IDPR, 32 (3–4) 2010 doi:10.3828/idpr.2010.10

Bruce Frayne

Pathways of food: mobility and food transfers in Southern African cities

Using recent multi-city survey data, the analysis demonstrates that informal rural–urban and urban–urban food transfers make important contributions to the food budgets of chronically food-insecure, poor households in the rapidly urbanising cities of Southern Africa. The paper outlines why dealing with food and nutrition security is a priority and multi-faceted urban development challenge, and argues for development policy and planning that seeks to enhance these widely prevalent household linkages by supporting urban (and rural) livelihoods. Given the links between food and nutrition security on the one hand, and human development and wealth generation on the other, using a food lens is one useful way of devising approaches to urban development that are people-centred and pro-poor, which is important in the Southern African context of widespread rural–urban migration and pervasive urban poverty.

Urban food security in Southern Africa has been concerned with urban systems of acquisition and production, with an emphasis on the informal sector and more recently on urban agriculture. Much less attention has been paid to linkages and food chains between rural and urban areas and their embeddedness in systems of migrancy. None the less, research indicates that urban households in the global South, and sub-Saharan Africa in particular, do rely to varying degrees on a supply of food from the rural areas in order to survive within hostile urban environments (Baker, 1990; Stark, 1991; Baker and Pedersen, 1992; Baker and Aina, 1995; Kamete, 1998; Smit, 1998; Krüger, 1998; Tacoli, 1998; Potts and Mutambirwa, 1998; Potts, 2000; Rakodi and Lloyd-Jones, 2002). More recently, research in Windhoek (Namibia) and Nakuru (Kenya) (Frayne, 2004; Owuor, 2006) demonstrates that food transfers from rural to urban households are an important feature of urban food provisioning. What is not known is the prevalence of these urban–rural linkages, their dynamics, and their contribution to improving urban food security for poor urban households, or whether significant urban–urban food transfers also occur (Koc et al., 1999; Mougeot, 2005; Frayne, 2007, 104).

Within the context of widespread urban poverty and rapid urbanisation, an important planning and development question, then, is to what extent do social links fostered by the migration process contribute to food security for poor urban households in Southern Africa? In response to this question, the African Food Security Urban Network (AFSUN) undertook the Urban Food Security Baseline Survey (UFSBS) in late 2008, which collected data from approximately 6500 households and 28,700 individuals in 11 cities in 9 Southern African countries. Based on the analysis

Bruce Frayne is Assistant Professor with the International Development Program, School of Environmental Enterprise and Development (SEED), Faculty of Environment, University of Waterloo, 200 University Avenue, Waterloo, Ontario, Canada N2L 3G2; email bfrayne@waterloo.ca

of the survey data, this article argues that urban–rural connections – fostered by the social capital provided by the migration and urbanisation process in Southern Africa – are an important dimension of household livelihoods in urban areas, and do play a significant role in ameliorating the generally high levels of chronic food insecurity experienced by poor, urban households (Frayne et al., 2010). Furthermore, the data show that urban–urban links between households in different cities are becoming an equally important system of urban food provisioning.

The survey methodology is summarised next, which is followed by a contextual discussion of the urbanisation, poverty and food security nexus that characterises the development and policy challenges in Southern Africa. The article then analyses and discusses the AFSUN survey data, focusing on the role of migration-based linkages and inter-household food transfers, and quantifies this for the 11 cities sampled. The paper concludes with a return to the framing question, and based on the survey evidence makes the argument that development policy and planning should seek to enhance these widely prevalent household linkages in order to support urban (and rural) livelihoods, and that dealing with food and nutrition security is a priority and multi-faceted urban development challenge. In summary, the article highlights the migration-food-poverty links, and suggests that urban managers proactively accept migration and urban growth as an inevitable demographic transition in Southern Africa, which is also one that reflects the broader regional and global dynamics of demographic change from a rural to an urban society.

Methodology

The AFSUN Urban Food Security Baseline Survey was conducted simultaneously in late 2008 in 11 cities in 9 countries in Southern Africa. The cities are Blantyre, Cape Town, Gaborone, Harare, Johannesburg, Lusaka, Maputo, Manzini, Maseru, Msunduzi (Durban Metro) and Windhoek. The surveyed cities represent a mix of primary and secondary cities; large and small cities; cities in crisis, in transition and those on a strong developmental path; and a range of local governance structures and capacities as well as natural environments. These particular cities were selected on the basis of local expertise, expressed interest and engagement from policy-makers and the fact that they collectively offer a wide platform from which to address the issues of urban food security more generally. In that respect, the AFSUN survey is a 'pilot project'. since the standardised methodology can be applied to other urban areas within individual countries, across the region and in Africa more generally.

AFSUN partner organisations planned the methodology and survey instrument at a Research Planning Workshop in June 2008 hosted by the University of Botswana in Gaborone. The finalised questionnaire was then pilot tested and approved by partners, and ethics approval obtained. Implementation commenced in late 2008. In all cities,

the project held a training course for undergraduate students in fieldwork methods as part of its commitment to local capacity-building. The fieldwork was supervised by senior faculty in each city.

One or more poorer urban neighbourhoods were identified for study in each city. In the larger cities, such as Cape Town and Johannesburg, different types of formal and informal urban neighbourhoods were chosen. Within city neighbourhoods, households were sampled using a systematic random sampling technique; when it was not possible to interview people in the designated household, a substitution was made. Maps of the areas to be surveyed were prepared and used in the field for household selection. At the household level, household heads or other responsible adults were selected to answer the questions on the survey. Field supervisors and/or city partners checked completed questionnaires. To minimise data entry errors and to standardise data cleaning, all questionnaires were sent to the University of Namibia in Windhoek for entry, reliability checking and the preparation of final data sets and tables for analysis. The resulting AFSUN Urban Food Security Regional Database contains information on 6453 households and 28,771 individuals (Table 1). A data analysis workshop was hosted by the University of Witwatersrand in Johannesburg in February 2008.

The survey has used a number of important scales to measure household poverty and food security. These are the Lived Poverty Index (LPI; Afrobarometer, 2004); the Household Food Insecurity Access Scale (HFIAS; Coates et al., 2007); the Household Food Insecurity Access Prevalence (HFIAP; Coates et al., 2007); the Household Dietary Diversity Score (HDDS; Swindale and Bilinsky, 2006); and Months of Adequate Household Food Provisioning indicator (MAHFP; Bilinsky and Swindale, 2006). For this analysis, households have been assigned to one of the two categories of 'food secure' and 'food insecure'. These have been computed from the four categories in the original HFIAP indicator, as follows: food secure = food-secure and mildly food-insecure combined; food insecure = moderately food-insecure and severely food-insecure combined.[1]

Urbanisation, poverty and food security

One hundred years ago, in 1910, only about 10% of the 1.65 billion humans on the planet lived in urban areas. Today, the world's population approaches seven billion, and more than half that number live in cities (UNESA, 2009). This ongoing exponential population growth and unprecedented urbanisation is creating development challenges on a scale and at a pace never before experienced in human history, and cities are the epicentre of that challenge. It is estimated that by 2030 the global

1 The detailed documentation of this methodology is available on the Food and Nutrition Technical Assistance (FANTA) Project website (http://www.fantaproject.org).

