The Supermarket Revolution and Food Security in Namibia:

Workshop Proceedings

24th October, 2017 Country Club, Windhoek, Namibia











Programme



Topic: The Supermarket Revolution and Food Security in Namibia

Director of Ceremonies: Dr. Lillian Pazvakawambwa

09h00 Introduction and Welcoming Remarks:

Dr. Ndeyapo Nickanor

09h05 The Global Supermarket Revolution:

Prof. Jonathan Crush

09h25 The South African Supermarket Sector:

Dr. Gareth Haysom

09h45 South African Supermarket Expansion into Africa:

Dr. Jeremy Wagner

10h05 Tea Break

10h30 Discussion

11h00 Supermarkets in Windhoek:

Prof. Lawrence Kazembe

11h20 Implications for Household Food Security:

Dr. Ndeyapo Nickanor

11h40 Dietary Diversity among Children in Namibia:

Dr. Lillian Pazvakawambwa

12h00 Informal Food Vendors in Windhoek:

Prof. Lawrence Kazembe/ Dr. Ndeyapo Nickanor

12h20 Discussion

12h50 Vote of thanks:

Mr. Innocent Kamwi

13h00 Lunch









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The Supermarket Revolution

Director of ceremonies, Dr. Lillian Pazvakawambwa

Prof. Nelago Indongo, Director of the Multidisciplinary Research Centre at UNAM,

Professor Jonathan Crush, AFSUN and Hungry Cities Partnership Director; the CIGI Chair in Global Migration and Development at the Balsillie School of International Affairs, and head of the Canadian delegation present

Dr. Gareth Haysom from African Centre for Cities at the University of Cape Town

Distinguished invited guests from Namibia Statistics Agency (NSA), Agro-Marketing Trade Agency (AMTA), Labour Resource and Research Institute (LARRI), Ministry of Health and Social Services, Ministry of Agriculture, Members of the Namibia Food and Allied Workers Union, Habitat Research and Development Centre, the entire University community present here today. All our distinguished invited guests

Members of the media

Ladies and gentlemen, good morning

It gives me great pleasure to extend to you all a very warm welcome and to say how grateful we are that you have accepted our invitation to be part of this exciting dialogue on an issue that is so dear to everyone.

The topic: Supermarket Revolution and Food Security, befits the current rapid urbanization in our country, the changing food systems and the challenge of

food insecurity. Urban food systems impact on the levels and extend of food in/security; the types of diets consumed; employment opportunities, health and environmental issues. All these are all within our national frameworks of NDP5, Vision 2030 and the Harambee Prosperity Plan, which strive to leave no one behind.

While not singling out anyone, I would like to sincerely appreciate the presence of Professor Jonathan Crush. He founded the Southern African Migration Programme (SAMP) (a consortium of Canadian and African researchers) in 1997 which is now housed at the International Migration Research Centre at the BSIA. In 2005, he co-founded the African Food <u>Security Urban Network (AFSUN)</u>, a research, policy and capacity-building network of Canadian and about 10 African universities (including UNAM), NGOs and municipal governance networks. In 2008 AFSUN profiled the levels of food insecurity in 11 cities in Southern Africa. Since joining the Balsillie School, he has established the **Hungry Cities Partnership** which links colleagues from Laurier and Waterloo with partners in Mexico, Jamaica, South Africa, Mozambique, Kenya, India and China. He is also working with the African Centre for Cities at the University of Cape Town, where he holds an Honorary Professorship, on several projects including the funded Growing Informal Cities Project and the DFID-ESRC funded Consuming <u>Urban Poverty Project.</u>

Ladies and gentlemen, a nation is food secure when food is available, accessible and is utilized in a sustainable manner. In urban areas food

accessibility hinges on income and also physical access of food outlets. We will hear more about this in the presentations.

Your presence here, ladies and gentlemen, attest to the importance of the issues and challenges that we are facing today. Through this workshop, we aim at sharing and learning from each other's experience. I am therefore extremely pleased to see that for.

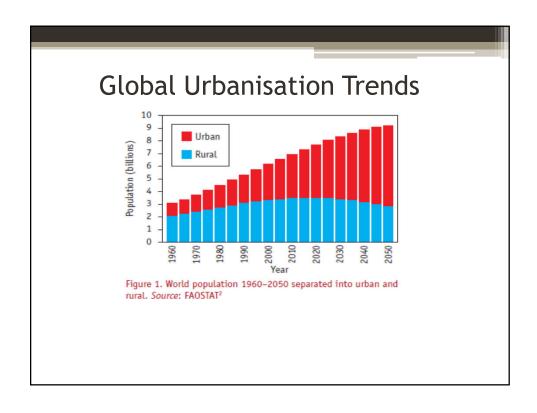
With these few words I would like to welcome you all and wish you fruitful deliberations.

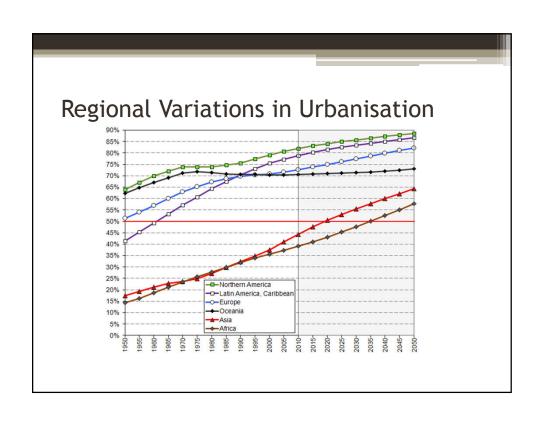
RAPID URBANIZATION AND THE SUPERMARKET REVOLUTION IN THE GLOBAL SOUTH

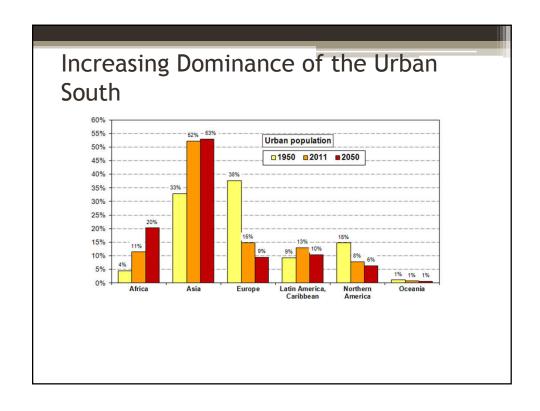
Prof Jonathan Crush, Balsillie School of International Affairs Director of African Food Security Urban Network (AFSUN at www.afsun.org)

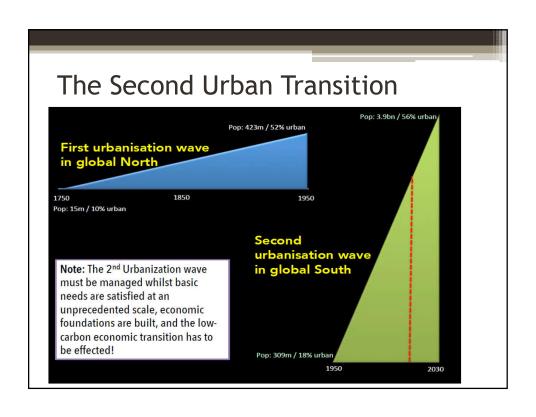
Outline

- Rapid Urbanization in the South
- Growing Urban Food Insecurity
- The Supermarket Revolution
- Implications of the Revolution
- Conclusion: The Supermarkets Project

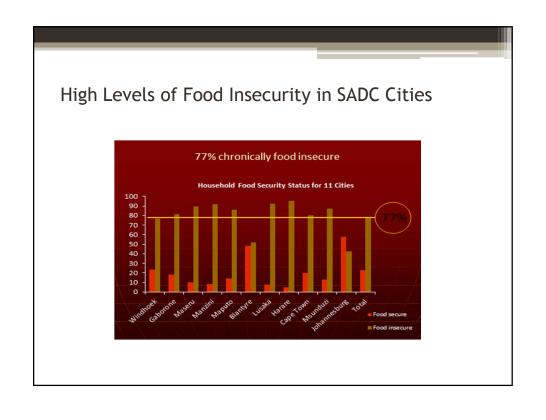








Rural and Urban Incidence of Hunger (Food-Energy Deficiency) Rural and Urban Incidence of Hunger (Food-Energy Deficiency) Source: Ahmed et al (2011: 38)



3. Supermarket Revolution Waves

Wave	Period (of takeoff)	Countries (Emerging Economies)	Modern food retail share o market share (mid 2000s: average)			
1 st	Early 1990s	South America	50-60%			
		East Asia (outside China and Japan)				
		Parts of South East Asia				
		North-Central Europe and Baltic countries				
		South Africa				
2 nd	Mid-to-late	Mexico	30-50%			
	1990s	Central America				
		Much of South East Asia	1			
		South-Central Europe				
		Parts of Southern Africa (e.g. Zambia, Mozambique, Swaziland and Botswana)				
3 rd	Early 2000s	Parts of Eastern and Southern Africa (eg. Tanzania, Uganda, Zimbabwe and Malawi)	5-20%			
		Other parts of Central and South America				
		China				
		Eastern Europe				
		Russia				
		India	7			
4th	Late 2000s	South Asia (outside of India)	No estimates			
(Emerging)		sub-Saharan African countries not impacted in the 2nd and 3rd wave (e.g. Democratic Republic of Congo, Angola and Nigeria)				
		Poorer countries in South East Asia (eg. Cambodia) and South America (eg. Bolivia)	1			

4. Implications of the African Revolution

A. Do supermarkets mitigate rural food insecurity by providing market opportunities for small farmers?

• B. What is the relationship between supermarkets and informal food vendors? Do supermarkets undermine the informal food economy?

• C. What is the impact of the supermarket revolution on the food security of poor urban consumers?

• D. What are the policy implications of the supermarket revolution?

5. The Supermarkets Project

- What are the drivers of South African supermarket expansion within South Africa and what are the corporate strategies of the supermarket chains vis-a-vis the rest of Africa?
- Which South African supermarkets are present in Namibia? What locations do they occupy within the city and how does this relate to high and low-income consumers? What are the implications for the accessibility (geographical and economic) of urban consumers (including the urban poor) to these outlets?
- How are the supermarket supply chains organized? To what extent do they involve the import of products from South Africa and international markets? Are any products derived from Namibian sources and, if so, which ones?
- What are the patronage patterns of supermarkets by different income groups in Windhoek and what is the impact on food security of low-income groups (including food availability, accessibility, stability and nutritional quality of diets)?
- What is the impact of supermarket expansion on the informal food economy and what kinds
 of relationship exist between formal and informal markets and vendors and supermarkets?



