

Vulnerability in crisis: urban household food insecurity in Epworth, Harare, Zimbabwe

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Received: 29 August 2011 / Accepted: 1 October 2011 / Published online: 17 November 2011
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Abstract Much of the contemporary literature on food security has focused on the rural sector. However, within the current context of high demographic growth, rapid urbanization and rising urban poverty which characterizes much of Sub-Saharan Africa, urban food insecurity cannot continue to be ignored. This study therefore examines the vulnerability of poor households to food insecurity in the challenging urban environment of Harare in Zimbabwe, an acute example of a city (and country) ‘in crisis’. Findings from qualitative and quantitative research demonstrate severe food insecurity characterized by critical food shortages and the consumption of narrower diets among poor households in the city. Household vulnerability to food insecurity stemmed from a range of factors, including: high levels of unemployment and poverty; high dependency ratios; low levels of house ownership; hyperinflation; skyrocketing food prices; and the general collapse of the formal food system. Vulnerability to food insecurity was further exacerbated by a prolonged adverse socio-political climate that undermined national economic recovery and reduced the livelihood opportunities available to the urban poor. The paper concludes that in Harare, as in most urban areas of the developing world, the urban poor have become highly vulnerable to food insecurity.

Keywords Urban food security · Vulnerability · Urban livelihoods

Introduction

Food security has been defined as a state ‘when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life’ (World Food Summit 1996). Embedded in this broadly accepted definition are three major components of food security, namely: food availability, access, and utilization. A fourth, cross-cutting dimension of ‘vulnerability’ is now widely recognized and accepted as being fundamentally important. Vulnerability generally refers to ‘insecurity in the well-being of individuals, households or communities in the face of a changing environment’ (Moser 1998:3). In urban areas, the factors that generally increase household vulnerability include, among other things: job loss, inadequate housing conditions and persistent price escalations (Moser 1998). Therefore, in the context of a city such as Harare, it is not just poverty that places households at risk of becoming food insecure. Rather, it is a whole range of conditions that limit the poor’s access to resources that could afford them protection during times of crisis. Using vulnerability to understand household food security in urban areas thus draws attention to the specific contextual factors which influence exposure and determine the capacity of households to respond to any changes in their environment. Against this background, the aim of this paper is to examine the vulnerability of poor urban households to food insecurity in the context of Harare, Zimbabwe.

To achieve this aim, the paper has two objectives: a) to determine the food security status of the households under study; and, b) to identify the factors that affect their vulnerability to food insecurity. The paper uses a livelihoods approach to examine a wide range of issues related to

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household food insecurity. The choice of Harare as a case study was motivated by the expectation that the severe economic and socio-political challenges faced by Zimbabwe since 2000 would have had significant effects on household food security. The remainder of this paper is divided into five sections. Section “[Urbanization, poverty and food insecurity](#)” discusses the urbanization process in Southern Africa, particularly how high rates of urban growth have exacerbated poverty and increased the vulnerability of the urban poor to food insecurity. Section “[Research context](#)” gives a brief overview of Zimbabwe's urbanization process, to provide a better context for understanding the current urban food security challenges in the country. Section “[Methodological approach](#)” details and justifies the methodological approach used, which combined qualitative and quantitative methods to investigate urban household food security in a specific case study settlement. Section “[Household food security and vulnerability in Epworth](#)” presents the findings of the research and discusses the numerous factors responsible for increasing household vulnerability to food insecurity. The last section, Section “[Conclusion](#)”, concludes the paper by emphasizing the multiple-pronged nature of the factors that make households vulnerable to food insecurity in the urban environment.

Urbanization, poverty and food insecurity

Sub-Saharan Africa is rapidly urbanizing. With an urban growth rate of 5% per annum, it is expected that over 300 million new residents will be added to urban areas in the sub-continent between 2000 and 2030 (Kessides 2005). Given evidence that ‘the poor are urbanizing faster than the population as a whole’ (Ravallion et al. 2007:693) and that there is a general increase in the levels of poverty among the urban populace (Mitlin and Satterthwaite 2011), such a high growth rate raises questions about hunger, malnutrition and urban household food insecurity. Despite the challenges that these trends pose, ‘little is still known about the extent of food insecurity in the cities and towns of Southern Africa’ (Frayne et al. 2009:2). The neglect of urban areas in the literature on food insecurity in sub-Saharan Africa can be traced to the influence of development theories based on an assumption that the residents of cities are better off economically than rural people (Maxwell 1998). Modernization theory, for example, postulated that urbanization would drive development and improve people’s lives, as had happened during Europe’s industrialization. In Southern Africa, however, urbanization has mostly taken place in the absence of industrialization (Bryceson 2006). Instead, migration to cities has been ‘fuelled by a failure of agricultural policies or regional conflict’ (Commission for Africa 2005:219) rather than industrialization and economic

growth. Most migrants to cities have therefore ended up being unemployed or underemployed, with incomes insufficient to meet their daily food requirements (Stevens et al. 2005). Despite such problems, the discourse on urban poverty and food insecurity has remained marginal.

In addition, urban bias theory shifted the emphasis of development from the economic to the political by arguing that development policies in the developing world have systematically favored the politically vocal, articulate, organized, and powerful urbanites at the expense of rural dwellers (Lipton 1977; Nyerere 1968). In a bid to correct the perceived distortions of urban bias, development initiatives in Africa tilted heavily towards rural areas (Lipton 2005), solidifying a ‘contemporary blindness’ towards urban poverty and food insecurity (Maxwell 1998:7). However, as Owuor (2006) and Potts and Mutambirwa (1998) point out, the cities of the region are increasingly typified by the presence of extreme poverty. The failure of Structural Adjustment Programmes, global recession and global food price hikes have all significantly contributed to worsening urban economic conditions in the region. Already there are indications that the Millennium Development Goal (MDGs) of halving the number of people living in poverty by 2015 will not be met in the region (United Nations Population Fund 2007). The depth of poverty in the region may be even greater than the figures portray, given that most statistics use a monetary conception of poverty¹ and do not adequately account for people impoverished in terms of inadequate housing, sanitation and clean water. This crisis demands improved understanding of the vulnerability of the urban poor to poverty and food insecurity.

In trying to understand urban food insecurity, a livelihoods approach is valuable. Such an approach seeks to improve understanding of how people use the resources at their disposal to construct a livelihood (Chambers and Conway 1992). Although the approach emerged from research in rural areas, where it has been successful as an analytical tool for coming to grips with rural livelihoods, a number of authors have demonstrated that it is theoretically sound and can also be utilized to understand urban deprivation. The assumption is that people construct their livelihoods by drawing on a range of assets (human, physical, financial, social, and natural) which are available to them within a broader socio-economic and political context (Rakodi 2002). The ability of the poor to access assets and other resources in the urban environment is mediated by the context in which they live: the *vulnerability context*. The value of the livelihoods approach is that it directs attention to the contextual and systemic factors that contribute to the

¹ See Rakodi (1995a) for a detailed discussion on the limitations of using poverty lines to measure urban poverty.

occurrence of poverty and ultimately food insecurity within households, as well as the assets available to households themselves. In the city, vulnerability factors include shocks such as illness or conflict; stresses such as economic downturns, inflation, currency devaluation, structural unemployment and poor governance; and also seasonality, which influences prices and employment opportunities.

Research context

This section gives a historical overview of Zimbabwe's urbanization process. This approach is adopted in order to provide a context for understanding the food security challenges besetting urban areas in the country today. Particularly central to this discussion are the socio-political processes embedded in post-independence urbanization (Economic Structural Adjustment Programme, Fast Track Land Reform Programme, *Operation Murambatsvina* - literally "throw out rubbish") and the role that these processes have played in increasing vulnerability and undermining urban livelihoods as well as in household food security.