Table 1 Demographics of households surveyed

	Windhoek	Gaborone	Maseru	Manzini	Maputo	Blantyre	Lusaka	Harare	Cape Town	Msunduzi	Johannesburg
Total number of households sampled	N=448	N=399	N=802	N=500	N=397	N=432	N=400	N=462	N=1060	N=556	N=996
Average HH size	4	3	4	4	7	5	5	6	4	5	4
Median HH size	4	3	4	4	7	5	5	5	4	5	4
Smallest HH size	1	1	1	1	1	1	1	1	1	1	1
Largest HH size	12	10	15	20	17	13	16	16	19	21	12
Household structure											
Female headed (%)	33	47	38	38	27	19	20	23	42	53	33
Male Headed (%)	21	23	10	17	8	6	3	7	11	12	16
Nuclear (%)	23	20	35	32	21	41	48	37	34	22	36
Extended (%)	24	8	17	12	45	34	28	33	14	13	15
Under 18-female headed (%)	0	0	0	0	0	0	0	0	0	0	0
Under 18-male headed (%)	0	0	0	0	0	0	0	0	0	0	0
Total (%)	100	100	100	100	100	100	100	100	100	100	100
Total											
Total people in sample population	1848	1237	3248	2112	2737	2230	1978	2572	4177	2871	3762
Percentage of males/females											
Male	48	43	44	47	47	50	48	47	44	44	47
Female	53	57	56	53	53	50	52	53	56	56	53
Total	100	100	100	100	100	100	100	100	100	100	100
Age groups											
0–15	24	23	31	36	35	39	42	33	28	34	26
16–29	38	41	35	35	37	36	35	36	34	34	36
30–44	28	24	17	18	14	15	16	18	21	18	23
45+	10	12	17	11	14	10	8	13	17	14	16

Column totals may exceed 100% due to rounding.

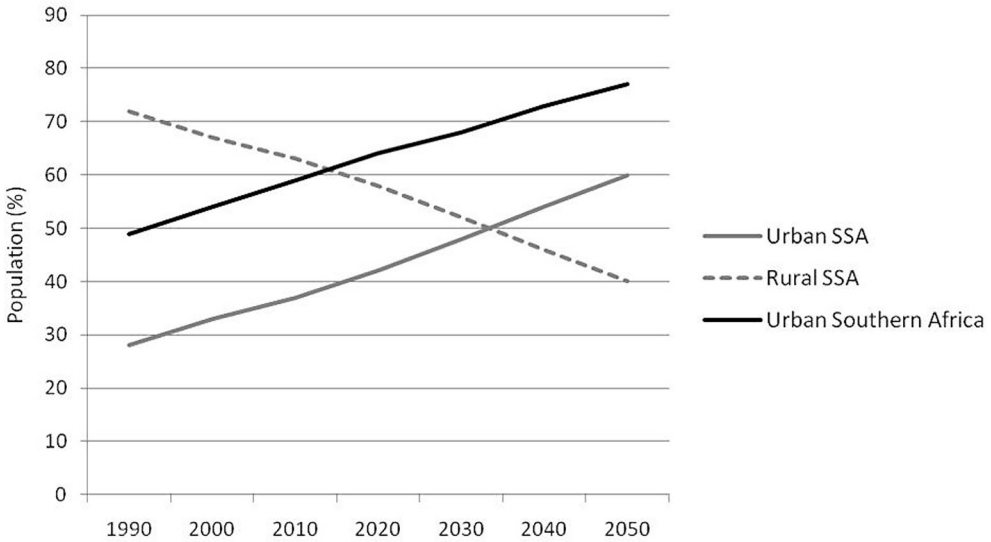

Figure 1 Urban Population Projections for Sub-Saharan and Southern Africa (1955–2030)
Source: UNESA, World Urban Prospects (2009 Revision)

population will have increased by 3 billion to reach a total of close to 10 billion; almost all of this increase will be accommodated in developing countries and specifically in the cities of the global South (Moreno and Warah, 2007). Already unable to effectively manage the urbanisation process, cities of the South are becoming more crowded and polluted with each passing year. These are cities in which about half of the economically active population are unemployed or chronically underemployed (Aina and Baker, 1995; McDonald, 2000; de Bruijn et al., 2001; Falola and Salm, 2004; UN-HABITAT, 2008). The rate of urbanisation in sub-Saharan Africa (4%) is about twice that of the global average (2%), with almost all new urban residents being accommodated in slum conditions (UNESA, 2007; UN-HABITAT, 2007, 11). By 2020, the global number of slum-dwellers will increase to 1.4 billion, and in sub-Saharan Africa this number will rise to near 400 million. Asia and Africa will have the largest demographic increase in the coming decades, with 2.66 billion and 748 million, respectively (UN-HABITAT, 2007, viii).

Although sub-Saharan Africa is still the most rural region in the world, this is changing fast. By 2035, the urban population of this region will exceed the rural. Current national urban growth rates range from 3 to 4% per annum, whereas rural growth rates are much lower at 0–2% per annum (Figure 1). By 2050, Southern African will be about 77% urban (UN-HABITAT, 2008; UNESA, 2009).

Although urbanisation has generally been associated with increases in welfare, this is not the case in sub-Saharan Africa, where growing urban populations are becoming

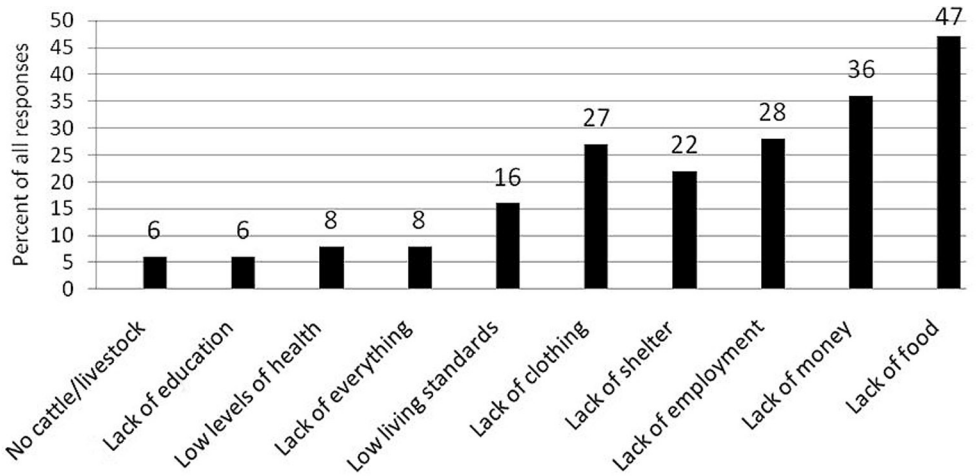

Figure 2 Perceptions of Poverty
Source: Adapted from Afrobarometer, 2004

poorer (Ravallion, 2007).This 'urbanisation of poverty' (Amis, 1995; Mehta, 2000; Tibaijuka, 2009) is taking place within a generalised transformation of a historically agrarian population to an urban one. Coupled with this transition is the global pressure on the food system. It is estimated that the recent increases in food prices have pushed at least another 100 million people into chronic hunger, and in 2009, the FAO estimated that the number of undernourished passed 1 billion for the first time. Indeed, progress on the first of the Millennium Development Goals (MDGs) – to halve global hunger by 2015 – has been 'negligible' and the number of malnourished people in sub-Saharan Africa has increased in the last 20 years (Committee on World Food Security, 2006).[2]

