Food Remittances, Migration and Rural-Urban Linkages in Kenya

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Abstract

Rural-urban migrants in Sub-Saharan Africa do not generally cut their links with rural homes and much has been written about the character, types and implications of connections between rural areas and rapidly growing cities. The persistence of circular migration and the perpetuation of rural-urban connectivity is a distinctive feature of Kenyan urbanization. Informal non-market food remitting from rural to urban areas has received little attention in comparison with cash remitting from city to countryside. This paper presents new evidence from a household survey in Nairobi on the extent, frequency and nature of informal food remitting from rural areas to migrants in the city. Around 70% of household heads in Nairobi were born in rural areas of the country, which facilitates comparison between migrant and non-migrant households as well as amongst different categories of migrant households (in terms of variables such as household size, type, income level, and food security). Approximately half of both migrant and non-migrant households in Nairobi send cash and receive food remittances, evidence of the perpetuation of rural-urban ties. To provide additional insights into rural-urban food remitting, the paper discusses the results of three multilevel adjusted regression models showing the associations between food transfers and various demographic and socioeconomic individual and household variables. The paper shows that contrary to expectations from the literature, food remittances are not solely related to migration, nor only associated with poverty and the struggle for urban survival. In addition, food remitting is clearly not a transitory, short-term phenomenon connecting urban households with rural homes.

Keywords

migration, rural-urban remittances, urbanization

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Key Points

1. The persistence of circular migration and the perpetuation of rural-urban connectivity remains a distinctive feature of Kenyan urbanization.
2. Over half of all households surveyed in Nairobi receive informal food remittances from rural areas of the country.
3. Approximately half of both migrant and non-migrant households in Nairobi send cash and receive food remittances adding credence to arguments about the persistence of rural-urban links over time.
4. Contrary to previous work on food remitting, the Nairobi evidence suggests that it is neither transitory, associated with reciprocal cash remitting, nor strongly related to urban poverty.
5. The Nairobi evidence suggests that better-off, higher-income households with household members in wage employment rather than the urban poor are most likely to receive food remittances.

Introduction

A progressively greater share of the population of Sub-Saharan Africa is living permanently or semi-permanently in towns and cities (UN, 2015). Some have argued that African urbanization is driven primarily by natural population growth, while others have convincingly demonstrated that migrants make up a large proportion of the population in many urban areas (Fox 2014, 2017; Parnell and Pieterse, 2014). Internal migrants to cities do not generally cut their links with rural homes and, since the 1980s and earlier, much has been written about the character, types and implications of connections between rural areas and rapidly urbanizing cities (Baker, 1990; Baker and Pederson, 1992; Evans and Ngau, 1991; Parkin, 1975; Potter and Unwin, 1989; Tacoli, 2006).

More recent studies have suggested that rapid urbanization requires a reconceptualization of the dominant linear view of migrants relocating to cities and sending cash remittances to relatives in the countryside. Adergaard et al. (2019) argue, for example, that the relationship between people who have moved to cities and those they leave behind in rural areas is far from linear and that "complexity and diversity are fundamental characteristics of rural-urban linkages." They go on to redefine such linkages as "constantly evolving webs of connections between urban and rural spaces and dimensions." Proctor and Berdegue (2020: 187) go further, arguing for the deconstruction of the conventional rural-urban dichotomy since the livelihoods of the majority of geographically-separated "rural" and "urban" households are intertwined such that "rural and urban, defined in the traditional way, are conceptual lenses that distort our view of the reality of social processes and can only lead to sub-optimal policies and interventions." Writing from the rural perspective, others have suggested that urban and rural households should not be seen as separate entities but as essentially part of the same geographically dispersed or translocal household pursuing multi-local livelihood strategies (Andersson Djurfeldt, 2015; Steinbrink and Niedenführ, 2020).

There is a long history of research on the rural drivers of migration to urban areas in Kenya, most notably the influential two-sector Harris-Todaro economic model of household decision-making about migration (Harris and Todaro, 1970; Todaro, 1969). At the time, Elkan (1967) promoted the idea of circular migration in the Kenyan context, suggesting that urbanization was an essentially impermanent phenomenon. As he noted, "part of the urban populations in East Africa and elsewhere consists of people who continue to have close connections with their villages of origin, to which they may ultimately return" (Elkan, 1967: 581). Over 40 years later, Oucho et al. (2014: 1) painted essentially the same picture in their study of rural-urban migration to Kisumu and Nairobi, noting that migrants "maintain strong contacts with their origins, to where they send remittances for relatives left behind. At the end of a migratory life, the majority of migrants expect to return to their homes to try and lead better lives than non-migrant folk, and to develop their communities as well as their counties of origin." While there is some evidence of a decline in return migration of older people, the persistence of circular migration and the perpetuation of rural-urban connectivity over time remains a distinctive feature of Kenyan urbanization. As Mberu et al. (2013: 275) found, 80% of older migrants in Nairobi slums maintained contact with their rural-origin homes during a full year of observation and that "patterns and reasons of linkages are consistent with migrants' positive contributions to the upkeep of rural origin households."

One of the most widely documented forms of rural-urban connectivity in Kenya is the flow of cash remittances from urban-based migrants to their rural relatives (Bang et al., 2016; Jena, 2018; Maar et al., 2019). The rapid development of the mobile money MPESA system since 2007 has clearly demonstrated both the sizable volume and urban-rural directionality of cash remitting in the country (Kingiri and Fu, 220; Morawczynski, 2009). Lacroix (2011: 34) has argued that although there is a wealth of research on migrant remittances more generally, the relationship between remittance

use and food security has been undervalued. This is consistent with a broader neglect of the connections between international and internal migration and food security (Chikanda et al., 2020; Crush, 2013; Crush and Caesar, 2017). More recently, several studies have demonstrated that there is a positive macro-level relationship between food security and the volume of remittances received (Atuoye et al., 2017; Ebadi et al., 2020; Mabrouk and Mekni, 2018; Sulemana et al., 2019).

