Food Security in Epworth, Zimbabwe: Leveraging Rural-urban Linkages for Resilient Food Systems in Peri-urban Areas

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Abstract

In Zimbabwe, persistent political and economic problems have instigated and exacerbated food insecurity over the past two decades. Low food production, combined with high levels of inflation, a stagnating economy and increasing food prices, have worsened the plight of consumers in the country. High levels of poverty in the rural areas continue to influence rural-urban migrations, but most migrants to the city generally face deprivation, especially in peri-urban areas such as Epworth, where most migrants prefer to settle owing to its semi-formal nature. How then, do the poor in these peri-urban areas feed themselves amidst high urban poverty levels? Using data collected from different surveys between 2008 and 2016, the article explores four major strategies adopted by households to cope with food insecurity: reliance on urban farming; dependence on rural remittances; utilisation by urban residents of employment opportunities in the surrounding farms; and participation in, as well as dependence on, informality. A more nuanced appreciation of these survival strategies will engender an informed theoretical understanding on how to leverage these linkages to create resilient food systems in peri-urban areas.

Keywords: urban food security, urban agriculture, survival strategies, ruralurban linkages, resilient food systems

Résumé

Au Zimbabwe, la persistance de problèmes politiques et économiques a provoqué et exacerbé l'insécurité alimentaire, au cours des deux dernières décennies. La faible production alimentaire, combinée à des niveaux élevés d'inflation, une économie

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stagnante, et l'augmentation des prix des denrées alimentaires, ont aggravé la situation des consommateurs dans le pays. Les niveaux élevés de pauvreté dans les zones rurales continuent d'influencer les migrations des campagnes vers les villes, mais la plupart des migrants vers la ville sont généralement confrontés à des privations, en particulier dans les zones périurbaines telles qu'Epworth, où la majorité des migrants préfèrent s'installer en raison de sa situation semi-urbaine. Comment alors se nourrissent les pauvres de ces zones périurbaines lorsque que les niveaux de pauvreté urbaine sont élevés? À l'aide de données recueillies entre 2008 et 2016 à partir de différentes enquêtes, l'article explore quatre grandes stratégies adoptées par les ménages pour faire face à l'insécurité alimentaire : le recours à l'agriculture urbaine; la dépendance aux envois de fonds ruraux; l'utilisation par les citadins des possibilités d'emploi dans les terres environnantes ; et la participation et la dépendance à l'informalité. Une appréciation plus nuancée de ces stratégies de survie engendrera, une compréhension théorique éclairée sur la manière de tirer avantage de ces liens et créer des systèmes alimentaires résilients dans les zones périurbaines.

Mots-clés : sécurité alimentaire urbaine, agriculture urbaine, stratégies de survie, liens campagnes-villes, systèmes alimentaires résilients

Introduction

Zimbabwe is a country in crisis (Chitiyo, Vines and Vandome 2016). Dzimiri (2017) describes the twenty-first-century period in Zimbabwe as the crisis decades. This is because since 2000 the country has been moving from one crisis to the other. The country's economy has been stagnating amidst high levels of inflation, currency depreciation, rising food prices and the depletion of foreign currency reserves (Dore 2018). These economic challenges have instigated and exacerbated food security challenges in the country and spurred different migration trends. These migrations include, but are not limited to, the movement of people from rural to urban areas in times of agricultural crisis, the movement from urban to rural areas when economic conditions in the urban areas have deteriorated, the movement from small to larger urban areas in search of employment, and the movement from large to smaller urban centres where urban costs for accommodation and transportation are relatively lower. While rural and urban areas are generally treated as disparate geographic entities in development literature, the reality is that these areas are not completely detached from each other but are rather linked by an umbilical exchange of people, money, food, goods, technology, information and ideas (Potter and Unwin 1995).

In Zimbabwe, as in most African countries, most urban dwellers have a dual system of multispatial households – one in the city and one in the village

(Potts 2000). A significant proportion of urban residents in the country see themselves as living temporarily in the city to avail themselves of economic gain, education or health services, and plan on retirement to go back to their rural areas where most own pieces of land which they will have invested in during the course of their life in the city. Many Zimbabwean urbanites thus maintain a strong attachment to a particular rural area that they consider to be their home. The findings of Potts and Mutambirwa (1990), in a survey on postcolonial rural-urban migrants to Harare, for example, suggested that migrants retained their rural linkages because of the need for security in their old age or when they fell sick or lost employment. Hence, most periodically visit the rural areas for holidays, funerals, ceremonies and rituals. The movement between the rural and urban areas and between the small and larger urban centres in the country thus creates circular migration patterns.

The practice of circular migration in Zimbabwe dates back to the colonial period, when indigenous populations were restricted to staying in the urban areas only when their labour was required. Although the coming of independence removed these restrictions on living in the city, circular migration continued especially during the economic crisis of the 1990s. During that period, the country went through economic challenges emanating from the implementation of the Economic Structural Adjustment Programme (ESAP). Acute economic challenges in the urban areas forced many people to relocate to their rural areas (Ranga 2004; Kawewe and Dibie 2000). In the post-2000 period, the implementation of land reform also increased urban-rural migration, as a significant number of urban families sought and acquired land in the rural areas through the resettlement programme.

