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REVISITING AFRICA'S SUPERMARKET REVOLUTION

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Abstract

Africa is urbanizing at an unprecedented rate and food systems are undergoing rapid transformation. This transformation is being driven in part by a global supermarket revolution. However, the idea of an inexorable supermarket revolution on the continent has recently been contested. This paper examines the role of supermarkets in Namibia's capital city Windhoek to test the applicability of the model. The paper is based on (a) a review of the literature on South African supermarket expansion; (b) a survey of the food purchasing behaviour of a representative sample of 875 households in Windhoek; and (c) a comprehensive product inventory of three supermarkets in Windhoek. Since the end of apartheid, all five major South African supermarket chains have expanded their operations into other African countries, especially those most geographically proximate, such as Namibia. Windhoek is a city of 350,000 people and has over 30 supermarkets, which cluster in middle and high-income areas. However, over 90% of households, including those in low-income areas and informal settlements, patronize these supermarkets. A major reason for growing supermarket domination of the urban food system is the proximity of South Africa and the integration of Namibian supermarkets into South African supply chains. Two-thirds of products sold at supermarkets are sourced directly from South Africa. Despite the corporate power and efficiencies of South African supermarkets, at least one locally-owned chain is able to compete in this crowded marketplace.

Keywords

food security, supermarket revolution, urbanization

This is the 17th discussion paper in a series published by the Hungry Cities Partnership (HCP), an international research project examining food security and inclusive growth in cities in the Global South. The five-year collaborative project aims to understand how cities in the Global South will manage the food security challenges arising from rapid urbanization and the transformation of urban food systems. The Partnership is funded by the Social Sciences and Humanities Research Council of Canada (SSHRC) and the International Development Research Centre (IDRC) through the International Partnerships for Sustainable Societies (IPaSS) Program.

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Introduction

Africa is urbanizing at unprecedented speed and will be over 50% urbanized by mid-century (Parnell and Pieterse 2014). The country of Namibia is urbanizing at an even faster pace. The urban population of the country increased from 493,000 (30% urbanized) to an estimated 1,116,000 (48% urbanized) between 1995 and 2015, and is projected to grow to 1,567,000 (55% urbanized) by 2025 (UNHABITAT 2016). Rapid urbanization in Africa is accompanied by major transformation of national and local food systems (Crush and Battersby 2016, Frayne et al 2018, Reardon 2015, Tacoli 2017, Tefft et al 2017). This transformation is driven by the development of new urban mass markets, the growth of an urban middle class, and the profit potential offered by both large multinational and local supermarket chains (Reardon 2011, Tschirley , 2015). The restructuring of urban food systems involves "extensive consolidation, very rapid institutional and organizational change, and progressive modernization of the procurement system" (Reardon and Timmer 2012). Reardon and colleagues were the first to suggest that this transformation constituted a "supermarket revolution," which involved progressively greater control over the urban food supply and marketing by supermarket chains (Reardon et al 2003, 2007, Weatherspoon and Reardon 2003, Reardon and Gulati 2008, Reardon and Hopkins 2006, Reardon and Timmer 2008, Tandon et al 2011).

Africa's supermarket revolution has been called the "fourth wave" of supermarketization (previous waves having swept over Europe and North America, Latin America, Asia, and some African countries such as South Africa) (Altenberg et al 2016, Dakora 2012, Reardon et al 2003). In recent years, however, there has been growing scepticism about the inevitability of an African supermarket revolution. Critics have cautioned against the over-optimism and inexorability of the model, pointing to the uneven speed of the spread of supermarkets, the challenges faced by supermarkets in establishing cost-efficient supply chains, and the resilience of informal forms of retail (Abrahams 2009, 2011, Humphrey 2007, Minten 2008, Vink 2013). Abrahams (2009) even calls the whole idea "supermarket revolution myopia," primarily because it neglects the size and resilience of informal food economies in Africa. The "classic paradigm" of North-South multinational corporation supermarket expansion also requires added nuance given that "many Southern-based retail chains have emerged in recent years" (Altenburg et al 2016).

This paper revisits the African supermarket revolution model in light of new research from Namibia. It argues that supermarkets have come to exercise a significant degree of control over the urban food system. However, these are not supermarket chains from Europe or North America. Rather, they are a combination of locally-owned supermarket chains and those from the neighbouring African country of South Africa. Because of the key role played by South African supermarkets in Namibia, the first section of the paper shows how supermarkets have transformed the South African food system and developed a model of operations that they seek to reproduce in other African countries. The next section addresses the phenomenon of South African supermarket expansion into the rest of Africa, showing that the process has proved to be much more dynamic and rapid in countries that are geographically proximate to South Africa. The following section focuses on the case study of Namibia and the capital city of Windhoek, which has come to resemble a typical mid-sized South African city in terms of supermarket domination of the food system. While there may be reasons for scepticism about the supermarket revolution in many African countries, Namibia is not among them. The country is clearly in the midst of a major transformation of food retailing led by South African and local supermarket corporations.

South African Supermarket Domination

Corporate retailing and the supermarket have become the primary format for marketing food to consumers in South Africa. According to Greenberg (2017), the transformation of South Africa's food system by supermarket corporations has involved extensive consolidation, rapid institutional and organizational change throughout entire agro-food value chains, and progressive technological modernization of procurement systems. The country's retail outlets now offer a full variety of formats that are very similar to those in the United States and, in the process, the agro-food system and its value chains have been fundamentally restructured. Large-scale supermarket chains dominate the food retail market in most South African urban areas along major transportation arteries, as standalone supermarkets on high streets, and as anchor tenants in malls and mini-mall developments (Battersby and Peyton 2014, 2016, Crush and Caesar 2016). They also increasingly operate convenience-store formats including in fuel-refilling stations.