National household survey data from Kenya suggests that low-income households are the greatest beneficiaries of cash remittances. While the remittances literature in Kenya generally focuses on the investment of remittances in agricultural production, there is more general evidence that a primary use of cash remittances in rural areas is food purchase (Tshikala et al., 2019). Tacoli and Vorley (2015) argue that many rural dwellers in Africa buy more food than they sell and, as "net food buyers", are from low-income households that depend on remittances to access purchased food. Crush and Pendleton (2009) found that in Southern Africa, 82% of migrant-sending households spent remittances on food while only 24% invested them in agricultural activity. Only 7% of households received income from the sale of farm produce. In addition to cash remittances, one-third of migrant-sending households received remittances in the form of goods, including food. In Kenya, Maara et al. (2019) suggest that increased remittance receipts actually reduce the overall proportion of household income that is spent on food.

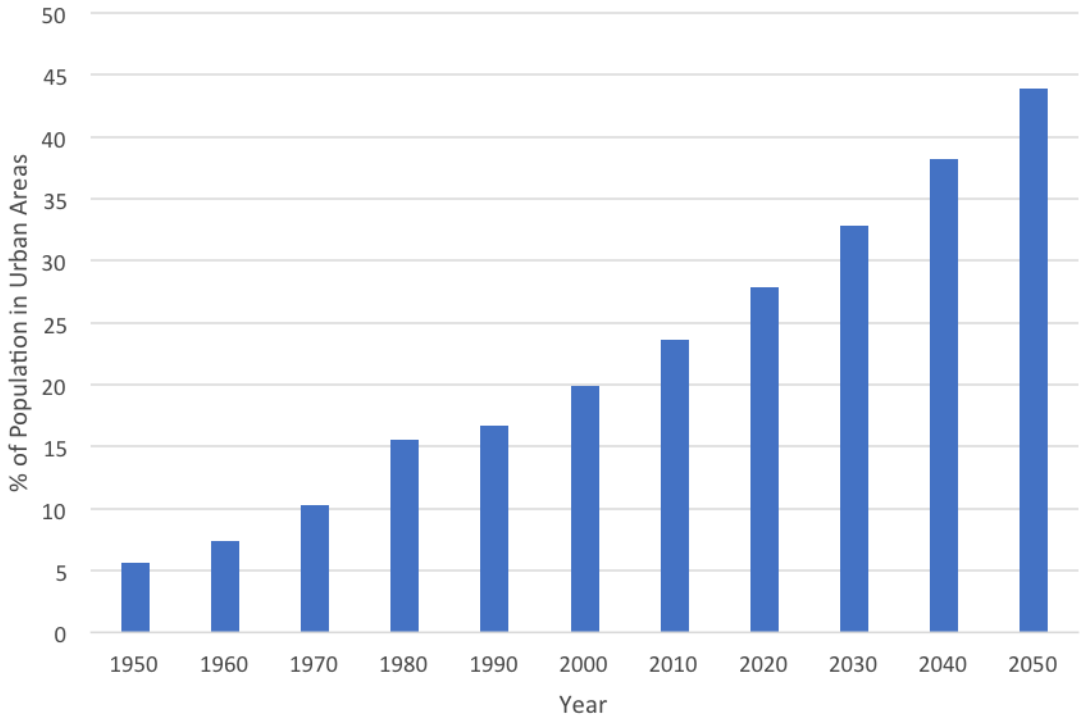
Food remitting has received little attention in comparison with cash remittances (Crush and Caesar, 2020). So, too, has the impact of cash and goods remitting on the food security of those living in urban areas (Chikanda et al., 2020). In this paper, we address another aspect of the relationship between remittances and food security; that is, the informal transfer or remitting of food from rural areas to migrants in the city. Frayne (2004, 2010a, 2010b) was the first to draw systematic attention to this phenomenon accompanying contemporary rapid urbanization. Informal food remittances from rural households were significant in volume and played an important role in the diet of migrants living in low-income areas of Namibia's capital, Windhoek. Other studies have confirmed that these "food pathways" are much more common than previously assumed, although their importance varies considerably from country to country and city to city (Crush and Caesar, 2020; Frayne and Crush, 2018; Owuor, 2010; Tawodzera 2013). A large-scale study of 11 cities in nine countries by AFSUN found that nearly three in every 10 households in low-income neighbourhoods received food remittances, varying from 14% in Johannesburg to over 40% in Harare, Lusaka and Windhoek (Frayne and Crush, 2018). Another study of over 3,000 rural households in nine African countries, found that one-third remitted maize to towns within and outside their district, 23% to the capital city and 17% to other urban centres (Andersson Djurfeldt, 2015). In Kenya, as Owuor (2010: 119) notes in a study of Nakuru, urban households with active rural-urban linkages "enjoy significant transfers of food from rural areas that offset hunger and vulnerability in the urban context." However, there have been no studies to date of rural to urban food remitting in Nairobi, where many residents are migrants from rural areas.

This paper draws on data from a representative city-wide household food security survey of Nairobi conducted in 2015 to examine the importance of food remitting to households in the Kenyan capital. The next section of the paper provides an overview of urbanization and the rapid growth of Nairobi, which has led to increased socioeconomic inequality, precarious livelihoods for the majority, and growing food insecurity, as context for the detailed empirical analysis of food security and food remittances that follows. The methodology used in the survey is then described, with analysis of the differences between migrant and non-migrant households in Nairobi. Attention then turns to the phenomenon of food remitting, showing that over 50% of surveyed households in the city had received food remittances in the previous year. The paper then uses multivariate logistic regression to identify the relationship between Nairobi household characteristics and the probability of receiving food remittances from rural areas. The conclusion argues that the current understanding of the drivers of food remitting needs to be revised in light of the findings from Nairobi.