Contents

- Supermarkets in South Africa history.
- State of Supermarkets in SA numbers, market, competition.
- Supermarkets within the food system
- Cape Town studies profiles and practice.
- Emerging trends
 - Consolidation and market dominance
 - Supermarkets and social protection/Supermarket expansion





Supermarket origins and trajectory

- South Africa's formal food needs were traditionally fed by local "green grocers", local dairy deliveries, butchers, etc.
- Smaller independent food retail stores were present, often more "departmental-type" (Stuttafords, Clicks, Garlics), but also Ackerman's, Thrupps, Woolworths (mostly clothing).
- Since 1970s supermarkets have established themselves as one
 of the dominant food retail environments, increasing their
 footprint significantly since 2000.







Pick n Pay 1967

Thrupps – Independent supermarket, 1972



The Super-market in South Africa

- Supermarkets are conceptualized as market tools to increase food distributional capacity (Reardon & Hopkins, 2006).
- Supermarkets are hypothesized to replace traditional informal markets in lower income areas, leading to an increasingly formalized food system in South Africa (Reardon, et al. Henson, 2007).
- In South Africa, supermarketization was and is supported by trade liberalization and private sector development promoted in the ANC Government's Growth, Employment and Redistribution strategy (GEAR). A strategy based on a neoliberal premise of development via 'transformation towards a competitive outwardoriented economy,' (Department of Finance, 1996:1).
- SA owned expansion rising demand from urbanization, led to large scale expansion of formal food retail, with rapid market saturation in high-income areas (Humphrey, 2007).



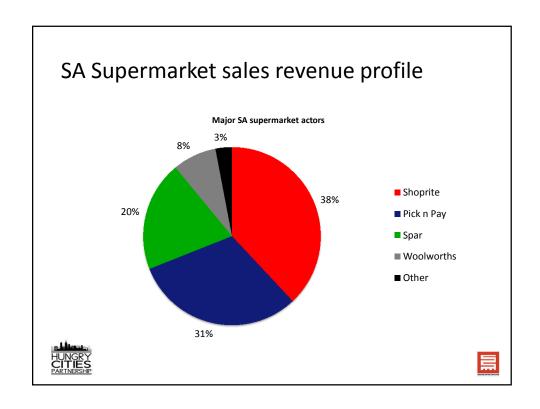


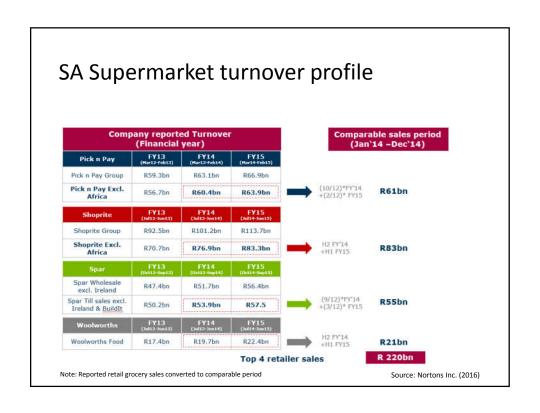
Supermarket expansion post 2000's

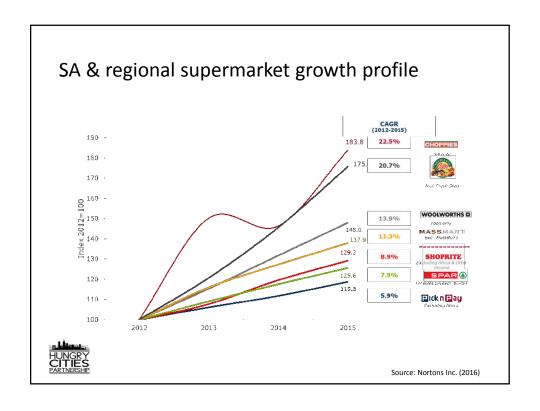
- In 2003 the supermarket sector in South Africa accounted for 50/60% of all food retail (Weatherspoon and Reardon, 2003: 337).
- Sector has continued to expand with formal food retail accounting for 68% of all food retail in 2010 (Planting, 2012).
- Four major companies account for 97% of sales within the South African formal food retail sector. In 2012 Shoprite Checkers and Pick n Pay each controlled over 30% of the formal food retail market, Spar 20% and Woolworths just under 10% (GAIN Report, 2012).

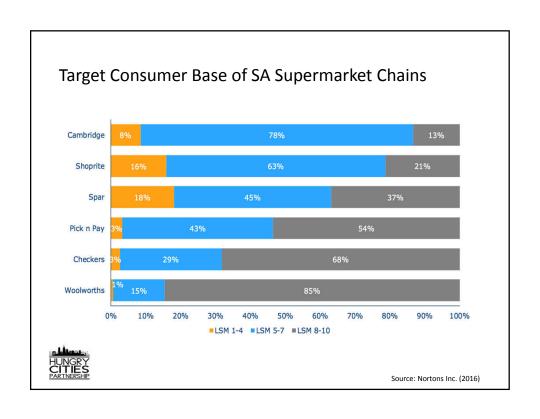


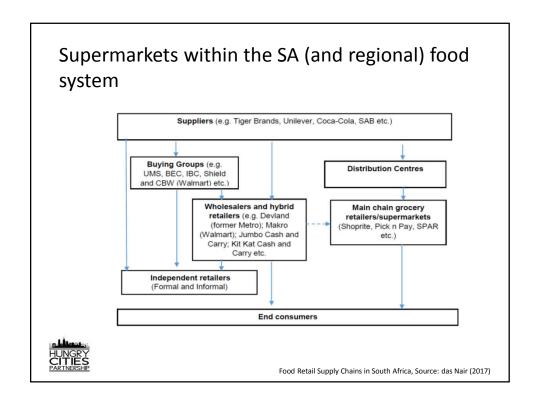


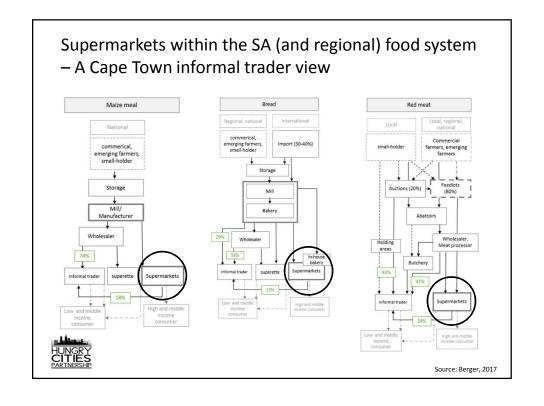


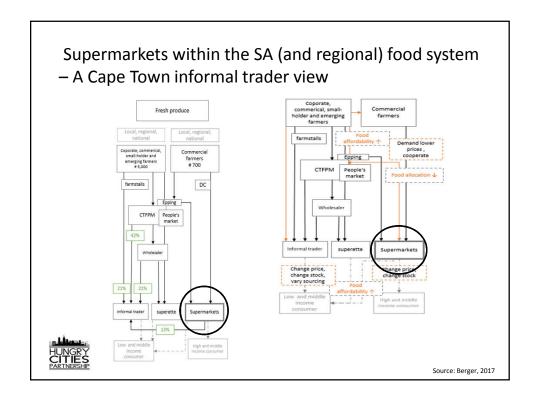












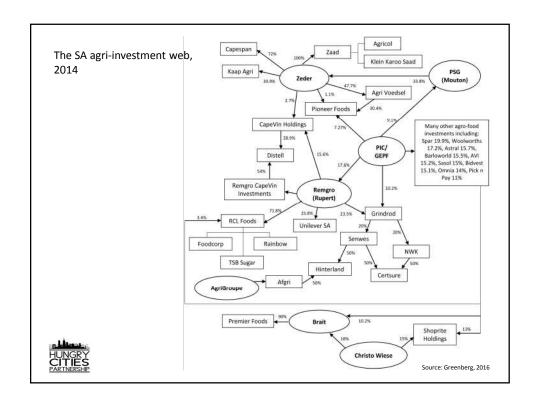
SA & regional supermarket ownership profile – select operations

	Shoprite	Pick n Pay	Massmart	Spar	Woolworths
Controlling shareholders	Institutions/ Wiese	Ackerman family	Walmart (Walton family)	Institutions	Institutions
Market share (modern grocery retail)	36.1%	25.5%	*	18.7%	
Market capitalisation	R94.1bn	R35.3bn**	R29.9bn	R32.7bn	R87.5bn
Group revenue	R102.2bn	R64.2bn	R78.3bn	R55bn	R39.9bn
Trading/operating profit***	R5.7bn	R1.0bn	R2.0bn	R1.9bn	R3.9bn
SA supermarket revenue/turnover	R76.9bn				R19.2bn
SA supermarket operating profit	R4.5bn				R1.3bn****
Employees	123 100 (87% in SA)	49 300 plus 23,000 franchise	47 209	4 025	38 855 (73% in SA)
Distribution centre m ² (000)	600	141	328	237	-

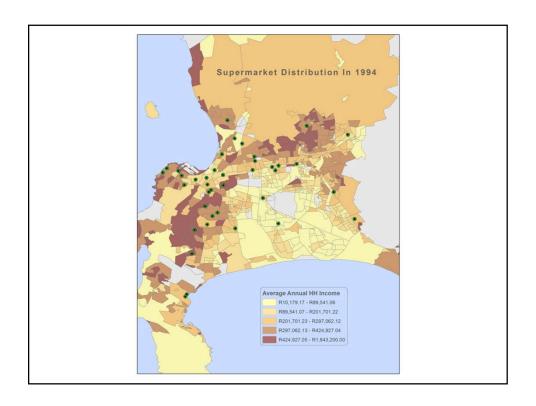
Sources: Annual reports, 2014; Financial Mail, 2015; Euromonitor, 2015, 2015a 2015b *Blank cells indicate this information is not provided in available reports. **Pick n Pay Stores plus Pick n Pay Holdings ***Different reporting formats, but usually trading and operating profits are close to one another ****Profit before tax