There are now over 4,000 large-scale hypermarkets and supermarkets in South Africa, and the number of branded convenience stores has increased to more than 4,500 (das Nair and Dube 2017). The five biggest food retailers in South Africa are also the five largest retailer chains across all sectors i.e. Shoprite, Pick n Pay, Spar, Massmart-Walmart and Woolworths. A sixth retailer – Fruit & Veg City – has expanded rapidly in recent years, primarily in the marketing of fresh produce (das Nair et al 2018). The big five had a combined market capitalization of ZAR285 billion (USD21 billion) in 2016, and their combined turnover increased by nearly 70% between 2010 and 2015. Between them, they control over two-thirds of the total South African food retail market. While food retail is dominated by these locally-owned corporations, two external players have recently entered the country. One is American-owned retail giant Walmart, which acquired a controlling interest in South Africa's Massmart. The other is Choppies, a smaller but fast-growing Botswana-based supermarket chain.

In terms of the individual corporations, Shoprite Holdings includes a number of supermarket chains with different target markets, including Checkers, Shoprite, OK Foods and Usave, as well as Hungry Lion fast-food outlets. In total, Shoprite Holdings has 1,284 supermarkets (2016 figures). Pick n Pay operates 1,280 supermarkets and hypermarkets in more affluent areas of cities and owns the down-market Boxer chain of supermarkets that immodestly labels itself "Africa's Favourite Discount Supermarket." The third most important company, the Spar Group, has 892 supermarkets and five brands – SuperSpar, Spar, KwikSpar, SaveMor, and petrol-station Spar Express outlets – and operates a franchise model of store ownership. All of Woolworth Holdings' 382 outlets carry the Woolworths name, although many stores (particularly in malls) also retail clothing and household goods along with food. Fruit & Veg City now has almost 100 supermarkets in South Africa (das Nair and Dube 2015). Its upmarket chain, Food Lovers' Market, has introduced FreshStop outlets at Caltex petrol stations. In terms of foreign ownership, Walmart acquired Massmart in 2011 despite considerable opposition from local supermarket chains and organized labour. The company primarily retails consumer goods but has started food retailing as Game FoodCo, a section in existing Game stores, and as Cambridge (240 outlets combined). Finally, Choppies has nearly 70 supermarkets in South African towns close to its home base in Botswana.

The supermarket chains have adopted the strategies of their North American and European counterparts, formalizing their supply chains and adopting Western-style layouts to establish a standardized supermarket format (Peyton et al 2015). They have all invested heavily in large distribution centres throughout the country, which supply products to company-owned retail outlets either through their own or outsourced transportation companies. Centralized procurement drives down costs, reduces competition, and ensures that supermarkets can increasingly extract value and dictate terms to others in the supply chain, especially agricultural producers (das Nair et al 2018). Just-in-time centralized procurement also lowers transaction costs, improves adherence to product quality, and homogeneity, and reduces the number of suppliers retained on longer-term supply contracts. At the same, supermarkets have been accused of anti-competitive conduct, including the exertion of buyer power over suppliers and the prevention of rivals from locating in particular shopping malls (das Nair et al 2018). The South African Competition Commission is currently investigating charges of anti-competitive behaviour by supermarket companies (CCSA 2016).

Supermarkets in South Africa were initially constructed to serve upper-income neighbourhoods and consumers, and in most towns and cities they tend to cluster in suburban shopping malls or on main streets in the CBD. However, the supermarket chains are now increasingly targeting middle- and low-income residents of the country's rapidly growing towns and cities. The budget subsidiaries of supermarket chains are focused on the mass market in lower-income areas, often as anchor tenants in new mini-mall developments (Battersby and Peyton 2014). The different chains have varying customer mixes when measured against the country's Living Standards Measure (LSM) (see Truter 2007). Woolworths, for example, draws 85% of its customers from the upper-income LSM 8-10 brackets. Pick n Pay draws 54% from these brackets and 43% from middle-income LSM 5-7. Both have very few customers (less than 4%) in the low-income LSM 1-4 brackets. Spar has its most significant customer base in LSM 5-7 (45%) but also has a significant 15% presence among LSM 1-4 consumers. The other interesting point of comparison is the two Shoprite-owned chains. Checkers primarily targets high-income consumers (68% in LSM 8-10) and draws only 3% of its custom from LSM 1-4. By contrast, Shoprite (which includes Usave) has 21% from LSM 8-10 and 16% from LSM 1-4. As a whole, its primary custom comes from middle-income earners (63% from LSM 5-7). Massmart-Walmart's Cambridge Food (launched in 2008) has the lowest high-income customer share (13% in LSM 8-10) and the highest middle-income customer base (78% in LSM 5-7).

Battersby and Peyton (2014, 2016) map the geographical spread of supermarkets across the urban landscape in the city of Cape Town. The spatial distribution of supermarkets remains "highly unequal" (Battersby and Peyton 2016). The greatest concentration is in high-income areas of the city, the CBD, and in shopping malls along major transportation arteries. There are eight times as many supermarkets in upper-income quintile areas as in lowest-income quintile areas. They also map the distribution of Shoprite's Usave budget supermarkets, which explicitly target lower-income consumers. These are disproportionately located on the edges of the Cape Flats region, which "has provided many in lower income neighbourhoods with a cheaper alternative food source, but it has neglected those most in need; those in the central Cape Flats region, where poverty is most heavily concentrated" (Peyton et al 2015). Despite the apparent lack of physical accessibility, Battersby (2011) shows that 94% of households in three poor neighbourhoods of the city purchase some of their food at supermarkets. However, two-thirds only patronize supermarkets once a month or even less frequently. This is a function of the fact that many poor households tend to purchase staple foods (such as maize meal or rice) in bulk once a month. Similar patterns of supermarket patronage among the urban poor have been observed in other South African cities such as Johannesburg (Rudolph et al 2012) and Msunduzi (Pietermaritzburg) (Caesar and Crush 2016), as well as in other Southern African cities such as Gaborone (Botswana), Maseru (Lesotho), Manzini (Swaziland), and Blantyre (Malawi) (Crush and Frayne 2011).