Migrants in the City

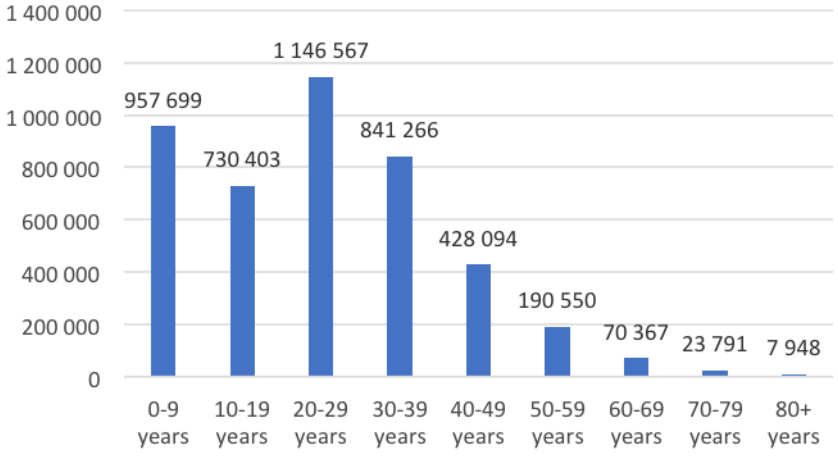
Kenya is undergoing a shift of population from countryside to city (Figure 1). About 25% of Kenya's population is urban, with an annual growth rate of 4.4%. Despite restrictions on movement related to COVID-19, the metro area population of the City of Nairobi was estimated at 4,735,000 in 2020, a 3.9% increase from the 2019 population. By 2025, the population is projected to reach 6.2 million and to cross the 10 million mark by 2038. Like the rest of Kenya, Nairobi has a young population with over 90% of the city's inhabitants being under the age of 40 (Figure 2). An estimated 60% of Nairobi's population lives in slums or informal settlements (Mohamed et al., 2016). Although natural increase is a key contributor to Nairobi's population growth, in-migration is equally important. Nairobi attracts its youthful population through rural to urban migration from all regions of Kenya, as well as regional and international migration; all in search of economic opportunity (Arnold et al., 2014). The city's Kenyan population is drawn from nearly all 43 of the country's ethnic groups, although the five major groups (Kikuyus, Luo, Kalenjin, Kamba and Luhya) are dominant. According to Ren et al. (2020), informal settlements are the centres of population growth and agglomeration and the proportion of migrants is particularly high in these areas of the city. A survey in Korogocho and Viwandani, for example, found that 86% of the residents were migrants (Emina et al., 2011) (Table 1). While the proportion of male residents who were migrants was higher than the female proportion, the difference was less than 5% in both sites and in the aggregate. Another study found that poor health, older age and long-term residence in Nairobi led to reduced propensity to maintain rural links (Mudege and Zulu, 2011).

Figure 1: Percentage of Population in Urban Areas, 1950-2050



Source: UN (2014)

Figure 2: Age Distribution for Nairobi, 2019



Source: https://www.citypopulation.de/en/kenya/admin/nairobi/47__nairobi/

Table 1: Migrant Population in Korogocho and Viwandani, Nairobi, 2006

	Korogocho			Viwandani			Both sites		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Migrant	73.6	76.5	75.2	94.1	95.2	94.8	84.4	87.7	86.3
Non-migrant	26.4	23.5	24.8	5.9	4.8	5.2	15.6	12.3	13.7

Source: Emina et al. (2011: S210)

Social and economic inequality and high levels of poverty accompanying urbanization are particularly evident in Nairobi. Poverty rates in the informal slum settlements of Kibera, Korogocho, and Mathare are over 60%. By contrast, higher-income areas of the city such as Kileleshwa, Runda and Karen have poverty rates under 5% (Otiso, 2014). The rapid growth of the city creates intense stress on social service programmes, especially with high levels of unemployment, precarious livelihoods and food insecurity concerns. Employment opportunities in the city are heavily gendered, with women concentrated in low-paying occupations because of unequal access to education, land and other productive assets (Mudege and Ezeh, 2009). Even in the informal sector, most women sell low-margin items such as fruit and vegetables, and secondhand clothes, while men tend to sell higher profit-margin products such as electronics, hardware, shoes and other goods (Kamau et al., 2018). Access to basic needs such as food, water, electricity, medical care, education and housing is a challenge for most residents of Nairobi (Mberu et al., 2014). Only 40% of the city's households have functioning water connections. In low-income areas of the city, most households are without water connections and either buy their water from vendors or use community water points. Sanitation and hygiene facilities are uncommon in most low-income areas, especially in the largest informal settlements, which puts most of the city's migrant residents at high risk of gastrointestinal and respiratory tract infections. While chronic and non-communicable diseases are on the rise, migrants have limited access to health care in the city (Arnold et al., 2014).

Methodology

This paper draws on data from the Hungry Cities Partnership (HCP) Food Security Household Survey for Nairobi City, which interviewed a total of 1,434 households in 2015. To generate a representative city-wide sample, a three-stage cluster sampling and probability proportion to size sampling was used. The survey was conducted in randomly selected administrative sub-locations spread across all administrative districts (or sub-counties) and divisions of Nairobi City County. Nairobi is divided into four administrative districts (or sub-counties) – Nairobi West, Nairobi East, Nairobi North and Westlands – that are further sub-divided into eight administrative divisions: Dagoretti and Kibera (in Nairobi West), Embakasi and Makadara (in Nairobi East), Central, Kasarani and Pumwani (in Nairobi North) and Westlands division (in Westlands). These divisions are further divided into a total of 49 administrative locations. Lastly, the locations are split into 111 sub-locations, which are the lowest administrative units in Kenya. The survey covered randomly selected households in 23 of the 111 administrative sub-locations of Nairobi. In the selected 23 sub-locations, systematic random sampling method was used to identify the participating households where every nth household was recruited and interviewed. The household head was the target interviewee in this survey. The data was collected in a face-to-face interview with an experienced and trained enumerator.