The AFSUN survey (2008) confirms this trend of worsening levels of food insecurity related to upward food price changes. The survey found that 78% of the regional sample reported 'going without food' as a direct result of food price increases (in the past six months). Poor urban households were found to be very sensitive to food price shocks, with almost all (92%) food-insecure households reporting going without food as a result of food price increases. This relationship between going without food as a result of price increases and food security status is statistically significant ($p<0.001$, cc=0.480).

In trying to understand Africans' own experiences of poverty, the Afrobarometer research demonstrated that when people were asked 'In your opinion, what does it mean to be poor?', food poverty was reported as even more important than the lack of money or employment, with the greatest proportion (47%) of the sample saying that it

2 For a full discussion of the urban food crises, see Crush and Frayne (2009).

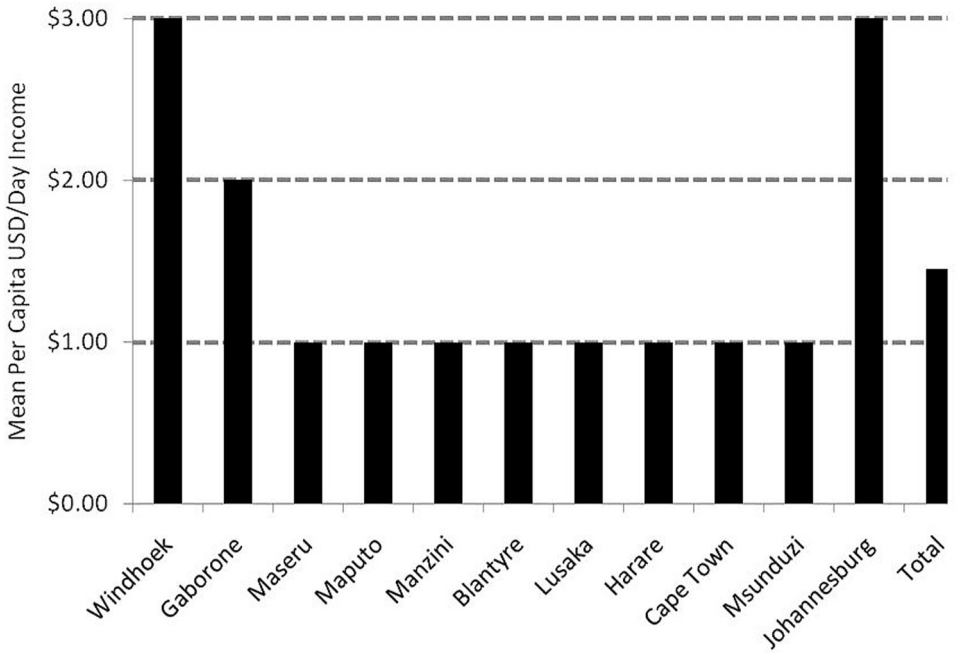

Figure 3 Mean Per Capita Household Income for 11 Cities, 2008 (rounded to the nearest dollar)

was a 'lack of food' (Figure 2). Hunger is therefore a central characteristic of poverty, and remains a pivotal development challenge within the context of rapid urbanisation and persistent urban poverty in sub-Saharan Africa.

In addition to the negative impact of food prices increases on household food security, the AFSUN survey confirms both widespread levels of urban poverty in Southern Africa and significant food insecurity at the household level. The survey found that households in all but two cities (Windhoek and Johannesburg) had daily per-capita incomes at or less than $2/day. At the aggregate level for the 11-city sample, 66% of households live at or below the $1/day poverty line, and 76% live at or below the $2/day poverty line (Figure 3).

What is important about these findings is that while a smaller proportion of the poor urban population surveyed lives below the $2/day poverty line compared with national populations, the study found very high levels of food insecurity in the 11 cities. Using the Household Food Insecurity Access Prevalence Indicator (HFIAP), the AFSUN survey found that at least three out of four households are food-insecure. The mean level of household food insecurity for the regional sample was 77%, and the difference between insecure and secure households is statistically significant ($p<0.001$, cc=0.392; Figure 4). Although Johannesburg has fewer food-insecure households than

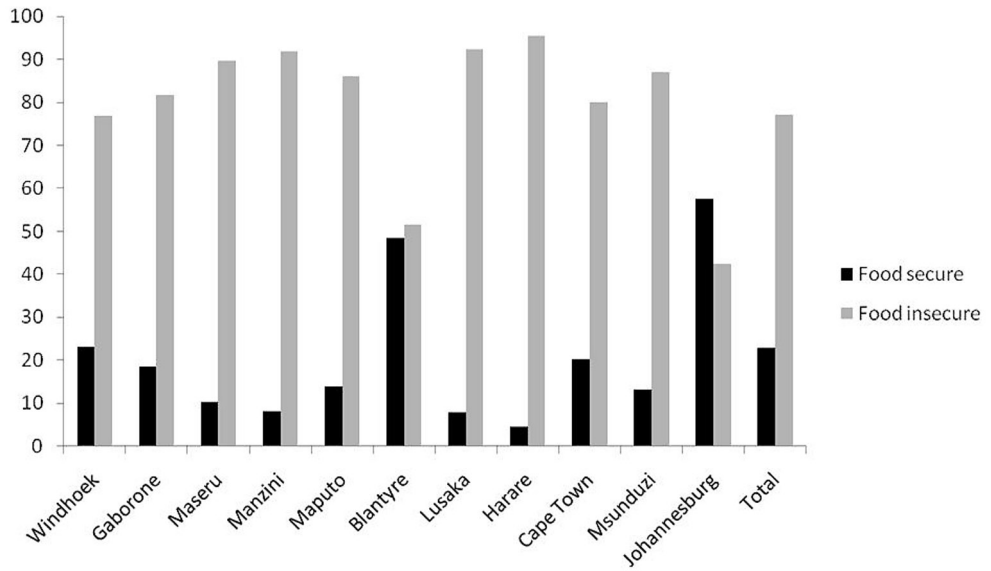

Figure 4 Mean Levels of Regional Household Food Insecurity, 2008 (%)

any of the other cities (at 42%, a result of sampling very different areas, including Alexandra which had a higher income than either Orange Farm or the inner city), the cities of Maseru, Manzini, Lusaka and Harare have 90% or more households that are food-insecure. Even Cape Town (80%) and Msunduzi (87%) have higher than average levels of food insecurity, despite South Africa being the wealthiest country in the region with an extensive social protection system (Frayne et al., 2009).