Supermarket Expansion Outside South Africa

The growing power and control of supermarket corporations over the food system in South Africa has been accompanied by outward expansion to other African countries (Chidozie et al 2014, Dakora et al 2010, das Nair and Chisoro 2016, das Nair and Dube 2017, das Nair et al 2018, Parker and Luiz 2015). The penetration of supermarkets is part of a broader process of corporate South African profit-seeking in larger African markets (Miller et al 2008, White and Van Dongen, 2017). The top five African retail companies by revenue earned are all South African supermarket chains. South African retailers (including the supermarket chains) have a presence in 17 countries. Fast food/restaurant companies are present in 15 countries. South Africa's corporate footprint in Africa is heaviest in the countries of the Southern African Development Community (SADC), with which it has the strongest historical and contemporary links. Namibia is one of the major target countries for South African corporate expansion. SADC countries have experienced particularly strong growth in the South African supermarket presence.

Pick n Pay has over 1,500 outlets in South Africa and 87 in eight other African countries including Botswana, Lesotho, Namibia, Swaziland and Zambia (das Nair and Dube 2015, 2017). The Spar Group has over 800 outlets in South Africa and 130 in 12 countries including Angola, Botswana, Cameroon, Malawi, Mozambique, Namibia, Nigeria, Zambia and Zimbabwe. Woolworths owns over 400 stores in South Africa and 63 in 11 countries, namely, Botswana, Ghana, Kenya, Lesotho, Mauritius, Mozambique, Namibia, Swaziland, Tanzania, Uganda and Zambia. Massmart-Walmart has Game outlets in Botswana, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda and Zambia, although Game FoodCo outlets are primarily located in South Africa. The most detailed information on geographical spread and the split between South African and other locations is available for Shoprite. In addition to its nearly 2,000 outlets in South Africa, the group has over 300 non-South African outlets spread across 13 African countries with a particularly strong presence in Namibia, Zambia and Botswana. Table 2 breaks down Shoprite's holdings into its constituent companies and their distribution between South Africa and other countries. While less than 10% of outlets overall are outside South Africa, one-quarter of Shoprite supermarkets and one-third of Hungry Lion fast food outlets are outside the country.

There are several drivers of South African supermarket expansion outside the country. First, food retailing is a key motor for industrial growth across the continent, with South African companies to

TABLE 1: Distribution of Outlets Owned by South African Supermarket Chains

	Shoprite	Pick n Pay	Spar	Woolworths
South Africa	1,916	1,541	839	421
Angola	51			
Botswana	39	12	30	√
Cameroon			1	
DRC	1			
Ghana	6			√
Kenya				√
Lesotho	23	3		√
Madagascar	9			
Malawi			3	
Mauritius	3			√
Mozambique	26		9	√
Namibia	106	38	29	√
Nigeria	23		12	
Swaziland	26	17		√
Tanzania				√
Uganda	2			√
Zambia	63	17	14	√
Zimbabwe			35	

Source: Company annual reports and websites

TABLE 2: Distribution of Outlets Owned by Shoprite Holdings

	No. of oulets in South Africa	%	No. of outlets outside South Africa	%
Shoprite	458	74.7	155	25.3
USave	302	82.3	65	17.7
Checkers	202	96.7	7	3.3
Checkers Hyper	7	100.0		0.0
OK	336	86.6	52	13.4
Hungry Lion	130	66.0	67	34.0
Liquor Shop	376	96.4	14	3.6
Total	1,811	91.4	170	8.6

Source: Shoprite website

the fore (Economist 2013). Second, the short and long term financial profits to be made by early entry into Africa's growing urban consumer markets are significant. Third, there is the growth of an African middle-class with higher disposable incomes, changing dietary preferences, heavy expenditure on processed food, and a taste preference for food purchase at modern retail outlets (Tschirley et al 2015). Fourth, in the context of high rates of formal sector unemployment, there is a readily available and cheap labour force to utilize in supermarket and value chain operations. Fifth, the accessibility of supermarkets to South African producers and suppliers has played a significant role in creating regional supply chains and increasing capacity for expansion. South African companies can leverage their already established procurement networks in South Africa to more easily penetrate other urbanizing markets within the region and continent. Sixth, supermarket supply chains achieve major economies of scale when compared to the long, inefficient, and informal food supply chain systems that have historically dominated African food markets. And finally, although non-African (and especially European) supermarket chains are beginning to target Africa, the South African companies have only limited competition from large multi-national chains as well as locally-owned chains.

While the supermarket revolution model projects the inevitable spread of South African supermarkets into the rest of the continent, it did not fully take into account various obstacles and challenges to replicating the South African model in different regions, particularly those further away from South Africa (Dakora and Bytheway 2014). Dakora et al (2010) argue that cross-national systems connectivity, variable development levels of local production and supply, imports and freights, labour disputes/issues, land issues in managing franchisees, complex international supply chains, import duties/paperwork, and domestic competition all present challenges for South African food retail expansion into other African countries. They categorize the barriers in supply chain expansion of South African retail businesses as either "hard" or "soft." Hard barriers include those related to physical infrastructure and utilities. Roads, railways, ports, airports and electricity are the main delivery systems for retail companies to get their goods to outlets, yet this physical infrastructure is inadequate in many countries. Soft barriers comprise the bureaucratic environment of government legislation on imports and exports, and regional and international bilateral/multi-lateral trade and customs agreements. Other soft barriers include information deficits, land tenure rights issues, non-uniformity in regulations and market structures for freight/cargo, and protectionist policies of African governments (Dakora 2016, das Nair et al 2018, White and Van Dongen 2017).