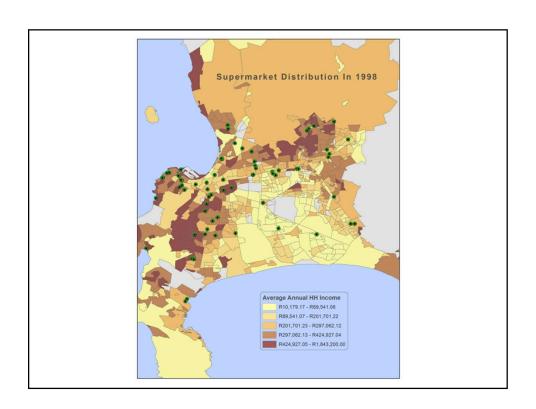


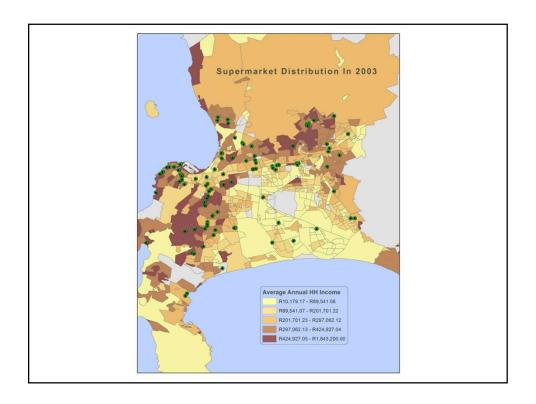
Source: Greenberg, 2016

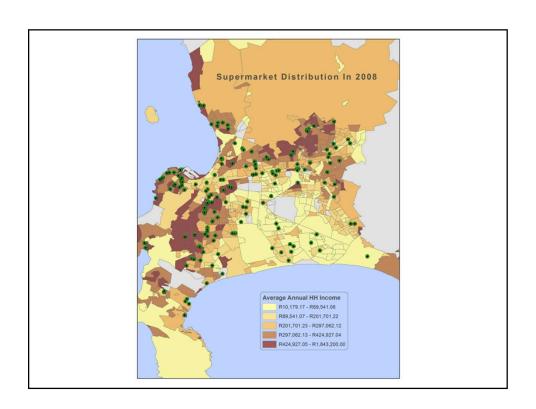


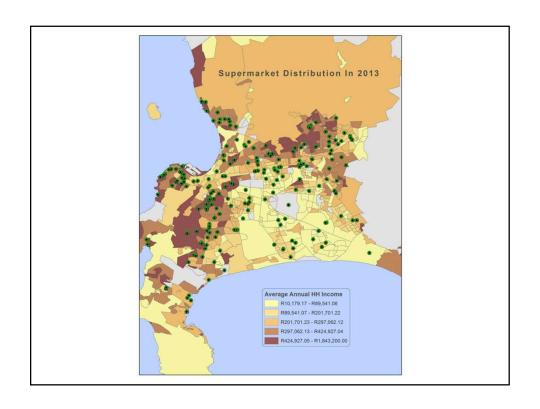


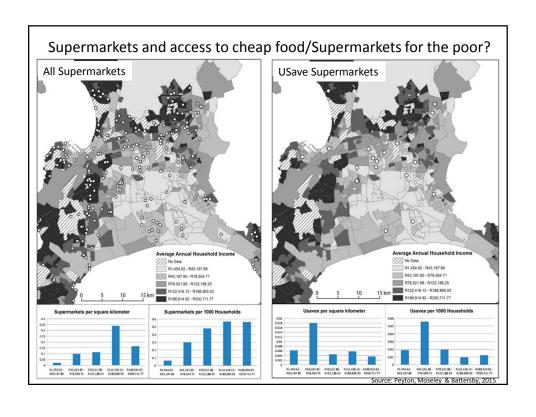


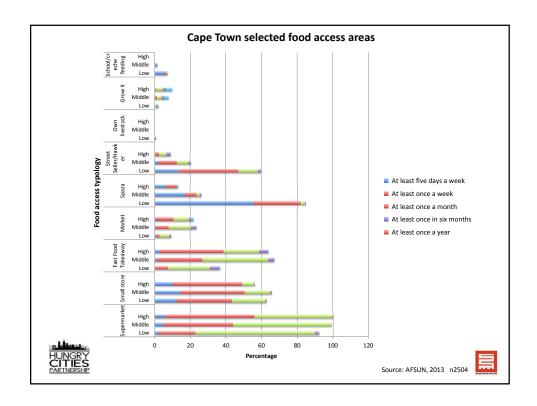












Some emerging trends – structural dominance

- Supermarket sector currently being investigated by the SA Competition Commission ...
 - "The Commission has initiated a market inquiry into the South African grocery retail sector. The Inquiry commenced on 27 November 2015 and is expected to be completed in May 2017. The Commission has initiated the Grocery Retail Market Inquiry as it has reason to believe that there are features present within this sector that may prevent, distort or restrict competition, and to pursue the purpose of the Competition Act."
- Interesting enquiry driven by the SA Consumer Goods Council aimed at the informal sector – mostly associated with counterfeit goods and food fraud – (deflection or misdirection?).





Statutory members of the Consumer Goods Council of South Africa

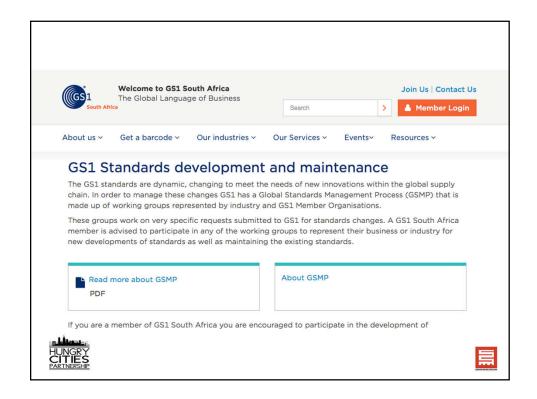
- Gareth Ackerman Chairman, <u>Pick n Pay Stores Limited</u>
- Gwarega Mangozhe Chief Executive Officer. Previously, <u>Internatio Mueller Chemicals Distribution</u> (IMCD) South Africa
- David North Pick n Pay Stores, Group Executive, Strategy and Corporate Affairs
- Richard Rushton Distell, Managing Director
- Remy Ejel Nestle, Market Head, Southern African Region
- Soraya Zoueihid <u>British American Tobacco</u> Southern Africa Area, Area Director
- Paul Verhaak Parmalat, General Manager
- Kelvin Balogun Coca-Cola Southern & East Africa, President
- Spencer Sonn Woolworths Food, Managing Director
- Grattin Kirk Business Executive, Consumer Brands, <u>Tiger Brands</u>
- Llewellyn Steenveldt Group Commercial Executive, Massmart
- Chichi Maponya CEO, Maponya Group
- Abdul Razak Moosa Executive Director, Willowton Group (Sunfoil oils)
- Russel Behrens Financial Executive, <u>Tiger Brands</u>
- Brett Walker Botten CEO, SPAR
- Doug Smollan Chair SACGC Anti- Crime Initiative

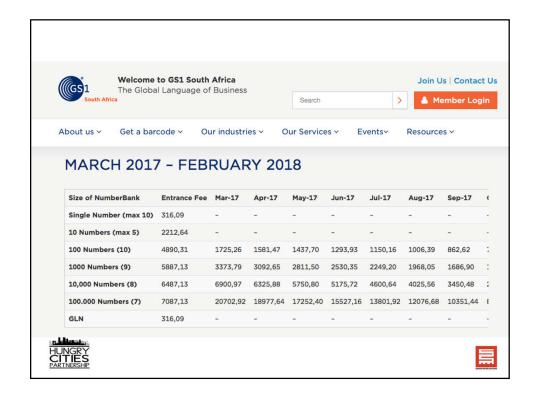


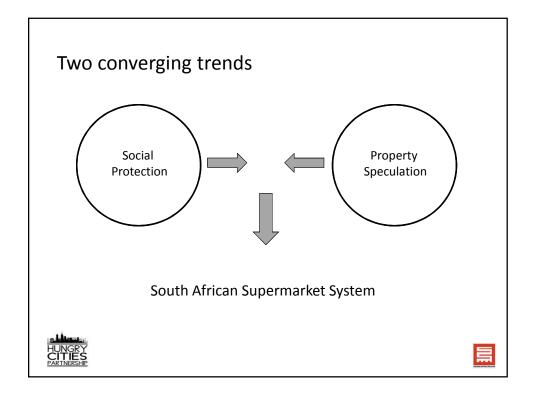
Source: https://www.cgcsa.co.za

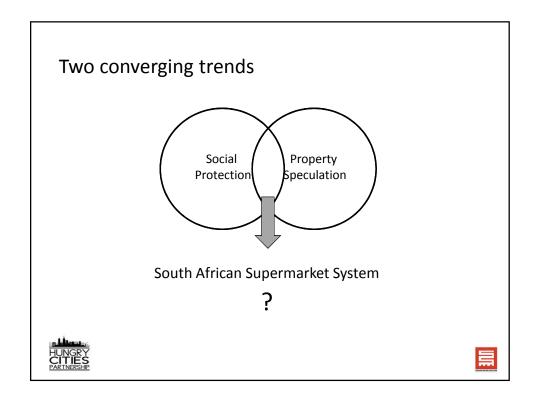












Two converging trends - Mallification

"While local government has no clear formal mandate to address the food system, it is playing a profound role in reshaping the food system through non-food related planning and policy decisions designed to achieve urban development objectives" (Battersby, 2017)

- The literature on supermarket expansion, spearheaded by Reardon's research team, has viewed the
 process as being driven by changes in consumer demand and supply-side determinants (Reardon et
 al., 2004)
- Reardon and colleagues have been surprisingly silent on urban supply-side issues, such as improved urban infrastructure, despite the centering of this expansion in urban areas.
- Nationally, the proportion of the population who had purchased fast food within the past four weeks increased from 66 per cent in 2009 to 80 per cent in 2015 (Maharaj, 2016).
- The impact of the expansion of supermarkets on the food system should therefore be considered as part of a wider set of food system changes brought about by the emergence of the shopping mall (Battersby, 2017).
- The number of shopping centres increased from 1,053 in 2007 to 1,942 in 2015 (Prinsloo, 2016) or 45,489 people per mall in 2007 to 28,321 in 2015.
- While planning decisions technically lie with planning departments, it is clear that a number of other actors play critical roles in shaping the urban retail landscape. These include developers, financiers and investors, market researchers, property management companies and leasing companies, retailers and suppliers, and neighbouring land users (Adatia, 2010)