Given high levels of urbanisation in Southern Africa, it comes as no surprise that the AFSUN survey recorded high numbers of migrants in its sample of urban households. Thirty-eight percent of households in the sample are first-generation migrant households – that is, no one in that household was born in that city, but has migrated there during their lifetime.[3] In contrast, there are only 13% of households with no members who have migrated to the city (all born within the city where the survey was conducted). The largest proportion of households comprises a mix of migrants and non-migrants (50%), indicating the temporal and geographic fluidity of household structure across all cities in the region.

Given this large-scale migration process evident across the region – 88% of house-

3 This analysis of migration assumes that only those who were born in 'Urban' and are staying now in 'Same urban' can be considered non-migrants and the remainder can be considered migrants. As a result, there are three types of households: (1) households with no migrants (i.e. born in the city in which the survey took place); (2) households with a mix of migrants and non-migrants (i.e. some household members were born somewhere other than the city in which the survey took place and migrated to/joined the current urban household); and (3) migrant households (i.e. all household members were born somewhere other than the city in which the survey took place).

holds in the sample included migrants – the question then is to what extent migration influences household food security status? Perhaps surprisingly, the data do not show an association between these two variables; migration makes no significant difference to the food-security outcome of the household

What about households which have migrant workers (people who live and work away from the household but are still considered members of the household)? Are households with migrant workers more food-secure? As with the lifetime migration of household members, having a migrant worker in the household makes no difference to the food security situation

Yet the literature suggests that migration does contribute to strong urban–rural linkages, and that these foster resource transfers between reciprocal households, including food (Rakodi and Lloyd-Jones, 2002; Dodson et al., 2008; Crush and Frayne, 2010; Landau, 2010; Potts, 2010). For example, in one household study of seven countries in Southern Africa, it was found that remittances are central to the economies of households in the countries surveyed, and that they are almost exclusively used for basic consumption of goods and services (Pendleton et al., 2006). Importantly, food was the largest expenditure item reported in all seven countries, followed by medical services and school fees. In another study in Namibia it was found that in a sample of households in the capital city of Windhoek, 38% remitted income to the rural areas, with about half of these households sending money every two to three months or every month (Frayne, 2001, 206–07). The same study found that food transfers from rural areas to urban households was even more widespread than cash remittances, with 62% of urban households reporting receiving food transfers over the past year (Frayne, 2001, 233). Owuor's (2006) study in Nakuru, Kenya showed similar trends, with urban households receiving food from rural areas as part of their household food budget.

In the AFSUN survey, remittances from elsewhere in the form of cash and goods (excluding food) also feature. Overall, 7% of households report receiving cash and goods as an income remittance in the past month. The highest levels of remittances received were reported in Windhoek and Maseru (12%), and Lusaka and Harare (11%). The three South African cities had the lowest levels of remittance income (cash/goods). However, as with household migration status (discussed above), when remittance-receiving households are cross-tabulated by household food security status, there is no statistically significant correlation, and food-secure and food-insecure households receive about the same levels of remittances.

Given this lack of statistical correlation between household migration status and food security, the question therefore remains: how does the migration process reduce the food gap in poor *urban* households, and how prevalent is this livelihood dynamic in Southern African cities? The article now turns to the findings on food transfers in the 11 cities in the AFSUN survey.

Food transfers

Although the migration status of a household is not statistically correlated with an improvement in food security status, the data from the AFSUN survey demonstrate the importance of migration in the urban food security equation when food transfers are factored in. Fostered by the extensive social networks that underpin migration, 28% of the regional sample reports receiving food transfers from households living elsewhere (Figure 5). Windhoek has the highest proportion of households receiving food transfers (47%), which is consistent with other studies conducted in Namibia (Frayne, 2001; 2004; 2007).

Food transfers are particularly important for food-insecure households, and this finding is statistically significant for the regional aggregate of all 11 cities ($p<0.001$; cc=0.102). Although the correlation is weak, it is noteworthy that only 16% of food-secure households receive food transfers, compared with 84% of food-insecure households.

Of those households that received food transfers, 81% considered these to be important/very important to the household's food budget, with a further 9% that regarded these food transfers as critical to their survival. Interestingly, these figures mirror those obtained for Windhoek in similar research carried out in 2000, where 81% of that sample also reported rural–urban food transfers to be important/very important, with a further 11% that considered the food transfers to be critical to their survival (Frayne, 2001, 236). Households receive a mix of food types, with cereals the most dominant (Figure 6). The most common types of food sent to urban households are cereals (89%), vegetables (40%), nuts, beans and pulses (31%), and meat, poultry and offal (29%).

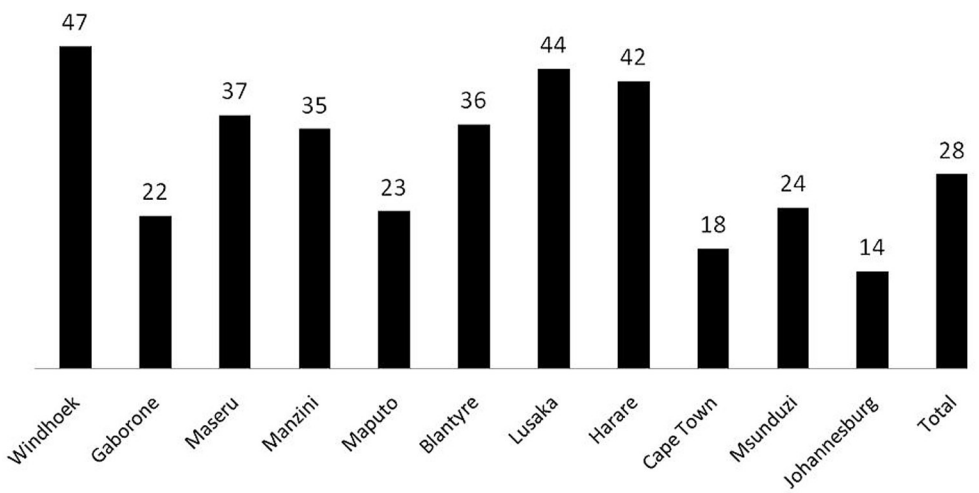

Figure 5 Total Food Transfers to Urban Households (%)