Colonial urbanization

Most of Zimbabwe's colonial urban settlements grew relatively slowly in their formative years. Harare, for example, grew to a mere two thousand settlers by 1909, almost two decades after its establishment (Yoshikuni 2006). Urban growth was stunted by successive laws (e.g. Southern Rhodesian Native Regulations Act of 1897 and Vagrancy Law of 1960), which prohibited unemployed Africans from living in towns (Drakakis-Smith 1992). Tightly controlled urban growth meant that there were no major backlogs in the provision of services to the small urban population. Therefore urban poverty did not become entrenched and questions regarding food insecurity in urban areas rarely, if ever, arose. Even when the country was placed under sanctions due to the 1965 Unilateral Declaration of Independence (UDI), the living conditions of urbanites did not worsen much, as the government invested heavily in industries to create more jobs, thereby keeping the urban standard of living relatively high (Curtin 1968). This situation changed in the 1970s during the country's protracted war of liberation, as many refugees from rural areas moved into towns, which were considered to be safe. Without meaningful job creation for the new in-migrants, poverty levels in the urban areas increased rapidly. The situation worsened following the attainment of independence in 1980, as the removal of restrictive legislation provided a new impetus for Africans to move into cities (Patel 1984). The new government therefore battled to provide for a rapidly increasing urban population.

Post-independence urbanization

After independence, the government worked hard to fulfill citizens' expectations by making huge expenditures on education, health and infrastructure. Relative success was achieved: by 1991 the country had registered a net primary education enrollment rate of 82%, an adult literacy rate of 86% and a real GDP growth rate of about 7% per annum (Malaba 2006). However, in this attempt to tackle the inherited skewed income distribution, the government had put more emphasis on redistributive policies than on growing the economy. Government expenditure thus increased to over 50% of GDP by 1990 and unemployment shot up to 26% in the same year from 8% at Independence (Brown 2000). Recurrent droughts compounded the situation by reducing food stocks and adversely affecting foreign currency earnings from agricultural exports (Stevens and Mugova 2006). Other problems also started to become manifest: shortages in housing, lack of employment opportunities, insufficient water supplies, and a general deterioration of the urban environment. The economic problems forced the government to adopt a World Bank and IMF sponsored Economic Structural Adjustment Programme in 1991 in a bid to promote investment and growth.

The economic structural adjustment programme (ESAP)

Essentially, ESAP was required to overcome the country's domestic and international debt and to promote investment and growth (Mupedziswa 1997). This was to be done through a three-pronged strategy which involved: a) trade liberalization, b) domestic deregulation and investment promotion, and; c) fiscal and monetary policies to curtail government expenditure (Chisvo 2000). These measures, it was argued, would kick-start the process of economic growth which was then stalling, and reshape the role of the government in the process and at the same time reduce the fiscal deficit as well as encourage foreign investment. Little progress was, however, made towards achieving these targets. Although ESAP cannot be wholly blamed for the economic woes that have bedeviled Zimbabwe since the 1990s, many analysts (e.g. Potts 2006; Tibaijuka 2005) believe that it laid the foundation for a serious downward trajectory in the country's economy. The austerity measures that ESAP imposed led to the closure of many factories, massive retrenchment, declining real wages, skyrocketing consumer prices and a decline in the formal economy. This created severe hardships for urbanites whose standards of living deteriorated drastically because of their heavy dependence on the cash economy (Ranga 2004). Any progress made in the initial years of ESAP was wiped out by its negative impacts and its objectives were never achieved.

The general macro-economic meltdown

Since 2000, Zimbabwe has been experiencing a rapid economic decline. GDP contracted by over 40% between 2000 and 2006 (Government of Zimbabwe/Unicef 2006). Annual inflation increased from a two-digit figure in 2000, peaking at 231 million percent in July 2008 (Hanke and Kwok 2009). The country's external debt ballooned to US \$4.8 billion in 2007 (Gilpin 2008). By 2008, formal sector employment had shrunk to 480 000 from about 3.6 million in 2003 (Chimhowu 2009). In the wake of the economic decline, life expectancy, which had peaked at 61 years in 1990, fell to around 36 years in 2008 (United Nations Population Fund 2007). The Human Development Index (HDI) dropped from 0.621 in 1985 to 0.468 in 2003 (UNICEF 2004: 69), indicating a drastic decline in welfare. This tumultuous economic environment negatively impacted on general livelihoods, with the purchasing power of the average Zimbabwean in 2005 falling to the same level as in 1953 (Clemens and Moss 2005)—virtually wiping out the gains made over the previous 50 years. Poverty also increased: the country's Human Poverty Index (HPI), more than doubled from 17% in 1990, to 40% by 2006 (Chimhowu 2009). The impact on the urban poor has been particularly devastating: the largest increase in poverty between 1995 and 2003 was recorded in urban areas (65%), while rural areas recorded a lower increase of 42% (Government of Zimbabwe 2006:20). On average, urban households were thus becoming poorer faster than their rural counterparts. Increasingly therefore, urban areas have come to be dominated by worsening socio-economic conditions and heightened vulnerability among urban households.

The fast-track land redistribution programme (FTLRP)

In the year 2000, the government launched the fast track land redistribution programme, compulsorily acquiring farms from largely white farmers, for redistribution to indigenous blacks. By the end of 2002, there were only about 600 of the original 4500 white farmers left in the country (Sachikonye 2003). Although over 1.2 million black farmers benefitted from the land reform programme (Government of Zimbabwe 2005), production levels have remained low, as most of the new farmers have neither the financial resources nor the equipment and expertise to productively run the farms (Gandure and Marongwe 2006). As a result, the country has become a net importer of food. While production levels have somewhat improved in the newly resettled areas since 2004, these increases have not been sufficient to offset the losses incurred due to the disruptions. Maize production deficits, for example, have averaged over 500 000 tonnes per annum since 2000.

While the fast-track land reform undoubtedly caused huge disturbances for commercial agriculture, it would be remiss to regard the process as a total failure. A book by Scoones et al. (2010) provides empirical evidence of success stories that, because of the prevailing political situation, have largely been ignored by the press, political commentators and even academics. Using evidence from 400 households in 16 different sites in Masvingo Province, Scoones et al. (2010) indicate that the outcomes of the land reform programme are far more complex than the generalizations of media headlines and that there are examples of both success and failure. Nevertheless, while such success stories give hope that the country may slowly be on the road to economic recovery, they do little to expunge the fact that at inception, and indeed during subsequent years, the programme contributed enormously to increasing food insecurity at the national level. The impact was even worse in urban areas, because very little food filtered into towns and cities from the rural areas to feed urbanites who were already reeling under the general macro-economic meltdown. Urban residents therefore have had to rely on imported food, inflows of which were unreliable in a country with little foreign currency.

Operation Murambatsvina

Operation *Murambatsvina* (OM), instituted in 2005, was a programme in which backyard houses, vending stalls, flea markets and informal businesses in the country's urban areas were destroyed. According to the government, the aim of the programme was to enforce urban by-laws, stop 'illegal' activities and ensure orderly urbanization (Government of Zimbabwe 2005). Critics, however, argue that the essence of the operation was to disperse a restive urban population adversely affected by economic decline and the deterioration in service delivery, which could have provided a breeding ground for a revolution against the government (International Crisis Group 2005). The operation caused massive destruction of livelihoods and housing in urban areas. For example, flea markets, which had become major income sources for many urban households due to the contraction of the formal job market, were destroyed (Tekere 2001). Some people were even forced to leave their jobs as a result of their loss of shelter (Tibaijuka 2005). It is estimated that more than 700 000 urbanites lost their homes, livelihoods or both (Mugara 2007). Operation *Garikayi*, launched in the aftermath of OM to construct houses for some of the affected families, was too little and too late to mitigate the impacts of OM, as the government had neither the capacity nor sufficient resources to ensure meaningful mitigation. Operation *Murambatsvina* can thus be singled out as the most visible post-colonial activity that rearranged Zimbabwe's urban landscape and worsened the plight of the urban poor. Household food

security in urban Zimbabwe generally and in Harare in particular is therefore best understood in the context of an urban populace whose livelihoods have progressively been decimated by a combination of factors, including ESAP, the effects of land reform, *Operation Murambatsvina* and the general economic meltdown in the country.