Two converging trends – Social Protection

Entitlement category	Social protection instrument	Food security objectives		
Production	Input subsidies	Promote food production		
	Crop and livestock insurance	Protect against harvest failure and livestock mortality		
Labour	Public works programmes	Provide temporary employment		
		Create useful and necessary infrastructure		
		Promote agricultural production		
Trade	Food price stabilisation	Maintain market access to food		
	Food subsidies	Keep food affordable for the poor		
	Grain reserves	Ensure adequate market food supplies		
Transfers	School feeding	Reduce hunger		
		Promote access to education		
		Promote local food production		
	Supplementary feeding	Enhanced food consumption		
	Conditional cash transfers	Reduce hunger and poverty		
		Promote children's access to education and healthcare		
	Unconditional cash transfers	Reduce hunger and poverty		

HUNGRY CITIES PARTNERSHIP

Source: HLPE-FNS, 2012: 31



Two converging trends – Social Protection

- The South African social grant system is often hailed as a success (Samson et al., 2002), and a
 model that other African countries could implement (Taylor, 2008).
- Drive to encourage countries to adopt centralized and financialized social protection
 measures

"a specific set of actions to address the vulnerability of people's life through social insurance, offering protection against risk and adversity throughout life; through social assistance, offering payments and in kind transfers to support and enable the poor; and through inclusion efforts that enhance the capability of the marginalized to access social insurance and assistance" (European Communities, 2010: 1)

- The country's social protection system is a vital means of support for a large proportion of society. In 2014, social grants cost the state 3.4% as a proportion of GDP (Phaahla, 2015) - in the 2017/2018 national budget consolidated spending forecast, the state allocated ZAR 232,6 billion to basic education, ZAR 187,5 billion was allocated to health and ZAR 180 billion to social protection (National Treasury, 2017)
- While the South African social grant system may have been ideal, or at least appropriate, at the time of initial implementation, the changes that have taken place in the food system, and in other systems, require a rethinking of how the social grant system is managed.



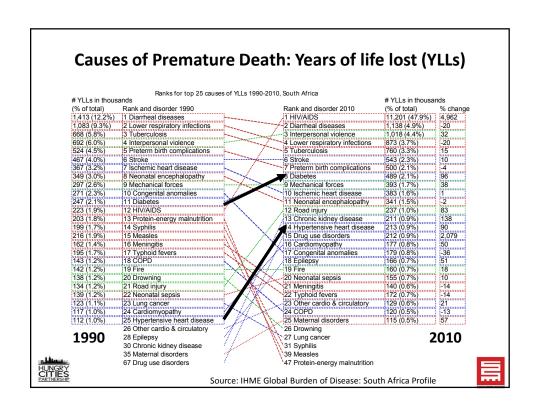












Thank you

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South African Supermarket Expansion into Africa

JEREMY WAGNER



South African Supermarket Expansion into Africa

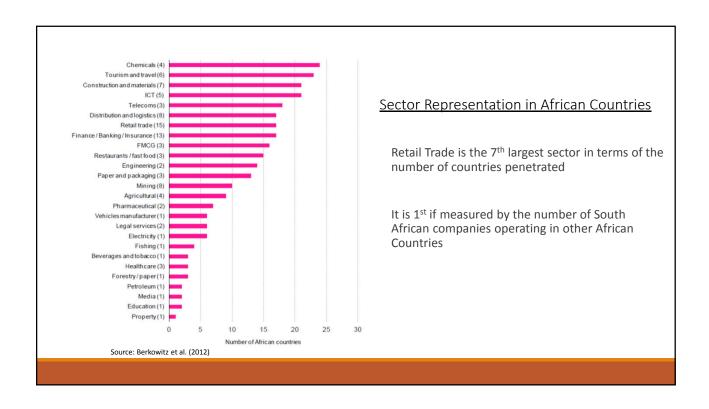


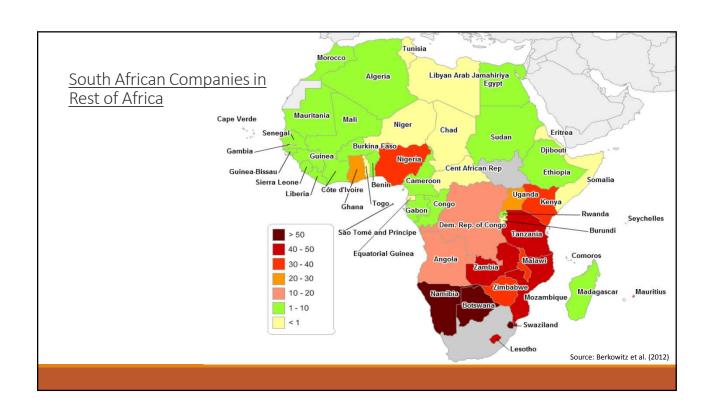
Can be contextualised in the larger trend of 'supermarketisation' occurring globally

The rate of expansion seems to be determined largely by income, urbanisation, and infrastructure and policies that favour supermarket growth

There are large differences in prevalence between sub-regions, countries, cities, and rural areas

The supermarket sector is increasingly and overwhelmingly multinationalised and consolidated





Africa's Top 25 Retailers

Retall revenue rank FY13	Name of company	Headquarter country	Core retail segment 2013	FY13 revenue (US\$ million)	
1	Shoprite Holdings Ltd	South Africa	Food and beverage	9.852.5	
2	Massmart Holdings Ltd	South Africa	General merchandise	7 529.9	
3	Pick n Pay Stores Ltd	South Africa	Food and beverage	6343.3	
4	The SPAR Group Ltd	South Africa	Food and beverage	5 166.7	
5	Woolworths Holdings Ltd	South Africa	Clothing and accessories	3 827.8	
6	The Foschini Group Ltd	South Africa	Clothing and accessories	1 594.1	
7	Mr Price Group Ltd	South Africa	Clothing and accessories	1 557.7	
8	Clicks Group Ltd	South Africa	Health and personal care	1 349.7	
9	JD Group Ltd (Steinhoff International Holdings Limited)	South Africa	Furniture and home furnishings	1 141.3	
10	Truworths International Ltd	South Africa	Clothing and accessories	1 008.2	
11	Label'Vie SA	Morocco	General merchandise	681.9	
12	Choppies Enterprises Ltd	Botswana	Food and beverage	567.9	
13	Lewis Group Ltd	South Africa	Electronics and appliances	523.4	
14	OK Zimbabwe Ltd	Zimbabwe	Food and beverage	483.7	
15	Iliad Africa Ltd	South Africa	Building materials	464.2	
16	Société Magasin Général SA	Tunisia	General merchandise	454.5	
17	PZ Cussons Nigeria Pic	Nigeria	Electronics and appliances	444.7	
18	Meikles Ltd	Zimbabwe	Food and beverage	346.4	
19	Sefalana Holding Company Ltd	Botswana	General merchandise	229.6	
20	Zambeef Products PIc	Zambia	Food and beverage	171.8	
21	Uchumi Supermarkets Ltd	Kenya	Food and beverage	163.8	
22	AVI Ltd	South Africa	Food and beverage	155.7	
23	Furnmart Ltd	South Africa	Furniture and home furnishings	131.6	
24	Edgars Stores Ltd (Edcon)	Zimbabwe	Clothing and accessories	64.8	
25	Rex Trueform Clathing Co Ltd	South Africa	Clothing and accessories	47.4	

Source: Deloitte (2015: 9)

Drivers of South African Supermarket Expansion



The short and long term financial profits to be made by early entry into Africa's rapidly growing urban consumer markets are significant

The growth of an African middle-class is coinciding with higher disposable incomes, changing dietary preferences, heavy expenditure on processed food and a taste preference for food purchase at modern retail outlets

There is a readily available and cheap labour force to utilize in supermarket and value chain operations

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

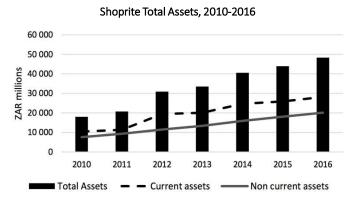
Supermarket supply chain formats achieve major economies of scale when compared to the long, inefficient, and informal food supply chain systems that have historically dominated African food markets.

Shoprite

Operates **1,514** corporate supermarket, hypermarket, and convenience outlets

Operates in **15 countries** across the continent

The company's total assets grew from ZAR18 billion in 2010 to nearly ZAR50 billion in 2016



Source: das Nair and Dube (2017)

Shoprite

	Shoprite	Checkers	Checkers Hyper	Usave	OK Furniture	OK Express	House & Home	Hungry Lion
South Africa	400	180	31	266	255	23	45	124
Angola	7			14	5			7
Botswana	5	1		5	7		1	9
DRC	1							1
Ghana	3			1				
Lesotho	5			6	6	1		3
Madagascar	8							
Malawi	3			3				
Mauritius	3							
Mozambique	8			3	5			
Namibia	18	4		23	11		2	11
Nigeria	10							
Swaziland	9			5	4	1		1
Uganda	3							
Zambia	20			1	2			11
Total	503	185	31	327	295	25	48	167

Angola 33 34 16 Malawi

DRC Mozambique

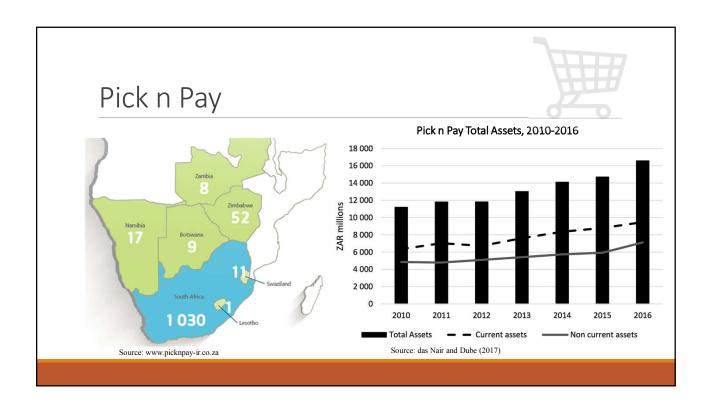
Angola 28 8 Madagascar

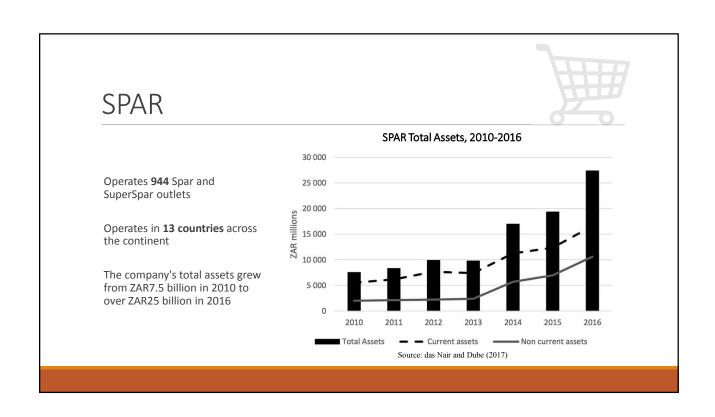
Namibia 20 South Africa

Source: Dakora (2016: 12)