However, not much success has been achieved in raising rural productivity, and rising poverty in the rural areas has led to a resurgence of rural-urban migration. Close to a third (28%) of the country's rural population faces severe food shortages in an environment where national stocks have become virtually depleted (ZimVAC 2019). A host of factors – recurring droughts, inadequate financial and technical support to the land reform programme and depressed producer prices – have made farming less viable. A significant proportion of households that used to survive through farming have been forced to migrate to the city, particularly to the periurban areas where it is relatively easier to settle. However, the majority of these migrants have encountered an equally challenging environment in the peri-urban areas, where unemployment is estimated at over 90 per cent (Mlambo 2017). Therefore, the population is experiencing similar and even worse economic and food challenges in the urban areas. According to the

2018 Urban Livelihoods Assessment, 37 per cent of the urban population were unable to meet their food needs - a 6 per cent increase from the 31 per cent that was recorded in 2017 (ZimVAC 2018), hence there has been a decline in household food security. Food security occurs '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' (FAO 2013: 313). For the urban poor, the struggle to achieve household food security is incessant as households rarely have enough resources to ensure adequate food for everyone. While this is generally true even in countries with stable economies, the situation in Zimbabwe is dire. Under these economic challenges, which have afflicted the country since 2000, the poor have become even more vulnerable. Food prices have risen 50 to 150 per cent above the five-year average, and inflation had surged to 59.4 per cent by March 2019 (Naidoo 2019). The livelihoods and food security situation of most urbanites have thus become precarious. For residents of the peri-urban area of Epworth, the challenges are equally daunting because of acute levels of poverty, high unemployment, high levels of informality and a collapsed formal food system. How, then, do poor residents of these peri-urban areas survive and feed themselves?

To answer this question, this article interrogates the survival strategies of households in Epworth. Epworth is a peri-urban settlement on the outskirts of Harare, housing approximately 170,000 people. Run by the Epworth Local Board, close to 70 per cent of the settlement is informal (Muchadenyika 2020) with most of the residents living in informal dwellings. Poverty in the area is endemic, and most households frequently go without water, income, food and electricity (Tawodzera and Chigumira 2018). Because of the high levels of informality in the area, many households who face hardship in Harare move into Epworth because it is more affordable. Additionally, new migrants to the city also start by establishing themselves in Epworth before moving on when their economic conditions improve. Given these conditions of extreme material deprivation, the article explores four major strategies adopted by households in Epworth to cope with food insecurity: reliance by households on urban farming; dependence on rural food (and monetary) remittances; the utilisation by urban residents of employment opportunities in the surrounding farming lands; and participation in, as well as the dependence by households, on informality. A more nuanced appreciation of these survival strategies engenders better understanding of how to leverage these linkages for a more resilient food system in the peri-urban areas of the country. A resilient food system is defined as a system that is able to persist, adapt and transform under conditions of uncertainty (Folke et al. 2010). Before attempting to deal with these questions, however, it is prudent to give a brief background to the decline of the Zimbabwean economy.

The Background to the Decline of the Zimbabwean Economy

The deterioration of the Zimbabwean economy can be attributed to the impact of four key developments: the Economic Structural Adjustment Programme (ESAP), the Fast-Track Land Redistribution Programme, Operation Murambatsvina and a perpetually unstable political environment. ESAP precipitated a serious downward trajectory in the country's economy (Chisvo 2000) because its austerity measures led to the closure of factories, massive retrenchments, declining real wages, skyrocketing consumer prices, a contracting formal economy and the subsequent rise of the informal sector (Tibaijuka 2005). This affected households especially in the urban and peri-urban areas where food access is primarily through purchase. The land reform programme, on the other hand, interfered with farming operations and drastically lowered food production in the country. Maize deficits averaged over 500,000 tonnes per year in the post-2000 decade (Sachikonye 2003).

Food production improved through the government-initiated command agriculture programme. In the 2016/2017 agricultural season, approximately 2.8 million tonnes of maize were produced (Kuhudzayi and Mattos 2018). However, the harvest in the subsequent season, was not as productive and food security in the country's urban areas. The food system is thus mainly supplied by food importations – a tenuous position considering the country's perennial shortage of foreign currency.

Operation Murambatsvina, implemented in 2005, caused massive destruction of livelihoods. This was a programme in which the government partnered with municipalities to destroy informal houses and businesses in the urban areas of the country. It is estimated that more than 700,000 people lost their home, livelihood or both in urban areas (Mugara 2007), worsening the plight of the urbanites. The majority of those affected have not rebuilt either their housing and livelihoods, much to the detriment of their food security. On the political front, almost every election result since the year 2000 has produced disputed results (see Bratton and Masunungure 2018; Masunungure 2010; Dzimiri 2017). As a result, Zimbabwe has been shunned by many countries internationally, which has negatively affected trade and reduced foreign currency inflows. The disposable income for consumers has continued to decline, reducing their purchasing power and increasing food insecurity.

In peri-urban areas such as Epworth, the economic challenges have further weakened the food system. Much of the trade occurs in the informal sector, transport and food distribution systems are inefficient and water and electricity supply is largely intermittent. Most households in Epworth leverage their linkages with the rural areas to survive. This therefore brings to the fore the central role that rural-urban linkages play in the food security of households in peri-urban areas. This is in spite of the fact that rural and urban areas are generally treated in literature as separate geographic entities, without much attention to the symbiotic relations that exist between them.

