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HUNGRY CITIES OF THE GLOBAL SOUTH

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Abstract

The recent inclusion of an urban Sustainable Development Goal in the Post-2015 UN Development Agenda represents an important acknowledgement of the reality of global urbanization and the many social, economic, infrastructural and political challenges posed by the human transition to a predominantly urban world. However, while the SDG provides goals for housing, transportation, land use, cultural heritage and disaster risk prevention, food is not mentioned at all. This discussion paper aims to correct this unfortunate omission by reviewing the current evidence on the challenges of feeding rapidly-growing cities in the Global South. The paper first documents the magnitude of the urban transition and the variety of indicators that have been deployed to measure the extent of food insecurity amongst urban populations. It then looks at the way in which urban food systems are being transformed by the advent of supermarkets (the so-called “supermarket revolution”) and the growth of the informal food economy. The final section of the paper examines the relationship between formal and informal food retail and asks whether the one is undermining the other or whether they co-exist in an uneasy, though symbiotic, relationship. Against this backdrop, the secondary purpose of the paper is to lay out a research agenda which will guide the Hungry Cities Partnership as it attempts to give greater global prominence to the critical but neglected issue of urban food systems and food insecurity.

Keywords

food security, food economy, urbanization, inclusive growth, cities, informality

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“Food and cities are so fundamental to our everyday lives that they are almost too big to see. Yet if you put them together, a remarkable relationship emerges” (Steel 2008: ix)

Introduction

The recent inclusion of an urban Sustainable Development Goal in the Post-2015 UN Development Agenda represents an important acknowledgement of the reality of global urbanization and the many social, economic, infrastructural and political challenges posed by the human transition to a predominantly urban world. However, while the SDG provides goals for housing, transportation, land use, cultural heritage and disaster risk prevention, food is not mentioned at all. This is only the latest example of a more chronic problem. With few exceptions, food insecurity in the Global South has been sidelined in urban research and policy-making over the last decade (Crush and Frayne, 2011a). Similarly, any residual concern with urban food security has been swept aside by the new international food security agenda and its pro-smallholder farmer and anti-urban bias. When the UNDP (2012) called for “inclusive growth and people-centred approaches to food security”, for example, it framed the issue purely as a matter of rural production and employment (Dev 2008, Hanson 2013, Spoor and Robbins 2012). The only aspect of urban food security that has commanded significant attention has been urban agriculture, which is widely but improbably seen as the key to cities feeding themselves (Badami and Ramankutty 2016, Crush et al 2011, Lee-Smith 2010, 2012). In fact, there was a great deal more research and policy debate on urban food security in the 1990s, when the South was far less urbanized than it is today (Maxwell 1999).

The challenge of building sustainable and inclusive cities has been identified as one of the major critical development issues of the 21st Century (Birch and Wachter 2011, Martine et al 2012, Mitlin and Satterthwaite 2013, Parnell and Walawege 2011). However, the blinkered approach of both the urban

development and food security agendas ignores the reality that the Global South is in the midst of a major urban transition (Beall et al 2013, Fox 2014, Kessides 2006, Parnell and Pieterse 2014, Pieterse 2008, Satterthwaite 2006). By 2020, the urban population of developing countries is expected to exceed 50%. Over the next 30 years, virtually all of the anticipated 3 billion increase in the human population will occur in cities of the South. These cities will absorb 95% of urban growth in the next two decades and, by 2030, will be home to almost 4 billion people, or 80% of the world’s urban population (Parnell and Oldfield 2013). The dimensions and drivers of rapid urbanization, and their relationship with economic growth, vary across the South and from city to city (Beall et al 2013, Parnell and Oldfield 2014, Taylor et al 2011, Turok and McGranahan 2013, Yeung, 2011).

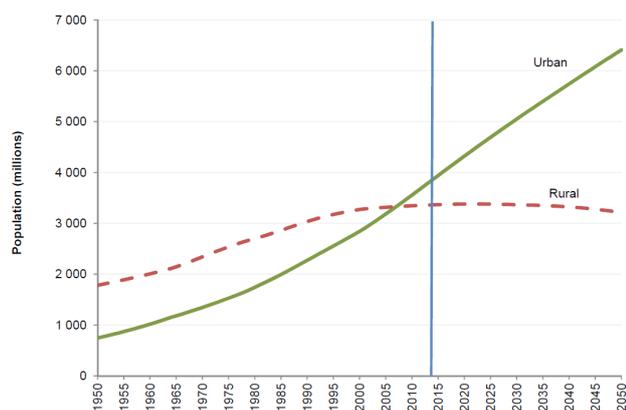
In many areas the speed of the urban transition is far outpacing the ability of formal sector labour markets to provide decent employment and a food-secure future for burgeoning populations (Martine et al 2008, Pieterse and Simone 2013, Satterthwaite et al 2010). This discussion paper suggests that, as a result, the cities of the South are experiencing a major and deepening crisis of food insecurity. The manifestations of this crisis include food poverty, hunger and malnutrition, a lack of dietary diversity, child wasting and stunting, increased vulnerability to disease, and an obesity epidemic (Athreya et al 2010, Chmielewska and Souza 2011, Crush et al 2012, Popkin et al 2012, Zingel et al 2011).

The Southern Transition

For the first time in human history, there are now more people living in urban than in rural areas (UN 2015: 7). The gap between the two will continue to widen in favour of the urban (Figure 1). The world’s urban population is expected to rise to nearly 60% by 2025 and to two-thirds by mid-century. The rural population is expected to stabilize in 2020 and then to start declining. The combined urban population of Africa, Asia and Latin America increased from 1.8 billion in 1995 to 2.9 billion in

2015 and is projected to rise to 3.7 billion by 2050. In 1950, only 24% of countries (mainly in Europe and North America) were more than 50% urbanized. By 2014, this figure had increased to 63% and is projected to exceed 80% by 2050 (UN 2015: 7).

FIGURE 1: Global Urban and Rural Population



Source: UN (2015: 7)

Current levels of urbanization vary considerably by region but all regions are becoming more urbanized (Figure 2). In the Global South, Latin America urbanized the earliest and has levels of urbanization comparable to those in Europe and North America. Asia is currently urbanizing at the fastest rate, with countries such as China and India at the forefront. Even in Africa, often regarded as the most rural region of the Global South, the urban transition is well under way. The urban population of Africa increased from 248 million (or 34%) in 1995 to 412 million (44%) in 2010 and is projected to climb to 658 million (47%) by 2025. By 2030, there will be more people living in towns and cities in Africa than in the countryside.

By 2050, the bulk of the world's urban population will be living in the Global South and especially Asia (52%) and Africa (21%) (Figure 3). The number of megacities (of over 10 million in size) increased from 10 in 1950 to 28 in 2014, and is projected to rise to 41 in 2030 (UN 2015: 17). The majority of megacities and large cities of 5 to 10 million inhabitants are in the Global South. However, the fastest growth is in the number of secondary cities (Figure 4). The number of cities with 1 to 5 million people increased from 126 in 1970 to 525 in 1914

and those with populations of 300,000 to 1 million, from 413 to 1,204,186 to 525.

In Central and South America the rate of urbanization over the last 50 years has been labelled “remarkable” (Cerrutti and Bertonecello 2006: 140). Within the region, the pace of urbanization has varied considerably from country to country. One study suggests that the countries of Latin America can be divided into four groups on the basis of their level of urbanization: incipient (40–50% urban), moderate (55–65% urban), extensive (70–80% urban) and advanced (85–95% urban) (Cerrutti and Bertonecello 2006) By 2020, more countries will have moved from incipient and moderate to extensive and advanced urbanization. The drivers of Latin America's urban transition have been analyzed in considerable detail but it is clear that rural poverty and a fundamental transformation in the agricultural sector from peasant production to large-scale commercial farming were critical drivers of the transition (Portes and Roberts 2005, Roberts 2005, Rodgers et al 2011).