Source: Shoprite Integrated Report 2014

SHOPPITE



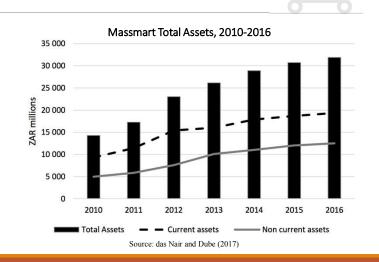


Massmart

GAME division operates **165** outlets

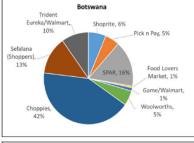
Operates in **13 countries** across the continent

The company's total assets grew from ZAR14.5 billion in 2010 to over ZAR25 billion in 2016

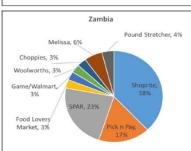


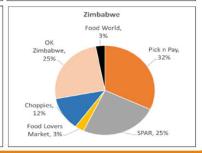
Woolworths Woolworths Total Assets, 2010-2016 60 000 Operates 397 food retailing 50 000 outlets 40 000 ZAR millions Operates in 11 countries across 30 000 the continent 20 000 The company's total assets grew from ZAR9 billion in 2010 to 10 000 over ZAR50 billion in 2016 Source: das Nair and Dube (2017)

Supermarket Presence in Botswana, South Africa, Zambia and Zimbabwe









Source: das Nair (nd)

Questioning Supermarkets



Are local producers, processors, and transporters integrated into supermarket procurement practices?

What is the relationship between supermarkets and informal food retailers and does the growing presence of supermarkets inhibit or stimulate the informal food economy?

What are the implications of growing presence of modern food retailing in Southern Africa for food environments and food security of the urban poor?

Do supermarkets make food more affordable and do they provide for a more diverse and nutritious diet?

Is the rise of supermarkets partially responsible for the coinciding rise in NCDs?

What are the policy implications across all these issue areas and through various levels of governance?

Supermarkets Patronage in Windhoek

Lawrence N. Kazembe









Outline

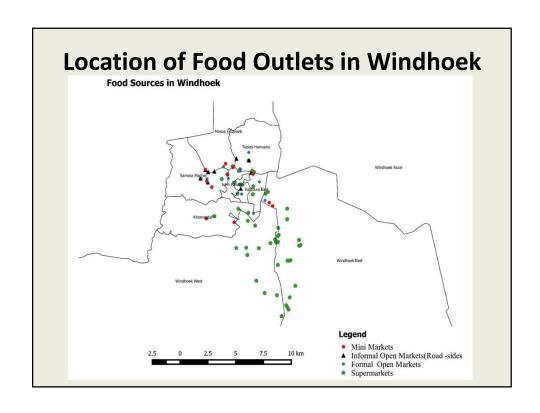
- Distribution of Supermarkets
- Supermarkets as main source of food
- Frequency of Food Purchases
- Supermarkets Domination of Food Purchasing
- Consumer Attitudes of Supermarkets
- Impacts of Supermarkets Food Sector

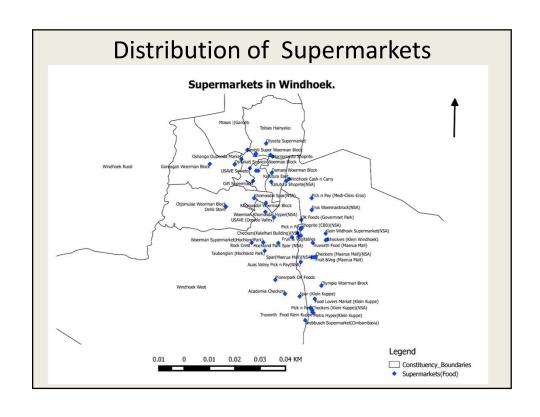


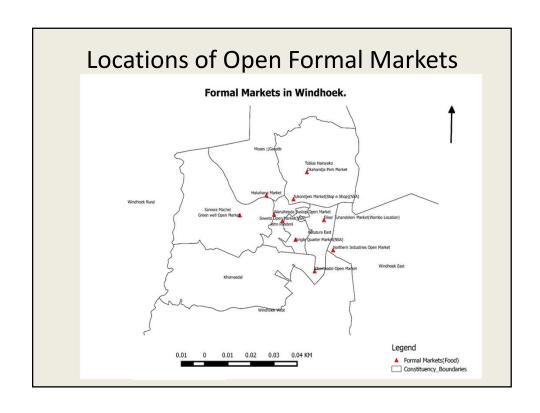


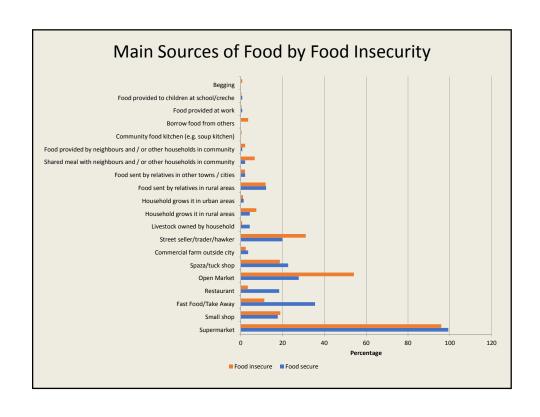


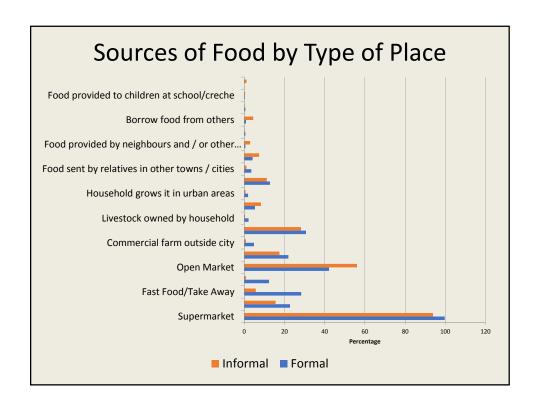


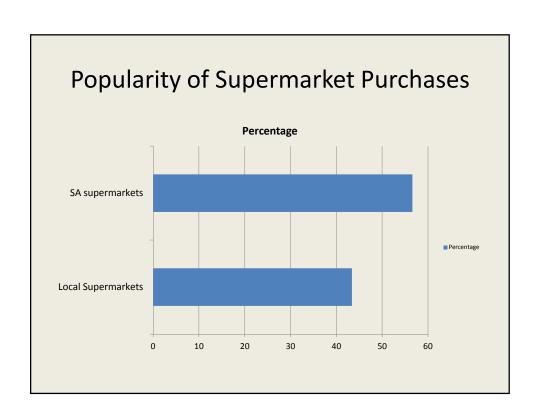


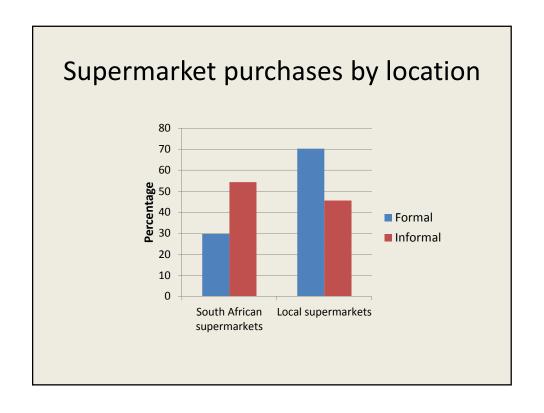










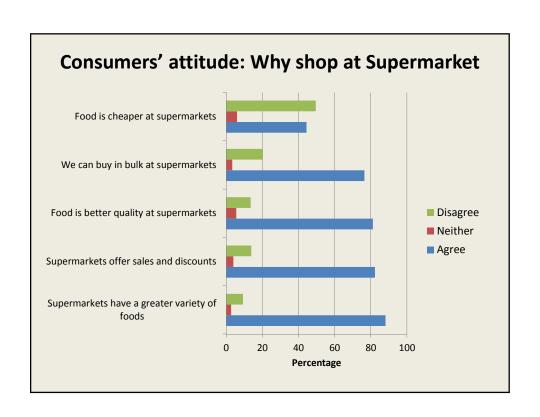


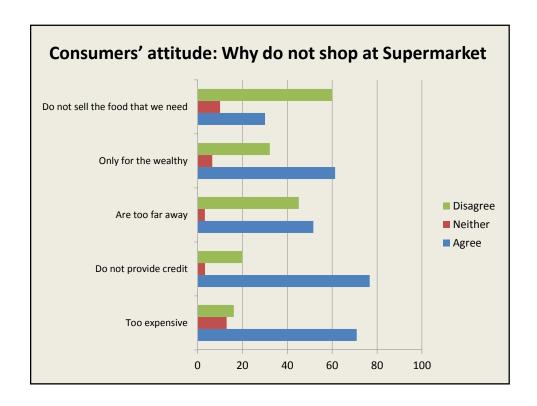
No. 316 80 34	
80	68.1 17.2
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34	7.3
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11	2.4
6	1.3
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1	0.2
464	100.0
	11 6 1



	Food p	urchas	es	
	Super market	Open Market	Spaza/ tuck shop	Street Vendor
Bread	53.5	1.2	27.8	0.6
Meat	61.1	20.0	0.3	5.1
Vegetables	77.5	11.6	1.1	8.0
Fish	46.0	16.6	2.4	26.6
Offal	38.1	29.9	2.1	18.6
Frozen Fish	80.0	15.4	3.1	1.5
Pies/vetkoek	53.0	9.6	18.1	10.8
Cooked Meat	51.1	27.3	0.0	3.0
Cooked Fish	64.0	24.0	4.0	0.0
Snacks (crisps etc)	66.3	2.0	11.9	14.9
Sweets/chocolate	57.0	4.3	18.3	15.1

Frequ	ency	of fo	od p	urcha	ase	
		Freque	ency of pu	rchase fro	m the sou	rce (%)
	% of HH	At least five days a week	At least once a week	At least once a month	At least once in six months	At least once a year
Supermarket	96.5	4.5	16.5	65.7	12.4	0.8
Small shop	18.6	11.9	60.0	22.5	5.6	0.0
Fast Food/Take Away	15.5	5.1	39.4	48.5	4.8	2.3
Restaurant	5.8	8.2	49.0	36.7	4.1	2.0
Open Market	49.8	17.6	46.2	19.5	16.2	0.5
Spaza/tuck shop	19.4	50.9	41.2	7.3	0.6	0.0
Street seller/trader/hawker	29.2	49.8	33.7	6.8	9.6	0.0





Where do we stand

- The supermarket revolution in in Namibia in general, and Windhoek particular mirrors those in Zambia, Botswana
 - Where South- African supermarket giants are dominant and ever-present;
 - Offer food security across the city
 - Provides dietary diversity to many households
 - Overall: Food systems have been transformed ["market transnationalized"].
- Growth of local markets and competition
 - May offers unfair competition to small traders [monopolistic tendencies through "market concentration"]
- Do supermarkets contribute to the obesity pandemic in developing countries?
 - How much of NCD is associated with the spread of supermarkets in Windhoek.