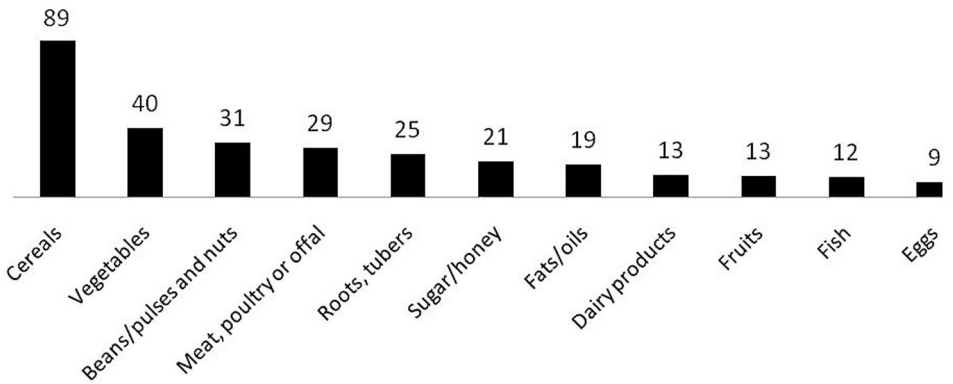

Figure 6 Types of Foods Sent to Urban Households (%)

From a food security perspective, it is noteworthy that 77% of receiving households said that this food is sent to them to help the household feed itself, and another 20% are sent food as a gift. The importance of this food for household survival is further reinforced by the fact that 92% of households use the food entirely for home consumption, with only 3% selling it on at a market or from home; there is little difference in the use of food by household food security status.

The data discussed thus far represent all food transfers to urban households. However, it is noteworthy that inter-household linkages are not only between rural and urban areas; the data show that 48% of food transfers are in fact from households in other urban areas, and that 11% of households receive food from households in both rural and other urban areas. In terms of food transfer origins, there are differences between countries: Windhoek (72%) and Gaborone (70%) receive the most food from the rural areas, with the three South African cities receiving the greatest proportion of food transfers from urban areas (Cape Town=83%; Msunduzi=82%; Johannesburg=67%).

The source (urban or rural) of the transfer also has an important impact on the frequency with which households receive food. At the aggregate level for all food types, households enjoy a much greater frequency of food transfers when the food comes from an urban area. For example, 25% of households report getting food sent from other urban areas at least once a week, compared to only 5% of households receiving food transfers from rural areas at least once a week (reported for the past 12 months). In contrast, the lower the frequency of food transfers, the greater the proportion that comes from rural areas (Figure 7). This might be expected in a cash-oriented urban food economy, where seasonality is not a consideration as it is in rural areas. The cycle of agricultural production will determine to a large degree the availability of food, with transfers taking place after harvest, which may only be once or twice a

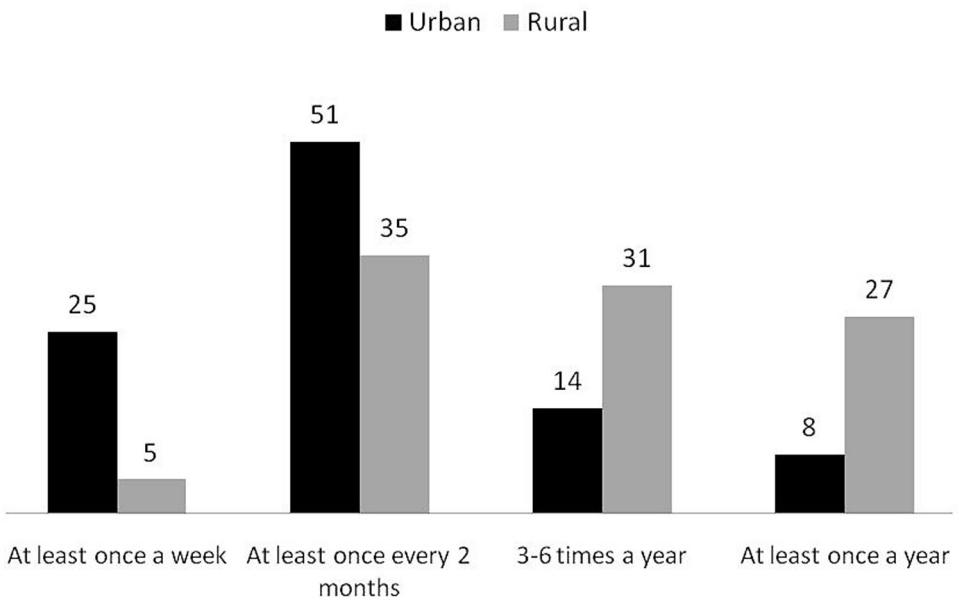

Figure 7 Frequency of Food Transfers to Urban Households by Area of Origin (%, past 12 months)

year (depending on the particular crop). Take cereals, for example: 73% of households get cereals from rural areas only 3–6 times a year or at least once a year (i.e. not very frequently), whereas only 21% of households get cereals from urban areas in the same low-frequency categories. Similarly, 27% of households get cereals at least once a week from urban areas, but only 2% of households get cereals this frequently from rural areas (Table 2). This trend fits with the AFSUN survey data collected on food sources, which show that the majority of households in the sample purchase food, with 79% buying food from supermarkets, 70% from informal markets and street foods, and 68% from small shops/take aways (Frayne et al., 2010).

Does the source of the food transfer (urban or rural) make any difference to the food security status of receiving households? When household food security status is cross-tabulated with source of food transfer, there is no influence (Table 3). In fact, at the regional level, the proportion of receiving households in the food-secure (16%) and food-insecure (84%) categories mirrors the aggregate picture, irrespective of the source of the food transfer. There are, however, some interesting variations in specific cities. For example, in Gaborone, households are more likely to be food-secure if they receive food from rural sources (33%), compared to either urban only (7%) or combined urban and rural sources (8%). The opposite is the case in Maputo, where only 1% of food-secure households receive food from rural areas only, with 17% of food-secure households getting food from urban areas only.[4]

4 Additional research is required to understand these variations.

Table 2 Frequency of transfers by area of origin (%, past 12 months)

Food type	Frequency	Urban (%)	Rural (%)
Cereals	At least once a week	27	2
	At least once every 2 months	52	25
	3–6 times a year	12	36
	At least once a year	9	37
Total		100	100

N=1798.

Table 3 Household food security status by source of food transfer

Household food security status	Rural areas only		Urban areas only		Rural and urban areas		Total	
	N	%	N	%	N	%	N	%
Food-secure	120	16	139	16	31	16	290	16
Food-insecure	615	84	740	84	164	84	1519	84
Total	735	100	879	100	195	100	1809	100

Although there are significant variations in food transfers between cities in the survey – Johannesburg is the lowest, with 14% of households receiving food transfers, and Windhoek is the highest at 47% – these findings reinforce the importance of migration in understanding spatially 'stretched' households, and the strong social capital that creates these food pathways between households that are geographically diverse (Martin and Beittel, 1987; Spiegel et al., 1996). Moreover, while rural–urban links have dominated the pattern of social capital, this appears to be changing as the population urbanises, with significant urban–urban linkages being reported in this survey. Food transfers are therefore very important, and it is in this way that the migration process plays a significant role in household food security within the cities of Southern Africa.