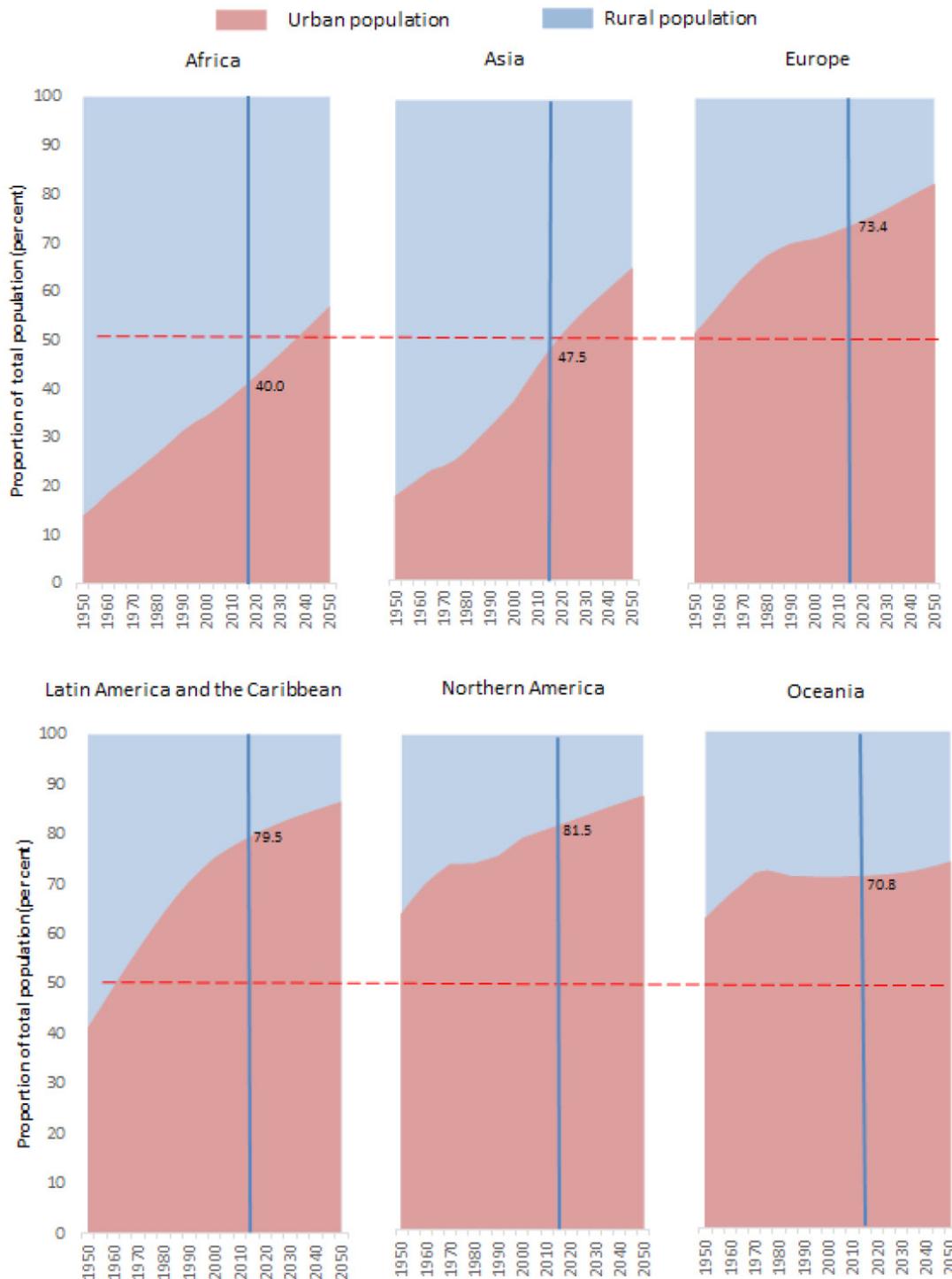
If Latin America's urban transition is remarkable, Asia's is “profound” (Hugo 2006: 115). Almost half of all the world's urban residents now live in Asia. By 2030, Eastern Asia (including China, South Korea and Japan) is projected to be 63% urban, South-Eastern Asia (including Indonesia, Malaysia, Thailand, Vietnam and the Philippines) to be 56% urban and South-Central Asia to be 44% urban. Among the most-urbanized Asian countries will be South Korea (90%), Japan (85%), Indonesia (64%) and China (60%). One of the defining characteristics of Asian urbanization has been the emergence of megacities (defined as urban agglomerations of over 10 million people) (Hugo 2006: 119). In 2001, two-thirds of the world's megacities were in Asia (Tokyo, Mumbai, Calcutta, Dhaka, Delhi, Shanghai, Jakarta, Osaka, Beijing, Karachi and Manila). Central and South America had four (Sao Paulo, Rio de Janeiro, Mexico City and Buenos Aires) and North America just one (New York).

As in the other areas of the Global South, there are regional and inter-country differences in the rate and level of urbanization within Africa. Nowhere,

however, are urban populations shrinking. The most urbanized region is Eastern Africa, which became more than 50% urban between 1990 and 2000. By 2030, the proportion of people living in towns and cities will exceed 60%. In Northern Africa, levels of urbanization were 47% in 2010 and

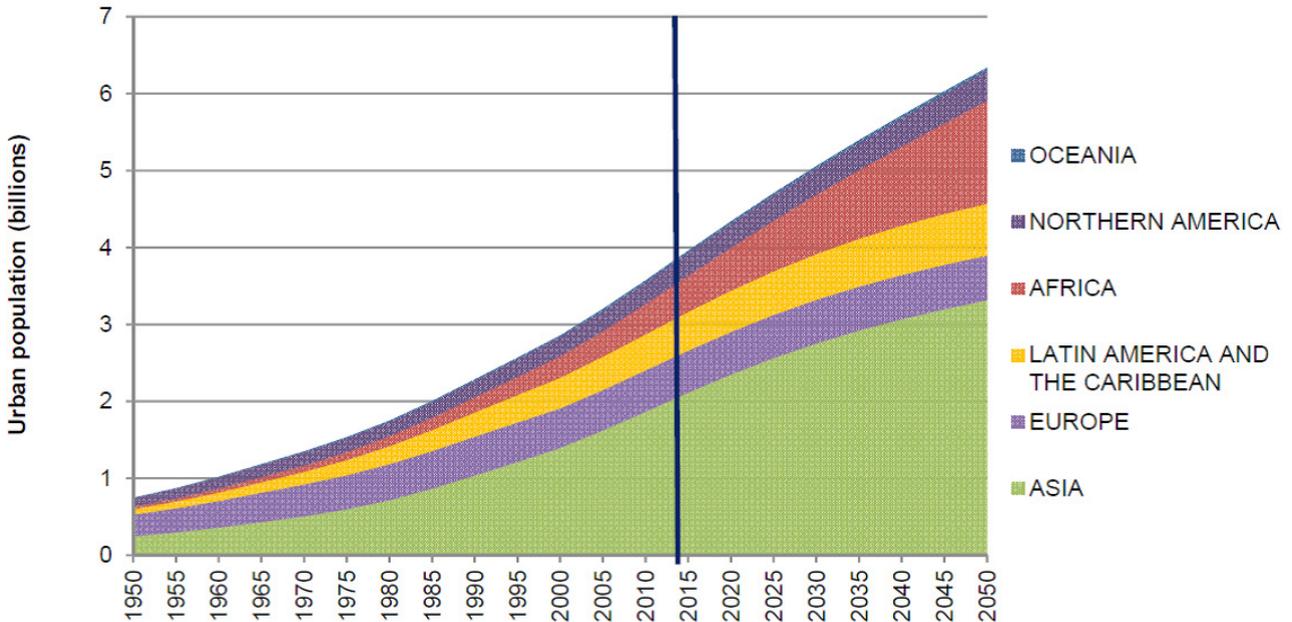
are projected to increase to 58% by 2030. Some Northern African countries (such as Algeria and Libya) already have levels of urbanization equivalent to North America and Europe. The urban population of Western Africa is projected to pass 50% between 2010 and 2020 and rise to 56% by