Acknowledgements









THE IMPLICATIONS OF SOUTH AFRICAN SUPERMARKETS ON HOUSEHOLD FOOD SECURITY IN WINDHOEK, NAMIBIA

Ndeyapo Nickanor

The Supermarket Revolution and Food Security in Namibia 24 October 2017, Windhoek, Namibia











Introduction

- Food insecurity is a challenge for most countries in the Global South. Namibia is not an exception as a significant proportion of its population still remains in poverty and is therefore vulnerable to food insecurity.
- The focus on urban food security in urban Namibia is fairly recent.
- The neglect of urban food insecurity research is largely due to the traditional conceptualization of urban areas as being more developed.
- Food insecurity a major challenge in Southern African cities
- Although urbanization and modernization is associated with increased income and improved nutrition it is not clear whether the urban poor are reaping the benefits given the rising income inequalities which manifest in food insecurity









Introduction

- Most measures whether based on income, consumption or expenditure, show that rural poverty is deeper and more widespread than in the cities
- However, although urban centres offer better access to health, education, basic infrastructure, information, knowledge and opportunity, poverty is rapidly increasing thereby increasing associated health problems
- Recent studies have shown that Southern Africa is rapidly urbanizing, that urban poverty and malnutrition is growing and that the poor are urbanizing faster than the non-poor

Objectives

 To assess the impact of growing supermarkets on food security.









Methodology

- During 2016, the Department of Statistics and Population Studies in partnership with AFSUN, HCP at UCT and Balsillie School for International Affairs in Canada collected information from 875 households in Windhoek
- Households were identified using two-stage sampling, PSU were randomly selected with probability proportional to size, then households were systematically selected in each identified PSU









Poverty and Food Insecurity in Windhoek

- According to 2016 NHIES, 13% of households were poor (those spending N\$520.80 per month); 9% were severely poor (spending N\$389.30 per month)
- In the informal settlements 21% were severely poor and 29% were poor
- Levels of poverty and severe poverty were highest in femalecentred households
- Severe poverty more in Tobias Hainyeko, Moses Garoeb and Windhoek Rural









Income Poverty in Windhoek

Table 1: Income Poverty Levels by Constituency

	Severely Poor %	Poor %
	%	%
Moses Garoeb	43.0	34.8
Tobias Hainyeko	16.5	19.6
Windhoek Rural	13.9	14.3
Samora Machel	12.7	13.4
Khomasdal	7.6	7.1
Katutura Central	3.8	4.5
John Pandeni	2.5	1.8
Windhoek East	0.0	0.0
Katutura East	0.0	4.5
Windhoek West	0.0	0.0









Levels of Food Insecurity in Windhoek

Food Insecurity Prevalence by Housing Type and Location

	Food Secure	Food Insecure
	%	%
Housing		
Formal	27.6	72.4
Informal	8.0	92.0
Constituency		
Windhoek East	72.7	27.3
Windhoek West	47.7	52.3
Katutura East	21.3	78.7
John Pandeni	16.9	83.1
Samora Machel	16.1	83.9
Khomasdal	14.0	86.0
Tobias Hainyeko	11.1	88.9
Moses Garoeb	10.8	89.2
Katutura Central	9.6	90.4
Windholek Rucal A M I UNIVERSITY C	F CAPEROWN	9.0



Levels of Food Insecurity in Windhoek

Table 3: Food security prevalence in Windhoek compared to other African cities

	Food Secure	Mildly Food Secure	Moderately Food Insecure	Severely Food Insecure
	16.4	3.4	13.1	67.1
Windhoek, Namibia 2016	(n=141)	(n=29)	(n=113)	(n=577)
Windhoek, Namibia 2008	18	5	14	63
Harare, Zimbabwe 2008	2	3	24	72
Lusaka, Zambia 2008	4	3	24	69
Maseru, Lesotho 2008	5	6	25	65
Maputo, Mozambique 2008	5	9	32	54
Manzini, Swaziland 2008	6	3	13	79
Msunduzi, South Africa 2008	7	6	27	60
Gaborone, Botswana 2008	12	6	19	63
Cape Town, South Africa 2008	15	5	12	68
Blantyre, Malawi 2008	34	15	30	21
Johannesburg, South Africa 2008	44	14	15	27









Household Dietary Diversity in Windhoek

Food Group	Types of foods consumed	Food secure % of	Food insecure
		Surveyed	% of
		Households	Surveyed
			Households
1	Pasta, bread, rice noodles, biscuits or any other foods made from flour, millet, sorghum, maize, rice, wheat, or oats	94.9	97.3
2	Potatoes, sweet potatoes, beetroots, carrots or any other foods made from them	25.5	8.9
3	Other vegetables	27.0	20.1
4	Fruits	14.6	4.2
5	Beef, pork, lamb, goat, rabbit, wild game, chicken, duck, other birds, chicken heads and feet, liver, kidney, heart, or other organ meats/offal or products	78.8	45.6
6	Eggs	12.4	4.0
7	Fresh or dried fish or shellfish	13.1	23.3
8	Foods made from beans, peas, lentils, or nuts	8.8	5.6
9	Cheese, yoghurt, milk, or other milk/dairy products	26.3	12.8
10	Foods made with oil, fat, or butter	54.0	25.5
11	Sugar or honey	55.5	30.8
12	Other foods such as condiments, coffee, tea	49.6	23.4









Frequency of sourcing food from different outlets

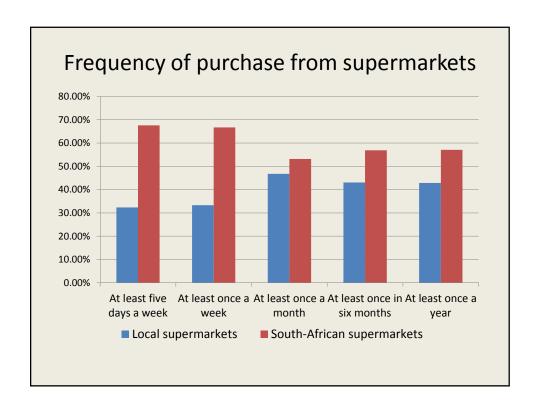
		F	requency of p	ourchase fron	n the source (9	%)
	% of	At least five days per week	At least once per week	At least once per month	At least once in six months	At least once per year
Cunarmaniat	96.5	4.5	16.5	65.7	12.4	0.8
Supermarket	96.5	4.5	10.5	05.7	12.4	0.8
Small shop	18.6	11.9	60.0	22.5	5.6	0.0
Fast Food/Take Away	15.5	5.1	39.4	48.5	4.8	2.3
Restaurant	5.8	8.2	49.0	36.7	4.1	2.0
Open Market	49.8	17.6	46.2	19.5	16.2	0.5
Spaza/tuck shop	19.4	50.9	41.2	7.3	0.6	0.0
Street seller/trader/hawker	29.2	49.8	33.7	6.8	9.6	0.0











Conclusion

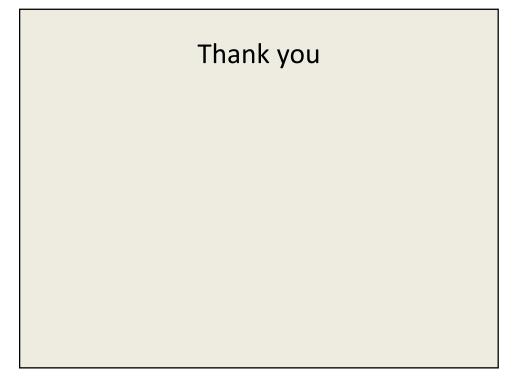
- Household Food insecurity is determined size of household; sex of household head, location, income levels
- Levels of food insecurity in Windhoek are going up despite the reduction in overall poverty
- Limited dietary diversity, average 3.2 (out of 12), less quality of diet
- Most households in Windhoek purchase food from supermarket, (65.7% monthly shopping), tuckshop and street vendors (50% almost everyday)



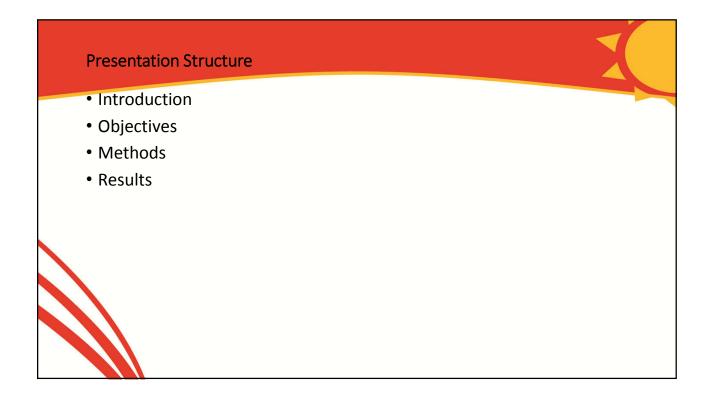












Introduction

- The three major components underlying food security are food availability, accessibility and utilization.
- Intake of a variety of foods and food groups over a specified period is critical to ensuring adequate intake of essential nutrients that promote good health and well-being (Ruel, 2002).
- Dietary diversity is not only viewed as a proxy measure of food security (Hoddinott and Yohannes, 2002), but has become an important measure of the diverse diet and by implication an indicator of nutritional adequacy and quality (Foote, *et al.*, 2004).
- Consumption of a higher number of food items and food groups is associated with positive health outcomes such as birth weight, child anthropometric status (Hoddinott and Yohannes, 2002); improved nutritional adequacy (Hatloy, *et al.*, 1998).
- Dietary diversity is also highly correlated with caloric and protein adequacy; reduced complications of diabetes among adults (Wahlqvist, *et al.*, 1989), reduced incidence of cancers Fernadez, *et al.*, 1996; Lucenteforte, *et al.*, 2008).
- A number of studies have shown, that DDS is positively associated with overall dietary quality (Slevy, et al., 2006; Kennedy et al., 2007)

Objectives of the study

- In developing countries, deficiencies of selected micronutrients prevalent among young children and women of childbearing age were found to be associated with birth defects, growth restriction, impaired cognition and increased morbidity and mortality (Black, et al., 2008).
- A limited or lack of dietary diversity is primarily responsible these deficiencies particularly among population groups of concerns in developing countries.
- Understanding dietary intakes among children is important in order to develop evidence-based strategies.
- The purpose of the study is to describe patterns dietary diversity among children under five in Namibia as a proxy of food security.
- In addition, we explore a variety of count models to establish the determinants of dietary diversity among children in Namibia.