Methodological approach

This section details the methodological approach used to investigate urban household food security in Epworth, Harare. It starts by describing the study site and then discusses the research design, which combined qualitative and quantitative methods in a bid to provide a richer understanding of household food security in the urban environment. The research was carried out in February and March 2009.

The study site

Harare is Zimbabwe's largest city. With a population of about 1.5 million people (CSO Zimbabwe 2009), the city accommodates approximately 46% of the country's total urban population. Epworth, located about 15 km to the southeast of the city centre, is a low-income peri-urban residential area. The land on which the suburb is situated was donated by Cecil John Rhodes to the Wesleyan Methodist Mission Trust in 1900 (Butcher 1988; Rakodi 1995a, b). The original inhabitants were subsistence farmers, whose economic activities changed when the area became a refuge for people fleeing from the war in rural areas. Most of the land was subdivided by the church to accommodate the new arrivals and the area was gradually turned into an informal residential area. At independence, when restrictive urban legislation was repealed, huge numbers of people moved into Epworth and settled there. The population of the area expanded rapidly: from approximately 20 000 people (CSO 1982) in 1980 to 120 000 by mid-2009 (CSO 2009).

In 1986, faced with a ballooning population and increasing challenges, the Methodist Church passed ownership of Epworth to the government and the settlement was legalized (Butcher 1988). The government in turn appointed a Local Board to oversee the area's development. Because of its low rents, Epworth continues to attract a multitude of people from other residential areas where accommodation costs are higher. The choice of Epworth for this study was motivated by the high incidence of poverty in the area, and the expectation that a study there would yield a great deal of information on how the urban poor construct their livelihoods and strategize to meet their food needs in the context of the country's crisis situation.

A mixed methods approach

This study combined qualitative and quantitative methods to examine urban household food security. While the qualitative method provided an exploratory edge to discovering the ways in which households function in the urban environment to ensure their food security, the quantitative approach played a confirmatory role, measuring and quantifying those aspects of food security identified in the qualitative process so as to allow for the generalization of findings.

The qualitative approach

A total of 30 in-depth semi-structured interviews were carried out. To capture the diversity of household food insecurity experiences, male-headed, female-headed and child-headed households were included in the sample, as well as households with different socio-economic status and varying length of residence in the city. Within the selected households, a household member above the age of 18 years was chosen as an informant, in order to capture data from a wide cross section of household members, including household heads, spouses, children and other household members. Each in-depth interview took approximately one and a half hours. The semi-structured nature of the interview schedule enabled the researcher to probe for additional information by pursuing interesting issues through follow-up questions. Key informant interviews were also conducted. As Denscombe (1998:118–119) points out, key informants are usually selected because they have 'some special contribution to make' and 'have a unique insight' owing to the position they hold. For this study, the Chairman, Executive Secretary and four councilors of Epworth Local Board were selected for interview, as well as five informants from NGOs.

The quantitative approach

Quantitative data gathering involved the collection of information through a standardized household questionnaire. Statistical procedures were employed to select a statistically acceptable sample size of 200 households from all the seven wards in Epworth. The sampling frame consisted of all the households in the area, arranged by wards. First, modified random sampling was used to select households from the ward lists, which were arranged in alphabetical order. In each ward, a sampling starting point was determined by throwing a dice and thereafter selecting households at a predetermined interval until the desired sample size was achieved. Second, one of the adult household members (above 18 years) was selected as the respondent. The structured household questionnaire was designed to capture demographic characteristics, poverty data, income and expenditure patterns, food insecurity experiences,

dietary diversity information and coping mechanisms. The administration of each questionnaire took approximately an hour. Four enumerators with previous data collection experience were trained as fieldworkers over a two-day period. Communication during the survey was in the local *Shona* language so that respondents could fully understand the purpose of the interviews as well as the information being sought.

Household food security and vulnerability in Epworth

Levels of household food insecurity

This section first presents the research findings on the levels of food insecurity in Epworth and then discusses the numerous factors that are responsible for increasing household vulnerability to food insecurity. Four measures were used to determine household food security: a) Household Food Insecurity Access Scale Score (HFIASS); b) Household Food Insecurity Access Prevalence Indicator (HFIAP); c) Household Dietary Diversity Score (HDDS); and, d) Months of Adequate Household Food Provisioning (MAHFP).²

*Household food insecurity access scale score (HFIASS)*³

The HFIASS, which measures the degree of food insecurity in terms of access to food, ranges from a minimum of 0 to a maximum of 27, with a higher score indicating more food insecurity within a household (Coates et al. 2007). Table 1 shows the levels of food insecurity among the surveyed households. Some households registered the maximum score of 27, representing severe food insecurity. The average score was 14.55 and the median score was 16.50. This average score was almost the same as the 14.7 recorded during the 2008 AFSUN Baseline survey carried out in the residential areas of Mabvuku-Tafara and Dzivarasekwa (Crush and Frayne 2010), despite the fact that the country's economic situation had by then stabilized a bit through the ushering in of the Government of National

² These are internationally accepted food security measures designed by the USAID's Food and Nutrition Technical Assistance (FANTA) project and have been used extensively in food security surveys internationally (see, Swindale and Bilinsky 2006).

³ The HFIASS reflects the household experience of food access problems during the previous month. It is derived from a 9 item questionnaire where a respondent answers on behalf of all household members. For each question, the respondent has 4 possible responses depending on the frequency of occurrence of the experience described. The level of food insecurity is established based on a score (the sum of responses), followed by a classification of severity of food insecurity. The scores range from a minimum of 0 to a maximum of 27. The higher the score, the more food insecure the household is.

Unity and there had been an improvement in the availability of food.

On a regional basis, this HFIASS was higher than that recorded for other cities in the 2008 AFSUN survey, which revealed that amongst poor households in Johannesburg the average score was 4.7, in Blantyre 5.3, Windhoek 9.3, Cape Town 10.7, Gaborone 10.8, and Lusaka 11.3 (Crush and Frayne 2010). The high HFIASS score in Epworth was thus indicative of high levels of food insecurity among households. During the qualitative survey, the majority of surveyed households gave graphic descriptions of their food insecurity situation, often saying: 'we are dying here'; 'we are lucky to be alive' or 'we are starving...it's by the grace of God that we are still surviving'. Most reported being constantly worried about not having enough food, not being able to eat food they preferred, eating a limited variety of food, and frequently eating smaller and fewer meals than desirable.

Household food insecurity access prevalence indicator (HFIAP)

The HFIAP categorizes households into four levels of food insecurity⁴: food secure and mildly, moderately and severely food insecure (Coates et al. 2007). Only 3.0% of the surveyed households were classified as food secure and 6.5% as mildly food insecure (Table 2). Nine out of ten households in the study settlement were food insecure: 31.5% were moderately food insecure while the greatest proportion of the sample (59%) was severely food insecure.

Such high levels of household food insecurity were not surprising, given that the city, and indeed the whole country, was reeling under the most severe economic crisis to have afflicted the country in the post-independence period. As noted above, this crisis was characterized by severe food shortages, high inflation and consequently high food prices.

Household dietary diversity scale (HDDS)

The severity of household food insecurity in Harare was not just reflected in the prevalence of households that were food insecure, but also in the narrow range of foods that these households were consuming. Most respondents in the qualitative survey indicated that they always had 'the same meal' or 'the usual meal', which consisted mostly of *sadza* (a thick porridge made from white maize meal) and boiled vegetables. These assertions were validated by the quantitative results, with no household

⁴ For ease of analysis, the first two categories (food secure and mildly food insecure) were later collated into one to make up the food secure category while the last two (moderately food insecure and severely food insecure) were combined to form the food insecure category.

Table 1 Average household food insecurity access scale score (HFIASS)

	Number of HHs	Average score	Median score	Minimum score	Maximum score
Household Food Insecurity Access Scale Score (HFIASS)	N=200	14.55	16.50	0.00	27.00

in the sample reporting having consumed food from all 12 food groups during the previous day (Table 3).