While the spread of South African supermarkets to other countries is an indication of food system formalization, the process has been met with a mixed local response. Middle-class consumers have generally welcomed their advent, but their procurement and employment practices have generated considerable controversy and opposition. Abrahams (2009), for example, notes that there have been concerted local efforts to discipline exclusionary sourcing practices and supermarket dominance. In Nigeria, farmers threatened to burn down the South African-owned Shoprite branch because of the supermarket's practice of procuring food products from foreign sources (Abrahams 2009). In Uganda, local authorities encouraged farmers to seek government support for what they referred to as 'invading' supermarket supply chains, helping producers meet the quality and consistency requirements for supplying the supermarket (Abrahams 2009). Furthermore, Shoprite's alleged practice of procuring 80% of their products from South Africa led the government of Tanzania to condemn the practice publicly (Ciuri, 2013). Shoprite's expansion in East Africa has also been thwarted by local competition. In 2014, Shoprite's locations in Tanzania were bought by the growing Kenyan retail giant Nakumatt (Ciuri 2013). In 2015, Nakumatt announced its intention to buy Shoprite stores in Uganda as well (Ciuri and Kisembo 2015).

Against the backdrop of the debates about the African supermarket revolution model, this paper focuses on the case study of Namibia where South African supermarkets have the heaviest presence outside South Africa itself. While these supermarkets are to be found in many urban centres, the vast majority are located in the fast-growing capital city of Windhoek. Previous research on supermarkets in Namibia has focused on supermarket supply chains and especially whether rural smallholders are integrated into those chains and, if they are, what types of benefits they derive (Emongor 2009). While this remains an important question, there have been no attempts to systematically examine the Namibian supermarket revolution as a whole including patterns of ownership, product sourcing, and consumer patronage. Using data collected in Namibia in 2016, this paper attempts to address these issues in order to assess the extent to which Namibia fits or contradicts the supermarket revolution model. The next section of the paper describes the methodologies used in the study and the following section presents and discusses the results.

Methodology

The data for this paper is drawn from three main sources. First, an inventory of all supermarket retail outlets in Windhoek was compiled from phone directories and field observation. The physical location of each outlet (together with its name and company ownership) was then plotted on detailed city maps of Windhoek and reduced to scale using GIS. Second, in order to trace product supply chains, various supermarket managers were asked to share product inventories and sourcing information. However, company policy prohibited the sharing of this information. With the consent of several managers, a novel methodology was devised to compile inventories in different types of Shoprite supermarket (a Checkers, Shoprite and Usave). Student research assistants photographed all products on supermarket shelves with cell phones, capturing information on product type, brand name, quantity, pricing and source country. The information on the photographs was extracted and recorded in Excel spreadsheets for analysis. The primary purpose was to understand the relative importance of imported versus locally-produced/processed foodstuffs and to see to what extent supermarket supply chains are confined to Namibia, regional or international.

The third source of data was a household food security survey conducted in Windhoek in 2016. A total of 875 Windhoek households were interviewed using a two-stage sampling design. Primary sampling units (PSUs) were randomly selected with probability proportional to size (PPS). The PSUs were selected from a master frame developed and demarcated for the 2011 Population and Housing Census. Within the 10 constituencies, 35 PSUs were selected covering the whole of Windhoek, and 25 households were systematically selected in each PSU. The sampled PSUs and households were located on maps, which were used to target households for interviews using tablet technology.

Spatial Distribution of Windhoek Supermarkets

All major South African supermarket chains have a strong presence in Nambia, with Shoprite, Pick n Pay, and Spar particularly prominent. The South African supermarkets face competition from Woermann Brock (WB), a long-established local company that dates back to the early German colonial period in the 19th Century. Woermann Brock opened its first supermarket in Windhoek in 1966 and now has nearly 30 supermarkets throughout the country and six in Windhoek (Table 2). Of the nearly 160 supermarkets in Namibia in 2016 (excluding small independent outlets), one-third were owned by Shoprite, followed by Pick n Pay (22%), Spar (18%) and Woolworths (4%). Of the South African chains, Shoprite and Spar are clearly the most important, followed by Pick n Pay. Woolworths has a presence but with limited food retailing.

Both Shoprite and Spar have expanded their national presence in Namibia in the last decade, but the greatest growth has been from Pick n Pay (35 supermarkets since first opening in 1997) (Table 3). Woermann Brock has also experienced significant national growth (from 15 to 27 supermarkets). Windhoek itself now has 45 supermarkets (or a fifth of all supermarkets in the country). Of these, half are South African-owned and half Namibian-owned. The Shoprite group has the largest South African presence in the city with 10 supermarkets (including two Usaves, three Shoprites and five Checkers supermarkets). Woermann Brock has six supermarkets in the city.

The distribution of chain supermarkets in Windhoek is shown in Figure 1. Although the spatial spread appears relatively even, the majority of supermarkets are concentrated in higher-income areas such as Windhoek East and Windhoek West. As Table 4 shows, there is a direct correlation between the proportion of poor/severely poor residents and the number of supermarkets in a constituency. At one end of the scale are Windhoek East and Windhoek West with no poverty and 21 supermarkets. At the other end is Moses Garoeb with 78% of residents living in poverty or severe poverty and only one (non-South African) supermarket. Shoprite subsidiaries such as Checkers are all located in higher-income areas of the city, as are direct competitors such as Pick n Pay supermarkets. The number of supermarkets in low-income areas is much lower and tends to be confined to locally-owned supermarkets (including Woermann Brock) and budget South African supermarkets such as Usave. There are no supermarkets in the sprawling and growing informal settlements to the north of the city.