Methods

- Secondary data from the Namibia Demographic and Health Survey NDHS (2013), from a cross-sectional sample of representative mothers from all the regions was used.
- The woman responded to dietary questions regarding the feeding of their children.
- The responses were used to compute a dietary diversity score (DDS) given by the total number of food groups consumed by the children out of the recommended 12.
- DDS is the sum of the different food groups consumed by each child, ranging from 1 to 12 according to FANTA criteria(Swindale and Bilinsky, 2006).

Methods

- Bread, noodles, other made from grains; Potatoes, cassava, or other tubers; Eggs; Meat (beef, pork, lamb, chicken, etc); Pumpkins, carrots, squash (yellow or orange inside); Dark green leafy vegetables; Mangoes, papayas, other vitamin A fruits; Any other Fruits
- Liver and heart organs; Fish or shell fish; Food made from beans, peas, and lentils; and Cheese, yoghurt, and other milk products)
- A DDS of <5 reflects poor dietary diversity and poor food security.
- Independent variables such as wealth index, region, mother's highest educational level, religion, ethnicity, marital status and place or residence, to establish the determinants of dietary diversity in children.

Statistical Models for factors influencing dietary diversity

- <u>Dependent Variable</u>: The number of food groups consumed (measured by the DDS) is a count variable (1-12)
- <u>Independent variables e.g</u> wealth index, region, mother's highest educational level, religion, ethnicity (main language spoken at home), marital status and place or residence etc,
- To establish the determinants of dietary diversity in children a variety of count regression models can be explored namely
 - ➤ Poisson Regression
 - Quassi-Poisson
 - Negative Binomial
- Zero-inflated and Hurdle regression models do not apply here since every living child has to consume at least one of the food groups to continue to exist!
- The best model will be chosen based on AIC, BIC or other goodness of fit criteria

Poisson regression model

Let (y_i, x_i) denote n independent observations and $\mu_i = E(y_i | x_i)$ then $y_i | x_i \sim P(\mu_i)$ so that

that $\mu_i = h(\mathbf{x}_i^T \boldsymbol{\beta})$ or $g(\mu_i) = \mathbf{x}_i^T \boldsymbol{\beta}$ where g is a known link function of $\mu = g^{-1}$ denotes the response function. Since the Poisson distribution is from the exponential family, the model is a generalized linear model. The most widely used model uses the canonical link function by specifying

$$\mu_i = \exp(\mathbf{x}^T \boldsymbol{\beta}) \text{ or } \mathbf{x}^T \boldsymbol{\beta}$$

Negative binomial distribution

If one assumes for the random parameter b_i the Gamma distribution r(v, v), the mean fulfils $E(b_i) = 1$ and obtains for the marginal probability

$$P(y_i) = \int f(y_i|b_i)f(b_i)db_i$$

$$= \int \left(e^{-b_i \mu_i} \frac{(b_i \mu_i)^{y_i}}{y_i!}\right) \left(\frac{v^v}{\Gamma(v)} b_i^{v-1} e^{-vb_i}\right) db_i$$

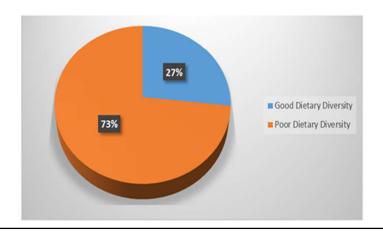
$$=\frac{\Gamma(y_i+v)}{\Gamma(v)\Gamma(y_i+v)}\Big(\frac{\mu_i}{\mu_i+v}\Big)^{y_i}\Big(\frac{v}{\mu_i+v}\Big)^{v}$$

which represents the Negative Binomial distribution $NB(v, \mu_i)$ with mean and variance given by

$$E(y_i) = \mu_i = \exp(\mathbf{x}_i^T \boldsymbol{\beta})$$
 and $Var(y_i) = \mu_i + \frac{{\mu_i}^2}{v}$

Results: Dietary Diversity Pie Chart

- Only 27% of the children had a good dietary diversity.
- The rest of the children had a poor dietary diversity (73%).



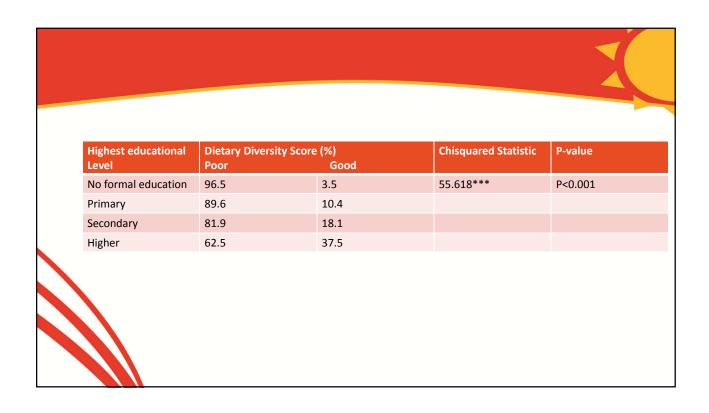
Results: Histogram showing distribution of DDS scores for the children • FANTA (Swindale and Bilinsky, 2006), DDS ranged from 1 to 11 with a mean of 3.52 and a standard deviation of 2.41; [95% CI: 3.38 – 3.67]. • The dietary diversity scores were skewed towards very few food groups.

Diversitytotal

Percentage of respondents who gave their child food from the indicated dietary category · There was very little Percentage of respondents who gave their child the indicated dietary consumption of foods category from all other groups Gave ChildCheese, yorghurt and other milk products 3.3 except for the Gave Child Foods made from beans, peas, lentils, and nuts 2.1 Gave Child Fish or shell fish 5.2 Bread, Noodles and Gave Child Liver, heart, other organ 3.6 other grains group Gave Child Any other fruits 5.9 Gave Child Mangoes, papayas, other vitamin A fruits 2.4 (41.2%);Gave Child Dark green leafy vegetables 4.5 Potatoes, cassava, and Gave Child Pumpkin, carrots, squash (yellow or orange inside) 4.4 other tubers (19.2%); Gave Child Meat (beef, pork , lamb, chicken, etc) 9.7 Gave Child Eggs and to a lesser extend Gave Child Potatoes, cassava, or other tubers eggs (15.5%). Gave Child Bread Noodles and other made from grains 0 5 10 15 20 25 30 35 40 45

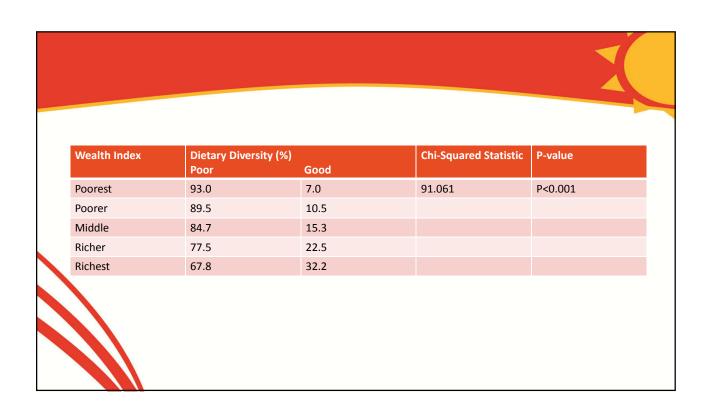
0 87.8 12.2	Respondent currently Working?	Dietary Diversit		Chi-Squared statistic	P-value
	NI-	Poor	Good	30.299***	P<0.001
	vo Yes				

Region	Dietary Dive	ersity Score (%)	Chi-Squared Statistic	P-value	
	Poor	Good	118.732***	p<0.001	
Caprivi	84.1	15.9			
Erongo	67.8	32.2			
Hardap	90.2	9.8			
Karas	68.1	31.9			
Kavango	87.2	17.3			
Khomas	64.8	35.2			
Kunene	90.9	9.1			
Ohangwena	92.6	7.4			
Omaheke	90.1	9.9			
Omusati	94.6	5.4			
Oshana	89.1	10.9			
Oshikoto	85.7	14.3			
Otjozonjupa	86.7	13.3			

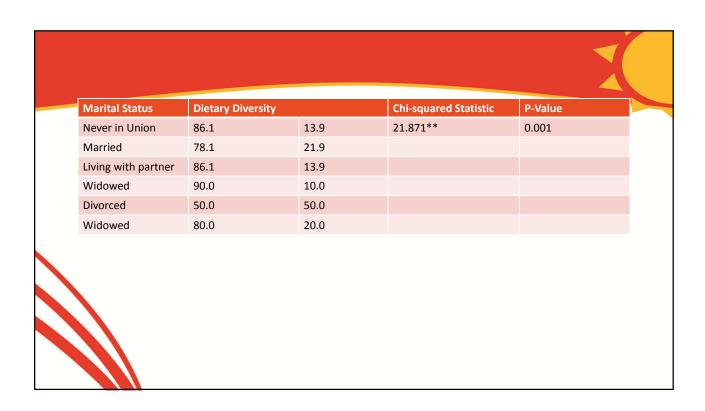


Religion	Dietary Diversity Poor	Score (%) Good	Chi Squared Value	P-value
Roman Catholic	82.3	17.7	11.337*	P=0.045
Protestant Anglican	86.2	13.8		
ELCIN	84.2	15.8		
Seventh Day Adventist	84.6	15.4		
No religion	97.7	2.3		
Other	78.7	21.3		

ex of household ead	Dietary Diversity Poor	Good	Chi-squared Statistic	P-value
lale	82.6	17.4	2.997	P=0.083
emale	85.6	14.4		



Main Language Spoken at home	Dietary Divers	sity Score (%)	Chi-squared Statistic	P-value
Afrikaans	72.1	27.9	36.783	p<0.001
Damara/Nama	84.7	15.3		
English	70.0	30.0		
Herero	87.8	12.2		
Kwangali	83.5	16.5		
Lozi	84.0	16.0		
Oshiwambo	86.7	13.3		
San	94.4	5.6		
Others	69.5	30.5		



Poor Good Statistic 15-19 88.1 11.9 6.378 0.38
15-19 88 1 11 9 6 3 /8 (1 3)
20-24 85.5 14.5
25-29 83.4 16.6
30-34 83.1 16.9
35-39 80.8 19.2
40-44 82.8 17.2
45-49 90.9 9.1

Count models performance criteria				
Model	AIC	BIC		
Poisson Regression	8078.816	8364.729		
Negative Binomial****	6444.857	6785.753		
Also considering Ordinal Regression?				