Migration, Urbanisation and Food Security

Urban and rural areas are different functionally. Rural areas provide the space for agricultural production whereas cities are sites for industrial development that leads to higher GDP per capita (Bravo 2008). Cities are 'engines of economic growth and social development' (Potter 1990:1) – centres that draw in human resources and raw materials, coupled with superior urban infrastructure to spur industrial and commercial development (UN-HABITAT 2008). In the developed world, the relationship between urbanisation and economic growth has been established (Bravo 2008). In the developing world, however, such a relationship is barely tenable, as development seems to have been 'decoupled from urbanisation' (Watson 2007: 208).

Where migrants in the developed world were 'pulled' to the city by the availability of jobs, in the developing world they have been 'pushed' from the countryside because of poverty (Njoh 2003). According to Bryceson (2006), urbanisation in southern Africa has often taken place independent from industrialisation. People who have migrated from the rural areas to the city have thus often found themselves in poverty, unemployed or underemployed in the informal sector, creating a large body of urban poor who have very little or no income to meet their daily food requirements.

Regardless of these urban challenges, rural-urban migration continues because of expected rather than real urban wages (Rogers and Williamson 1982). Without a guaranteed income in the city, the food security of the migrants in the city becomes challenging. Hence the 'urbanisation of poverty' thesis, which argues that 'far from being an upwardly mobile strategy, migration to cities has become a rural coping strategy of last resort' (Maxwell 1998: 12). Rather than migration to the city leading to the upward mobility that is envisaged, those who move from the rural areas because of poverty, more often than not find themselves again immersed in poverty in the city. In peri-urban areas such as Epworth, the urban poor find themselves being

marginalised from life and opportunity in the formal city and are usually 'invisible' to the authorities, who are reluctant to improve their welfare. Although they live within city boundaries, the economic condition of the peri-urban dwellers is generally worse than for residents in the rest of the city. They often have to survive by straddling the rural-urban divide, leveraging the social and economic relationships embedded therein for survival.

Although urban and rural areas are often portrayed in literature as separate geographic entities, the reality is that these areas are linked by an umbilical exchange of people, money, food, goods, technology, information and ideas (Potter and Unwin 1995). In most sub-Saharan African countries, people migrate to town to work in urban areas and retire to the village where most own pieces of land. They also send resources from the city to the rural areas. While these resource flows were much stronger in the 1960s and 1970s, when urban households typically earned enough to meet their urban needs and send some money to their rural homesteads (Moseley 2001), declining conditions and opportunities in today's African urban centres are reducing these flows to the village.

In Zimbabwe, circular migration dates back to colonialism when male migrant labourers would work and live in urban areas but leave their family in the rural areas (Potts 1997). Although independence removed restrictions on living in the city, circular migration continued. The introduction of ESAP made urban life expensive and the rural home became an important safety net for distressed urban households (Potts and Mutambirwa 1990). A significant proportion of urban dwellers in Zimbabwe thus maintain a strong attachment to rural areas. While huge income differences between the urban and the rural areas in the past made sure that net resource flows were directed to the rural areas, there is evidence that these resource flows may be changing as the gap between urban and rural incomes narrows (Gelderblom 2005). A two-decade-long economic crisis in Zimbabwe seems to have almost closed this gap (Chimhowu 2009). Given evidence of the 'urbanisation of poverty' in sub-Saharan Africa (Mehta 2001), the possibility of reduced flows from urban to rural areas, and increased flows from rural to urban areas, is conceivable.

While the transfer of remittances from urban to rural households is now well documented, the reverse flows are not well researched and the social and economic context within which these exchanges occur remain poorly understood. In Zimbabwe, where the rural-urban linkages remain part of the urbanisation process (Potts and Mutambirwa 1998), an understanding of the social and economic linkages between urban and rural areas may be crucial to understanding resilience in the peri-urban areas.

Theoretical Framework: The Resilience Approach

The background to the food crisis in Zimbabwe has been discussed in the preceding sections. What these sections make apparent is the fact that most households in the country's urban areas live in abject poverty and are therefore susceptible to food insecurity. In the midst of high levels of food security in the peri-urban environment, households resort to coping strategies. These allow the household to maintain its various objectives, including food and livelihood security, health status and overall wellbeing. While coping is generally short-term and aims to deal with the immediate crisis (Davies 1993), a longer-term outlook concerns itself with resilience to food security. This article thus uses a resilience lens to interrogate the food security survival strategies of households in Epworth in order to appreciate how these can be used as a basis for creating more resilient food systems in peri-urban areas in general.

The term 'resilience' was first used by Holling (1973:17) in the context of ecological research, when he argued that 'resilience determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variable, driving variables, and parameters and still persist'. Walker and Salt (2006) defined it as the capacity of a system to absorb disturbance and retain its basic function and structure. In the same vein, the Intergovernmental Panel on Climate Change (IPCC 2012:34) perceives resilience as:

the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.

Essentially, the major objectives that underlie the notion of resilience are to prevent the system from moving to an undesired alternative regime in the face of change, to preserve the components that allow the system to renew and reorganise after a disturbance (Thulstrup 2015), and to allow for the development of a capacity for learning and adaptation.