FIGURE 2: Level of Urbanization by Region, 1950-2050



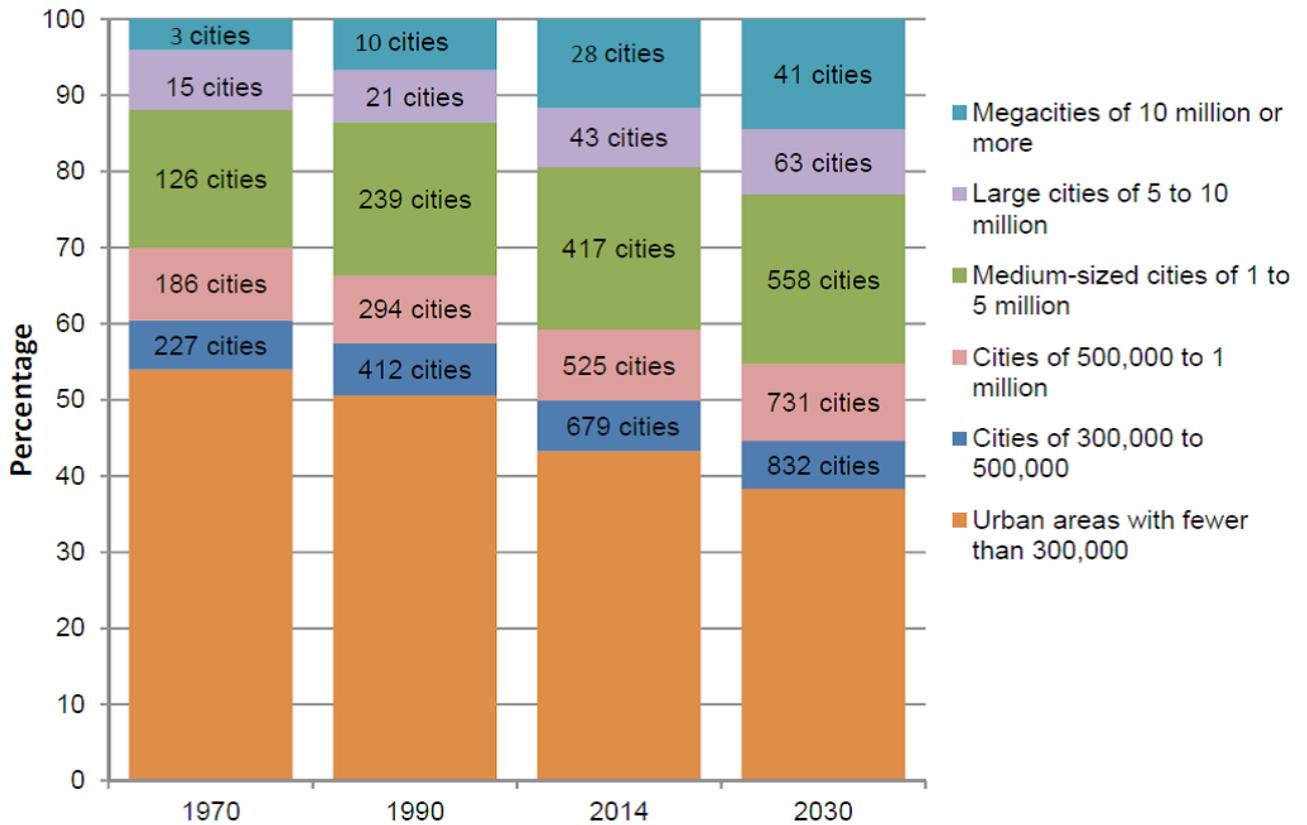
Source: UN (2015: 10)

FIGURE 3: Global Urban Population by Region, 1950-2050



Source: UN (2015: 12)

FIGURE 4: Distribution of Urban Population by City Size



Source: UN (2015: 17)

2030. The least urbanized region is Southern Africa which will still be only 35% urbanized in 2030. However, some Southern African countries such as South Africa and Botswana are already more than 60% urban and, as a region, Southern Africa has the highest rates of urbanization in the world.

While some have questioned the UN methodology for projecting future urbanization rates, no one contends that the transition towards a predominantly urban future in the Global South is a statistical invention. Promoters of rural development in Africa (such as the Alliance for a Green Revolution in Africa, the UN's Food and Agriculture Organization and the International Fund for Agricultural Development) suggest that urbanization is an inherently negative and problematic phenomenon that can and should be slowed, or even stopped, through judicious technocratic support of rural small farmers. IFAD's president recently argued, for example, that "if smallholders are excluded from the region's food security response, they will follow a well-trodden path to over-crowded urban areas and abroad. Rural areas will become increasingly depopulated...Africa needs vibrant rural areas that offer a variety of enterprises of all sizes, providing employment, income and food security, as well as offering essential environmental services." This romantic vision of pastoral Africa may provide a convenient rationale for institutional relevance, but flies firmly in the face of reality. As Collier (2009: 62) notes, "peasant agriculture offers only a narrow range of economic activities with little scope for sustaining decent livelihoods. In other societies people have escaped poverty by moving out of agriculture. The same is true in Africa: young people want to leave the land; educated people want to work in the cities. Above all, people want jobs" (see also Collier and Dercon 2012).

The Hungry Cities Partnership focuses its attention on urbanization and urban food security in seven countries across the Global South with different trajectories and histories of urbanization: China, India, Jamaica, Kenya, Mexico, Mozambique and South Africa. These differences are manifest in the urbanization experience of individual cities in each country. The project selected seven cities for closer

examination and comparative analysis: Bangalore in India, Cape Town in South Africa, Kingston in Jamaica, Maputo in Mozambique, Mexico City in Mexico, Nairobi in Kenya, Nanjing in China. Four (Cape Town, Maputo, Kingston and Nairobi) are capital cities. Three (Cape Town, Kingston and Maputo) are coastal cities while the others are in the interior of their respective countries. Four (Mexico City, Kingston, Maputo and Nairobi) are primate cities and three (Bangalore, Mexico City and Nanjing) are mega-cities with populations in excess of 10 million. At the other end of the spectrum, Kingston has a population of less than 1 million.

Mexico City is the largest of the Hungry Cities with a population of 20 million in 2010, and is emblematic of the Central American urbanization experience, growing rapidly from 3.4 million in 1950 to 18.5 million in 2000 (Table 1). The city is projected to increase in size to 24 million by 2030. However, the rate of increase has slowed in recent decades as Mexico is now a highly urbanized society. Kingston, Jamaica, is the smallest of the Hungry Cities although it is the largest city in the Caribbean. Kingston's population increased from 278,000 in 1950 to 578,000 in 2000 and is projected to increase to 664,000 by 2030. The city is therefore the slowest growing of all the cities but it is located in one of the countries with the highest rates of emigration in the world. This has two implications: first, it explains the relatively slow growth of the city over time and, second, it means that Kingston is one of the most transnational of all the cities with the majority of households having members living abroad.

The three African cities – Cape Town, Maputo and Nairobi – are all in countries with a recent history of colonial rule though of different kinds: British (Kenya), Portuguese (Mozambique) and white settler (South Africa). All three colonial regimes were profoundly opposed to urbanization and enacted measures to control its pace and direction. The most extreme form of repression was in apartheid South Africa where the regime attempted to stop migration to the cities with legal restrictions on black Africans' freedom of movement and, in the case of Cape Town, bans on the employment of

TABLE 1: Population Increase in Individual Hungry Cities, 1950-2030 ('000)

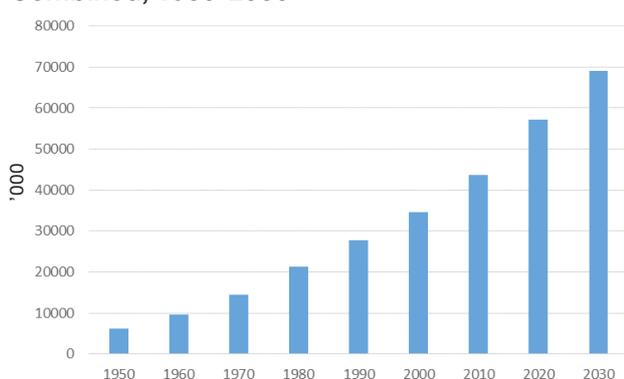
	1950	1960	1970	1980	1990	2000	2010	2020	2030
Mexico City	3,365	5,479	8,831	13,028	15,642	18,457	20,132	21,868	23,865
Nanjing	1,037	1,230	1,459	1,731	2,893	4,279	6,162	11,837	14,762
Bangalore	746	1,166	1,615	2,812	4,036	5,567	8,257	11,837	14,763
Cape Town	618	803	1,114	1,609	2,155	2,715	3,345	3,860	4,322
Nairobi	137	293	531	862	1,380	2,214	3,227	4,792	7,140
Maputo	98	290	433	751	1,095	1,517	1,886	2,459	3,593
Kingston	278	421	476	516	562	578	584	605	664
Total	6,279	9,682	14,459	21,309	27,763	34,527	43,593	57,258	69,113

Source: Compiled from UN (2015) Table A12

black Africans. Urbanization in Mozambique was accelerated by a bitter war for independence but in all three countries the collapse of colonial and white rule led to particularly rapid urbanization and the growth of massive informal settlements.