Furthermore, the mean household dietary diversity score was 4.20 out of a possible score of 12.00, indicating that households were consuming foods from, on average, only four different food groups, reflecting a lack of variety in the foods consumed. Narrow diets are a cause for concern given that the importance of nutrients in a diet extends well beyond the energy value of the food. Deficiency of iodine, for example, has often been associated with increased risk of miscarriage (World Bank 2005a, b), while in children and adolescents, poor nutrition has been shown to result in poor physical and mental development, (Aboussaleh and Ahami 2009). Hence, the narrow diets that households in Epworth were able to consume reflect a deeper food insecurity problem than the issue of food availability.

Months of adequate household food provisioning (MAHFP)

In as much as the low dietary diversity among surveyed households showed the nutritional inadequacy of the food being consumed by the poor, food insecurity was also reflected by the number of months per year in which household are adequately provisioned with food. A mean score of 5.07, representing 5 months of adequate food provisioning, was recorded, with a median of 4.00, a minimum of 0.00 and a maximum of 12.00 months. Although seasonality is often treated as an issue that only affects the food security of rural households, the survey results (Fig. 1) show that it is relevant to urban households: most households reported being well provisioned during the months corresponding to the country's agricultural season (February-June), while severe shortages were recorded during the dry months (August-December). Within the former period, the supply of most foods, especially cereals, increase

Table 2 Household food insecurity access prevalence indicator (HFIAP)

	N	%
Food secure	6	3.0
Mildly food insecure access	13	6.5
Moderately food insecure access	63	31.5
Severely food insecure access	118	59.0
Total	200	100.0

as crops are harvested and food prices are relatively low. Additionally, in a country like Zimbabwe, where rural-urban linkages are strong (Potts 2008; 2006; Potts and Mutambirwa 1991), food flows from rural to urban areas considerably increase food availability in the cities, further depressing prices and increasing the proportion of households that are well provisioned during this period.

Urban household vulnerability to food insecurity

Vulnerability refers to the full range of unfavourable conditions and factors that place people at risk of becoming food insecure, as well as those factors that affect their ability to cope when they are threatened by environmental changes.⁵ In urban areas, the environmental changes that increase vulnerability and threaten urban households may be economic, social or political and can take the form of sudden shocks, long-term trends, or seasonal cycles (Moser and Satterthwaite 2008). Most of these changes do not occur in isolation, but rather appear as multiple stressors that increase the vulnerability of the poor and negatively affect their ability to cope with such challenges. The major factors that were influencing household vulnerability in Epworth, Harare, are explored below in detail.

Poverty and household food insecurity

Most of the households interviewed during the survey were living in poverty. The LPI, which assesses the satisfaction of basic needs, was used to measure poverty.⁶ The average LPI of the sample stood at 2.80, while the median was 2.68 and the maximum 3.88. It was no surprise that those

⁵ Chambers (1989:20) distinguishes between an external and an internal side of vulnerability. The external side relates to risks and shocks which are beyond individual/household control, but to which individuals or households are exposed (e.g. globalization, political and economic marginalization, declining terms of trade, weakening social networks). The internal side, on the other hand, is concerned with the specific characteristics of a person/household that exacerbate their susceptibility to shocks and stresses and affect their ability to cope (e.g. education levels of household members, unemployment and poverty).

⁶ The Lived Poverty Index (LPI) scores range from 0.00 (complete satisfaction of basic needs) to 4.00 (frequent shortages of basic needs). The LPI is a good indicator of household poverty, as it measures how frequently people go without necessities such as food, clean water, medicine, enough fuel to cook food and an income (Mattes 2008; Afrobarometer 2003).

Table 3 Household dietary diversity score

Household Diet Diversity Score	N	%
1	2	1.0
2	21	10.5
3	34	17.0
4	92	46.0
5	21	10.5
6	10	5.0
7	8	4.0
8	5	2.5
9	5	2.5
10	2	1.0
11	0	0
12	0	0
Total	200	100.0

surveyed households with high LPI scores were also food insecure. This relationship was statistically significant ($p < 0.001$). As Fig. 2 shows, 78.4% of the households that were food insecure had LPI indices of above 2.00, while only 5.3% of the food secure households had an LPI index above 2.00, underlining the fact that poverty is a major factor in increasing household vulnerability in Harare.

In the urban context therefore, the link between poverty and food insecurity is very strong, because not only does poverty reduce households' ability to buy food, it has an adverse effect on their access to goods and services such as housing, water and energy, which are also necessary for maintaining food security.

Income and household food security

While poverty encompasses many dimensions, the aspect that has most influence on household access to urban goods and services is income. Access to an adequate and stable income is vital for urban household food security because of the monetized nature of the urban environment where nearly everything has to be bought. A particularly apt comment from a survey respondent, that the urban area 'only recognizes one totem: money',⁷ clearly illustrates the importance of income to survival in the urban environment. Income is indispensable for household food security, because most poor urban households are net food purchasers (FAO 2008). The survey findings show that over three-quarters (76.8%) of the food insecure households had total monthly incomes below R500 (Fig. 3), while 59.7% of the food secure households reported that they earned more than R1500 per month. This association between household income and food security status was statistically significant

($p < 0.001$). Although some households with considerably higher incomes ($>R1000$) were food insecure, this was a symptom of Harare's crisis situation, during which persistent food shortages rendered even some moneyed households food insecure. Nevertheless, the availability of cash incomes enabled some households to overcome the food shortages in ways that were not available to those with lower incomes. For example, some households with enough money formed food clubs through which they imported food from Mozambique, Botswana and South Africa.

Employment and household food security

Households with at least a member(s) earning an income from full-time work were more food secure than those that were deriving an income from part time/casual work (21.8%) (Fig. 4).

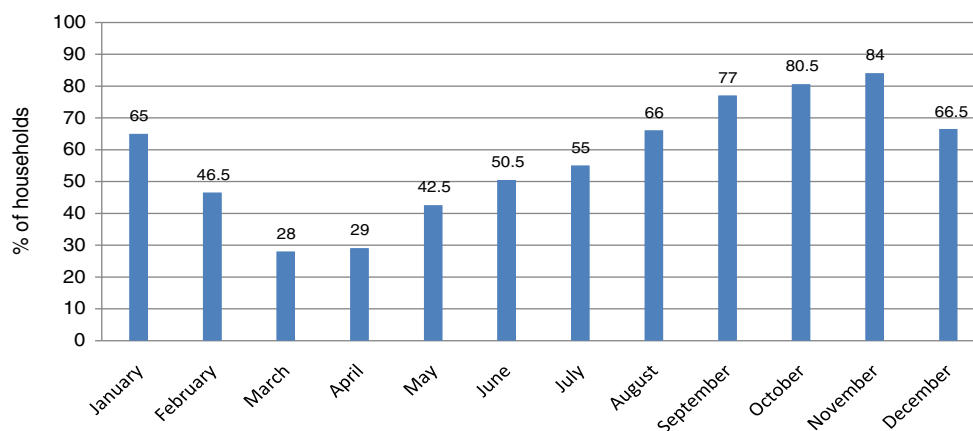
The relationship between employment and household food security status was statistically significant ($p < 0.01$), underscoring the importance of working to household food security in the urban environment. Working facilitates the mobilization of resources that are critical to accessing food, particularly for the landless urban poor who have little recourse to own production. Households with at least a member(s) in full-time work also reported significantly higher incomes than those working part-time or not working (Table 4). It is this higher income which enabled households to purchase food and pay for other obligatory urban expenses. Thus, in an economic 'crisis' situation such as that of Zimbabwe, access to employment remained critical to urban household food security.

Tenure status and household food security

Home ownership has frequently been postulated to reduce vulnerability in urban areas (Grant 2007; Loughhead et al. 2001; Waite 2000). This is because it reduces the risk of eviction following impoverishment and provides opportunities for renting out rooms or operating a home-based enterprise. The survey results show that households that owned houses were relatively more food secure than households that were renting or those living in tied accommodation (i.e. accommodation provided by employers, usually for the duration that one is in employment). As Fig. 5 shows, the greater proportion of the food secure households (68.4%) lived in their own/family accommodation while only 26.1% were in the tenant/lodger category and 5.5% in tied accommodation. On the other hand, the majority of the food insecure households were found among those tenant/lodger households (60.8%). House ownership in Harare impacted on household food security status in the following ways: First, houses did not only provide shelter for owners, but generated income as well through renting out excess rooms. Thirty-two percent of

⁷ Case Study No. 6, 24 March 2009, Ward II, Epworth, Harare.