Southwick et al. (2014) argue that resilience can be perceived differently by different people, not only because of its complexity but also because different disciplines define it differently. Van Breda (2018) shows that in the recent past there have been two major ways of looking at resilience – either as a process or as an outcome. When resilience is viewed as an outcome, the focus is on the 'state of being resilient' in the face of adversity (Van Breda 2018), hence resilience is seen as an end product. In food security studies, this state is seen as being one in which households have built the capacity to

resist adversity and are therefore not susceptible to further shocks, stresses and crises. On its own, however, this view is problematic as it ignores processes that lead some households to have negative outcomes while others have positive outcomes. On the other hand, there are also perceptions that resilience is a process – i.e. the capacity to rebound from adversity strengthened and more resourceful (Walsh 2006: 4). Van Breda (2018) argues that such distinctions are unnecessary, and that a more encompassing view of resilience should incorporate all critical components, these being the process, mediating factors and the outcome. Hence, a broader definition of resilience would be 'the multilevel processes that systems engage in to obtain better-than-expected outcomes in the face or wake of adversity' (Van Breda 2018: 4). Resilience, therefore, denotes the capacity of a people to maintain functionality in the presence of disturbances by drawing upon their resources and competencies to manage change. In the case of Epworth, it is postulated that households in this peri-urban area draw on their linkages with the rural areas to enhance their resilience to food insecurity. The ways in which these households are affected, the manner in which they cope and manage change, as well as the way that they function after and/ or in anticipation of adversity should therefore be understood as a way to enhance more resilient food systems in peri-urban areas.

Research Methods

This section details the methodological approach taken in the study. It first gives a background to the area, highlighting its origin and growth, population growth and relevant socioeconomic data to understand how residents survive in the challenging urban environment. It then describes the four studies carried out in Epworth between 2009 and 2016.

The study site

Epworth is a peri-urban settlement approximately 15 kilometres outside Harare, Zimbabwe's capital city (Figure 1).

It lies on land donated by Cecil John Rhodes to the Wesleyan Methodist Mission Trust in 1900 (Rakodi 1995). Historically, Epworth was a subsistence farming area (Butcher 1988). In the 1970s, Epworth became an attractive destination for refugees who were fleeing insecurity in the countryside due to the intensification of the war of liberation (Chikwete-Biti et al. 2012). The Methodist Church welcomed the refugees, particularly towards the end of the war (Rakodi 1995). Epworth is generally an attractive destination for migrants because of its semi-formal nature (Butcher 1988), which

allows residents to pursue multiple livelihoods, including urban farming and informal sector activities. A huge number of people also moved into Epworth during the post-2000 economic crisis and after the 2005 Operation Murabatsvina, which destroyed informal housing in most of the country's urban areas. The population of the area swelled from 20,000 people in 1980 to 120,000 in 2009, and 167,462 by 2012 (Central Statistical Office, 2013). In 1986, faced with the population increase, the Methodist Church passed ownership of Epworth to the government (Butcher 1988). A local board now runs the area.

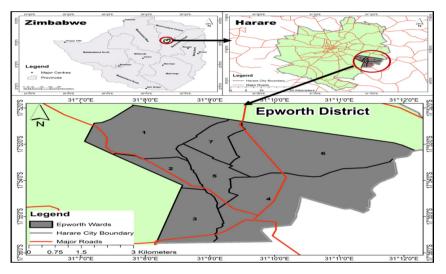


Figure 1: Map of Epworth Source: Author, 2018

The four surveys

Four surveys were carried out in Epworth between 2009 and 2016: two household food security surveys (2009 and 2016); a retail census (2016); and a retail survey (2016). From these studies, this article extracts only data that is relevant to its objective: interrogating the survival strategies of households in the peri-urban area of Epworth as a way to understand how to leverage these linkages for a more resilient food system in peri-urban areas.

The 2009 household food security survey

This involved the collection of information from 200 randomly selected households through a standardised household questionnaire administered to an adult household member above the age of eighteen years. The study

combined quantitative and qualitative methods to examine household survival under Zimbabwe's crisis conditions. The data from the 2009 survey is used in this article to indicate household food security levels in Epworth as a basis for comparison with the 2016 survey to see what changes, if any, occurred during the period. Food security was measured using the household food insecurity access prevalence (HFIAP) indicator. The HFIAP, developed by the Food and Nutrition Technical Assistance Project (FANTA), uses household responses to a set of questions in order to group households into different food security status levels: food secure; mildly food insecure; moderately food insecure; and severely food insecure. In this article, for ease of analysis, the first two categories are combined to form the food-insecure category.

The 2016 household food poverty survey

In this study, 483 questionnaires were administered to households who were selected through systematic random sampling. The questionnaire captured information on household demographic characteristics, income and expenditure patterns, food insecurity experiences and coping mechanisms. This data was used to calculate household poverty using the Lived Poverty Index (LPI). The LPI is a multidimensional poverty measure designed by Afrobarometer (Mattes et al. 2016). The LPI measures how frequently people self-report going without certain basic necessities, such as food, clean water, medicine, fuel to cook food and an income, over the course of the previous year. An LPI score is calculated for each household and ranges from 0.00 (complete satisfaction of basic needs) to 4.00 (always without basic needs). The calculation of household food security levels was through the HFIAP scores, as explained in the previous section.

The 2016 retail census

A retail census was carried out in Epworth in 2016. Its aim was primarily to identify all retail services in the peri-urban settlement. The census sought information on the location of the retail services, the type of service, the foods sold and retail store ownership. The census identified 1,607 retail services and mapped them. The data from this survey was used in the article to indicate the spatial distribution of retail food shops in Epworth, as such distribution has a bearing on food access and, by extension, the food security status of households.

