Food Availability, Preferences and Consumption in Zimbabwean Urban Spaces

Marcyline Chivenge and Innocent Chirisa

Abstract Food availability, preferences and consumption are critical factors of food insecurity. The chapter unfolds food preferences availability and consumption in Zimbabwe with particular reference to Harare, Bulawayo and Bindura. Through extensive literature review and document analysis it is evident that there is food distribution and accessibility problems that need to be addressed. Expanding employment opportunities, thereby enhancing households' sources of incomes can be the solution. Food insecurity is well understood concerning issues, such as social protection, sources of income, rural and urban development, changing household structures, health and access to land, water and inputs, retail markets, or education and nutritional knowledge. Household food security in Zimbabwe has declined due to a drastic reduction in food and agricultural production following erratic rainfall, a declining industrial economy and the gross lack of key farming inputs. Food availability is declining thus affecting preferences and consumption. Policies addressing food availability that affects preferences and consumption should be spatially blind and universal in application targeting the poorest communities especially in urban areas that are often neglected.

Keywords Value chain · Food distribution · Taste and preferences · Adequacy · Sovereignty

1 Introduction

Food security is defined in terms of three concepts that is availability, access and utilisation [1]. It is reported that there is currently enough food produced worldwide

M. Chivenge
Department of Architecture & Real Estate, University of Zimbabwe, Harare, Zimbabwe

I. Chirisa (✉)
Department of Demography Settlement and Development, University of Zimbabwe, Harare, Zimbabwe

Department of Urban & Regional Planning, University of the Free State, Bloemfontein, South Africa

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to provide everyone with adequate calories [14]. Therefore, globally speaking, availability is not the core of the global food crisis. The concept of access with respect to food security refers to what food the household can acquire. This refers both to what kinds of food are available and whether or not the household can afford them. Food security utilisation refers to how a single household uses the best options for food that it has access to and evaluate whether the household is healthy enough to absorb the nutrients from what they eat and drink [39, 47].

Household food security is the capability of a household to guarantee all its members continued access to adequate quantity and quality of food [17]. Food insecurity is dominant in Zimbabwe, in urban areas in Africa and many developing countries. Traditionally food has been perceived to be plentiful and diverse in the urban areas than the rural areas. However, it is far from being homogeneously available. Food security accounts for the consumption levels of all members of a household's population [38]. In Zimbabwe, there is noteworthy disparity between households in rural and in urban areas, in terms of food access [32]. Most rural households produce their own food for household consumption and sell the surplus. During shocks, such as droughts, they are assisted by government interventions and food aid from non-governmental organisations [40]. In contrast, urban households rely on small-scale food production, regular buying of food and livelihood diversification to construct a living. Access to adequate food at a household level is dependent on how food markets and distribution systems function and not merely on total agro-food output [19].

Food intake patterns begin to be shaped at the earliest points in life [20]. Early exposures and experiences are critical for the acceptance of some foods. Hence, the major determinant of food preferences is what individuals had at the earlier stages in life. Laska et al. [22] notes that in low-income communities may be compromised by a lack of available healthy foods. A growing body of research has documented widespread disparities in food availability across the urban areas. Numerous studies have shown that the number and type of food stores available in a locality also determine food intake. Westlake [50] notes that despite much interest in the concept of 'food deserts', there has been little systematic empirical research documenting the location of food stores and geographical variations in the price and availability of healthy foods.

2 Literature Review

Msuya et al. [30] investigated the availability, preference and consumption of indigenous forest foods in Uluguru North (UNM) and West Usambara Mountains (WUM) of Tanzania. According to Mela [28] under many conditions, food choice and food availability are mutually reinforcing. Thus, food aversion learning is a potent phenomenon that may account for many apparently idiosyncratic and strong dislikes for the 'taste' of particular foods. Advertising exposure may lead to consumers' preferences and consumption of food [7]. Higher income earners spend more on food

and have a tendency to purchase more expensive branded foods and beverages than lower-income earners, resulting in a higher food availability in these areas. Regmi and Gehlhar [36] notes that per capita availability of meat and fruits and vegetables in low-income countries remains far below those in high-income countries. Vabø and Hansen [49] are of the view that the foods that are familiar to a certain household or locality is closely linked to that foods are available to them. This might vary throughout the world and therefore, cause differing preferences.