Fig. 1 Months in which urban households did not have enough food



households interviewed during the quantitative survey reported renting out part of their homes to raise income - earning an average of R225 per month per household. As productive assets, houses therefore became an important source of income that enabled households to survive. Grant (2007) observed the same strategy being used by homeowners in Gweru. Likewise, Rakodi (1995a) reports that some households retrenched during the implementation of the ESAP were adopting the same strategy of renting out part of their houses to raise income for survival. Second, homeowners did not have to pay rent⁸ enabling them to retain more of their incomes.

In contrast, tenant households were confronted with ever-increasing rents in the country's hyperinflationary environment. It was common for some households to go hungry, having used a greater proportion of their income to pay rent. As one respondent explained:

Most landlords do not care whether you starve or not, all they want is for you to pay the rent. What happens to you later is your business.⁹

The situation became worse as landlords pegged their rents in foreign currency to guard against inflation. To pay their rents, tenants had to purchase foreign currency on the black market at highly inflated rates, further impoverishing them. Some landlords even resorted to hiking rents without notice to tenants, rendering them more vulnerable to eviction and food insecurity.

Household structure and household food security

The links between household structure and food security in urban areas cannot be over-emphasized. The survey results show that female-centred households and extended households

were more vulnerable to food insecurity than other households (Fig. 6). For female-centered households,¹⁰ vulnerability was linked to low income, as households in this category reported low average monthly incomes of R475 in comparison to R772 for male-centered, R576 for extended and R600 for nuclear households (Table 5). In addition, female household heads indicated that they were generally unable to compete with men in sourcing food, given the physical strength that is required to stand in queues and to push and shove for extended periods of time. One woman compared the battles she encountered in food queues to a war situation:

No one cares about others any more. We sometimes spend the whole day in a queue and fail to buy anything. Men push, shove and jump the queues, buy, and rejoin the queues to buy again. They do not respect women or the elderly; they can shove you out of the queue even when you are carrying a child on your back. So we end up buying food from them.¹¹

This demonstrates that when securing food is no longer just an issue of money, but one of physical ability, female-headed households become even more vulnerable to food insecurity. Thus, the gender aspect of food access becomes even more pronounced in situations such as those in Harare where food supplies are erratic.

Among the extended households, vulnerability to food insecurity was also linked to low mean monthly incomes. While extended households are not necessarily synonymous with high dependency, the economic crisis in Zimbabwe meant that most household members were unable to find formal employment. In an environment with unemployment

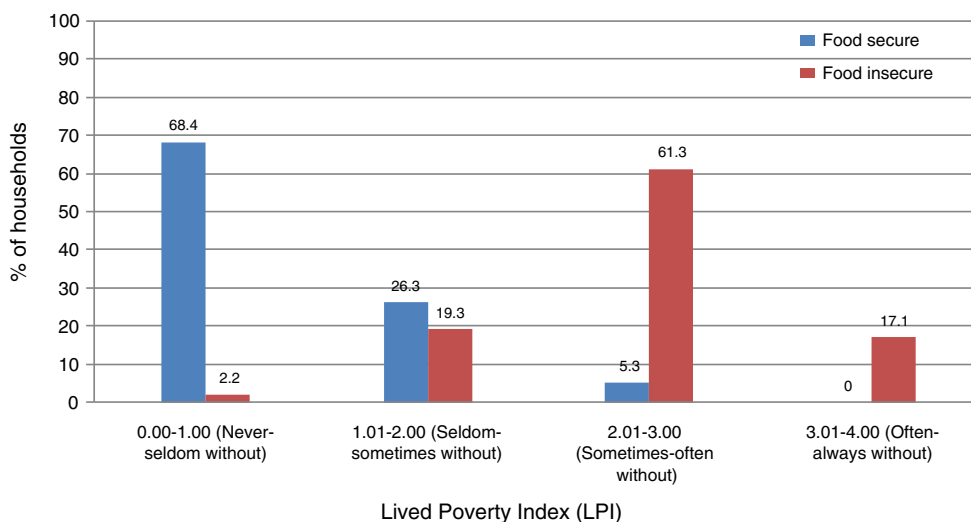
⁸ Rent averaged R115 per household (Research Survey, 2009).

⁹ Case Study No. 25, 27 March 2009, Ward VII, Epworth, Harare.

¹⁰ Usually single women, widows and separated/divorced/abandoned and without a partner or spouse.

¹¹ Case Study No. 19, 26 March 2009, Ward VI, Epworth, Harare.

Fig. 2 Urban household food security status by Lived Poverty Index (LPI)



rates above 90% for most of the crisis period, many household members failed to obtain employment—it was common to find only a single member being employed in a household of six or more people (see also below). The result was high dependency ratios resulting in low per capita incomes. Given that most poor urban households rarely have enough income to initiate other income-generating activities (Beall and Kanji 1999), the superiority of numbers alone did not provided extended households with any advantages. Furthermore, since the majority of the poor were lodgers, high and increasing rents left poor extended households with very little income for food.

Household size, dependency ratios and household food security

Although the proportion of food secure households amongst smaller households (1–5 members) was higher (84.2%) than

those that were food insecure (72.4%), the relationship was not statistically significant ($p > 0.05$). What was more important and statistically significant ($p < 0.001$) was the relationship between household dependency ratios and food security, with low dependency ratios associated with the household being food secure (Fig. 7). Almost three quarters of the food secure households (73.6%) had dependency ratios of less than 2, while more than half of the food insecure households (54.1%) had dependency ratios equal to or greater than three. In the absence of significant differences in income between households, higher dependency ratios tend to aggravate food insecurity, as more mouths rely on the meager income to survive. Thus, a lower household per capita income resulting from increased household size tends to aggravate food insecurity. While the addition of household members in urban households during normal economic times may increase household income as soon as the additional household members obtain work, the economic crisis in Harare was

Fig. 3 Urban household food security status by household monthly income

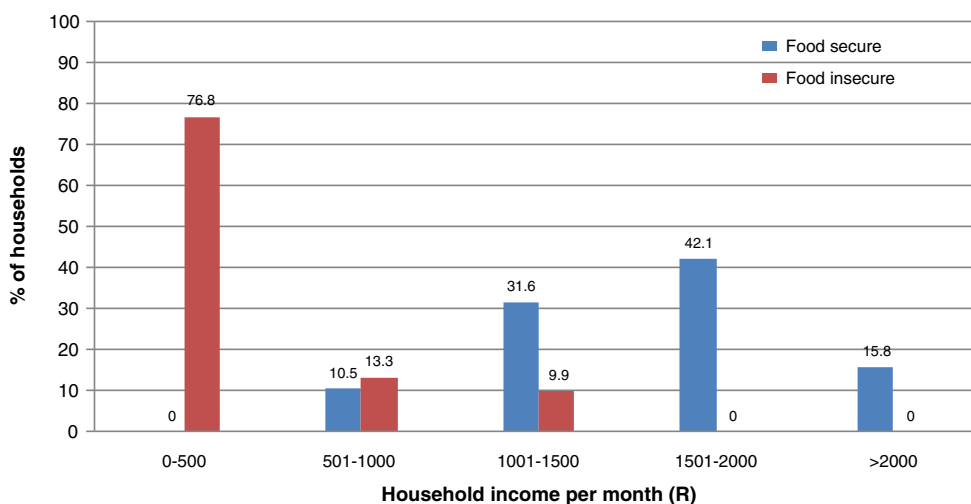
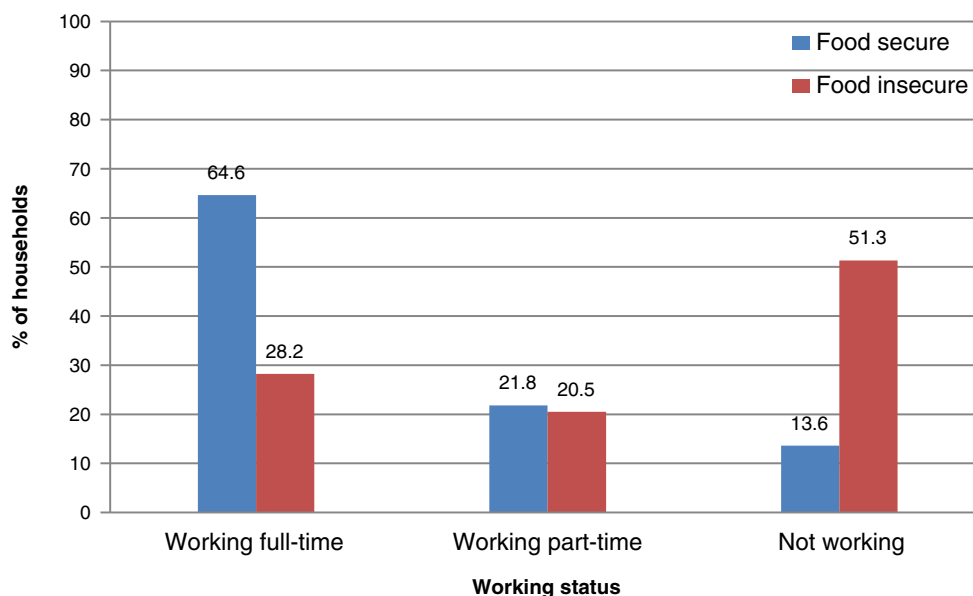