The retail survey

The retail survey entailed identifying a statistically representative sample of 127 retail services in all the wards of Epworth and examining these services in detail. Information sought included: retail store ownership, type of retail services, foods sold, business strategies, problems, challenges and opportunities. This data enabled the creation of a food-store typology in Epworth, highlighting which type of stores were in existence and what foods where available and being traded. This impacted on food availability and the types of foods available on the market for consumers to purchase, ultimately having a bearing on household food security status and survival.

Results

This section presents the results on household poverty and food security in Epworth. It also discusses data on the food system of the area as well as the strategies adopted by the households to cope with food insecurity.

Household poverty

In this study, the Lived Poverty Index (LPI) was used to measure poverty. The LPI is multidimensional and measures household deprivation on a variety of basic necessities over a defined period. In the 2009 food security study, household poverty was high, as reflected by an average sample LPI of 2.80. This figure was attributed to the fact that the study was carried out when the economic crisis in the country was at its peak. Although the 2016 household food poverty study showed a lower average sample LPI of 1.69, this nevertheless reflected that poverty was rife in the area. As Figure 2 shows, a significant proportion of households in Epworth had gone without basic necessities several times in the preceding year: food (27.4 per cent), clean water (26.1 per cent), fuel to cook food (31.3 per cent) and a cash income (32.7 per cent).

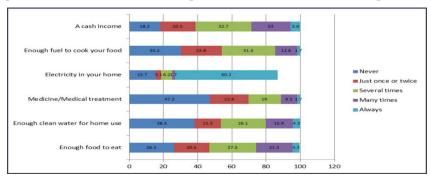


Figure 2: Proportion of households going without necessities in Epworth Source: Author, 2018

As these statistics show, a significant proportion of these households were struggling to access necessities. The 32.4 per cent of households who reported going without cash several times in the previous year was also reflective of the low mean monthly household income in the area, which stood at USD 185.55. This low income had grave repercussions for household food security, given that the monthly food basket at the time of the survey was USD 567 (Consumer Council of Zimbabwe 2016). For a more resilient local food system in Epworth, there is a need to improve water and electricity infrastructure. Without these, food utilisation remains low and impacts negatively on health and food security outcomes.

Household food security

The acute poverty levels among households in Epworth had a negative effect on food security. The levels of food (in)security in the area were measured using the household food insecurity access prevalence (HFIAP) indicator. The HFIAP uses household responses to a set of questions to group households into food-secure and food-insecure households. The findings of both the 2009 and 2016 surveys showed acute levels of food insecurity: in 2009, only 9.5 per cent of the households in the area were food secure; the comparable figure for 2016 was 12.3 per cent (Table 1).

	20	2009		2016	
	N	%	N	%	
Food secure	19	9.5	59	12.3	
Food insecure	181	90.5	421	87.7	
Total	200	100.0	480	100.0	

Table 1: Household food security in Epworth

In addition to these low levels of food security, dietary diversity was low, with only an average household dietary diversity score of 4.45 (out of a possible score of 12.00) being reported in the 2009 survey and 4.12 in the 2016 survey. What this indicates, in both years, was that households were consuming an average of only four different food types out of the possible twelve food types that were investigated. Such low levels of household food insecurity are a huge indictment not only of the economic situation in the country, but also of the food system, which is unable to provide food more efficiently and at a cost affordable to consumers.

Household food sources in Epworth

Epworth is predominantly served by informal food sources. Results from the 2016 food retail survey found that tuck-shops (19.5 per cent) dominated as food sources in the area, followed by market stall vendors (16.3 per cent) and grocery shops (12.3 per cent). The dominance of informal retail stores in the area is a product of both the shambolic state of the economy at the national level, which has drastically curtailed formal food retailing, as well as the absence of any significant formal food outlets in Epworth, owing to the poor road network, lack of electricity and poor water supply.

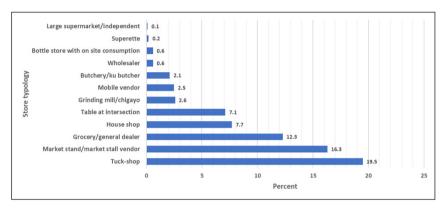


Figure 3: Store typologies in Epworth

Source: Author, 2018

As the 2016 food retail survey further reveals, these informal food sources (street vendors, stalls and tuck-shops) are spread across all the wards (Figure 4), along roads and within residential areas. In an area dominated by the poor, such a spatial arrangement is the most convenient as it increases access to households who have limited financial capacity to travel to supermarkets that may be located far away. Street vendors in the area trade in a variety of food items, which range from fruits, vegetables and meat to cooked foods and even cooked beans. While this largely informal food system serves the needs of the local population, one needs to point out the negative impact on food cost, given the high cost per unit of food that is generally characteristic of informal food systems.

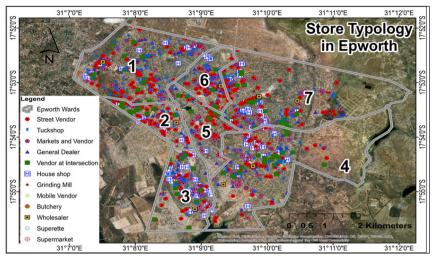
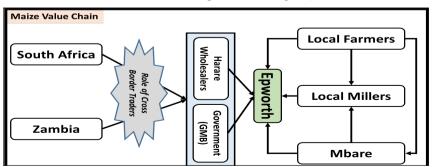


Figure 4: Spatial distribution of retail food sources in Epworth

Source: Author, 2018

Food sources for retailers

Retailers are key to the food system. The viability and resilience of a food system is generally measured by how it enables or impedes access to residents of an area and ultimately affects the pricing of the foodstuffs. It is therefore crucial to understand where the key foods in Epworth come from. A component of the 2016 retail survey studied value chains for food items in the area. The value chain analysis served to identify where the major foods (maize, vegetables and rice) traded in the area come from. Maize is a staple crop used by households for the preparation of their main meal, sadza, which is served with a relish. As Figure 5 shows, maize-meal traded in Epworth was either imported from South Africa and Zambia or accessed from the local farmers and GMB, a government agency.