For the purposes of this analysis of rural-urban food remittances, the primary dependent variable was whether a household had received a food transfer at any time in the previous year (coded as 1 and 0 respectively). The key predictor variable in the analysis was the migration status of the primary breadwinner (household head) defined in terms of their place of birth: either a rural area in Kenya (1) or in Nairobi itself (0). Other individual predictor variables included the sex, age, education, employment status and health status of the household head. Employment status was categorized as (a) self-employed, (b) employed full-time, (c) employed part time (including casual work), (d) unemployed, or (e) other. A second set of predictor variables related to household characteristics including size, type, main source of household income, average monthly income, lived poverty, proportion of income spent on food, and level of food security. For household type, each household was classified as (a) female-centred (female head with no partner or spouse present), (b) male-centred (male head with no partner or spouse present), (c) nuclear (two parents and children), or (d) extended (two parents and children plus other relatives and non-relatives). Similarly, four main types of household income were identified in the city: (a) formal wage work, (b) informal wage work, (c) informal self-employment, or (d) formal self-employment. Household income was divided into quintiles and lived poverty was based on the Lived Poverty Index, a subjective measure of household status based on frequency-of-occurrence of doing without five basic needs (each scored from 0 to 4 and averaged to give a single household score).

To determine if there was an association between food transfers and urban household food security, two sets of predictor variables were used. Food security was measured using indicators developed by the Food and Nutrition Technical Assistance (FANTA) project (Coates et al., 2007). Household food insecurity was measured as a score ranging from 0 to 27 (HFIAS scale) and transformed via the FANTA algorithm into a categorical variable (the HFIAP typology). Each household was assigned to one of four categories: (a) food secure, (b) mildly food insecure, (c) moderately food insecure, or (d) severely food insecure. Because household food insecurity is related to the proportion of household income spent on food, this predictor variable was also divided into four categories of progressively greater proportion from less than 20% to more than 50%. The health status of the household was determined by whether or not any member of the household had diagnosed medical conditions and binned into 1 = healthy and 0 = unhealthy.

A third set of predictor variables aimed at assessing whether there was any relationship between food transfers and different types of household shock experienced by the household. The hypothesis here is that a household shock increases the probability of food transfers as a mitigating response. Seventeen separate shocks were identified and categorized into three groups: (a) economic (which included sudden food price increases and loss of income), (b) socio-political (including political violence), and (c) biophysical (including disease and epidemics). Responses in each of

these categories were binned into whether or not a household had experienced one or more of these shocks in each of the three categories.

There is a suggestion in the literature that food remitting is part of a broader social economy of reciprocity in which cash remittances flow from city to countryside and food remittances flow in the reverse direction (Crush and Caesar, 2020; Frayne, 2010). For purposes of the analysis, households were divided into two types: remitters and non-remitters (based on whether they had sent cash remittances to the rural area in the previous year). Finally, it was important to assess whether there was any significant difference between migrant and non-migrant households in terms of the frequency of receiving food transfers.

The study has several limitations. First, income, poverty and expenditure on food were self-reported and not verified independently. Second, the study did not investigate the migrant status of individual household members, the intra-household allocation of food, and the length of time the migrant heads had lived in Nairobi. Third, the study found a wide sample disparity in household food security status with very high levels of extreme food insecurity and low levels of complete food security. Fourth, although data was collected on the types of food transferred, quantity and quality was not measured and hence the nutritional value and impact of food transfers to the household was not verifiable. Finally, throughout the paper we refer to migrant and non-migrant households on the basis of whether or not the head was born in a rural area or in Nairobi. In practice, many migrant households, particularly those with children, are more likely than their non-migrant counterparts to consist of a mix of migrant adults and Nairobi-born children.

Comparing Migrant and Non-Migrant Households

The city-wide HCP survey found that 70% of household heads in Nairobi were born in rural areas of the country and another 8% were born in other countries or Kenyan cities with only about two in every 10 household heads born in Nairobi (Figure 3). Similar proportions of migrant and non-migrant household heads were male and female (a ratio of 4 to 1). Given the emphasis in the migration literature on the importance of youth migration, the similar age breakdown of migrant and non-migrant household heads is noteworthy. While 40% of migrant household heads and 45% of non-migrant household heads were classified as youth (under the age of 35), in each age band over 35 the proportion of heads was very similar. The notion that migrants inevitably return to the rural areas when they get older was also not confirmed, with 13% of migrant household heads being over the age of 55 compared with only 9% of Nairobi-born household heads.