TABLE 3: Number of Supermarkets in Namibia and Windhoek, 2016

	Namibia		Windhoek	
	No.	%	No.	%
South African				
Shoprite	53	33.5	10	32.3
Pick n Pay	35	22.2	4	12.9
Spar	29	18.4	4	12.9
Woolworths	6	3.8	2	6.4
Massmart-Walmart (Game)	4	2.5	2	6.4
Fruit & Veg City	4	2.5	3	9.7
Namibian				
Woermann Brock	27	17.1	6	19.4
Total	158	100.0	31	100.0

Source: Company annual reports, 2016

FIGURE 1: Location of Supermarkets in Windhoek

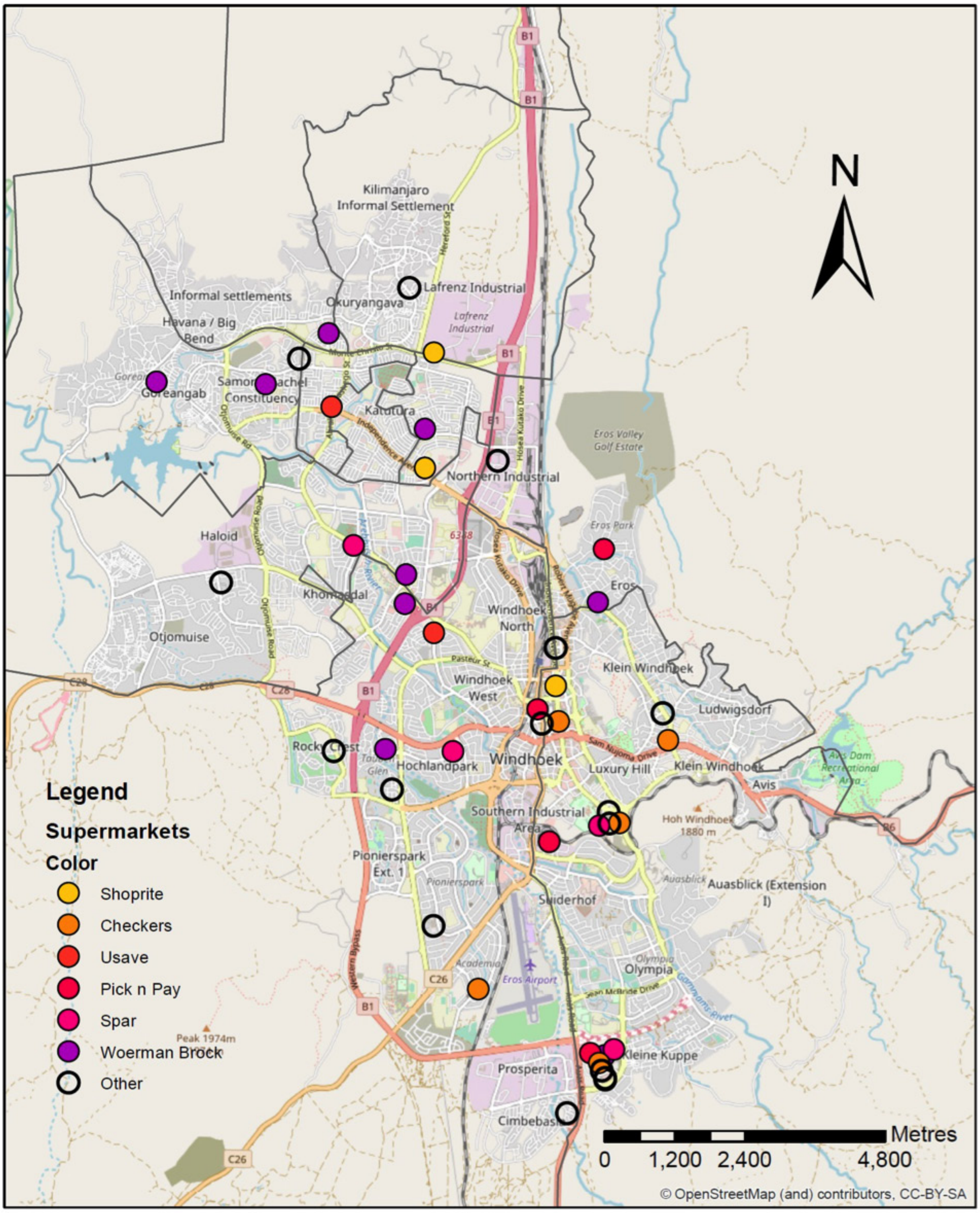

TABLE 4: Location of Supermarkets by Constituency

	No. of South African supermarkets	No. of Namibian supermarkets*	Total	Poor/severely poor** %
Windhoek East	10	2	12	0.0
Windhoek West	8	1	9	0.0
John Pandeni	1	0	1	4.3
Katutura East	1	1	2	4.5
Katutura Central	1	0	1	8.3
Khomasdal	1	0	1	14.7
Samora Machel	0	1	1	37.5
Tobias Hainyeko	1	0	1	36.1
Moses Garoeb	0	1	1	77.8
Total	23	6		100.0

*Woermann Brock
**Based on 2016 NSA-NHIES poverty indicators

Supermarket Supply Chains

Emongor (2009) and Emongor and Kirsten (2009) were the first to provide insights into the distinctive nature of supermarket sourcing in Namibia where (a) smallholder farming is largely confined to the north of the country, and (b) where the main city, Windhoek, is located in a relatively arid area with no large-scale horticultural production in the city-region. Namibia's low and erratic annual rainfall (which averages between 350-700mm) has defined crop production in the country. The most common grains produced are pearl millet and maize, which are grown in the north and north-eastern parts of the country due to water availability. Maize meal and pearl millet are the main staple food crops for all Namibians. Shifiona et al (2016) indicate that maize and rice now represent one-third of all consumption in the country, while pearl millet makes up one-fifth. Until recently, pearl millet was not a commodity found in supermarkets in Namibia, despite its significant contribution to both rural and urban livelihood and household food security.