Source: Author, 2018

Figure 5: Value chain analysis of maize

The greater proportion of the maize-meal was, however, imported by crossborder traders and then sold to wholesalers. Cross-border traders played a key role in the importation of maize meal and supplied it to the informal sector to resell to consumers. Some of the maize-meal purchases were also made from local grinding mills or from the market at Mbare Musika in Harare. The value chain for vegetables was short. Most of the vegetables sold in the area were sourced from Mbare market in Harare and from surrounding farming areas. Other sources included the nearby Marondera and Dema rural areas. The value chain for vegetables thus did not extend beyond the national boundaries. Like maize, most of the rice sold in Epworth was sourced internationally: from South Africa, Mozambique, China, Vietnam and Singapore. The length of the rice value chain was long and showed Epworth's vulnerability to global food systems through changes in international food prices.

Household food sources: survival on the informal sector

A significant source of vulnerability for urban consumers is the configuration of the food distribution networks. This is particularly because intra-urban food distribution networks generally favour high-income residential areas rather than peri-urban areas such as Epworth, where infrastructure such as roads, retail and marketing systems is poorly established. In most cases this creates discrepancies in pricing systems, as food reaches these areas mainly through informal systems. The 2009 food system study unequivocally buttressed this point by showing the dominance of informal food sources in Epworth. Figure 6 indicates that the two most important sources of food for poor urban households were the informal market (95.5 per cent) and own production (63 per cent). Supermarkets accounted for only 21 per cent and small shops 14.5 per cent.

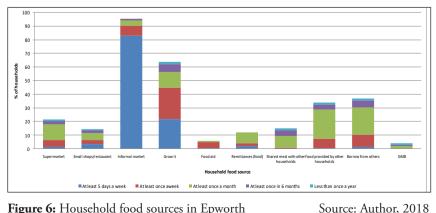


Figure 6: Household food sources in Epworth

A more important point is that households were obtaining food more frequently from informal rather than formal sources: 83 per cent of the households reported obtaining food from the informal market at least five days a week, reflecting the high frequency with which the poor buy in small quantities. While attempts were made in the past to introduce large supermarkets into the area, these have failed largely. This failure is attributed to the fact that supermarkets generally sell food in bigger units that are unaffordable to the poor who dominate the area.

Survival on reciprocity between rural and urban areas

The findings presented in this section show that most households leverage social and economic relations of reciprocity that exist between the rural and the urban areas for survival. According to the 2009 food security survey, about two-thirds (64.5 per cent) of the surveyed households reported at least one member visiting the rural home once every year, while 28 per cent visited every six months (Table 2).

Frequency of Visits	N	% of Households
Every week	0	0.0
Every month	12	6.0
Every six months	56	28.0
Every year	129	64.5
Never	3	1.5
Total	200	100.0

Table 2: Frequency of rural visits by urban household

Such visits are a way of life, a tradition through which urbanites remain 'anchored' to their rural homes. The reasons for such visits to the rural areas also bear testimony to the central role that rural-urban linkages play in food security in Epworth. As Table 3 shows, 64 per cent of the surveyed households reported members visiting the village to collect food and/or money. Thus, the social and cultural linkages that exist between urban and rural family members act as conduits for the movement of food and money between the two areas.

While urbanites also send money or food, the percentage of households doing so was lower, at 34 per cent, unarguably due to increasing economic hardships in the city. Urban households were reported to be getting more resources from the village than they were sending, suggesting that the flow of resources between the rural and the urban area may very well have reversed: more than three-fifths of the surveyed households (62%) reported normally receiving food from the rural areas, whereas 34 per cent reported receiving money (Table 4).

Reason For Visiting	N	% of Households
To see relatives and friends	160	80.0
Social events (e.g. marriages, funerals, tombstone unveiling)	132	66.0
To get food and/or money	128	64.0
For farming and other economic purposes (e.g. to sell livestock)	70	35.0
To take money and/or food to their family	68	34.0
To send children to school	65	33.0
Others	11	6.5

Table 3: Reasons why household members visit their rural home

Table 4: Households that reported normally receiving food and money from rural areas

	Normally Recei	ve Food	Normally Rece	ive Money
	N	%	N	%
Yes	123	61.5	68	34.0
No	77	39.5	132	66.0
Total	200	100.0	200	100.0

The money that the households were receiving was mostly from the sale of agricultural crops and livestock. The most common foods that were transferred from the rural areas were, in order of importance: cereals, roots and tubers, meat and poultry. The transfer of food from rural to urban areas is critical to survival: 58 per cent of the households reported that the food they received from the rural area was very important, whereas 18 per cent regarded it as being critical to their survival in the city (Table 5).