Bangalore and Nanjing are located in two of the fastest urbanizing countries in the world, India and China. Bangalore grew from a population of less than a million people in 1950 to 4 million by 1990 and is expected to reach nearly 15 million in 2030. Nanjing had a population of around 1 million in 1950, which increased to nearly 3 million in 1990 when economic reforms opened the way to rapid urbanization in China. Nanjing currently has a population of around 6 million, which is expected to more than double by 2030.

FIGURE 5: Population Increase of Hungry Cities Combined, 1950-2030



Source: Compiled from UN (2015) Table A12

The “Hungry Cities” therefore represent a varied subset of growing cities in the Global South. In total, they had a combined population of just over

6 million in the mid-20th century which had increased to over 34 million by the turn of the century and 44 million by 2010. The UN projects that these seven cities will be home to 69 million people by 2030. The fundamental question for the Partnership is how food is delivered to the populations of these cities and, in particular, whether and how they are able to access it.

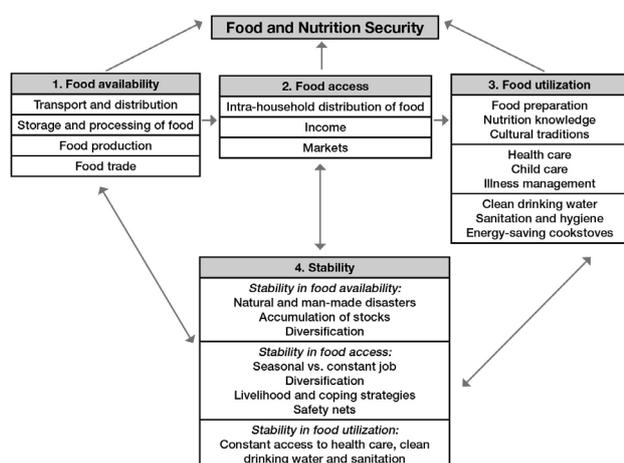
Dimensions of Urban Food Insecurity

One of the greatest challenges facing the world’s rapidly-growing urban population is how to access sufficient, affordable and nutritious food. In 1996, the Rome World Food Summit Plan of Action offered a definition of food security that has become embedded in policy discourse: “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO 1996: Article 1). This definition has endured because it moves beyond the idea that food security is simply a matter of increasing food production. In the urban context, where households have to rely on food purchase, the FAO definition is particularly germane because food security “depends to a large extent on individual household circumstances as the household operates within this purchasing environment” (Teng and Escaler 2010: 2).

The FAO definition suggests that food security has four inter-linked dimensions: food availability,

food access, food utilization and food stability (Figure 6). Understanding these different dimensions of food security and their inter-relationship is clearly a transdisciplinary challenge (Burchi et al 2011, Drimie and McLachlan 2013). For example, the food utilization component in Figure 6 identifies “food preparation, nutrition knowledge and cultural traditions” as determinants of food insecurity. Thus, people may be consuming a sufficient number of calories but if the food is unsafe, their dietary diversity is poor and they are forced to eat food they would prefer not to, then, by this definition, they are food insecure.

Figure 6: Dimensions of Urban Food Security



Source: Burchi et al (2011)

There is considerable debate about how the different dimensions of food security and insecurity should be measured and quantified (Barrett 2010, Cafiero et al, 2014, Calogero et al 2013, Coates 2013, Jones et al 2013, Leroy et al 2015, Santeromo 2015, Swindale and Bilinsky 2006). Anthropometric measures of food insecurity outcomes are the most widely used in the biomedical literature (Masset 2011). The three most common metrics are child wasting (low weight for height), stunting (low height for age) and underweight (low weight for age).

A national study of urban food security in India reported, for example, that in all but one Indian state, more than a third of children in urban areas are stunted (Table 2) (MSSRF 2010). Levels of

wasting varied from a low of nine percent in Kerala to a high of 37% in Bihar. In almost every state, over 20% of children are underweight. Apart from the very high levels of child undernutrition captured in these figures, there are striking differences from state to state and, by extension, city to city.

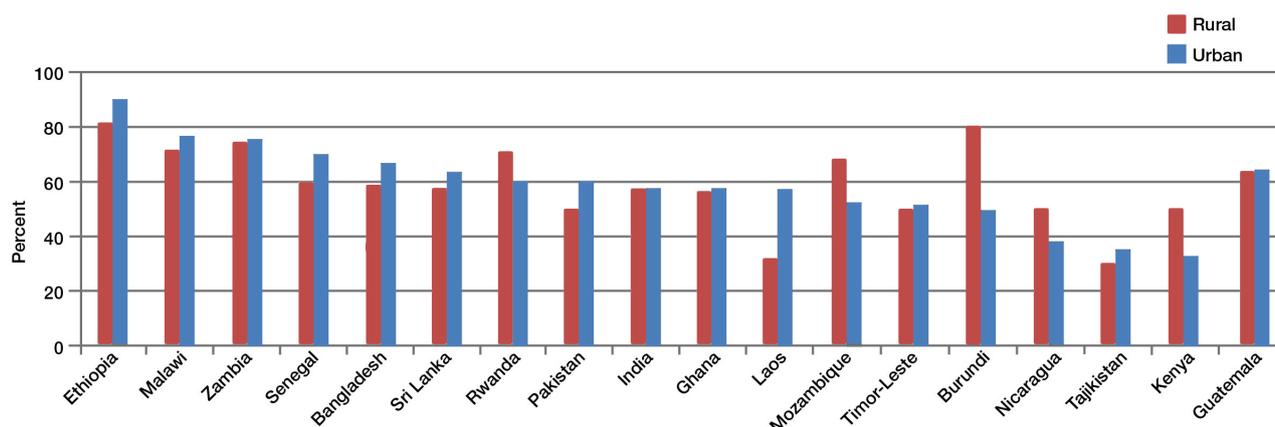
TABLE 2: Prevalence of Undernutrition in Children (Age 6-36 Months) in Urban India, 2005-2006

State	% stunted	% wasted	% underweight
Andhra Pradesh	33	15	24
Assam	35	19	28
Bihar	38	37	33
Gujarat	42	17	36
Haryana	36	24	37
Karnataka	34	17	26
Kerala	27	9	15
Madhya Pradesh	41	31	44
Maharashtra	40	15	27
Orissa	36	14	28
Punjab	33	11	20
Rajasthan	29	20	26
Tamil Nadu	30	22	23
Uttar Pradesh	33	13	26
West Bengal	30	13	24
Total	37	19	30

Source: MSSRF (2010): 72-5

Another common measure of food insecurity is the amount of dietary energy consumed by individuals or a household. Various cut-offs are generally used to classify the undernourished into increasingly deprived groups: for example, the subadjacent hungry (1800-2200 kcals per person per day); the medial hungry (1600-1800 kcal per person per day) and the ultra hungry (less than 1600 kcal per person per day) (Ahmed et al 2011). In several countries food-energy deficiencies are already higher in urban than rural areas (Figure 7). The Global Hunger Index (GHI) combines food-energy and anthropomorphic data including the proportion of people who are food-energy deficient, the prevalence of underweight children under 5 and the under 5 child

FIGURE 7: Rural and Urban Incidence of Hunger (Food-Energy Deficiency)



Source: Ahmed et al (2011: 38)

mortality rate) (IFPRI 2012). The GHI is a useful composite measure for tracking changes over time, but tends to rely primarily on national level data (IFPRI 2014). As a result, its utility for tracking and mapping levels of urban food insecurity is untested.

Another proxy measure for food insecurity, especially useful in the urban context, is the proportion of household income spent on food. As a general rule, the poorer the household, the higher the proportion. A recent study that examined poor urban household budgets in 13 countries across the South found that in every country studied, poor households were spending more than a third of their income on food (Table 3) (Ahmed et al 2011). In some countries, such as Burundi, Mozambique and Zambia, the figure was closer to 60%. Among the ultra-poor (those earning less than USD1 per person per day), the proportion of income spent on food was around 50% or more and nearly 70% in some countries such as Ghana and Rwanda.