Fig. 4 Urban household food security by employment status



such that the chances of additional members finding employment were almost nil.

Levels of education and household food security

In urban areas, education and its attendant skills are associated with improved employment prospects (Pendleton 1996) and earning capacity. This, in turn, increases the ability to pay for food and other urban services. The findings from Harare show a positive and statistically significant relationship ($p < 0.001$) between education and food security (Fig. 8). The largest proportion of food secure households had one or more members with tertiary education (52.6%), followed by those containing a member with secondary education (31.6%) and primary education (15.8%). None of the food secure households contained a member who had not had any formal education. The higher proportion of households which contained a member with tertiary education that were food secure can be attributed to the higher average monthly income of these households (see Table 6).

The finding that higher educational levels generally increase the chances of a household being food secure resonates with that of Benson (2007) who, while researching in the slum areas of urban Bangladesh, found that most food

secure households were headed by a literate head who, in most cases, had attained more than 8 years of education.

Under conditions of adversity akin to those of Harare, education is therefore likely to increase an urban household’s ability to recover and move from vulnerability to self-sufficiency (de la Rocha and Grinspun 2001). Education is thus an important survival tool in urban areas, as it affects not only employment and income, but also the ability of the household to make logical choices that are capable of pulling them through periods of crisis.

Food prices and household food security

Between 2007 and 2008, international food prices increased at unprecedented rates: 146% for wheat, 71% for soya bean, 41% for corn and 29% for rice (USAID 2009). In Zimbabwe the urban population became increasingly vulnerable due to the country’s reliance on imported food. The precipitous decline of the Zimbabwean dollar caused retailers to constantly increase their Zimbabwe dollar prices. Persistent cash shortages worsened the situation, as people struggled to withdraw cash from banks. When people were able to withdraw money, it was usually insufficient to purchase enough food. The government, which had failed to articulate a clear socio-economic policy

Table 4 Average monthly household income by employment status (rand US\$1: R7.50)

Work status	N	Mean	Median	Maximum	Maximum
Working - full time	80	752	560	100	5400
Working - part time	33	502	390	80	1700
Not working	87	413	315	40	850

Fig. 5 Urban household food security status by household tenure

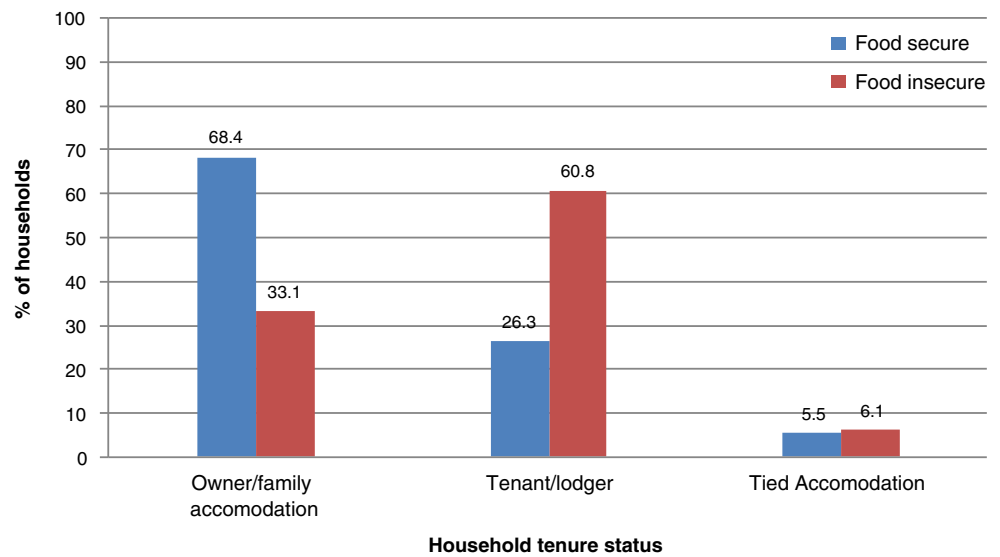


Fig. 6 Urban household food security status by household structure

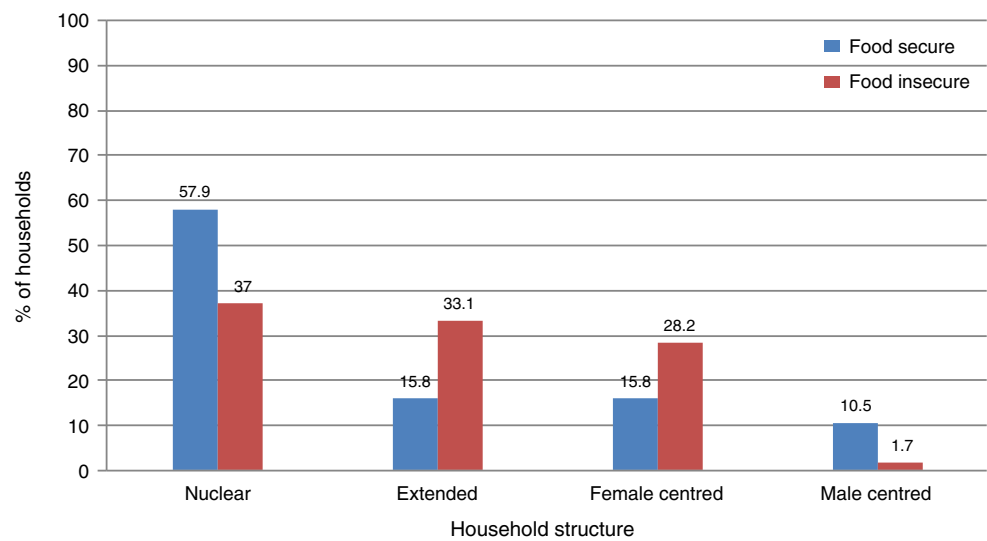


Table 5 Urban household monthly income by household structure (rand)

Household structure	N	Mean	Median	Minimum	Maximum
Nuclear	78	600	465	100	5400
Extended	63	576	440	80	2400
Female centered	54	475	380	40	2000
Male-centered	5	772	500	400	3000