Table 5: Importance of rural food transfers to urban households receiving transfers

Importance Of Food From Rural Areas	N	% of Households
Not important at all	0	0
Somewhat important	12	9
Important	18	15
Very important	71	58
Critical to survival	22	18
Total	123	100

Rural-urban food transfers thus represent vital safety valves and welfare options for households who are vulnerable to economic fluctuations in the city. It is through these food flows that households were able to survive in the city. All the households receiving food from the rural areas were using it for household consumption, with only a few (26 per cent) also selling it to raise income to pay for other urban expenses. It is clear, therefore, that rural-urban food transfers are an important component of the survival strategies of poor households in Epworth.

Survival on urban agriculture and working on farms

The practice of urban farming is prevalent in Zimbabwe's urban areas. A 1996 study by ENDA-Zimbabwe indicates that areas under urban farming in Harare doubled between the years 1990 and 1994 (ENDA-Zimbabwe 1994). In Epworth, the peri-urban nature of the settlement is conducive for urban farming due to the prevalence of empty pieces of land that residents can utilise. In the 2009 food security study, 66 per cent of the surveyed households indicated that they were growing field crops, whereas 43.5 per cent were growing garden crops. During the economic crisis that existed then, urban agriculture provided urban households with food that they would otherwise have had to buy on the market and gave households an income through the sale of the produce. Toriro (2009) found that 40 per cent of farmers produced enough cereals to cover half a year's consumption, underlying the importance of urban farming in supplying the needs of the households in peri-urban areas. Another study by Toriro (2018), confirmed the widespread prevalence of urban agriculture in Epworth where the majority of sampled households reported growing maize and leaf vegetables (Table 6).

Table 6: Urban farming in Epworth

Type of Farming	%
Maize	89
Vegetables	79
Fruits	100
Small livestock (e.g. chickens, rabbits)	25

The lower proportion of residents rearing livestock is largely attributed to the planning and regulatory framework, which is much less tolerant of livestock-keeping in urban areas. In addition to urban farming, some residents of Epworth earned their livelihood by working on the farms that surround the settlement. In the 2009 food security study, 29 per cent of the surveyed households indicated that they had at least one member who periodically

worked on the farms. The greater proportion of this employment occurred during the rainy season when work was plenty and labour in high demand on the farms. Farmers from the surrounding areas sent their trucks and tractors to Epworth in the morning to fetch workers and returned them in the evening. More than three-quarters (83 per cent) of those who were working on the farms were employed on a casual basis, with only 17 per cent working there permanently. The farms produced crops as well as livestock (chickens, pigs, cattle). Thus, work on the farms had also become a survival strategy for economically distressed households in Epworth.

Discussion

The history of migration is as old as the history of human beings; people have been moving for centuries, for reasons that range from security, trade and wars to territorial expansion, among other factors. In Africa's recent history, various researchers have observed that strong relationships and linkages exist between the urban and the rural areas. As this study observed, about twothirds of the surveyed households reported at least one member visiting the rural home once every year, while 28 per cent visited every six months. Most households reported having a 'home' in the village, despite more than half of the population in the area having been born in the city. Hence, the degree to which these urban households have recourse to resources in the rural areas for their survival in the city depends on the extent to which they interact with rural households, both physically and socially. Such interactions thus can be leveraged to create resilient food systems in a peri-urban area such as Epworth. Frayne (2001) demonstrates that such interactions are the primary assets that ameliorate vulnerability for urban households and are the key to urban survival.

Central to many of these human movements between rural and urban areas, though, is a desire to survive and to create a livelihood and to move resources between areas with different resource endowments. In Africa generally, and in Zimbabwe in particular, a prominent historical movement has been the transfer of resources from urban to rural areas. Such movements are well documented. In the 1960s, the wide gap between urban and rural incomes meant that urbanites could afford to remit consistently to the rural areas (Jamal and Weeks 1998). However, the era of economic decline and structural adjustment programmes in the 1980s and 1990s narrowed this gap considerably. This resulted in the emergence of new forms of migration, where resource flows from the village to the city began to increase. Smit (1998), in South Africa, documented the importance of rural food transfers to the well-being of the households in the city. Similarly, in Zimbabwe,

Potts and Mutambirwa (1990) reported that some Zimbabweans in the city were holding onto their land in the rural areas to grow food.

This article has provided evidence of the role of rural-urban linkages to the food security of households in Epworth. It has been shown that the majority of households in the area have strong linkages with their rural areas from which they access food and money. In times of economic distress in the city, these households are able to rely on these linkages to survive. While households periodically return to the village to farm, relatives in the village also send them resources that enable them to fend off hunger and food insecurity in the urban area. It is thus logical that improving the food system of Epworth needs to be grounded in a holistic understanding of the role that these linkages play in the food system of the area. Such an understanding will enable the government and municipalities to leverage these linkages to the betterment of the urban residents. Without continuous food flows to the city, most of these residents would be poorer.

In this article we have also discussed strategies that distressed urban households adopted to survive, such as urban agriculture and employment in the farms close to the settlement. While these may seem detached from ruralurban migrations, they are in fact interlinked, as most of those who farm or are in farming employment use skills and knowledge garnered in the rural areas. This section thus highlights important aspects that can be leveraged to create a resilient food system in the area. As the study has shown, urban farming was widespread in Epworth. Most households were growing their own food in the city in order to complement their food purchases. While well-resourced households may have been able to purchase their food requirements on the market, the study findings showed that the generality of the population was poor and was therefore unable to make adequate purchases to satisfy their food needs from the market. Urban farming is therefore integral to the area's food system. Improving the resilience of the area's food system means incorporating urban farming and acknowledging its role in urban food security. The local authority must therefore incorporate this activity into its planning process and move away from the current systems and policies that see the activity as a rural activity with no place in a modern urban area.