TABLE 3: Proportion of Urban Household Income Spent on Food

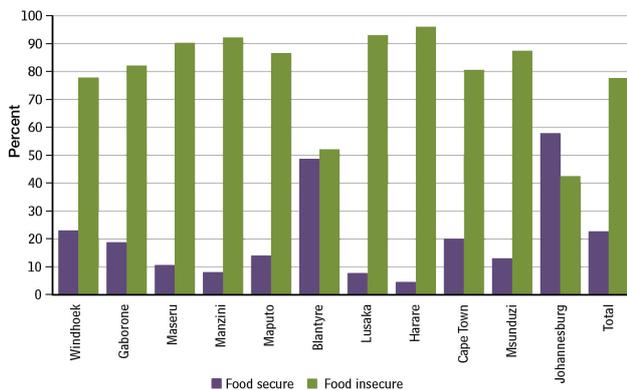
	USD1 per day and above	Less than USD1 per day
Burundi	57	65
Ghana	53	67
Malawi	34	50
Rwanda	50	68
Mozambique	60	66
Zambia	59	64
Bangladesh	43	60

India	49	61
Pakistan	45	52
Vietnam	46	49
Guatemala	35	48
Nicaragua	43	52
Peru	42	54

Source: Ahmed et al (2011: 98-9)

A more sophisticated set of cross-cultural measures of the access dimensions of food insecurity was developed by the FANTA (Food and Nutrition Technical Assistance) project (Swindale and Bilinsky 2006). The FANTA methodology was used in a 2008-2009 baseline survey of low-income neighbourhoods in 11 cities in Southern Africa by the African Food Security Urban Network (AFSUN) (Crush et al 2012). The survey revealed a stark picture of food insecurity in poor urban neighbourhoods across the region. Only 17% of the 6,453 households surveyed were food secure on the FANTA HFIAS scale (Figure 8). As many as 57% were severely food insecure and another 19% were moderately food insecure.

In cities in crisis, such as Harare (Zimbabwe) and Manzini (Swaziland), food security rates were less than seven percent and severe food insecurity levels were over 70%. Other findings included consistently low dietary diversity, severe fluctuations in levels of food insecurity during the year and particular vulnerability to food insecurity on the part of female-headed households.

FIGURE 8: Levels of Food Insecurity in Southern African Cities

Source: AFSUN

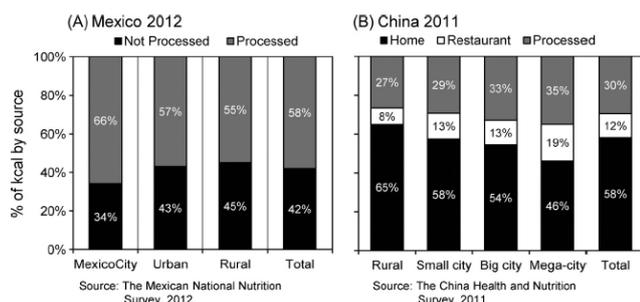
Popkin and Gordon-Larsen (2004) have noted that “there has been increasing evidence that the structure of dietary intakes and the prevalence of obesity around the developing world have been changing at an increasingly rapid pace.” Urban food insecurity is therefore increasingly viewed as a problem of both undernutrition (insufficient good quality food) and overnutrition (too much of the wrong kinds of food) (Popkin 2014, Popkin et al 2012). A review of 28 studies in West Africa, for example, found that the prevalence of urban obesity had doubled in the previous decade and a half (Akubakari et al 2008). Another study of West and East African cities reported that the prevalence of obesity increased by nearly 35% between 1992 and 2005 (Ziraba et al 2009). The growing public health and economic burden of urban obesity has been documented most thoroughly in countries such as Mexico (Rtveladze et al 2014). In the Global South, obesity rates tend to be significantly higher among women than men and among urban than rural populations (Subramanian and Davey Smith 2006). Obesity is also increasingly affecting the urban poor (Monteiro et al 2007, Case and Menendez 2009). Studies in India show that poor migrants who move from the countryside to the city soon begin to experience higher rates of obesity and chronic disease (Ebrahim et al 2010). In many households in poor urban communities in the South there is also evidence of a “nutrition transition paradox” of child undernutrition and adult obesity within the same household (Doak et al 2005, Van Hook et al 2013).

A primary driver of the dietary transition and the associated “double burden” of undernutrition and overnutrition is the actions and activities of large-scale multinational food and beverage companies known as “Big Food” (Igumbor et al 2012, Monteiro and Cannon 2012, Monteiro et al 2013, Stuckler and Nestle 2012). As Scrinis (2015: 136) notes, Big Food corporations are actively involved in transforming dietary patterns “through the displacement of minimally processed foods with their more highly processed, packaged, and convenience foods.” The rapid growth in the consumption of highly processed foods and beverages in the Global South “has been achieved through a range of corporate strategies, including the production of extremely palatable convenience foods, often achieved through the addition of sugars and sweeteners, salt, fats, and refined grains; the ubiquitous availability of these products; and very large advertising budgets to market their products” (Scrinis 2015: 137). A recent study of China and Mexico has compared the proportion of calories from processed foods in urban and rural areas (Popkin 2014). The distinction is not great in Mexico, with 57% of calories in urban areas and 55% of calories in rural areas derived from processed food and beverages, showing how far Big Food has penetrated the countryside as well as the towns (Figure 9). However, in Mexico City, the proportion is much higher, at 66%. In China, the proportion of calories from processed foods and beverages is lowest in the rural areas (at 27%) and increases with city size (to 35% in the country’s mega-cities).

Changes in levels and types of food insecurity accompanying the urban transition in the Global South are increasingly well documented (Abbade and Dewes 2016). Coherent strategies to mitigate rising levels of undernutrition and overnutrition are, by contrast, virtually non-existent. Very few national and city governments have thought systematically about the challenges and developed food security plans for their burgeoning urban populations (Haysom 2015). One of the many complex challenges is the dramatic transformation in urban food systems over the last three decades. This involves “extensive consolidation, very rapid institutional and organizational change,

and progressive modernization of the procurement system” (Reardon and Timmer 2012). One key question is whether and how the growing presence and power of supermarkets in cities of the South changes the food policy agenda (Timmer 2009).

FIGURE 9: Proportion of Calories Processed Food and Beverages in China and Mexico



Source: Popkin (2014: 94)

Big Food and Small Food

The rise of supermarkets in cities across the Global South has prompted some to label it a “revolution” in food retail (Neven et al 2009, Reardon and Hopkins 2006, Reardon et al 2003, 2007, Weatherspoon and Reardon 2003, Zhou et al 2015). Though some were sceptical about the inevitability of the revolution (Trail 2006, Humphrey 2007), it is undeniable that the kind of power that supermarkets and their value chains command over the food system in the North is increasingly being seen in the South, albeit at an uneven pace. Four overlapping phases in the spatial diffusion of supermarkets across the Global South were subsequently identified (Reardon and Timmer 2012) (Table 4).

The first phase saw supermarket expansion to and within the larger countries of Latin America such as Argentina and Brazil. The second phase occurred in selected countries in East and Southeast Asia (such as Indonesia, Malaysia, Thailand and the Philippines) as well as South Africa. The third phase witnessed rapid supermarket growth in the smaller countries of Latin and Central America. The fourth is well under way in the larger Asian countries and the

rest of Africa. In China, for example, supermarket sales are growing by 30-40% per year, which is 200-300% faster than in other regions of the South (Hu et al 2004). Expansion in “latecomers” such as India and Vietnam is occurring even faster than in China (Neilson and Pritchard 2007, Reardon and Minten 2011). Within countries, there is a consistent pattern of spread from large cities to intermediate towns and cities to small towns in predominantly rural areas (Reardon and Gulati 2008: 6).

TABLE 4: Supermarket Share of Food Retail by Country

Country	2002	2015 (projected)
Global North		
United States	90	100
United Kingdom	88	97
Denmark	75	85
Spain	60	74
Italy	54	68
Global South		
1st Phase		
Argentina	54	68
Chile	62	77
Brazil	49	76
2nd Phase		
South Africa	55	83
3rd Phase		
El Salvador	54	68
Colombia	47	58
Guatemala	35	44
4th Phase		
China	11	27
Egypt	10	13
Kenya	10	16
India	2	9
Tunisia	5	18
Morocco	5	15
Bangladesh	1	8
Pakistan	1	3

Source: Adapted from Traill (2006: 170)

Research on the relationship between the supermarket revolution and food security has focused on three main issues. First, there has been considerable research on whether or not supermarket expansion

and procurement practices provide new market opportunities and greater security for smallholder farmers (Andersson et al 2015, Barrett et al 2012, Michelson et al 2012, Minten et al 2009, Neven et al 2009, Reardon et al 2009, 2012, van der Heijden and Vink 2013, Vorley et al 2007). The prognosis is generally gloomy because of the incompatibility between small farm production and supermarket demands. Second, there is the question of whether the growing presence and power of supermarkets exacerbates or mitigates food insecurity among the urban poor. And third, there is much debate on whether the expansion of large-scale formal food retail and supply chains impacts negatively on the livelihoods of small independent retailers and the informal food economy.