Conclusions

The development discourse in the African context has been focused on the rural context, with little direct attention paid to questions of urban poverty and development (de Bruijn et al., 2001; Potts, 2006). In fact, urbanisation has often been viewed as a negative trend, and migrants as temporary visitors to the city (Falola and Salm, 2004; Simone, 2004). While this prevailing attitude is often attributed to colonial influences, contemporary development policies and plans generally fail to recog-

nise the emerging centrality of human settlements, often framing rural development as a means of slowing, if not stopping, urbanisation (Tapscott, 1995; SADC, 2003). Yet, as this article argues, migration and urbanisation are not only unstoppable, but are rapidly (re-)shaping the social economy of Southern Africa, and development approaches and policies will therefore have to recognise this process and adapt to meet the realities of an increasingly urban future. Moreover, the manifestation of rapid rural–urban migration in Southern African cities is rising levels of urban poverty, and in particular, food poverty. As demonstrated by the AFSUN survey, with the majority of poor urban households living below the food poverty line (77%), the implications for human development are dire.

One of the most pressing human development issues is that of malnutrition, which is often cited as the 'silent emergency', and is the outcome of chronic food insecurity and hunger (UNICEF, 1998; 2008). In urban areas, food *availability* is seldom the constraint, but rather *access* to food for the urban poor, especially for children. In a recent report highlighting the urgency of the matter, the World Bank argues that despite decades of interventions, malnutrition still affects at least one-third of the developing world's population (World Bank, 2006). Micronutrient deficiencies and stunting associated with poor levels of food security are considered an 'extremely serious development issue' by the Bank, with the highest prevalence concentrated in South Asia and sub-Saharan Africa. Furthermore, the report makes the salient point that the scale of malnutrition is such that it may prevent many countries from attaining the MDGs (World Bank, 2006).

Based on case studies, UNICEF (2008) reports that the urban–rural gap is closing with respect to malnutrition. This is likely to be the consequence of rising urban poverty associated with urbanisation in developing countries. Researchers commented in the early 1990s that because malnutrition rates are generally reported at the city level rather than the neighbourhood level, underreporting is a challenge; yet, it would be expected that malnutrition levels would be disproportionately higher in low-income and slum areas, and possibly greatly exceeding levels in rural areas (von Braun et al., 1993). The AFSUN survey supports this view, demonstrating the direct link between poverty and food insecurity at the household level in Southern African cities. The combination of macro- and micro-nutrient deficiencies leads to malnutrition and development consequences at all stages of the life cycle, and without the appropriate nutrition during this initial period, physical and mental development will be retarded; no interventions after these first two years can reverse this outcome (Alderman et al., 2006; Ruel and Hoddinott, 2008). This situation represents a major policy and planning challenge at all levels of urban and national government. Therefore, without effective food-related interventions, urban areas will inevitably become the focus of malnutrition in the region as the urban transition progresses over the coming decades.

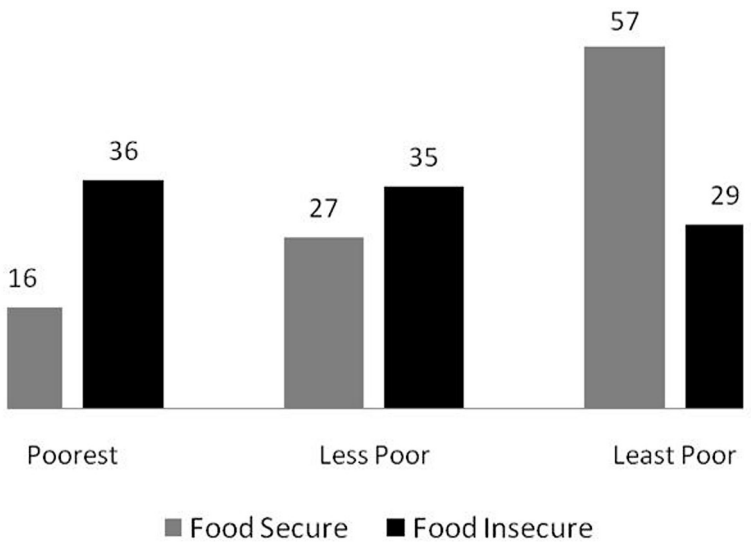

Figure 8 Household Income Terciles by Food Security Status (%)

Although the food security question in the African context continues to be framed in terms of agricultural production, the pace of urbanisation and attendant poverty calls for the additional focus on urban food systems, where access to food (or cash) is critical. Urban managers will have to explore ways to support urban food welfare as cities grow. One way of doing this is to support the current informal movement of rurally produced food to households in the city, which the AFSUN data and other studies demonstrate is important to many migrant household economies. As a primary source of urban food, developing and improving small-scale farmer production in sending areas (migrant areas of origin) is also an important strategy which is receiving attention within the broader food security approach in Africa (AGRA, 2010). In addition to developing the informal supply of food via rural–urban links, improving the commercial supply of food may help to control price rises and be of benefit to poor urban households, and could help improve the emerging urban–urban household food transfers discussed earlier. Developing and supporting production (urban agriculture) at the city level may be another key strategy (Mougeot, 2005; Redwood, 2008; Hovorka et al., 2009). In the AFSUN survey, 22% of households reported growing their own food, with some cities much higher, such as Blantyre (66%), Harare (60%) and Maseru (47%). As important as these production-oriented options are, in a price-sensitive, cash-intensive environment that characterises the urban food economy, full and secure access to food relies on income. The survey shows a direct link between income and food security status, with poorer households

experiencing greater levels of food insecurity; this relationship is statistically significant ($p<0.005$; cc=0.25) (Figure 8).

This article has argued that poverty and food insecurity are directly linked, and therefore, in the context of low incomes, social welfare will have to be designed with a food-security lens if it is to play a role in reducing the very high levels recorded in the cities in this survey. At present, the levels of food insecurity are high in South African cities despite there being well-developed social welfare systems in place, which points to the urgency of re-thinking programme design to address the very basic development question of food and nutrition security. Specific food grants could be considered as a means of improving food security amongst poor households, either through cash or voucher systems; for example, the means-tested food voucher system in the USA (Frayne et al., 2009, 19). Food aid remains almost non-existent in Southern African cities, and the AFSUN survey bears this out, with only 7% of households in the regional sample reporting receiving some form of food aid in the last year (with far fewer using food aid as a regular source of food).

An additional and often overlooked area of programme potential relates to the important role that community service organisations play in food provisioning amongst the urban poor. The survey found that the majority of households used what can be considered informal food sources, including sharing meals with, or eating food provided by, neighbours/others (41%), borrowing food (21%), community food kitchens (4%), and food aid (2%). Community organisations have the potential to greatly improve the delivery of food to needy households, but in order to do this effectively, they require support.