Pricing of food affects consumption and preference by households [10]. According to Tam et al. [41] university students in his study recommended that pricing changes to increase purchasing capacity and availability of an increased variety of foods on campus. Although taste, cost and convenience are the major drivers for food purchase, there was significant interest in the cost of food. At an older age tertiary institution are a great opportunity to influence eating behaviours. Student food purchasing habits are most influenced by taste, value, convenience and cost. Commonly suggested improvements included lowering food costs and increasing variety. Thus, in these areas the food consumption and availability largely depend on preferences of tertiary education students.

Food availability can be met through domestic production; with cereals and above all maize, providing the bulk of staple food [13]. As a result of the decrease in annual rainfall, there has been a reduction in food produced by subsistence and commercial farmers. Harvest varies considerably, largely in tune with the weather. Food aid shipments have aided the availability of food especially to the low-income earners with the bulk of aid coming from the USA. Hence, the availability of food for use also relies on government interventions especially during periods of food crisis. While much of the prior literature has focused on access to supermarkets and its potential influence on dietary intake [6]. Access to urban small food stores and their in-store availability of foods may also play a role in affecting diet, in particular vegetables. Distance to food stores determines food consumption and availability.

Poverty is a key determinant of access to food and there is a significant difference by location. High density residential areas are more likely to be poor than low density households; and poverty rates are higher in the marginal lands. Since the mid-1990s, urban poverty has increased significantly: the urban vulnerability assessment carried out in October 2003 estimated that 51% of urban dwellers were very poor and further 21% were poor [52]. The urban population has been hit hard by inflation and loss of jobs, all of which have affected their ability to obtain food. The poor cope partially by being prepared to restrict consumption by reducing food reducing meal frequencies and portion sizes, switching to the cheapest possible foods and consumption of other goods and services. Similarly, they often earn income by taking on arduous work that is low paid. But such measures offer survival, rather than the means to escape poverty [4].

3 Emerging Issues in Urban Zimbabwe

In Zimbabwe, about 75% of the country's population lives below the national poverty line. Zimbabwe is ranked 172 out of 186 countries on the UN Human Development Index [46]. This shows how widespread poverty is in the country, notably in rural areas and especially in the aftermath of Zimbabwe's macroeconomic decline and hyperinflation between 2006 and 2008 [44]. Zimbabweans spend significant shares of their incomes on maize and food overall, leaving less funds for costs, such as housing, transport, health and education.

Addressing food distribution and accessibility problems is essential. In urban areas it is crucial to expand formal employment opportunities, thereby enhancing households' sources of incomes. Social protection, sources of income, rural and urban development, changing household structures, health and access to land, water and inputs, retail markets or education and nutritional knowledge all concern household food security [34]. In order to improve food availability and accessibility, multiple factors that influence access to food should be identified so as to formulate appropriate policies to improve food access.

Household food security in Zimbabwe has declined due to a drastic reduction in food and agricultural production following erratic rainfall, a declining industrial economy and the gross lack of key farming inputs [51]. Food security status among the households differs due to variation in households' available resources. The Zimbabwe Vulnerability Assessment Committee [56] asserts that the 2013/2014 consumption year was projected to see 2.2 million people food insecure by the peak of the hunger period in March 2014. Mudimu [31] state that, in Zimbabwe, food unavailability has only been a household level concern among the poor and those without enough land to farm. However, food shortages at both national and household level have increased over the past two decades and the country has had to rely on food aid and commercial grain imports to meet its requirements.

As a result of increase in food prices and inflation, 70% of the population was living below the poverty datum line [54]. The plight of the poor is worsened by a substantial shortfall in maize production because of erratic rains. The majority have to survive on food aid from external donors. Poverty in urban areas is escalating because of the high rate of unemployment [34]. Zimbabwe is classified as a low-income country with a diversified economy, whose main industrial sectors include mining and agriculture. Although Zimbabwe was Africa's second most industrialised economy in the early 1990s, the majority of its population has always been agro-based. The decline of manufacturing and other industrial activities has contributed to an increase in the number of households that are dependent on agriculture for their survival. Urban agriculture has proved to be the solution for the urban poor.

Malnutrition continues to be a chronic problem in Zimbabwe. Maize still accounts for half of national caloric intake and this 'mono-diet' contributes to recent national measurements of undernourishment from 30 to 39% of the total population [9]. Malnutrition can be due to factors, such as insufficient caloric intake, inadequate diversification of food production and consumption (with maize dependence), poor

care/feeding practices, a high disease burden (especially HIV & AIDS), a lack of potable water and improper hygiene. Malnutrition is evident in high density residential suburbs and informal settlements.