Another important commodity is red meat. Livestock production in Namibia is the single most important agricultural activity and the majority of the population, both rural and urban, depends on livestock rearing for their livelihood. For many Namibians, a meal is not a meal without meat. In terms of trading, cattle is formally marketed from commercial farms, and in the communal areas at abattoirs, to local export butchers or on hoof to South Africa. Cattle farming contributes 2-4% of Namibia's GPD and is practised by an estimated 2,250 farmers, with a combined average annual herd of 840,000. Around 55,000 tonnes of beef are produced per year, which is primarily sold to South Africa (45%) and international markets (40%) with around 15% consumed domestically (Olbrich et al 2014). In 2010, meat imports totalled 40,000 tonnes of which three-quarters was chicken (with the main sources being South Africa, Argentina, the US, Denmark and Brazil). Recent studies have highlighted the barriers small-scale cattle farmers face in accessing formal markets (Thomas et al 2014, Kalundu and Meyer 2017).

Emongor (2009) conducted a census of the sources of products on supermarket shelves and showed the overwhelming domination of South Africa as a source of fresh food and vegetable products. With regard to processed foods, South Africa was again dominant, although all wheat and maize flour, pasta products and processed fresh milk brands were Namibian. However, with the exception of milk, the processing ingredients were mainly imported and processed by Namib Mills. Some 80% of all processed foods sold in Namibia are imported from South Africa. The Namibian food processing sector is relatively small and, although its products are found in Windhoek supermarkets, local production is insufficient to meet demand. At the same time, protectionist regulations mean that supermarkets procure most of their fresh milk from Namibia Diaries and their milled flour and pasta products from Namib Mills. Other dairy products such as cheese and yoghurt are imported from South Africa. According to Emongor (2009), there is a ban on the import of flour to Namibia, so Namib Mills has a monopoly on the importation and processing of wheat and maize to produce flour.

Emongor (2009) estimates that 82% of fresh fruit and vegetables come from South Africa and only 18% from Namibia. The imports come from South Africa via supply chains organized by subsidiaries such as Freshmark Namibia, Shoprite's fruit and vegetable procurement and distribution arm, and FreshCo (the Pick n Pay equivalent). Supermarkets are, however, required to source a certain percentage of their fresh produce from local farmers. According to Emongor (2009), Pick n Pay's FreshCo makes up this quota by sourcing from a single large-scale farmer. None of the Shoprite outlets buy directly from farmers in Namibia. FreshMark does obtain some produce locally but mainly from a handful of large-scale farmers. About 30% of vegetables are sourced locally and the rest comes from fresh produce markets in Cape Town and Johannesburg (Emongor 2009). The challenge of meeting quotas from local producers has led to charges that supermarkets are mislabelling products. In 2014, for example, the Namibian Standards Institution launched an inquiry into mislabelling practices by Freshmark, Shoprite and Checkers, which were allegedly representing South African products as locally grown and produced (Kaira and Haidula 2014).

Some large-scale farmers in Namibia who produce horticultural products prefer to transport their produce more than 1,000km to the fresh produce markets in Johannesburg or Cape Town in South Africa. The farmers use these markets because of their easy access and they can sell large amounts of produce, reducing transaction and transportation costs (Emongor 2009). Few small-scale farmers are integrated into supermarket supply chains. According to Freshmark Namibia, most small-scale producers are unable to meet the private grades and standards Freshmark demands so there is little procurement from this source (Emongor 2009). Most red meat sold in supermarkets in Windhoek does come from within the country with supply chains that connect supermarkets with large-scale commercial ranching operations via MeatCo, the largest abattoir in the country.

Ijuma et al (2015) argue that the rise in consumption of processed food in East and Southern Africa has been "deep", and now accounts for nearly 70% of purchased food. Their analysis of the processed food sector in Tanzania found that local and regional food processing was very competitive with imports from outside East Africa and was characterized by the rise of a few successful medium and large processors and "a surge of many micro and small firms" producing branded but largely undifferentiated meal and flour. They found that of 953 products, 59% were manufactured within Tanzania, 12% were from neighbouring countries (Kenya and Uganda) and 29% were sourced internationally. This study provides a baseline for comparison with the product data collected at two Shoprite-owned supermarkets in Windhoek.

In sharp contrast to Tanzania, only 25% of the recorded products in Windhoek were manufactured in-country and 8% internationally (i.e. outside Africa) (Table 5). Thus, two-thirds of products were manufactured in South Africa and imported. There are only three product categories – cereals and cereal products, dairy products and processed meat – where there are more local than imported products. In all other categories, there were more imported than locally-produced products. Shoprite's supply chains for processed foods are dominated by imports from South Africa. As many as two-thirds of the processed products come from South Africa and that country has an almost complete monopoly on canned food, sauces, spreads, desserts, and frozen foods.

The high number of cereal products is related to South African domination of the supply of breakfast cereals. South Africa also has a commanding presence in the soft drinks (including fruit juices and pop), condiments (including tea and coffee), and snacks categories. What is surprising is how little sourcing Shoprite appears to do from other countries within the region (with canned pineapples from Swaziland and orange juice concentrate from Zimbabwe the only recorded products). Equally, Europe and Asia are only sources for certain specialized foods. Thailand is the main source of rice. One oddity is the fact that Thai rice is imported directly into the country by Namib Mills and via South African manufacturers. Packaged rice from both sources can be found on the same supermarket shelves. Many of the European and Asian products may also be imported via South Africa. The only US product of the 642 sold is tabasco sauce.