Fig. 7 Urban household food security status by dependency ratio

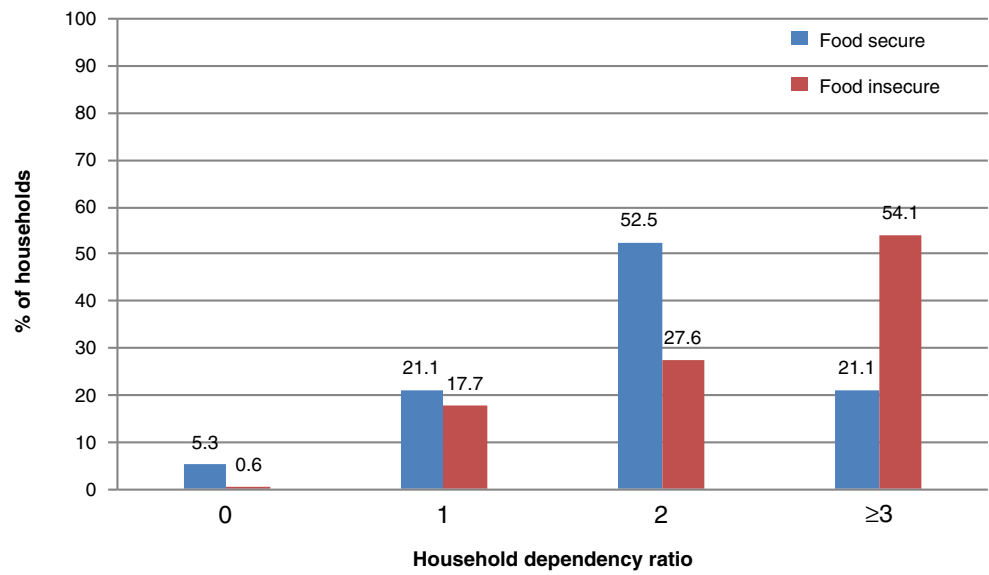


Fig. 8 Urban household food security status by level of education of household head

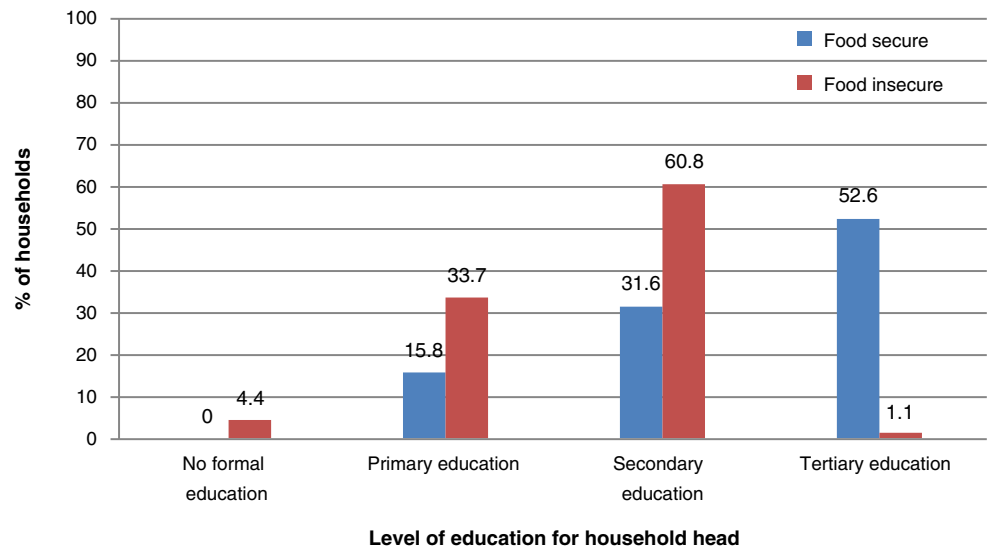


Table 6 Urban household monthly income by educational status of household head

Educational status	N	Mean	Median	Minimum	Maximum
No formal schooling	8	480	300	80	1550
Primary education	64	543	480	100	3000
Secondary education	116	550	490	40	5400
Tertiary education	12	850	600	100	2400

*Units are in rand

Table 7 Frequency of going without particular food because of price increases

Frequency	No.	%
Never	4	2
Everyday	16	8
Once a week	42	21
More than once a week, but less than everyday	128	64
Once a month	10	5
Total	200	100

to stabilize the situation after 2005, was overwhelmed. Predictably, the survey results show that only 2% of surveyed households had never gone without food following these price increases (Table 7).

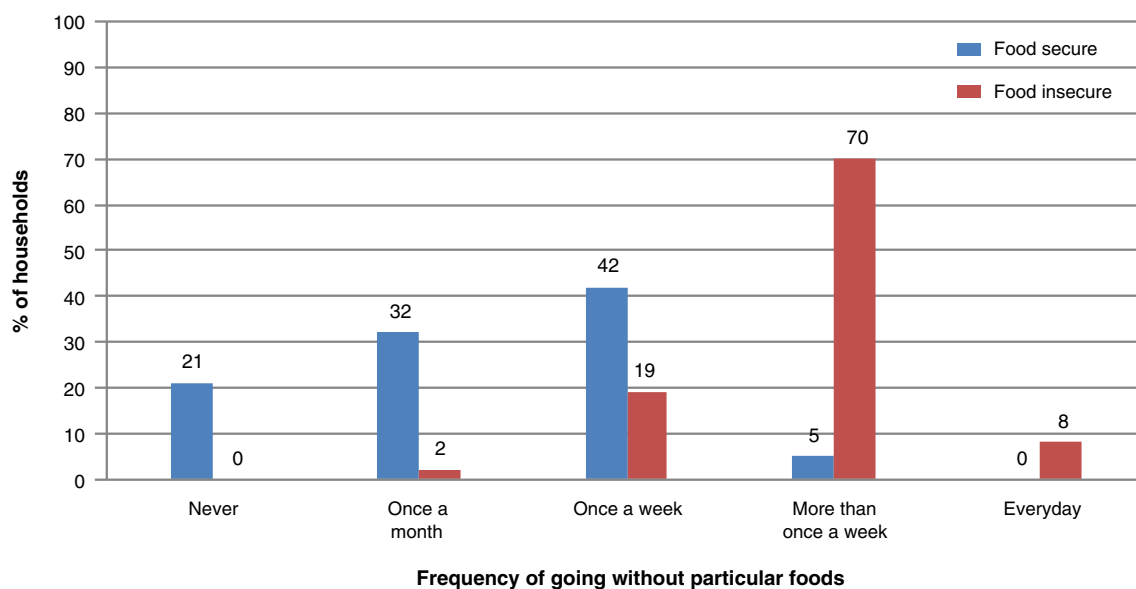
The majority (64%) reported going without certain types of food more than once a week. The foods that most households had gone without in the 6 months preceding the survey included beef, pork and other meat products (94%), bread, rice and noodles (91%), and potatoes, yams and cassava (90%). Food insecurity was therefore associated with going without particular foods, often quite frequently (Fig. 9). This relationship was statistically significant ($p < 0.001$). About 70% of the food insecure households reported having gone without particular foods more than once a week.

Food sources and household food security

Food distribution systems are an important influence on food availability. Formal intra-urban food distribution networks are

generally better established in high-income residential areas, where retail and marketing systems are well developed (Swift and Hamilton 2001). In contrast, residents of low income areas are more reliant on informal food distribution networks. For example, in their study in Harare more than a decade before this study, Leybourne and Grant (1999) indicated that low-income residential populations were accessing most of their vegetables through the informal supply chain of women small-scale traders who made purchases from the main markets for resale to consumers at a profit. This survey found that the situation they described has become even more common, with an increased proportion and variety of food being sold through these informal channels. As Fig. 10 confirms, the most important sources of food for poor urban households were informal markets (95.5%). In addition, the frequency of obtaining food was more for the informal than formal sources, probably indicating that the poor were buying in small quantities, necessitating frequent trips to the market. Individuals and small-scale traders imported food for resale on street corners and pavements, providing a lifeline for the poor during the country's prolonged food shortages.

Study findings indicate not only that informal food markets were the most common sources of food for poor households, reliance on these markets is associated with vulnerability: 81.8% of the food insecure households used this food source (Fig. 11). In contrast, more food secure households (36.1%) sourced food from supermarkets. In addition, food secure households more commonly received food remittances than insecure ones (15.7% compared to 1.6%), highlighting the importance of remittances to the food security of some households in urban areas.