Figure 3: Place of Birth of Household Heads in Nairobi

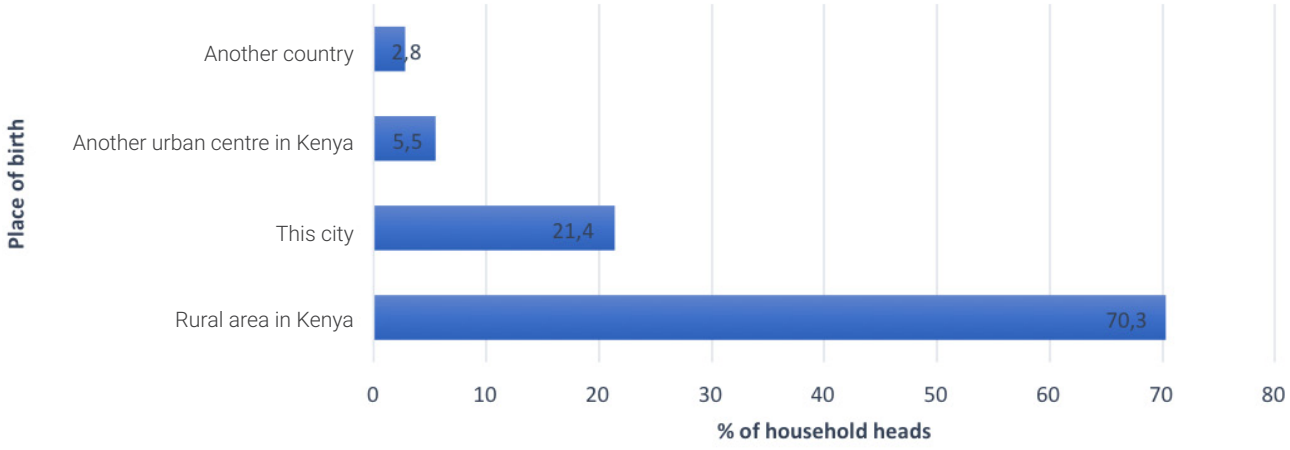


Table 2: Characteristics of Migrant and Non-Migrant Households				
	Migrant-headed (Rural-born)		**Non-migrant-headed (Nairobi-born)**	
	No.	**%**	**No.**	**%**
Characteristics of Household Heads				
Total	874	76.7	266	23.3
Sex of household head				
Male	717	82.9	217	82.2
Female	148	17.1	47	17.8
Age of household head				
16-24	64	7.4	32	12.1
25-34	284	32.7	87	33.0
35-44	285	32.8	88	33.3
45-54	123	14.2	33	12.5
55-64	50	5.8	13	4.9
65+	63	7.3	11	4.2
Education level of household head				
None	6	0.7	3	1.1
Primary school	151	17.8	20	7.7
Secondary school	348	41.0	82	31.4
Higher	343	40.4	156	59.8
Employment status of household head				
Self-employed	329	38.2	111	42.0
Employed full-time	353	41.0	113	42.8
Employed part-time (including casual)	128	14.8	27	10.2
Unemployed	34	3.9	6	2.3
Other	18	2.1	7	2.7
Health status				
Healthy	810	94.3	246	92.8
Unhealthy	49	5.7	19	7.2
Household Characteristics				
Food security				
Food secure	220	25.3	91	34.6
Food insecure	651	74.7	172	65.4
Household size				
1 person	151	17.3	48	18.1
2-3 persons	313	35.9	94	35.5
4-5 persons	299	34.3	84	31.7
6+ persons	108	12.4	39	14.7
Household type				
Female-centred	140	16.1	48	18.0
Male-centred	172	19.8	58	21.8
Nuclear	491	56.5	139	52.3
Extended	63	7.2	18	6.8
Other	3	0.3	3	1.1
Type of dwelling				
Formal	753	93.4	241	93.4
Informal	84	6.6	17	6.6

Main source of household income				
Formal wage work	401	46.4	137	52.3
Informal wage work	265	30.6	53	20.2
Self-employment (informal)	101	11.7	40	15.3
Self-employment (formal)	96	11.1	30	11.5
Total household income				
KES<= 10,000	136	26.0	29	18.4
KES 10,001-20,000	137	26.2	22	13.9
KES 20,001-30,000	66	12.6	24	15.2
KES 30,001-40,000	36	6.9	6	3.8
KES 40,001-50,000	27	5.2	3	1.8
>KES 50,000	121	23.1	74	46.8
Lived Poverty Index (LPI) score				
0-0.5	560	65.8	204	77.6
0.51-1.00	176	20.7	39	14.8
1.01-1.50	73	8.6	17	6.5
>1.5	42	4.9	3	1.1
% of household income spent on food				
<20%	220	43.4	75	49.3
21-35%	105	20.7	30	19.7
36-50%	90	17.8	26	17.1
>50%	91	17.9	21	13.8
Experienced shocks				
No	300	34.7	117	45.2
Yes	564	64.3	142	54.8
Economic shocks				
No	354	40.9	138	51.4
Yes	512	59.1	126	48.6
Sociopolitical shocks				
No	712	82.2	221	85.3
Yes	154	17.8	38	14.7
Biophysical shocks				
No	782	90.3	235	90.4
Yes	84	9.7	24	9.6
Sent remittances				
Yes	395	46.3	107	41.0
No	458	53.4	154	59.0
Received food transfers from rural areas				
Yes	452	52.4	122	54.1
No	411	47.6	144	45.9
Frequency of food transfers from rural areas				
Weekly	4	1.0	5	1.1
Monthly	275	66.9	297	66.7
Yearly	131	31.9	142	31.9
Less than once per year	1	0.2	1	0.2

Other similarities between the profile of migrant and non-migrant heads included their employment and health status. There is an assumption in the literature that migrants are less likely to enjoy labour market access and formal job opportunities than their non-migrant counterparts. However, in Nairobi, the proportion in full-time employment is similar for both groups (41% and 43%). Slightly more migrant heads do part-time or casual work (15% versus 10%) and fewer

(although still a significant proportion) are self-employed (38% versus 42%). The major difference between the two groups is in level of education, with Nairobi-born household heads tending to have higher levels of education overall.