Supermarket Domination of the Food System

Given the large number of supermarkets in Windhoek, and their locational preference for higher-income areas of the city, we might expect this spatial unevenness to be reflected in differential patterns of consumer patronage in different parts of the city. Nickanor (2014), for example, argues that the informal settlements are 'food deserts'. However, over 90% of surveyed households across the city purchase food at supermarkets, far higher than for any other food source. A comparison of food-secure and food-insecure household food sourcing reveals little difference in supermarket patronage (99% vs 96%). Exactly two-thirds of households shop at supermarkets on a monthly basis. Another 17% shop at supermarkets weekly while only 5% are daily shoppers. The patronage pattern is very different for vendors at city markets, informal shops, and street vendors. Around half of those who purchase food from these outlets do so on a daily basis while another 35-40% purchase weekly and only 7% do so monthly. The contrast in patronage frequency between largely informal sector and/or small business vendors and the supermarkets is therefore stark, which raises important questions about what kinds of products are bought at supermarkets versus other outlets.

The survey used the Hungry Cities Food Purchases Matrix, which captures how many households normally purchase a range of common food items and where they get them from (Crush and McCordic 2017). As Table 6 demonstrates, supermarkets are the main source of almost all food products. In the case of half of the products on the list, supermarkets command over 90% of the market share. The three main staples – maize meal, rice and pasta – are bought almost exclusively at supermarkets. In sum, supermarkets completely dominate the food retail system of the city, irrespective of the location,

TABLE 5: Source of Foods in Checkers and Shoprite, Windhoek

Product category	Total no. of products	Namibia	South Africa	Other SADC	Europe	Asia	Other
Cereals	136	68	51	0	6	11	1
Soft drinks	112	19	92	1	0	0	0
Snacks	108	30	71	0	3	3	1
Canned food	79	3	54	1	15	4	2
Sauces	43	0	39	0	0	4	0
Condiments	41	6	33	0	0	2	0
Spreads	31	0	23	0	4	2	2
Dairy	29	22	7	0	0	0	0
Desserts	24	0	24	0	0	0	0
Frozen foods	23	0	23	0	0	0	0
Meats	16	13	3	0	0	0	0
Total	642	161	419	2	28	26	6
%	100.0	25.1	65.3	0.3	4.4	4.0	0.9

wealth, level of poverty, and food insecurity of households.

The only staples in which supermarkets face competition are bread and meat although they still command over half of the custom. Supermarkets are also the major source of fresh and frozen produce. Over three-quarters of the households that purchase milk, eggs, fruit, fresh chicken, and vegetables do so from supermarkets. In the case of fresh fish, there is some competition from street vendors and open markets. Meat is also bought from small shops (mainly butcheries) and open markets, and offal from open markets and street vendors. It is likely,

TABLE 6: Patronage of Supermarkets for Individual Food Items

	% of households purchasing item	% normally purchasing item at supermarkets
Staples		
Maize meal	75.9	96.0
Bread	57.3	53.5
Rice	53.2	99.4
Pasta	50.6	99.6
Fresh produce		
Meat	42.4	61.1
Vegetables	31.2	77.5
Fish	32.7	46.0
Milk	25.4	96.9
Eggs	21.4	93.1
Fruit	16.7	91.1
Offal	11.0	38.1
Chicken	8.6	84.5
Frozen produce		
Chicken	28.9	95.7
Meat	10.1	93.3
Fish	7.3	80.0
Cooked food		
Pies/vetkoek	9.4	53.0
Meat	3.8	51.1
Chicken	2.7	62.5
Fish	1.0	64.0
Processed food		
Cooking oil	75.5	94.6
Sugar	64.5	94.7
Tea/coffee	46.2	96.8
Butter/margarine	26.1	99.6
Cooldrinks/pop	23.4	81.2
Fruit juice	14.7	97.7
Sour milk/omaere	12.3	95.4
Snacks (crisps etc)	11.4	66.3
Sweets/chocolate	10.5	57.0
Canned vegetables	9.7	100.0
Canned meat	4.9	95.3
Canned fruit	4.7	100.0

however, that some street vendors and vendors in open markets source their products from supermarkets as well. Supermarkets completely dominate the market for frozen produce and processed foodstuffs and over 50% of the cooked food market, although fast-food outlets do compete for cooked chicken and meat. Urban diets are also in transition and a high proportion of urban households purchase processed food items such as cooking oil and sugar from supermarkets.

In terms of preference for South African over local supermarkets, over half of the respondents (57%) said they patronize South African supermarkets, while the remainder (43%) patronize Namibian supermarkets (with 32% patronizing Woermann Brock). Shoprite is clearly the dominant South African chain, with two-thirds of the households patronizing Shoprite, Checkers and Usave supermarkets. Around 17% shop at Usave (the subsidiary that targets lower-income areas of cities). The South African supermarkets appear to be more accessible than local supermarkets for households in informal housing where 54% patronize South African outlets compared to only 30% in formal housing. The majority of households (70%) in the formal housing areas shop at local supermarkets (Figure 2). This suggests that although South African supermarkets are targeting higher-income areas of the city, they are attracting more customers in low-income and informal areas of the city. Local supermarkets tend to follow the more conventional strategy of targeting middle and high-income areas and consumers.

All households that shopped at supermarkets were asked why they did so. Of the over 800 households concerned, 88% agreed that the reason was the variety of foods in supermarkets (Table 7). Other factors with which there was strong agreement were the sales and discounts offered by supermarkets (82%), the better quality of food (81%) and the opportunities to buy in bulk (76%). Supermarket prices were not nearly as strong an incentive. Less than half (44%) agreed that food was cheaper at supermarkets and as many as 50% disagreed.