Maize is the staple for Zimbabwean households and accounts for roughly half of the average caloric intake for Zimbabweans. Zimbabweans prepare and consume maize mostly as porridge, prepared either hard or soft, called sadza. Wheat is also consumed, but in smaller quantities than maize (wheat accounts for roughly 10% of national caloric intake) and typically more in urban areas in the form of bread [48].

The prevalence of malnutrition is still a significant challenge in Zimbabwe. The prevalence of starvation is the traditional FAO hunger indicator. According to FAO [13], the average person in Zimbabwe consumes 2,219 kcal per person per day. Roughly half of the calories come from maize, 11.5% come from wheat, 9% come from sugar, 5% come from sorghum, roots and tubers and 3% comes from soy oil. For overall caloric intake, the food crop component is 69% and the animal foods component is 9%. Caloric consumption has remained fairly constant over the past two decades in Zimbabwe, with a minor increase during that time period. In some parts, households would benefit from increased consumption of fruits, vegetables and nutrient-dense animal source foods, where they are available and accessible.

4 Case Studies

According to the 2012 Census, Harare has a total population of 2,123,132. Food security in Harare improved in 2012 relative to 2008. Harare was in an extremely bad situation and by 2012 it had returned to a rate of food insecurity close to the regional norm for low-income neighbourhoods. The stabilization of the formal economy by 2012 shaped household food access in some key ways: more households received income from wage work and supermarkets and small retail outlets were much more important food sources than they were in 2008 (although alternative food sources remained important). Most households continued to rely on a diverse set of livelihood strategies and food security strategies even under these improved economic conditions, drawing on non-monetary informal food sources, such as rural remittances and urban agriculture in consistently high numbers [43].

Food price increases were less of a problem in 2012 than in 2008, but they continued to impede many households from accessing food on a regular basis. To the least poor households' vulnerability continues to exist for households experiencing a range of deprivations. Food security status in Harare is inextricably linked to other dimensions of poverty and that even within low-income neighbourhoods there is a wide differentiation in poverty rates and food security status among households. Food insecurity remains endemic among the poorest segments of the urban population. Households in low-income areas have relied on urban agriculture for some basic food requirements. Benefits of urban agriculture include food security and poverty reduction.

The total population of the Bulawayo Province was 653,337 [55]. This owing to closure and scaling down of industries in Bulawayo, most households have been exposed to extreme poverty. Poor households are dependent on informal trade as their source of income. Food insecurity has significantly increased countrywide with Matabeleland North and Matabeleland South provinces hit hardest [35]. According to the Zimbabwe Vulnerability Assessment Committee (ZimVac) lean season monitoring report for January 2019, food insecurity prevalence increased in the country. In Harare it increased from 46 to 52%, Chitungwiza from 33 to 35% while in Bulawayo it increased from 28 to 33% [57]. The prevalence of crop pests and livestock diseases remains a threat to household food security. Cash shortages have continued to have a negative impact on livelihoods in urban areas that has contributed to distorted prices of goods and services. It is imperative for the Government to initiate and strengthen programmes for the identification and treatment of severe and moderate malnutrition to maintain rates below global thresholds.

According to ZimStats [55], Bindura urban area has a population of 43,675. Moyo [29] stresses that, although urban households still live in predominantly cash-driven, exchange entitlement-based economies, food transfers from rural areas give them an additional option for accessing food outside urban food market channels. The majority of households are faced with escalating costs of food. Besides food from their own farms, most urban households rely on other sources of livelihood, such as sales of food and cash crops, vegetable growing, casual labour, remittances and petty trade [34]. Significant households are food insecure and attain low dietary diversity.

5 Lessons Learnt

Food insecurity in Zimbabwe has typically been seen as a rural issue, but households in urban and peri-urban regions represent an increasingly significant share of the food deficiency. Zimbabwe's population is relatively migratory with unsettled land tenure issues and the need to involve in livelihood activities in the informal economy [8]. Therefore, many heads of household may move from a rural, peri-urban or urban environment depending on the time of the calendar year and those considered food insecure can make up noteworthy and increasing proportions of people living in the urban environments [42]. It is a challenge to perfectly sum and locate those populations considered food insecure.

Mango et al. [23] noted that, according to the World Food Programme, food availability in the urban context is determined food aces, food supplies to markets, purchasing power and access to market and food utilisation, health and morbidity status. Food security is no longer realised merely as a failure of agriculture to produce adequate food at the national level, but a failure of livelihoods to guarantee access to sufficient food at the household level [11]. Factors used to explain the differences in levels of food availability and consumption between households include income, household land holdings, employment status, household productive asset endowments and household composition. Economic status is a large factor in food security,

however in poor countries it may not be the only determinant of food preferences [21]. Households with consistent income have more food available to them hence, better preferences. The availability of food for consumption by households has to be determined by other factors, such as household composition, educational level and livelihood diversification. Access to employment opportunities help to diversify and increase the amount of income at household level. The instability in access to employment opportunities determines food preferences of urban households.