• What remains

- 1. Establish the socioeconomic factors influencing dietary diversity based on the Negative Binomial regression model with logit link
- 2.Interpret the effect of each factor.

THANK YOU

INFORMAL FOOD VENDORS IN WINDHOEK, NAMIBIA

Ndeyapo Nickanor and Lawrence Kazembe

24 October 2017, Windhoek, Namibia











Objectives

 To examine the perception of street food vendors on poverty, experience with food sourcing, interaction with wholesales/supermarkets. Examine they types of products and challenges



Location where vendors operate from

In front of supermarkets



In Open Markets



Location where vendors operate from

Road sides



Mobile stalls



Location where vendors operate

- At construction sites
- From homes
- At major road intersections
- In front of government ministries

Reasons for engaging in street food vending

- There are limited opportunities to engage in to earn or supplement main income
- For survival, lack of alternative livelihood strategies

Sources of products

- I buy mainly in Shoprite, Pick n Pay, Checkers and sometimes in Spar because I check where there is a sale. The type of food I buy is mainly macaroni, rice, cooking oil and meat which I can buy maybe twice a month (KI Interview No 1, Moses Garoeb).
- If I want to do a proper grocery, including detergent, then at least I will use N\$2,000. I mostly buy in Metro, OK Foods at Baines and Spar. I buy staple food like rice, maize meal, meat, vegetables, coffee and tea. I try to do big shopping once a month and I only add products every week or every second week. I have noticed people tend to use shops that are close to their work places (KI Interview No. 2, Windhoek West).
- I use about N\$900 to buy food per month and I only buy food except relish and meat. I buy maize meal, cooking oil, macaroni, beans, mayonnaise and whatever we need and this can last up to 23rd of that month and then I have to supplement. I buy in Shoprite, Namica and Cash and Carry and sometimes at Woermann Brock because there it's better (KI Interview No. 3, Tobias Hainyeko).

Sources of products

- Overall there is a high tendency towards supermarket patronage
- Supermarket shopping tends to be a monthly activity
- For people living in informal settlements supermarket patronage is lower, due to constraints such as lack of refrigeration, thus fresh produce, when it can be afforded is purchased frequently:
- When we get money then we buy maize flour which lasts five days, but meat or fish you have to buy everyday because we do not have electricity in order for us to buy a fridge where we can store our meat and perishables. Thus for every meal you buy a piece of meat or fish which is just enough for that time (Interview No. 23).
- Every decent meal consists usually of maize meal or mahangu pap eaten with dried fish or meat when there is money to purchase the meat or fish. That is what we eat here every day. Even if you find chicken or vegetables on sale in the formal shops you will not buy it. Where are you going to store it? There is no electricity here and no refrigerator (Interview No. 26).

Distance constraints

- When there is no money then it's a struggle. At times I use N\$1,000 per month buying food only. This informal settlement (Havanna) is far from the main town and any other retail shops. Furthermore, there is no tarred road here and taxis hardly want to bring people this side if they do not charge exorbitant amounts. We are really far from town the closest food store is the Woermann Brock in Wanaheda but you can't foot there. There are local shops here but they are much more expensive (Interview No. 27).
- I use a lot of money to buy food and we buy it from formal retail shops at Shop 'n Stop. There is also a local shop here where we buy from because if you compare the prices it does not matter. At the end of the day you end up paying more for transport. (Interview No. 41).
- Shoprite, Woermann Brock and Pick n Pay are our preferred shops, but they are far from us. Maybe if they set up their shops here we will get electricity. For now we use a lot of money on transport to go to those shops, especially when you hear that there is a sale. A 50kg bag of maize is cheaper in those shops as compared to our local shops here. But you have to pay the taxi driver double to bring you up to your house with your goods (Focus Group No. 2).

Impact of Supermarkets on Informal Food sector

- The informal sector in Windhoek has not attracted a lot of research, partly due to its relatively small size, however the sector is providing employment to more than 64 000 people (NLFS, 2008).
- Most participants in the informal food sector are survivalist they support household needs rather than investing in business expansion
- I do not really fell happy about the ever-growing supermarkets in our area. Like now the new Woermann Brock at Monte Cristo service station took some of our customers. These shops are providing competition for me and my profit has decreased over the past months. Here we are only remaining with those customers that are not able to go buy at these shops or we can only get customers after hours when the shops are closed (Interview No. 8).
- Competition from supermarkets is always there. I can give you an example of stuff that can go
 without selling if there is a special in supermarkets. My milk I sell at N\$19.50 but will reduce
 whether there is a sale in town or not. Like in shops now, it is N\$13 so I don't do business like I
 always do (Interview No. 9).
- People from this area always go shop from supermarkets if they find out that I do not sell the goods that they are looking for. These shops are giving us difficulties in selling our goods sometimes. Most of the time people buy from the supermarkets on their way from work and end up not buying from our stands. I throw away all foods that I am not able to sell when they are spoiled. Sometimes I reduce the prices of the foods that I am not able to sell over a long period to avoid making a loss for that particular month (Interview No. 11).

Challenges experienced by Informal Food Vendors

- The problem is my space here in the market is very close to a tree, which has very small leaves, and these leaves are falling in the dry food, so I'm forced to cover the food with plastics and the customers are also complaining about this covering. The other issue is also those that are selling outside the market we are paying here in the market (about N\$ 70 per month) and they don't and some customers just buy from those selling outside instead of coming into the market (KII No. 2)
- The other challenge which we are facing is that of competition. There are now a lot of milling machines here in Windhoek and they are killing our businesses because they are selling mahangu flour at very low prices. (KII No.2)
- When the tomatoes are in stock for a long time they go bad so we use them at home or I give them to my friends or neighbours within a specific time after purchase. (KII No. 3)
- The challenges I am facing is with the shortage if people to help me run the business when I am not around. I always have to close my stand if I have to go somewhere. I also need more money to buy stock and I do not always make enough profit to buy stock and to sustain myself.(KII No.7)

Challenges experienced by Informal Food Vendors

- I have been having problems of breaking-in in my stall. I have to install a burglar door at my own
 cost to prevent thieves from entering my stall. The other problem is the location of the market,
 sometimes it become difficult for us to get customers here. The market is located far from
 houses.
- I also have a problem of protection around this area. Sometimes I would want to sell up to 22h00, but due to absence of police patrols in the area. I only open until 18:00 and go home before it get dark.
- The other problem I have is with protection in the Open Market. Some customers undermine the security personnel deployed at the open market, and they end up asking for things knowing that they are not going to pay for them. When I call a security then they end up insulting or beating the security when he/she intervenes. The securities that are protecting our goods here are not well equipped.
- The other issue I have is with the Municipality regarding cleaning. Earlier on, we had cleaners assigned to clean around the open market, and now those cleaners have stop coming here. Now we have to come here early to clean around our stalls and help customers at the same time. I am paying a lot of money for this stall, the municipality need to provide us with information why the cleaners have stopped coming.
- Currently I am also faced with problem of cash flow. This year the business is not really going well
 compared to last year. Sometimes I struggle to make enough fund to buy stock, buy electricity and
 pay for the stall.

Conclusion

- This study has demonstrated that there is a mutual beneficial coexistence between supermarkets and informal food vendors
- Informal food vendors have filled a gap created by the absence of supermarkets
- Low income households mainly source food from the informal sector



Workshop Attendees

No	Name	Organisation
1	Tobias Shinyemba	University of Namibia (UNAM)
2	Prof. Nelago Indongo	MRC, UNAM
3	Aposte Marson Sharpley	Khomasdal Constituency Office
4	Klemens Mutorwa	UNAM
5	Dr. Lilian Pazvakawambwa	UNAM
6	Innocent Kamwi	UNAM
7	Japhet Iilonga	Ministry of Gender
8	Joseph Hausiku	Namibia Competition Commission
9	Dr Opeoluwa Oyedele	UNAM
19	Matheus Ndjodhi	Ministry of Agriculture, Water and Forestry
11	Werner Tjipueja	UNAM
12	Mubukwanu Semi	Office of the Governor, Khomas Region
13	Jeremy Wagner	НСР
14	Maria Salamone	НСР
15	Jennifer Kandjii	Basillie School
16	Zuvee Kahitu	NSA
17	Immanuel Shipanga	UNAM
18	Dr. Michael Akuupa	Labour Research and Resources Institute
19	Peter liyambo	UNAM
20	Hendrina Kanyolo	One Africa
21	Castro Uulumbu	One Africa
22	Jacob Penda	Namibia Food and Allied Workers Union
23	Tsukhoe M. Garoes	Ministry of Urban and Rural Development
24	Prof. Lawrence Kazembe	UNAM
25	Serafia Mungandjera	Khomasdal Constituency
26	Dr. Ndeyapo Nickanor	UNAM
27	Dr. Gareth Haysom	African Centre for Cities
28	Frans Shuuya	Ministry of Agriculture, Water and Forestry
29	Lohja Amakali	Ministry of Agriculture, Water and Forestry
30	Prof Jonathan Crush	AFSUN/HCP