At the household level, there are some demographic similarities between households headed by migrants and those headed by non-migrants, especially in the range of household sizes, health status and household typology. For example, 16% of migrant households are female-centred, compared with 18% of non-migrant-headed households. The difference in all other categories is 4% or less. The primary differences are economic in nature. With regard to the primary source of household income, for example, significantly more migrant households do informal wage work. The income source and employment profile translates into seemingly marked variations in household income, lived poverty and food insecurity. For example, 52% of migrant-headed households are in the lowest two income quintiles compared with 33% of non-migrant households. Or again, 78% of non-migrant households have a (better) LPI of between 0.0 and 0.5, compared with 66% of migrant households. When it comes to levels of food security, migrant households tend to be more food insecure, spending a greater proportion of their income on food (a surrogate measure of food insecurity). In addition, only 25% of migrant households classified as completely food secure on the HFIAP scale, compared to 35% of non-migrant households. Also, more migrant households had experienced economic shocks in the run-up to the survey, although non-migrant households were far from immune.

The most significant finding is that migrant and non-migrant households were similar in areas more commonly associated in the literature with migrant behaviour. For example, 46% of migrant households had sent cash remittances to the rural areas in the previous year, but so had 41% of non-migrant households. Also, a marginally greater proportion of non-migrant households had received food remittances from rural areas in the previous year (54% versus 52%). The frequency of receiving remittances was very similar for both groups. These findings on food and cash remittances suggest that the idea that it is only migrants who engage in these practices needs to be completely rethought in the Nairobi context. Despite being born in Nairobi, the heads of non-migrant households appear to maintain strong linkages with rural homes.

The bivariate relationships between migration status and household demographic and economic status suggests that both migrant and non-migrant households receive food remittances from rural areas in roughly equal proportion and with the same frequency. In other words, migration status is not a good predictor of rural-urban food transfers in the Nairobi case. To confirm this observation and to assess whether there are other better predictors of the propensity to be involved in food remitting, the next section of the paper discusses the results of an unadjusted logistic regression and three multilevel adjusted models for all households that had received food remittances in the previous year.

Rural to Urban Food Remittances

Half of all surveyed households in Nairobi rely to varying degrees on an informal, non-marketed supply of food from their relatives and friends in urban and rural areas. While the food transfers come from both urban and rural areas, the importance of rural food sources is particularly evident, especially from relatives. Eight out of every 10 households receiving food transfers obtain them from relatives in rural areas (Table 3). Figure 4 shows that food transfers from the rural areas include cereals (primarily maize), roots and tubers (primarily potatoes), vegetables (primarily traditional vegetables), fruit, meat products (primarily chicken), and beans, peas, lentils and nuts.

The frequency of food transfers from rural areas varies between once per week to once per year (Figure 5). However, most recipient households in Nairobi receive regular food transfers "at least 3-6 times in a year." Frequency depends on factors such as cropping seasons, how often an urban dweller travels to the rural areas and vice-versa, and the availability and convenience of food transfers through other means. The frequency profile for the different food types is relatively consistent, although vegetables tend to be sent most frequently. The importance of food transfers to the household was measured subjectively by how much the transferred food matters to the households involved. Most households receiving food transfers indicated that the food source is either very important (46%) or important (40%) to their survival. The need for additional food is the most important motive for food transfers. More than three-quarters (80%) of the households receiving food transfers said they engaged in the practice to help the household eat. For about one-quarter of the households, the food was sent as a gift.

Table 3: Geographical Origin of Household Food Transfers

	No. of Households Receiving Transfers	% of Total Sample	% of Households Receiving Food Transfers
Relatives in rural areas	645	45.6	80.6
Friends in rural areas	40	2.8	5.0
Relatives in other urban areas	64	4.5	8.0
Friends in other urban areas	51	3.6	6.4

Figure 4: Food Transfers by Type and Geographical Origin

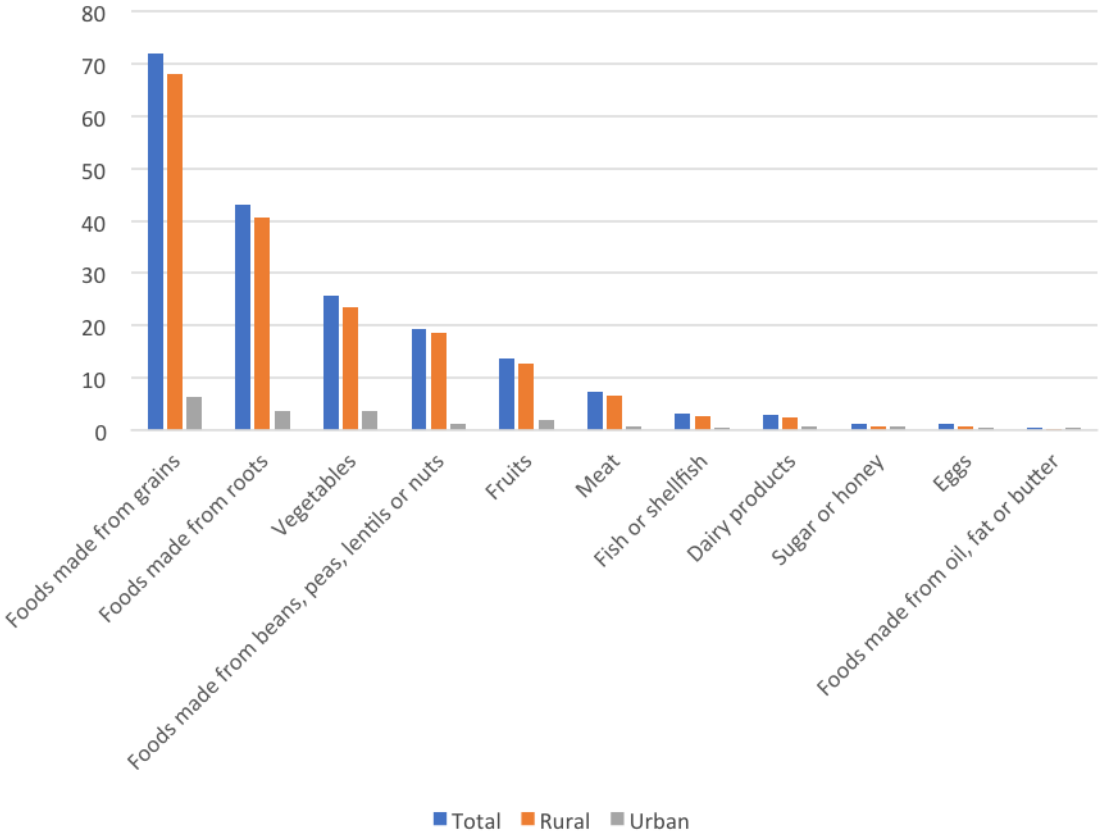
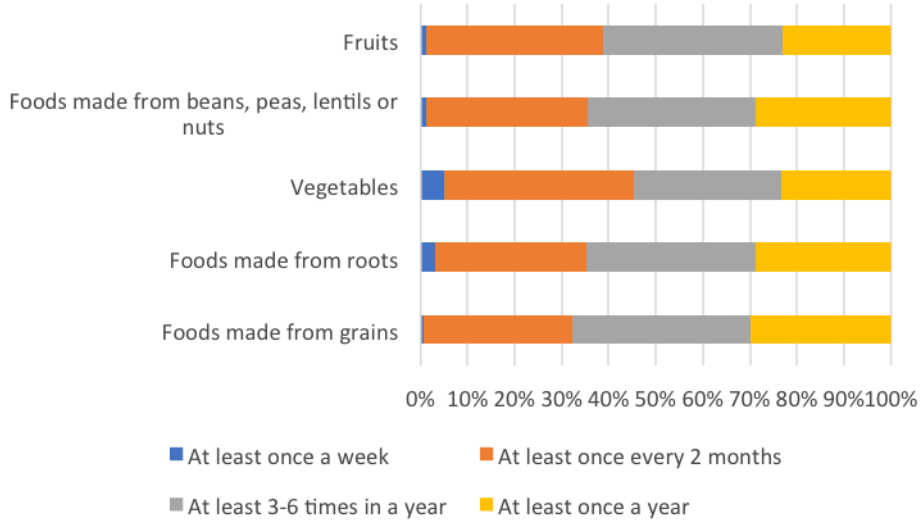