Family size is identified as one of the important demographic factors that affect household food insecurity status. Households with large family sizes have a higher chance of being food insecure than those with smaller ones [26]. The linkage between household size and household survival strategies is quite complex. For example, urban households may postpone having children or send existing household members to rural areas, thus reducing or limiting the size of the household. Alternatively, households may retain or incorporate additional members to increase income, thus increasing the household size [5]. Household size is significant for households that are food insecure, compared to food secure households [25]. Access to credit facilities determines household food security, because it gives the household an opportunity to be involved in income-generating activities, that can increase their financial capacity and purchasing power, to escape the risk of food insecurity. Moreover, it helps to smooth consumption when households face a temporary food problem. Factors that hinder access to credit include lack of education, collateral, good harvest, nepotism and an unduly long process.

Gebre [18] opines that the age of a household head affects food security status, where households headed by older people have higher chances of being food insecure. This is mainly because, the older household heads are, the less likely it is for the household to be productive and the more likely such households are to depend on remittances and gifts. Older household heads, rather than having their own income and production, have a higher probability of having a large family. Education level of the household head affects HFS. Literate household heads are less likely to be food insecure than illiterate household heads [34]. A possible explanation is that an educated household head largely contributes to working efficiency, competency, diversification of income, adoption of technologies and becoming visionary in creating a conducive environment to educate dependants, with the long-term target of ensuring better living condition than illiterate ones [18]. An educated household head plays a significant role in shaping household members. Gebre [18] stresses that being literate reduces the chances of households becoming food insecure.

6 Discussion

Tawodzera [42] explained that in general there is the realisation that poverty, as conceived by the poor themselves, is not just a question of low-income, but includes other dimensions, such as bad health, illiteracy and lack of social services, and a state of vulnerability and feeling of powerlessness. In trying to understand urban

food insecurity, a livelihoods approach is valuable [42]. Such a method aims to improve understanding of how people use the resources at their disposal to construct a livelihood. A livelihood comprises of the capabilities, assets (including material and social resources) and activities required for a means of living. A livelihood is sustainable when it can survive with and recover from, stresses and shocks. It is able to maintain or enhance its capabilities and assets, while not undermining the natural resource base [37]. Natural resources and common property resources, such as rivers, land and forests are generally less significant assets for urban poor residents, some natural resources, like land, are used in urban settings for livelihoods activities.

The Fast-Track Land Resettlement Programme (FTLRP) has so far played an important part in addressing food insecurity and poverty reduction among urban poor and low-income working-class groups in Zimbabwe [45]. Farrington et al. [15] points out that, natural resources are generally less used in the livelihood strategies of the urban poor, as they tend to be less available, especially in large urban centres. However, they should not be counted out, especially in peri-urban areas, where traditionally rural communities are being progressively absorbed into the urban fabric and are dependent on agricultural and non-agricultural activities. They are not only directly producing food for household consumption, but some are partly producing for informal commercial purposes. In most cases, access to productive resources including; land, water, seeds, livestock and trees, contributed to yield and income increases; that, in turn, led to improved food security and nutrition levels [12]. The persistent recurrence of poverty, loss of employment and changes in the economy in Zimbabwe; has forced some urban people to rely on resources that are close to rural areas for survival.

A key asset for the urban and the rural poor is social capital. Meikle et al. [27] explains that social capital refers to features of social organisation, such as trust, norms and networks, that can improve the efficiency of society by facilitating co-ordinating actions. Farrington et al. [15] argues that strong social capital can help communities in mobilising to make demands for services and rights to the state. And local social relations, social capital may include the wider networks of social relations between the poor and the non-poor, including systems of patronage. However, social capital is a valuable and critical resource for poor urban households, especially during times of crisis and socio-economic change [15].