Cities in the Global South are characterized by massive expansion in informal settlements and informal livelihoods (Loayza et al 2009, McFarlane and Waibel 2012, Neuwirth, 2011). Indeed, informality has become the defining feature of the landscape, politics and economy of the contemporary city in the South (Benjamin and Mbaye 2012, Chen 2012, Potts 2008, Simone 2004, Simone and Abouhani 2005). Efforts to secure livelihoods “depend on largely informalised processes and a wide range of provisional and ephemeral institutions” (Simone 2001: 252). The ILO estimates that three-quarters of all non-agricultural employment and self-employment in the Global South is in the informal economy (ILO 2011).

One of the major components of the urban informal economy in the South is the food retail, distribution and preparation sector (Bhowmik 2010, Crush and Frayne 2011b, del Pozo-Vergnes 2013, Skinner 2010). While the size and vibrancy of the informal food economy is apparent in the cities of the South, food-related activities are rarely separated out in statistics on the informal economy although they constitute a significant sub-category in most cities. The amount of research specifically devoted to understanding the structure, organization, dynamics and impacts of the informal food economy is relatively limited (Bhowmik 2010, Minten et al 2010).

The OECD has noted that “it would be misleading to address food security without taking into account a large part of the economy that provides jobs, incomes and essential services for the urban population. Despite its important role, the informal economy is still poorly defined, poorly measured and consequently poorly taken into account in food security policies” (Hitimana et al 2011: 1). In most cities, the informal food economy comprises a dense and diverse network of informal markets, suppliers, transporters, mobile traders, hawkers, retailers and street food vendors who sprawl across the landscape, making food more accessible and affordable in low-income areas of the city and to lower-income households. This is clear in at least one region of the world for which there is data – Southern Africa.

AFSUN has examined the food-sourcing strategies and patterns of households in low-income neighbourhoods in 11 cities in nine Southern African countries. In seven of these cities, over half of the households regularly sourced food from informal vendors (Table 5). In four cities (Lusaka, Maputo, Harare and Blantyre), the proportion was over 90%. In only one relatively small city (Gaborone in Botswana) was the informal economy less important with 29% of households sourcing informal food. When it comes to the degree of reliance on informal food, it is clear that the frequency of patronage is directly related to the importance of the source. So, the more households that patronize the informal food economy, the more likely they are to source food from there on a daily basis (Table 5).

The only real exception to this pattern is Windhoek where 77% of households source informal food and 45% do so on a daily basis. Conversely, the less the importance of the informal food economy, the greater the chance that households will purchase informal foods on a weekly basis. Very few households in any of the cities are occasional patrons of the informal food economy, confirming that informal food vendors play a critical role in making food available to low-income households.

TABLE 5: Household Patronage of Informal Food Economy in Southern African Cities

	% households sourcing informal food	Daily (at least 5 days a week)	Weekly (at least once a week)	Monthly (at least once a month)	Occasional (once or twice a year or less)
Lusaka, Zambia	99	93	7	<1	0
Maputo, Mozambique	98	77	18	5	0
Harare, Zimbabwe	97	80	18	2	<1
Blantyre, Malawi	96	83	16	1	0
Johannesburg, South Africa	84	26	59	12	2
Windhoek, Namibia	77	46	39	10	5
Cape Town, South Africa	66	30	55	11	4
Maseru, Lesotho	49	23	47	21	8
Manzini, Swaziland	46	22	60	16	2
Msunduzi, South Africa	42	15	49	32	3
Gaborone, Botswana	29	43	39	12	5

Source: AFSUN

National, regional and municipal policies towards informality and informal entrepreneurship are highly variable but tend to err on the side of control, hostility and harassment (Bryiers 2009, Gandhi 2012, Meagher 2011, Obeng-Odoom 2011, Roy 2009, Simone and Abouhani 2005). Policies span the spectrum from complete non-intervention to draconian attempts to control and even eliminate informality (Vambe 2008). The pathologizing and criminalizing of the informal food economy is especially common at the municipal level (Karumbidza 2011, Kamete 2013). Some countries with sizable migrant and refugee populations engage in selective pathologizing. In South Africa, for example, rampant xenophobia produces an extremely hostile operating environment for informal food vendors who are regular targets of municipal “clean-up” campaigns, police misconduct, extortion rackets and violent attacks of persons and property by agents of South African competitors (Rogerson 2015a, 2015b). Regulation through various legal and policy instruments is a pervasive response to informality. Kus (2010) points out that different countries (and cities) have different types of regulatory environments but the degree to which the state implements and enforces its regulations impacts on the vibrancy and growth of the informal economy. If the informal food economy is to thrive, provide employment, generate opportunities for innovation and entrepreneurship, and mitigate food insecurity, then an enabling policy environment is essential

(Kshetri and Dholakia 2011). What this might consist of is a subject for research and best-practice models that are transportable between different cities and regions need to be identified.

Competing Interests

The growing presence, power and global reach of supermarket chains is fundamentally affecting the nature of urban food systems in the Global South and brings significant competition to the informal food economy. There is a growing body of research on supermarket expansion and its implications for the urban consumer. Underlying the large literature on “food deserts” in the North is the normative argument that poor neighbourhoods in the inner city are significantly disadvantaged by the lack of access to supermarkets. The absence of supermarkets supposedly leads to less choice, unhealthy eating and higher rates of obesity (Besharov et al 2010, Ghosh-Dastidar et al 2014, Jiao et al 2012, Larsen and Gilliland 2008, Russell and Heidkamp 2011, Walker et al 2010). In other words, access to supermarkets is simply assumed to mean better and more nutritious diets for poor households. In South Africa, however, supermarkets are generally not inaccessible yet poor urban households have very limited dietary diversity. Therefore, the food deserts hypothesis (with its essentially benign

view of supermarkets) cannot be uncritically transplanted to the Global South. The causal connection between the absence of supermarkets and presence of food deserts has been challenged in Africa on various grounds, including the fact that it ignores the role of the informal food economy (Battersby 2012, Battersby and Crush 2014).

One of the impacts that supermarkets' supply chains and retail outlets are certainly having on food insecurity is that they are removing the "food availability" component from the food security equation. Supermarkets ensure that there is rarely an absolute shortage of food in the city, except under extreme conditions such as war or severe economic crisis (such as in Zimbabwe in 2008–2009 when empty supermarket shelves were popularly seen as a sign of the country's meltdown) (Tawodzera 2011). Supermarkets also have the potential to address other components of the food insecurity conundrum, smoothing seasonal variations and eliminating the (in)stability dimension of food insecurity. A central question therefore is what impact the supermarket revolution has had on food access and food utilization by the urban poor.

In general, the public health literature on supermarket impacts in the Global South suggests that supermarket expansion is actually having negative health outcomes (Banwell et al 2013, Ford and Dzewaltowski 2008, Kelly et al 2014, Kimenju et al 2015, Popkin et al. 2012). Instead of leading to healthier populations, supermarkets are encouraging increased consumption of energy-dense, highly processed foods and beverages that are rich in fat, sugar and salt (Asfaw 2008, Battersby and Peyton 2014, Monteiro et al 2010, Rischke et al 2015, Toiba et al 2015, Umberger et al 2015). Hawkes (2008) suggests that supermarkets have important negative dietary implications but the precise impacts depend on their location, the prices they charge, the promotional strategies they use, and the nutrition-related activities they implement. Whether poor households can access the food available for purchase in supermarkets in urban environments depends on two key variables: household income and the price of food. In many cities in the South, income, or the lack thereof, drives food

insecurity. Households with one or more members in wage employment tend to be more food secure than those who do not or those who rely on other income streams such as casual work, social grants or renting out accommodation. This immediately puts female-headed households at a disadvantage since urban labour markets are often highly gendered in the South and women find it harder to access decent paying jobs (Dodson et al 2012).

The other key determinant of food access for the urban poor is food pricing. Some have suggested that the comparative price advantage of supermarkets increases over time (Minten and Reardon 2008). In the early stages of supermarket penetration of a new market, prices of processed and fresh produce are equal to or higher than traditional sources. Later, processed food becomes cheaper while fresh produce is comparable in price. Finally, all food prices tend to be cheaper in supermarkets as "procurement systems become more efficient through better supply chain management and in-store and in-distribution-center inventory management and handling" (Minten et al 2010: 1775–6). However, this downward trend is not irreversible. In 2008 and 2009, for example, world food prices soared and the supermarkets passed many of the additional costs on to consumers. Across the Global South, levels of food insecurity escalated in the space of a few months (Cohen and Garrett 2010).