The issue of infrastructure and rural–urban migration is also an important development priority from a food security perspective. As presented in this paper, the majority of poor urban households are recent migrants to the city, and it is the food-insecure amongst these that relies the most on informal food transfers to supplement their food needs. It is also well documented that the urban poor (often migrants) are most often housed in informal conditions (UN-HABITAT, 2007). The AFSUN data show that informality and food insecurity are linked, with greater levels of food insecurity being measured in households that live in shacks and other informal types of housing, compared with formal housing types (Frayne et al., 2009, 15). Yet one of the most significant and intractable challenges in rapidly growing cities is housing, with slum populations rising daily. Infrastructure is therefore a pressing policy and development priority in urban areas, with a focus on roads and drainage, water and sanitation, and power – food insecurity is heightened not by the informality of the dwelling per se, but rather by the lack of basic infrastructure needed to store, prepare and consume food in sanitary conditions. Poor roads and informally developed urban environments can also directly limit the ability of food retailers (of all scales) to locate in informal areas, and for residents to readily access higher-quality,

cheaper food sources, such as supermarkets located in more formal and better-serviced places.

In summary, this article demonstrates that the migration and urbanisation process in Southern Africa encourages significant transfers of food to food-poor urban households, and that these informal food pathways make important contributions to household food security. However, as described in this concluding discussion, the implication of widespread, chronic urban food insecurity in the context of rapid urbanisation and limited economic growth is that the geographic epicentre of the development challenge has become the city; therefore, the pathways toward greater prosperity must lie in proactive policy and plan formulation within urban places. Given the links between food and nutrition security on the one hand, and human development and wealth generation on the other, using a food lens is one useful way of devising approaches to urban development that are people-centred and pro-poor.

References

AFROBAROMETER (2004), 'Lived poverty in Africa: desperation, hope and patience' (Briefing Paper No. 11), Cape Town, University of Cape Town.

AGRA (ALLIANCE FOR A GREEN REVOLUTION IN AFRICA) (2010), available at http://www.agra-alliance.org/section/about.

ALDERMAN, H., BEHRMAN, J. and HODDINOTT, J. (2006), 'Improving child nutrition for sustainable poverty reduction in Africa', 2020 Conference Brief, IFPRI.

AMIS, P. (1995), 'Making sense of urban poverty', *Environment and Urbanization*, **7**, 145–57.

AINA, T. and BAKER, J. (1995), 'Introduction', in J. Baker and T. Aina (eds), 29–42.

BAKER, J. (ed.) (1990), *Small Town Africa: Studies in Rural–Urban Interaction*, Solna, Scandinavian Institute of African Studies.

BAKER, J. and AINA, T. (eds) (1995), *The Migration Experience in Africa*, Uppsala, Nordiska Afrikainstitutet.

BAKER, J. and PEDERSEN, P. (eds) (1992), *The Rural–Urban Interface in Africa: Expansion and Adaptation* (seminar proceedings No. 27). Uppsala, Nordiska Afrikainstitutet.

BILINSKY, P. and SWINDALE, A., (2007), 'Months of adequate household food provisioning (MAHFP) for measurement of household food access: indicator guide', Washington, DC, Food and Nutrition Technical Assistance Project, Academy for Educational Development.

COATES, J., SWINDALE, A. and BILINSKY, P. (2007), 'Household Food Insecurity Access Scale (HFIAS) for measurement of food access: indicator guide (version 3)', Washington, DC, Food and Nutrition Technical Assistance Project, Academy for Educational Development.

COMMITTEE ON WORLD FOOD SECURITY (2006), 'Mid-Term Review of Achieving the World Food Summit Target, Rome', at www.fao.org/UNFAO/Bodies/cfs/cfs32/index_en.htm

CRUSH, J. and FRAYNE, B. (2009), *The Invisible Crisis: Urban Food Security in Southern Africa* (AFSUN Urban Food Security Series No. 1), Cape Town, Idasa Publishing.

CRUSH, J. and FRAYNE, B. (eds) (2010), *Surviving on the Move: Migration, Poverty and Development in Southern Africa*, Cape Town, Development Bank of Southern Africa and Idasa Publishing.

DE BRUIJN, M., VAN DIJK, R. and FOEKEN, D. (eds) (2001), *Mobile Africa: Changing Patterns of Movement in Africa and Beyond*, Leiden, Koninklijke Brill.

DODSON, B., SIMELANE, H., TEVERA, D., GREEN, T., CHIKANDA, A. and DE VLETTER, F. (2008), *Gender, Migration and Remittances in Southern Africa* (Southern African Migration Project Migration Policy Series No. 49), Cape Town, Idasa Publishing.

FALOLA, T. and SALM, S. (2004), *Globalization and Urbanization in Africa*, Trenton, NJ, Africa World Press.

FAO (FOOD AND AGRICULTURE ORGANIZATION) (2009), www.fao.org/news/story/en/item/20568/icode/

FRAYNE, B. (2001), 'Survival of the poorest: migration and food security in Namibia', (unpublished PhD Thesis), Kingston, Canada, Queen's University.

FRAYNE, B. (2004), 'Migration and urban survival strategies in Windhoek, Namibia', *Geoforum*, **35**, 489–505.

FRAYNE, B. (2007), 'Migration and the changing social economy of Windhoek, Namibia', *Development Southern Africa*, **24**, 91–108.

FRAYNE, B., BATTERSBY-LENNARD, J., FINCHAM, R., and HAYSOM, G. (2009), 'Urban food security in Southern Africa: case study of Cape Town, Msunduzi and Johannesburg' (Working Paper Series No. 15), Development Planning Division, Midrand, Development Bank of Southern Africa (DBSA).

FRAYNE, B., PENDLETON, W., CRUSH, J., ACQUAH, B., BATTERSBY-LENNARD, J., BRAS, E., CHIWEZA, A., DLAMINI, T., FINCHAM, R., KROLL, F., LEDUKA, C., MOSHA, A., MULENGA, C., MVULA, P., POMUTI, A., RAIMUNDO, I., RUDOLPH, M., RUYSENAAR, S., SIMELANE, N., TEVERA, D., TSOKA, M., TAWODZERA, G. and ZANAMWE, L. (2010), *The State of Urban Food Insecurity in Southern Africa* (AFSUN Urban Food Security Series No. 1), Cape Town, Idasa Publishing.

HOVORKA, A., DE ZEEUW, H. and NJENGA, M. (eds) (2009), *Women Feeding Cities: Mainstreaming Gender in Urban Agriculture and Food Security*, London, Practical Action Publishing.

KAMETE, A. (1998), 'Interlocking livelihoods: farm and small town in Zimbabwe', *Environment and Urbanization*, **10**, 23–34.

KOC, M., MACRAE, R., MOUGEOT, L. and WELSH, J. (eds) (1999), *For Hunger-Proof Cities: Sustainable Urban Food Systems*, Ottawa, International Development Research Centre (IDRC).

KRÜGER, F. (1998), 'Taking advantage of rural assets as a coping strategy', *Environment and Urbanization*, **10**, 119–34.