**Fig. 9** Household food security status by frequency of going without particular foods

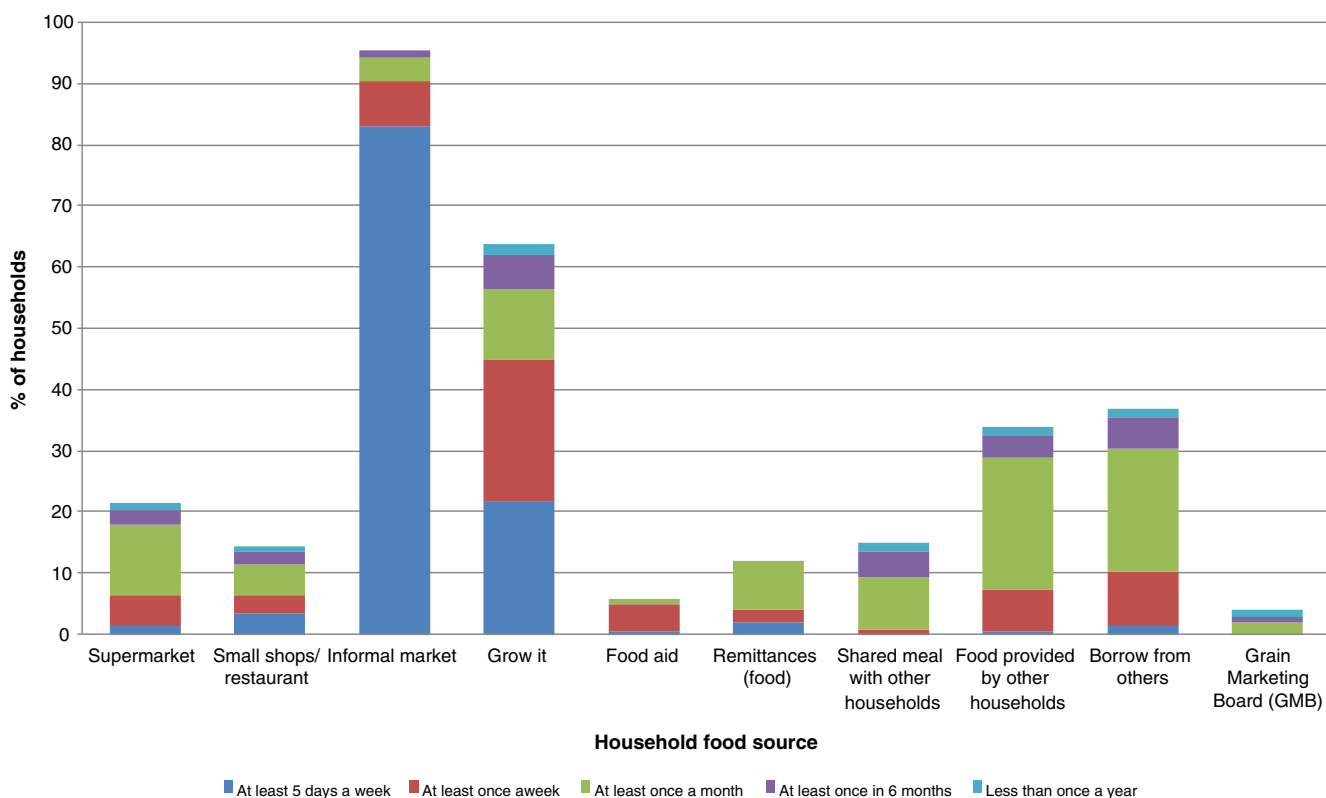


Fig. 10 Urban household food sources and frequency of obtaining food from a particular source. A color version of this figure is available in the online edition

Urban agriculture also played an important role in household food security, with a significant proportion of the surveyed households in Harare growing some of their food: 66% cultivated field crops and 43.5% garden crops.

The ability to grow their own food was also greater amongst food secure households, with 16.3% indicating own production as a major food source compared with only 3.9% of food insecure households.

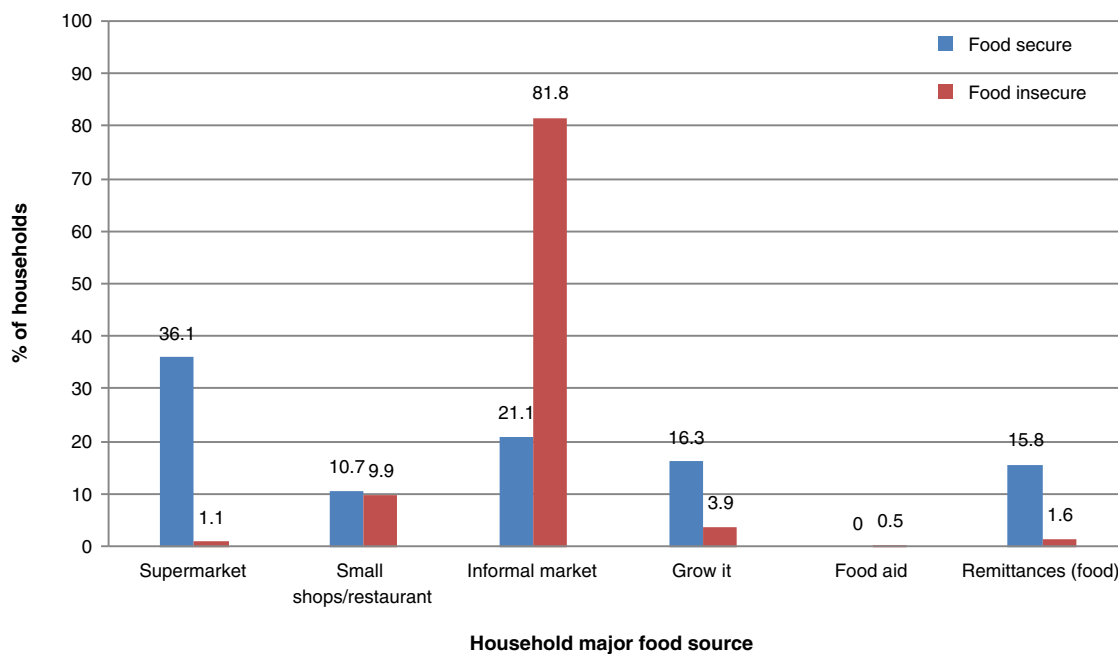


Fig. 11 Urban household food security status by major food source

Conclusion

This paper has examined the food security status of households in Harare and attempted to identify the factors responsible for the vulnerability of these households to food insecurity. The findings demonstrate that food insecurity and narrow dietary diversity were pervasive among households living in the poor settlement of Epworth. While these findings are specific to Harare and its 'crisis' state, they nevertheless give a valuable insight into the challenges that the majority of African cities face under difficult economic times. In Epworth, Harare, as in most African cities, the poor have become equally, if not more, vulnerable to food insecurity as their rural counterparts. Households' vulnerability to food insecurity resulted from an interaction of factors, in particular acute poverty, linked to high unemployment, low wages and high dependency ratios, whose effects were increased by high inflation rates and the resulting skyrocketing food prices. The general economic crisis in the country aggravated household food insecurity by destroying the formal food system. Household food insecurity was exacerbated by a prolonged adverse socio-political climate that undermined national economic recovery and reduced the livelihood opportunities available to urban residents. Although urban food security is not yet well understood, particularly in the African context, these findings highlight the need for government and local authorities to urgently deal, not only with problems of urban livelihoods in general, but with issues of urban poverty and food insecurity in particular. These institutions need to realize and accept the fundamental fact that poverty and food insecurity are no longer the preserve of rural areas and that food security is more than an issue of production only, but extends into other spheres such as those of marketing and distribution as well as pricing and affordability, which are key concerns of the urban population. Sufficient time, effort and resources therefore need to be allocated to understand and address the food needs of the urban poor so that their vulnerability to food insecurity is reduced.

Acknowledgements The author would like to thank the Programme in Urban Food Security (PUFS) at the University of Cape Town for availing funding used in this research.

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