Figure 5: Frequency of Food Transfers from Rural Areas



Predictors of Rural-Urban Remittances

To provide additional insights into the determinants and predictors of rural-urban food transfers, this section presents and discusses the results of three multilevel adjusted regression models showing the associations between food transfers and various demographic and socioeconomic individual and household variables (Table 6). Model 1 includes only individual characteristics of household heads in the logistic regression to test whether the odds of receiving remittances varies with the characteristics of household heads. Model 2 includes household characteristics to assess whether certain types of household are more likely to receive remittances. Model 3 adds household shocks to the analysis to determine if these sudden shocks to the household are likely to lead to food remittances in response.

Model 1 suggests that there is no significant difference between households headed by migrants and those headed by non-migrants (OR = 1.170 95% CI 0.875-1.565). This confirms the earlier observation that many households with heads born in Nairobi retain strong linkages with, and continue to receive transfers from, rural areas. Female-headed

households are marginally more likely than male-headed households to receive transfers but, again, the difference is slight (OR = 1.181 95% CI 0.853-1.634). The likelihood of receiving transfers does not consistently decline with the age of the household head, which suggests that length of residence in Nairobi does not have a significant impact on the likelihood of receiving food transfers. Model 1 does suggest that better educated heads and those in wage employment are significantly more likely than the self-employed to receive transfers (full-time: OR 1.449 95% CI 1.109-1.894; part-time: OR: 1.470 95% CI 1.011-2.138). However, unemployed household heads are least likely to be receiving transfers (OR: 0.815 95% CI 0.453-1.597).

Model 2 suggests that larger households and female-centred households are marginally more likely to be receiving food transfers. However, female-centred households and nuclear households (most of which are male-headed) have very similar odds ratios, which suggests that type of household is not a significant determinant of food remittances. Households whose main source of income is formal wage employment have increased odds of receiving food remittances compared with all other types. Confirming the findings from Model 1, households whose main source of income is informal sector self-employment are least likely to receive food remittances (OR: 0.406 95% CI 0.156-1.056). In addition, households with higher total income are more likely to receive food remittances than those with lower incomes. A comparison of households in the highest and lowest income quintiles, for example, suggests that the latter are significantly less likely to receive food remittances (OR: 0.471 95% CI 0.234-0.948). Finally, there was no significant difference in the likelihood of receiving food remittances between households that did and did not send cash remittances to rural relatives.

Model 3 tests an assumption that households experiencing one or more shocks would be more likely to experience sudden hardship and turn to the rural areas for support in the form of increased food transfers. For each of the three categories of shock – economic, sociopolitical and biophysical – Model 3 shows no significant difference in the likelihood of receiving food between those households experiencing and not experiencing a shock. This suggests too that household shocks do not lead to an immediate increase in the chances of food remitting.