LANDAU, L. (2010), 'Discrimination and development? Immigration, urbanisation and sustainable livelihoods in Johannesburg', in J. Crush and B. Frayne (eds) (2010) 67–82.

MARTIN, W. and BEITTEL, M. (1987), 'The hidden abode of reproduction: conceptualizing households in Southern Africa', *Development and Change*, **18**, 215–34.

MCDONALD, D. (2000), *On Borders*, New York, NY, St Martin's Press.

MEHTA, D. (2000), 'Urbanisation of poverty', *Habitat Debate*, **6**, Nairobi, UN-HABITAT.

MORENO, E. and WARAH, R. (2007), 'Urban and slum trends in the 21st century', UN Chronicle Online Edition (www.un.org/Pubs/chronicle/2006/issue2/0206p24.htm).

MOUGEOT, L. (ed) (2005), *AGROPOLIS: The Social, Political, and Environmental Dimensions of Urban Agriculture*, London, Earthscan and Ottawa, International Development Research Centre.

OWUOR, S. (2006), *Bridging the Urban–Rural Divide. Multi-Spatial Livelihoods in Nakuru Town, Kenya*, Leiden, African Studies Center.

PENDLETON, W., CRUSH, J. CAMPBELL, E, GREEN, T., SIMELANE, H., TEVERA, D., and DE VLETTER, F. (2006), *Migration, Remittances and Development in Southern Africa* (Southern African Migration Project Migration Policy Series No. 44), Cape Town, Idasa Publishing.

POTTS, D. (2000), 'Worker-peasants and farmer-housewives in Africa: the debate about "committed" farmers, access to land and agricultural production', *Journal of Southern African Studies*, **26**, 807–32.

POTTS, D. (2006), *Urban Growth and Urban Economics in Eastern and Southern Africa*, New York, NY, UN University Press.

POTTS, D. (2010), *Circular Migration in Zimbabwe and Contemporary Sub-Saharan Africa*, London, United Kingdom, James Currey.

POTTS, D.. and MUTAMBIRWA, C. (1998), 'Basics are now a luxury: perceptions of the impact of structural adjustment on rural and urban areas in Zimbabwe', *Environment and Urbanization*, **10**, 55–66.

RAKODI, C. and LLOYD-JONES, T. (eds) (2002), *Urban Livelihoods: A People-Centered Approach to Reducing Poverty*, London, Earthscan Publications.

RAVALLION, M. (2007), 'Urban poverty', *Finance and Development*, **44**, 15–17.

REDWOOD, M. (2008), *Agriculture in Urban Planning: Generating Livelihoods and Food Security*, London, Earthscan and Ottawa, International Development Research Centre.

RUEL, M. and HODDINOTT, J. (2008), 'Investing in early childhood nutrition' (Policy Brief 8), IFPRI, Washington, DC.

SADC (SOUTHERN AFRICAN DEVELOPMENT COMMUNITY) (2003), *Regional Indicative Strategic Development Plan (RISDP)*, Gaborone, SADC Secretariat.

SIMONE, A. (2004), *For the City Yet to Come: Changing African Life in Four Cities*, Durham, NC, Duke University Press.

SMIT, W. (1998), 'The rural linkages of urban households in Durban', *Environment and Urbanization*, **10**, 77–88.

SPIEGEL, A., WATSON, V. and WILKINSON, P. (1996), 'Domestic diversity and fluidity in some African households in greater Cape Town', *Social Dynamics*, **22**, 7–30.

STARK, O. (1991), *The Migration of Labour*, Cambridge, Basil Blackwell.

SWINDALE, A. and BILINSKY, P. (2006), *Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access: Indicator Guide (Version 2)*, Washington, DC, Food and Nutrition Technical Assistance Project, Academy for Educational Development.

TACOLI, C. (1998), 'Rural–urban interactions: a guide to the literature', *Environment and Urbanization*, **10**, 147–66.

TAPSCOTT, C. (1995), 'Changing discourses of development in South Africa', in J. Crush (ed), *Power of Development*, London and New York, Routledge, 176–191.

TIBAIJUKA, A. (2009), 'There is no sustainable development without sustainable urbanisation' (paper delivered at the 17th Session of the Commission on Sustainable Development on 13 May), Nairobi, UN Centre for Human Settlements.

UNESA (UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS POPULATION DIVISION) (2007), *World Urbanisation Prospects: The 2007 Revision*, New York, NY, www.un.org/esa/population.

UNESA (UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS POPULATION DIVISION) (2008), *State of World Population - Reaching Common Ground: Culture, Gender and Human Rights*,

New York, NY, www.un.org/esa/population.

UNESA (UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS POPULATION DIVISION) (2009), *World Urban Prospects: The 2009 Revision*, New York, NY, www.un.org/esa/population.

UN-HABITAT (2007), *The State of the World's Cities Report 2006/2007*, Nairobi, UN Centre for Human Settlements.

UN-HABITAT (2008), *The State of African Cities, 2008: A Framework for Addressing Urban Challenges in Africa*, Nairobi, UN Centre for Human Settlements.

UNICEF (1998), *The State of the World's Children*, Oxford, Oxford University Press.

UNICEF (2008), 'Health & MDG Booklet', www.unicef.org.

VON BRAUN, J., MCCOMB, J., FRED-MENSAH, B., and PANDYA-LORCH, R. (1993), *Urban Food Insecurity and Malnutrition in Developing Countries: Trends, Policies and Research Implications*, Washington, DC, International Food Policy Research Institute.

WORLD BANK (2006), *Repositioning Nutrition as Central to Development: A Strategy for Large-scale Action*, Washington, DC, World Bank.

Acknowledgements

The author would like to thank the following for their contributions to AFSUN and the baseline survey: Caryn Abrahams, Ben Acquah, Jane Battersby-Lennard, Eugenio Bras, Mary Caesar, Asiyati Chiweza, David Coetzee, Jonathan Crush, Belinda Dodson, Scott Drimie, Rob Fincham, Miriam Grant, Alice Hovorka, Florian Kroll, Clement Leduka, George Matovu, Sithole Mbanga, Chileshe Mulenga, Peter Mvula, Ndeyapo Nickanor, Sue Parnell, Wade Pendleton, Akiser Pomuti, Ines Raimundo, Celia Rocha, Michael Rudolph, Shaun Ruysenaar, Christa Schier, Nomcebo Simelane, Joe Springer, Godfrey Tawodzera, Daniel Tevera, Percy Toriro, Maxton Tsoka, Daniel Warshawsky, Astrid Wood and Lazarus Zanamwe. The Food and Nutrition Technical Assistance Project (FANTA) is gratefully acknowledged for providing the methodology and questions used in this survey to collect food insecurity data. Wade Pendleton, Christa Schier, Jane Battersby-Lennard and Jonathan Crush have provided valuable comment and analysis on aspects of this paper.

The survey was funded by the Canadian International Development Agency (CIDA) through its University Partners in Cooperation and Development (UPCD) Tier One Program.