Households in poor communities often diversify their livelihood and income-generating strategies so as to deal with food shortages [3]. The home gardening of vegetables has become one of the agro-based safety nets against food shortages and nutritional needs for urban dwellers in Zimbabwe [24]. One of the most common coping strategies in times of food insecurity in southern Africa lay in reducing food consumption. In badly affected parts of Zimbabwe, households have sought to cope with the situation by initially eating smaller portions. As the scarcity of food supplies worsened, families intensified their efforts at coping by skipping a meal during the day [53], noted that other common household strategies include short term dietary changes and reducing or rationing consumption, and maternal buffering. Reducing the number of meals per day has been the main strategy adopted over the years by households. The reduction or skipping of some meals has a negative impact on the

health of some of the most vulnerable members of the household, such as the sick, the elderly and children under five years of age due to poor diet.

Reducing household size through postponing having children or sending existing household members to rural areas to reduce expenditure, thus reducing or limiting household size [2]. Conversely, households may retain or incorporate additional members to increase income, thus increasing household size. Mechanisms that households employ in response to short term food insufficiency can tell a story about that household's capacity to withstand shocks and risks that trigger food shortages [34]. The capacity of households to withstand shocks or manage risks is dependent on the magnitude and severity of the risk, and on the households' assets, including social capital. Meikle et al. [27] stated that many poor urban households are opportunistic, diversifying their sources of income and drawing, where possible, on a portfolio of activities, such as formal waged employment, informal trading and service activities. People who live in areas with a high risk of food shortages will eventually develop a self-insurance coping strategy, to minimise risk to their household food security and livelihoods. Some of the households may resort to the sale of assets or migrating to regions where they can easily find employment, to feed the family.

The resilience of Zimbabweans is being tested as the country is facing high food costs, citizens of Zimbabwe are struggling to stay afloat [33]. Particularly, the vulnerable and the urban poor. A new effort should be placed to explore options to improve diets and food choices in economically struggling urban areas. Strategies on diversifying human diets under extreme financial constraints should be developed. Thus, with the projected population in cities providing urban populations with safe, nutritious foods is a growing burden for many city administrations. In Zimbabwe, urban poverty has huge negative impacts on nutrition: one-third of all children under the age of five suffer moderate or severe stunting; half of these children live in urban areas [16]. Zimbabwean cities have been crippled by unemployment and Zimbabweans emigrate in search of greater prosperity elsewhere. To date the response to food crises has generally focused on rural communities, leaving underprivileged populations in cities to fend for themselves.

A deep understanding of people's food choices is essential but often lacking. Zimbabwean citizens primarily survive on maize. It is not clear whether they are not willing to seek alternatives. Unlike in rural areas, in the city everything requires money, including accommodation, food, water and electricity, that people in rural areas usually do not have to pay for. In addition, there is limited farming space for everyone. Finding healthier foods is becoming increasingly difficult.

The Sustainable Development Goals envisage an end to extreme poverty for all. For this goal to be reached, there is an urgent need for massive compelling sensitization about urban malnutrition. In low-income township, where malnutrition is rampant, economic development is downward and unequal. Situations like these require a dramatic change to influence dietary behaviour, beyond aid-oriented nutrition approaches. Urban spaces provide opportunities for more radical interventions. There is need to get civil society, clinics and health workers and the food industry together to ignite a social movement, with small comprehensible steps, guided by constructive optimism, to give birth to a new meaning of food and nutrition. Design

meals with local preferences for nutritious foods, engage schoolchildren, adolescent girls, young mothers and old people. Food preferences and consumption can be influenced through connecting healthier foods in the city with rural supply chains; small grains and legumes, with higher nutrient densities than maize, can find a space in that. To help vulnerable communities to have a meal, an entry point into dialog and exchange with communities, to discover areas of needs that go beyond providing a meal, but to create a culture of becoming the change by engaging with others is a necessity.

7 Conclusion

Food availability is declining thus affecting preferences and consumption. Urbanisation and the nature of urban poverty and the relationship between governance, poverty and the spatial characteristics of cities and towns is an important determinant of food consumption, preferences and availability. A household's ability to achieve food sufficiency is derived from the household's human, material and institutional resource base. Food security factors can include demographic factors (high dependency ratio, low educational level of household head, female or child headed households), employment and income factors (unemployment of working age group and single income source), wealth and asset factors (asset poor, lack of diversity in assets, like liquid assets, no savings or inadequate savings), health factors (high incidence of illness and deaths, limited access to health care, inadequate access to clean water, poor sanitation) and environmental factors (high cost of living, high incidence of crime, etc.). Hence, there is a strong linkage between poverty and food insufficiency. Unlike in rural areas where most households derive their food requirements from agricultural production, food availability in urban areas is market dependant as most households depend on purchases for their food and urban agriculture contribution to food security is insignificant. However, strong rural urban linkages can lessen food unavailability in urban populations.

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