Table 6: Multivariate Analysis of Food Remittances to Urban Households

	Adjusted Models OR (95% CI) Model 1	**Adjusted Models OR (95% CI) Model 2**	**Adjusted Models OR (95% CI) Model 3**
Household Head Demographics			
Migrant status of household head (ref =migrant)			
Non-migrant	1.170 (0.875-1.565)	1.008 (0.668-1.520)	0.991 (0.652-1.505)
Sex of household head (ref = male)			
Female	1.181 (0.853-1.634)	1.064 (0.386-2.932)	1.102 (0.399-3.043)
Age of household head (ref = 16-24)			
25-34	1.148 (0.717-1.837)	1.037 (0.548-1.963)	1.064 (0.558-2.031)
35-44	1.561 (0.970-2.513)*	1.604 (0.813-3.164)	1.648 (0.829-3.276)
45-54	1.275 (0.749-2.171)	1.198 (0.559-2.566)	1.30 (0.601-2.810)
55-64	0.939 (0.467-1.888)	1.544 (0.569-4.188)	1.531 (0.552-4.250)
65+	1.338 (0.691-2.589)	2.622 (0.762-9.018)	2.893 (0.807-10.371)
Education level of household head (ref = no education)			
Primary school	0.666 (0.185-2.392)	2.116 (0.197-22.753)	2.389 (0.211-27.056)
Secondary school	0.946 (0.268-3.333)	3.731 (0.355-39.261)	3.962 (0.359-43.727)
Higher	1.441 (0.409-5.077)	4.585 (0.433-48.596)	4.915 (0.443-54.564)
Employment status of household head (ref =self-employed)			
Employed full-time	1.449 (1.109-1.894)***	1.214 (0.767-1.921)	1.157 (0.727-1.841)
Employed part-time	1.470 (1.011-2.138)**	1.188 (0.680-2.075)	1.159 (0.661-2.035)
Unemployed	0.815 (0.453-1.597)	0.406 (0.156-1.056)*	0.417 (0.160-1.088) *
Household Characteristics			
Household size (ref = 1 person)			
2-3 persons		0.950 (0.582-1.553)	0.964 (0.587-1.584)
4-5 persons		1.239 (0.752-2.043)	1.230 (0.740-2.045)
6+ persons		1.477 (0.849-2.569)	1.457 (0.834-2.545)

Household type (ref = female-centred)			
Male-centred		0.752 (0.260-2,177)	0.753 (0.259-2.189)
Nuclear		1.062 (0.380-2.968)	1.081 (0.385-3.033)
Extended		0.705 (0.214-2.319)	0.640 (0.193-2.119)
Main source of household income (ref = formal wage work)			
Informal wage work		0.967 (0.594-1.575)	1.002 (0.613-1.637)
Self-employment (informal)		0.586 (0.318-1.083)*	0.591 (0.320-1.095)
Self-employment (formal)		0.907 (0.477-1.722)	0.871 (0.456-1.665)
Total household income (>KES50,000)			
KES<= 10,000		0.471 (0.234-0.948)**	0.477 (0.236-0.965)**
KES10,001-20,000		0.726 (0.405-1.300)	0.731 (0.406-1.316)
KES20,001-30,000		0.693 (0.381-1.260)	0.687 (0.376-1.256)
KES30,001-40,000		1.005 (0.474-2.133)	0.991 (0.463-2.123)
KES40,001-50,000		0.802 (0.352-1.828)	0.782 (0.335-1.824)
Sends remittances (ref = no)			
Yes		1.161 (0.832-1.620)	1.140 (0.814-1.597)
Household Shocks/Emergencies			
Experienced shock (ref = no)			
Yes		0.942 (0.405-2.193)	
Economic shocks (ref = no)			
Yes			1.192 (0.550-2.557)
Social shocks (ref = no)			
Yes			1.014 (0.633-1.624
Biophysical shock (ref = no)			
Yes			0.668 (0.383-1.163)
*Legend: Net monthly income in Kenyan shillings; Significance level: **** P≤ 0.001.; *** P≤ 0.01.; **P≤ 0.05.; *P≤ 0.1.*			

Conclusion

The current literature suggests that informal food remitting from countryside to city in urbanizing Africa has several common characteristics. First, this phenomenon is an essentially transitional phase in the longer-term urbanization of the continent. As more and more people, especially the young, move away from the limited opportunities of rural life and settle in urban areas, so their links with those left behind – especially older people – will eventually weaken and dissolve. Second, the phenomenon of food remitting is tied to, and a direct consequence of, rural to urban migration and needs to be understood as a strategy by divided or multi-nodal households to bolster migrant survival in the city. Frayne (2010b: 104) observes that "migrants survive in the urban areas in part because of the food they receive from the rural areas." Third, food remitting calls into question the traditional linear conception of rural-urban linkages as a one-way flow of migrants to the city and a one-way return flow of remittances. Instead, food remittances should be seen as part of an integrated system of urban-rural reciprocity in which food flows to the city to support the migrant and cash flows to the countryside when the migrant has a steady source of income (Crush and Caesar, 2020). Finally, there is an assumption that (predominantly migrant) urban households experiencing high levels of poverty, precarious employment and food insecurity are more likely to need and to receive food remittances to meet their basic needs.

All four arguments are challenged by the survey findings reported for Nairobi in this study. Far from being a transitory phenomenon on the road to full urbanization, linkages with the rural areas remain strong and resilient in Kenya. One indication is that migrants of all ages (and therefore all lengths of urban residence) continue to receive food remittances from the countryside. Insofar as this is an indicator of resilient links between rural and urban areas and divided households, the findings provide additional support for the argument of previous Kenyan researchers that Nairobi residents who are migrants maintain strong rural links throughout their lives (Oucho et al., 2014; Owuor et al., 2018). Second, food remittances in Kenya are not only a migration-related phenomenon as conventional wisdom might suggest. As many as 54% of households with Nairobi-born heads of households had received food remittances in the previous year (compared with 52% of households with migrant heads). Third, the survey found no strong evidence for the phenomenon of urban-rural remittances reciprocity in that there was no significant relationship between a household's propensity to remit cash and its receipt of food remittances from rural areas. Finally, while food remitting has hitherto been associated with urban poverty, precarity

and the struggle for survival, the Nairobi evidence suggests that better-off, higher-income households with household members in wage employment are more likely to be receiving food remittances. Since these households generally have lower levels of food insecurity and spend a smaller portion of household income on food, food remittances in this context may be seen more as a way of supplementing and diversifying the household diet with fresh produce and are also more of an indicator of ongoing social ties with relatives in the countryside.

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