Most agree that the presence of supermarkets encourages people to eat more if they can afford to (Hawkes 2008). However, there is a lack of research on the impact of supermarkets on the diets and consumption practices of poor households. The case studies that do exist draw contrasting conclusions. In Guatemala, for example, Asfaw (2008: 237) concludes that supermarkets have a negative impact on poor households by increasing the calorie share of partially and highly processed foods in the diet at the expense of staple and "healthy" food items. In addition, an increase in supermarket purchase significantly increases overweight and obesity. In Tunisia, on the other hand, Tessier et al. (2008) found that regular use of supermarkets leads to a slight increase in dietary quality. A review by

Hawkes (2008) of other scattered global evidence found that the dietary implications are both positive (supermarkets can make a more diverse diet available and accessible to more people) and negative (they can reduce the ability of marginalized populations to purchase a high-quality diet, and encourage the consumption of energy-dense, nutrient-poor highly-processed foods).

Has the global expansion of large-scale formal food retail impacted negatively on livelihoods in the informal food economy? The impassioned policy debate around the entry of Walmart to India and South Africa clearly delineated the fears of workers, governments and small business of unfair competition, job losses and a decline in incomes and working conditions for those employed at various stages in the food value chain (Gopalakrishnan and Sreeniva 2009, Kenny 2014, Shah and Pore 2014, Sibanda 2012). The research literature takes two contrasting positions on the impact of supermarkets on the informal food economy. First, there is the argument that the former will inevitably destroy the latter. Kennedy et al. (2002), for example, pessimistically conclude that “competition for a market share of food purchases tends to intensify with entry into the system of powerful new players such as large multinational fast food and supermarket chains. The losers tend to be the small local agents and traditional food markets and, to some extent, merchants selling ‘street foods’ and other items.” In similar vein, Reardon and Gulati (2008: 17) conclude that “the mirror image of the spread of supermarkets is the decline of the traditional retail sector.” Suryadama et al (2007: 3) characterize the process as follows:

The first traditional retailers to go out of business are usually those selling broad types of goods, processed foods, and dairy products, with fresh produce shops and wet markets following afterwards. After several years of competition, the traditional retailers that are usually still in business are those selling niche products or those in locations where supermarkets are legally prevented from entering.

A second, contrasting, position is that the impact of the supermarket revolution on the informal

economy has been greatly overestimated and that the informal food landscape in the South is resilient in the face of competition (Abrahams 2010, Humphrey 2007). In Brazil, for example, Farina et al (2005) argue that the conventional wisdom was that supermarkets would eliminate all forms of competition simply because they were able to deliver food at lower prices. In practice, supermarkets and informal vendors “compete for consumer preference and, at the same time, complement each other.” The informal food economy has proven to be much more resilient in smaller urban centres than the large urban conurbations such as Sao Paulo and Rio de Janeiro. However, in all centres small food retail survives despite having higher food costs than the large supermarket chains because it offers more convenience to the consumer and involves lower purchasing costs (transport, time) than the large chains.

Another country with a large supermarket sector is Indonesia. Here, Suryadama et al (2007) document a decline in the informal food economy but argue that it cannot be attributed to supermarket expansion. Supermarkets and food traders in traditional markets are in direct competition with one another, selling many of the same products. While the traders experienced a significant decline in incomes in the early 2000s, none of this was directly attributable to supermarket competition. Instead, the lack of infrastructure in the markets, rising fuel prices and declining consumer spending power, and competition from within the informal food economy (by street traders) were the primary causes. As a result, “the decline in earnings and profit of traditional markets cannot be attributed to the presence of supermarkets near the traditional markets” (Suryadama et al 2007: 25).

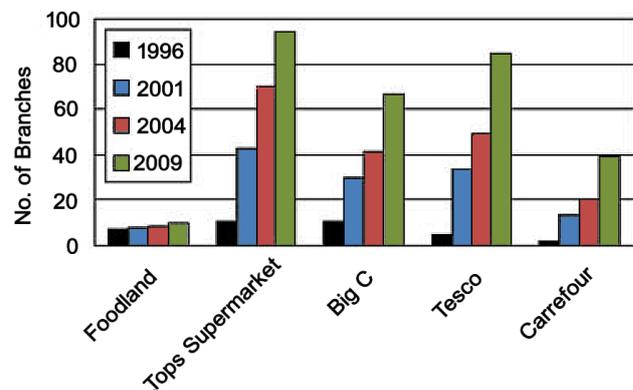
In Hanoi, poor urban households shop for food on an almost daily basis from a variety of outlets (Figuié and Moustier 2009). Although they have a positive image of supermarkets, in terms of the diversity and quality of produce, they have very low rates of supermarket patronage. This is attributable to spatial and economic inaccessibility (distance from supermarkets and the higher cost of produce). The traditional food-retailing sector works better

for poor consumers in terms of accessibility, credit and low prices. However, supermarket penetration in Vietnam is at a relatively early stage and this may partially explain their limited use as an everyday food source (Van Wijk et al 2004). In Delhi, India, food is retailed by a large number of players including pushcarts, kirana (mom-and-pop) shops, wet market retailers, cooperative-modern retail chains of small shops, public sector distribution system chain stores and private-sector supermarket chains (Minten et al 2010). Unlike in Hanoi, there are no serious spatial obstacles to the urban poor accessing supermarkets, which also offer cheaper processed and fresh food. However, the poor still patronize traditional suppliers because they are able to negotiate prices and foodstuffs can be bought in smaller, affordable quantities. In Chennai and Delhi, Ramakrishnan (2010) found that many small grocers adopted a variety of business strategies to ensure that they remained competitive with formal retail.

Similar conclusions about the resilience of the informal food economy as a food source for the urban poor have been reached in a variety of other urban contexts, including in China, Nicaragua, and Zambia (Abrahams 2010, D’Haese et al 2008, Isaacs et al 2010, Zhang and Pan 2013). Supermarkets are generally viewed as having the smallest and slowest impact on fresh fruit and vegetable suppliers and vendors in the informal food economy. One study in Bangkok, Thailand, examined the impact of supermarket expansion on wet markets, the traditional purveyors of fresh fruit and vegetables (FFV) (Schipmann and Qaim 2011). The rapid expansion of supermarkets in Thailand as a whole and in Bangkok in particular was apparent (Figure 10). The study compared quality and price variations in leafy vegetables and sweet peppers across the city over a four month period from 14 supermarkets, 17 hypermarkets and 17 wet markets. The study found that overall supermarkets and hypermarkets offered higher quality products than traditional wet markets but that wet markets charged significantly lower prices for the same products. The conclusion they draw is that supermarkets and wet markets are serving a different customer base with the former catering primarily to middle- and upper-income

consumers and the latter catering to low-income consumers. This, the study concludes, is “good news” for traditional wet markets and their supply chains, confirming an earlier finding of Minten and Reardon (2008). By contrast, Gorton et al (2011) challenge what they see as the accepted wisdom about the long-term competitive advantage of wet markets over supermarkets in Thailand, arguing instead that “on all salient attributes affecting retail outlet choice, supermarkets outperform wet markets. While wet markets continue to account for the majority of expenditure on fresh produce their market share has eroded sharply.”