FIGURE 2: South African and Local Supermarket Patronage by Type of Residential Area

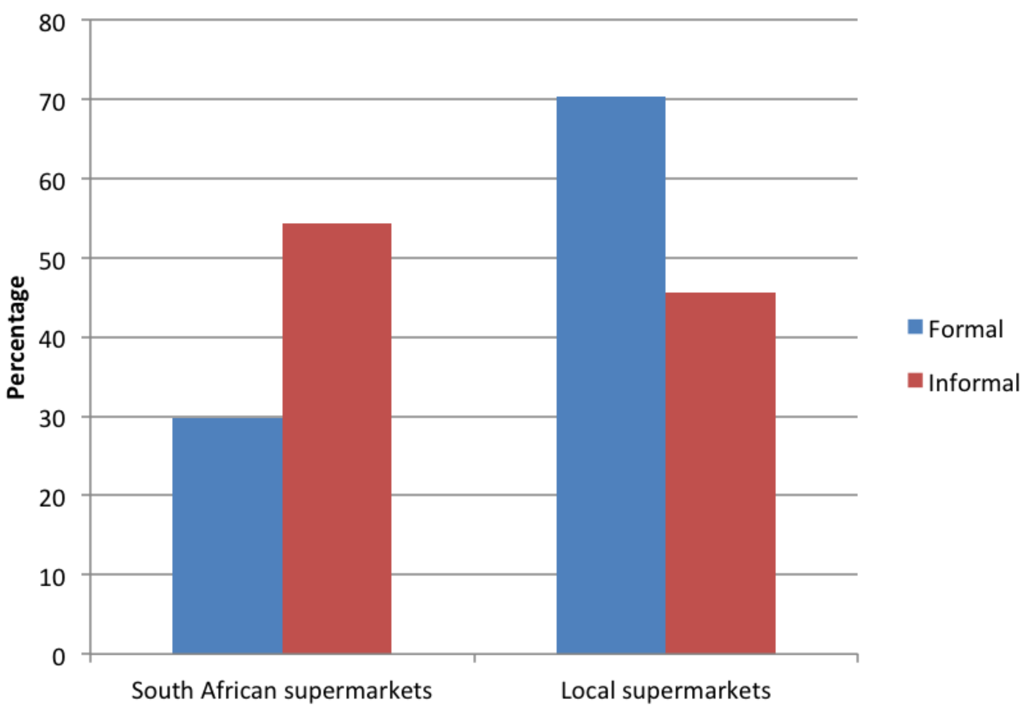

TABLE 7: Reasons for Shopping at Supermarkets

	Agree	Neither agree nor disagree	Disagree
Supermarkets have a greater variety of foods	88.1	2.7	9.2
Supermarkets offer sales and discounts	82.3	3.9	13.8
Food is better quality at supermarkets	81.1	5.5	13.4
We can buy in bulk at supermarkets	76.4	3.3	20.3
Food is cheaper at supermarkets	44.4	6.0	49.6

Conclusion

Many researchers have argued that Africa is undergoing a supermarket revolution, similar to that which came to dominate food systems and consumer habits in the global north and Latin America. They suggest that South Africa is the one African country emulating this model and that South African-based supermarkets would lead the revolution. The primary reason was that the end of apartheid was opening up the continent to South African businesses, which were attracted by the massive urban consumer market accompanying rapid urbanization and the growth of an African middle-class. The revolution would supposedly benefit consumers and small farmers who would be incorporated into new supermarket food supply chains. The proponents of the supermarket revolution model were primarily agricultural economists who viewed it as a largely inevitable and positive development. However, enthusiasm for the model has waned over time with much less being written about it in the last decade. Some have been extremely critical of the modernization premise of the model (the idea of inevitable stages or waves in particular) and the fact that the primary beneficiaries are not consumers or smallholders but large, monopolistic South African corporations.

A study by the African Food Security Urban Network (AFSUN) surveyed low-income households in 11 cities across the Southern African region and found surprisingly high rates of supermarket patronage (Crush and Frayne 2011). This finding broke with conventional wisdom at the time that supermarkets in African cities are primarily patronized by middle and high-income residents and therefore target areas of the city where these residents tend to live. The AFSUN survey suggested that the supermarket revolution model was a potentially accurate depiction of countries in the immediate vicinity of South Africa. There were several reasons for this: first, those countries within the Southern African Customs Union and Rand Monetary Area facilitated the ability of South African corporations to do business, move goods across borders and repatriate profits. Second, these countries had a long history of South African corporate investment dating back to the apartheid era. Third, geographical proximity meant that it was not necessary for supermarkets to build local supply chains from scratch. Instead, these countries and their cities were simply incorporated into existing supply chains, becoming retail nodes for large-scale South African agricultural producers and food processors.

This paper has examined the nature of the supermarket revolution in Namibia through a case study of its capital city. The levels of supermarket concentration in Windhoek are very similar to those in similar-sized South African cities. The Namibian supermarket revolution is incomplete in the sense that, unlike in South Africa, it has not involved wholesale transformation of the agro-food system. Some large-scale Namibian farms (particularly in the beef and vegetables sector) have been able to take advantage of new demands from supermarkets, but the overall number of local producer beneficiaries is small. Government protectionism has prompted some adjustment in supermarket strategies of procurement (particularly for processed cereal products) but, as this paper shows, the vast majority of products sold in supermarkets in Windhoek are imported from South Africa. Indeed, Windhoek supermarkets appear to be fully integrated into the same supply and distribution chains as South African cities.

The purpose of the paper is not to resuscitate the idea of an Africa-wide supermarket revolution but rather to suggest that the model needs to be given nuance. First, it appears that the revolution is proceeding fastest in countries that are geographically proximate to South Africa. This is primarily because the transformation of the food system in South Africa is more easily replicable in countries with close geographical and economic ties to South Africa. In addition, the revolution is likely to proceed much faster in countries such as Namibia where supermarkets can be integrated into South African supply and distribution networks. Second, the idea that the supermarket revolution will benefit smallholder farmers is certainly not supported by the Namibian case. Despite the efforts of government to protect local producers in some product sectors, the primary beneficiaries are large commercial farmers in the country. Third, despite the power, size and reach of South African supermarket chains, it does appear that locally-owned companies are able to compete successfully against their South African rivals. Further research is needed into the corporate strategy and supply chains of a locally-owned company like Woermann Brock to explain how it is able to participate in and benefit from the South African-led supermarket revolution.

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