Besides growing some of their own food, a significant proportion of people in Epworth reported working on neighbouring farms. These farms are an important source not only of labour and income but also of vital foodstuffs, which include vegetables and meat. While some of the people commuted to the farms daily during the farming season, others moved to and lived temporarily on the farms for the duration of the farming season, and migrated back to Epworth in the off-season. Hence, seasonal migration

is a very important component of a significant proportion of the residents of Epworth. Creating a resilient food system entails incorporating this facet into the planning process, recognising how the residents earn their income for their food security and sustenance.

Further to the livelihoods outlined above, the analysis of the maize value chain indicated that Epworth's food system was interlinked with that of the broader national, regional and even global food system. This is especially important, as maize is critical as a staple food in the country. While some of the maize was sourced from countries such as South Africa and Zambia, some also was sourced from within the local area. The integration with the local producers was critical, as this allowed local retailers to buy closer to home, shorten the value chain and therefore benefit the consumers through reducing retail prices. In good years, when production within the local farming areas is good, the prices of maize and maize-meal in Epworth tend to be lower than in other parts of Harare. This is because some of the production filters into the settlement and depresses the market prices, thereby increasing food access to consumers.

Besides maize, the local farmers were also supplying chickens and beef to the local market, hence improving food flows into the area. In an economic environment where foreign currency was in short supply nationally, and the importation of maize was not guaranteed, the linkages with local producers had an important moderating effect on food prices. A more resilient food system in Epworth could thus be improved by taking into consideration the value of these local supply chains. This consideration would equally apply to vegetables that are sold in Epworth, which are sourced primarily from within the surrounding farming areas as well as from nearby areas such as Marondera and Dema. The proper integration of the local farmers into the food system of the area will therefore improve how residents in Epworth access vegetables and the cost at which they access them. Concerning other foods, such as rice, the value chain is long, spanning regional and international boundaries. Without direct control of how rice is imported into the country, retailers and consumers in Epworth have limited room to influence its trade. Regardless, the presence of alternative foods may serve to moderate the price at which rice is made available on the market.

Additionally, the food system of Epworth was dominated by the informal sector. Transport systems in Epworth are generally not well developed and there were few formal food outlets from which customers could access food. Small retailers that were operating in the informal sector dominated the retail space: vendors, street traders, mobile vendors and tuck-shop operators. Some of these informal traders sourced their food from the rural areas and

from remittances of food sent from the rural areas, while others farmed in the rural areas and brought the produce to the city after the harvest, hence underlining the importance of migration in the food system of Epworth. Informal food traders are the lifeline of Epworth's food system. Any attempt to improve the resilience of the food system of the area must consider this reality. Rather than marginalising or criminalising informal trade in the area, the local authorities would do well to find ways of assisting these traders to operate more efficiently and from designated points that have infrastructures suitable for their needs and those of their consumers.

Conclusion

Epworth, as a peri-urban area, is steeped in the migration systems of the country. Migrants from the rural areas use the area as a first port of call, and when conditions improve they move farther away, to Harare. In the other direction, migrants who find it difficult to survive in Harare move to Epworth where rentals are affordable. The interaction between Epworth and rural areas enables the flow of resources that are critical to urban survival. Enhancing survival in the area entails improving the food system of the area through the creation of a resilient food system. This article agrees with Van Breda (2018: 4) that a resilient food system should focus on the multilevel processes it engages in to obtain better-than-expected outcomes in the face of adversity.

In the case of Epworth, its food-system resilience requires looking at a number of key issues. First, migration is at the centre of the food system, as food and money move into the area on the back of social relations between multi-spatial households who are domiciled in both geographic locations. Second, the location of Epworth as a peri-urban area enables its residents to migrate to nearby farms temporarily and seasonally to work and generate an income that is critical for their food security. Creating a resilient food system in the area thus requires a clear understanding and recognition of this important component of the area's food system. Third, the practice of urban households growing their own food in the area is a reality to be acknowledged. While urban residents born in the city do partake in this practice, the infusion of rural-urban migrants with adequate knowledge of farming means that this practice has taken root in the area. Thus, legislation governing urban agriculture should be realigned to allow this important economic activity to be recognised so that households can farm legally and sustainably. Fourth, the greater proportion of food trade in the area occurs in the informal sector. This informality is also linked to migration, as food from the rural areas finds its way into the informal sector. The local authority should thus accept that informality is key to the food system of the area. Any laws and regulations promulgated should consider this economic reality to create an environment that facilitates rather than impinges on households' ability to access food. Fifth, infrastructure such as roads should be improved to facilitate trade and therefore improve the food system. In addition, electricity and water services must be improved, as these are necessary to allow retailers to sell a wider array of foods. Sixth, the relationship with local farmers in the surrounding areas should be improved in order to allow for foods (e.g. vegetables and maize) to enter the market directly from the farms to Epworth rather than using Mbare as an intermediary, which lengthens the value chain and increases food prices for the consumers. Lastly, peri-urban areas like Epworth generally lack industrial development, so the majority of the residents survive on the informal sector, on working for surrounding farms, and on capitalising on rural-urban linkages to source food. Any proper understanding of peri-urban food systems and their resilience needs to consider these key issues.

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