FIGURE 10: Expansion of Leading Supermarket Chains in Thailand, 1996-2009



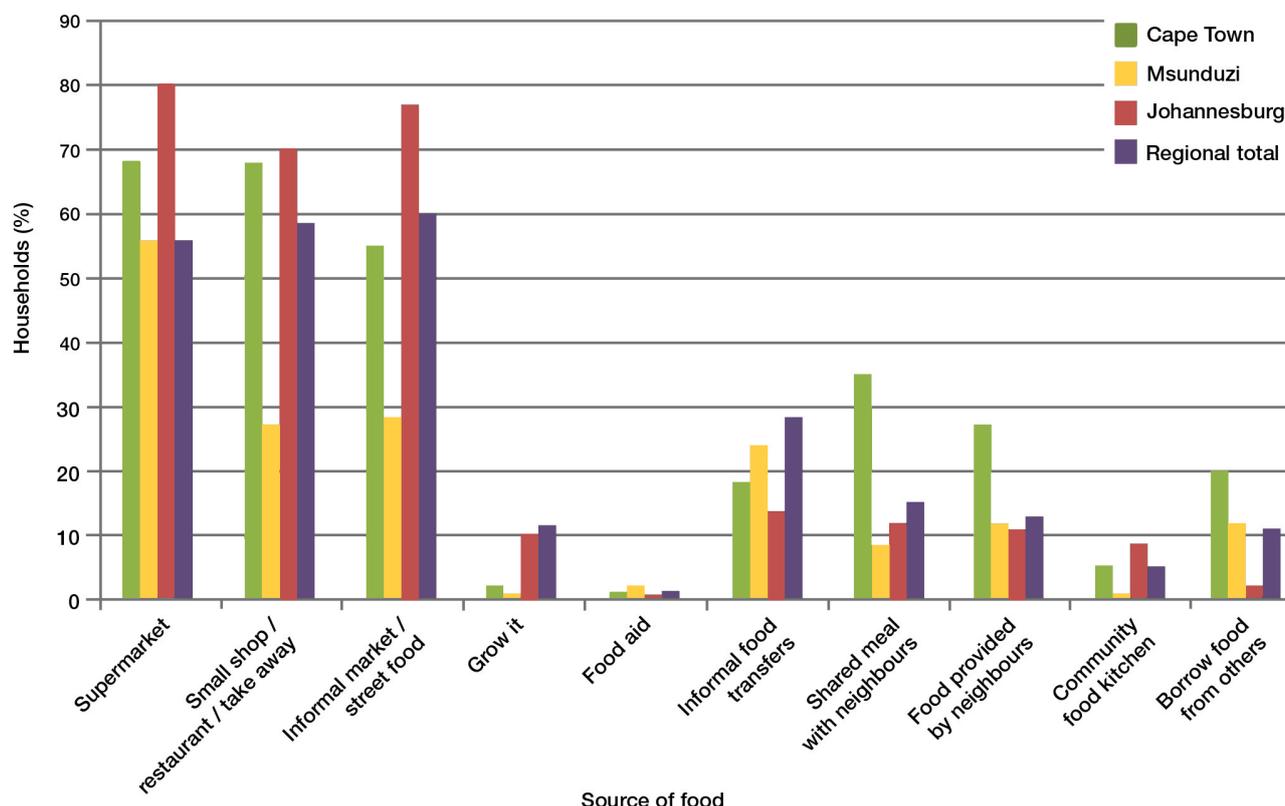
Source: Schipmann and Qaim (2011: 347)

The South African case provides an important corrective to the notion that consumers choose either supermarkets or the informal food economy and that the one’s loss is the other’s gain, an assumption that pervades much of the literature on supermarket impacts. Contrary to expectations that supermarkets are patronized only by higher- and middle-income consumers, AFSUN found that the urban poor and food insecure also source their food from supermarkets (Crush et al 2012). In the three South African cities of Cape Town, Msunduzi and Johannesburg, over 95% of poor households buy food at supermarkets, some 69% purchase food from small formal outlets (such as corner stores, grocers and fast-food outlets) and 68% patronize the informal food economy. However, only five percent of households patronize supermarkets on a daily basis, compared with 31% who purchase from the informal food economy that frequently. Most

poor urban households only shop at supermarkets once or twice a month, generally to purchase staples such as maize and rice, which can be bought in bulk and are considerably cheaper as a result. Perishables and cooked food, which cannot be easily stored

or refrigerated, are sourced from more proximate informal vendors and small outlets. However, this may change as supermarkets penetrate the low-income areas and engage in strategies to take market share from their informal competitors.

FIGURE 11: Sources of Food in South African Cities



Source: AFSUN

In sum, the research evidence is scattered and ambiguous but it does suggest that the relationship between supermarkets and the informal food economy is far more complicated than allowed by Kennedy and her colleagues (Crush and Frayne 2011b). The problem is that most of the studies undertaken to date tend to be snapshots taken during the early stages of supermarket penetration or focus on a limited range of products. Missing are longitudinal studies that track impacts and interactions over time as well as studies in countries and cities where supermarkets are well entrenched. Many also assume that the formal and the informal food economies have their own separate supply chains. Yet, formal sector retailers and especially wholesalers can be an important source of produce

for informal vendors, particularly those who are mobile and sell in areas of cities where formal retail is limited or absent or those who accept very low profit margins and are located near transport hubs, workplaces and along main thoroughfares. Although the evidence is still fragmentary, it does seem that the informal food economy in cities of the Global South is not doomed to extinction even in areas with long supermarket histories (D’Andrea et al 2006). On the contrary, rapid urbanization, the growth of poor urban populations, and the growth of informality as an entrepreneurial rather than survival strategy, all suggest that the formal and informal food economies will compete and co-exist long into the future. This hypothesis is one of many animating the Hungry Cities Partnership.

Conclusion

The Hungry Cities Partnership is located at the confluence of four transformative processes in the cities of the Global South. First, the South is undergoing a rapid urban transition fuelled by natural population increase and migration. The urban millennium poses many daunting challenges, not the least of which is how hungry cities and city-regions will actually be fed. Second, the cities of the South have witnessed major changes in the ways in which their food supply is organized. In the vanguard of this transformation are national and international supermarket companies that are vertically integrating all aspects of the food value chain and incorporating cities into global food supply chains. Third, there is a major upsurge in levels and trends of food insecurity in the cities of the South. Rates of both undernutrition and obesity are soaring, dietary diversity is declining and constant hunger is the lot of millions. Most cities are awash with food; the key issue is not how to grow more food but how to improve access to the food that is grown and available. Fourth, economic growth in many countries is far from inclusive with high unemployment rates, precarious employment and informality the new norm. The informal food economy has become a critical livelihood source for many who operate micro-enterprises in markets, on the streets and around transportation hubs, as well as a critical food source for low-income consumers.

Against this backdrop, the Hungry Cities Partnership has initiated a multi-year, collaborative inter-city program of research which initially seeks to address the following four issues and research questions:

- **Rapid Urbanization, Food Insecurity and Inclusive Growth:** The program of research under this broad theme will explore the linkages between inclusive growth and urban food security in the context of rapid urbanization in selected countries of the Global South. New comparative knowledge, and associated methodologies, will be generated on the following: (a) the dimensions, drivers and trajectories of urbanization in the seven partner countries and cities using census data, household and labour force survey data sets, satellite mapping, and scoping of secondary and grey literature; (b) levels and determinants of food insecurity in case study cities and city-regions at the household level and their relationship to formal and informal employment and income-generating activities and opportunities using representative household-level survey and electronic data-gathering; (c) how the operation of formal and informal urban labour markets, including their gendered nature, affects the ability of the most marginalized to mitigate food insecurity; and (d) whether inclusive growth policies directed at creating more and better jobs in the city could have a positive impact on food insecurity and, if so, how and for whom.
- **Reshaping Informal Food Systems through Inclusive Growth:** The research conducted under this theme will generate new comparative knowledge on the following: (a) the organization, structure, ownership, financing, employment and entrepreneurial and innovation strategies of small enterprises in the urban informal food economy; (b) the geography of small food enterprise location in relation to markets, competitors, consumers and transport infrastructure; (c) the patronage patterns of the informal food economy by poor urban consumers and the formulation of new and innovative strategies by small firms based on consumer behaviour; (d) the nature and impact of the regulatory environment governing the informal food economy in different contexts; and (e) how inclusive growth strategies targeting the urban informal food sector might provide greater opportunities for entrepreneurship, innovation, equality of opportunity and benefits for women, female-headed businesses and young entrepreneurs.
- **Youth Employment and Entrepreneurship in the Informal Food Economy:** The research program on youth entrepreneurship in the informal food economy in partner cities will (a) examine the levels and types of employment and entrepreneurial activity undertaken

by youth; (b) assess the motivational inclinations and perceptions of youth vis-a-vis employment and entrepreneurship in the food economy; (c) analyze the levels and types of youth participation in the informal food economy; (d) examine the opportunities and constraints on youth entrepreneurship in the informal food economy; and (e) make comparative, evidence-based recommendations for programs to boost informal entrepreneurship among youth in the partner cities and more broadly.

- **Competition Policy and Inclusive Growth in the Urban Food Economy:** Within the context of the global revolution in urban food retailing, the project aims to generate new and comparative knowledge for the case study cities on the following: (a) the general implications and challenges of the corporatization of food processing and distribution for inclusive growth, including employment and incomes; (b) the types of competitive and anti-competitive practices of supermarket chains both in relation to each other and to small firms in the formal and informal economies; (c) the entrepreneurial strategies and innovations being adopted by, or available to, small informal firms in the face of growing economic and spatial competition; and (d) the kinds of policies required on the part of central and local government to support and encourage small firms and entrepreneurial activities in the urban food economy.

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