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# Understanding the Socioeconomic Differences of Urban and Camp-Based Refugees in Kenya

## Comparative analysis brief

2018 Kalobeyei settlement,  
2019 Kakuma camp,  
and 2020–21 Urban  
Socioeconomic Surveys



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To ease readability, the brief refers to Kalobeyei settlement and Kakuma camp as “camps” while acknowledging that they are different.

Cover photos by UNHCR Kenya.

# Summary findings and recommendations

*The comparative analysis of the socioeconomic conditions of urban and camp-based refugees in Kenya builds on the findings of the Kalobeyei, Kakuma, and Urban Socio-economic Surveys (SEs). It offers an analytical understanding of key differences between refugees while providing explanations and policy recommendations.<sup>1</sup>*

## Finding



Refugees in Kenya are not systematically included in national surveys, which results in a lack of comparable socioeconomic data on refugees and their hosts.

## Recommendations

Systematic inclusion of refugees in national household surveys, complemented by specific refugee and host community surveys, can provide evidence for policy planning and programming. Panel surveys can offer a better understanding of changes over time to inform durable solutions.

## Urban and camp-based refugees



Camp-based refugees are more likely to live in unimproved houses, to suffer from overcrowding, and to use biomass fuels for cooking than those in urban areas (by 65, 17, and 65 percentage points, respectively). Urban non-protracted households are more likely than protracted ones to live in unimproved houses, with protracted households being more likely to suffer from overcrowding. Although less often than in camps, urban households also use biomass fuels for cooking.

*Short-term priorities:* Scaling up permanent shelters in Kalobeyei with extension to Kakuma through ongoing cash-based interventions as well as subsidies and vouchers can be crucial to improve refugees' living conditions.<sup>2</sup> Increasing funding for national housing programs such as the informal settlements upgrade schemes, to address hosts' needs while including refugees, can also reduce overcrowding. Increasing access to clean cooking fuels is key to enhance health outcomes, mainly for women and children under age 5. Expanding energy access, particularly moving host and refugee households up the energy ladder to non-biomass fuels, is key to enhance health outcomes specifically for cooks (primarily women) and their accompanying children.

<sup>1</sup> Comparability between camp-based and urban refugees may be affected by the timing of the data collection and the COVID-19 outbreak.

<sup>2</sup> UNHCR, "KISEDIP. Kalobeyei Integrated Socio-Economic Development Plan in Turkana West."

## Finding



Bank account ownership is low in both locations (10 percent). Camp-based refugees are 40 percentage points more likely to have bank accounts, while urban refugees are more likely to use mobile banking. Access to loans in both areas is mostly informal, with camp-based refugees being 22 percentage points less likely to have access to loans.

## Recommendations

*Medium-term priorities:* Expanding access to bank accounts and mobile money, especially among urban refugees, is key to increase access to formal loans, and improve savings and access to credit. This can help start and grow businesses, and smooth consumption shocks. Collaborations with the private sector, simplification of requirements for SIM card registration, and embedding refugees in government-led social protection safety nets can support these efforts.



Camp-based refugees are 19 percentage points less likely to have positive perceptions about trust in the host community than urban-based refugees. However, perceptions of security and participation in decision-making are higher in camps than in urban areas.

*Medium-term priorities:* Accelerating area-based interventions providing integrated service delivery for refugees and hosts while fostering socioeconomic interactions and expanding similar programs in urban areas will be crucial to improve social cohesion. Collaborating with governments to enhance security in urban areas is important to improve perceptions of safety. Strengthening communication mechanisms between refugees, organizations, and the government could be instrumental in raising refugees' concerns and improving participation in decision-making.

### Kakuma and Kalobeyei-based refugees



Refugees in Kalobeyei spend around 50 percent more than those in Kakuma on food and nonfood items. This can be partly explained by the difference in the type of food assistance.<sup>3</sup> About 60 percent of camp-based refugees are highly food insecure, without significant differences between camps.

*Short-term priorities:* Synchronizing cash transfers between agencies is essential to improve food assistance and support households' capacity to allocate resources and prioritize cash utilization. Shifting from in-kind to cash transfers will be crucial to improve food security among camp-based refugees. Cash transfers for refugees can be a more cost-efficient way forward and increase food consumption.<sup>4</sup>

<sup>3</sup> While refugees in Kakuma receive 70 percent of food aid in kind and 30 percent in cash, refugees in Kalobeyei receive 100 percent of food aid in cash through the Bamba Chakula program. Bamba Chakula ("get your food") is a monthly transfer to SIM cards that beneficiaries use to purchase food items from registered traders.

<sup>4</sup> Delius and Sterck. 2020. "Cash Transfers and Micro-Enterprise Performance: Theory and Quasi-Experimental Evidence from Kenya."

## Finding



Employment rates are very low, and refugees in Kakuma are 21 percentage points less likely to be employed than those in Kalobeyei. Literate refugees are 11 percentage points more likely to be employed than those who are illiterate. Around 52 percent of youth (age 15–29) in camps are not in employment, education, or training (NEET). People who are NEET are more likely to be in their 20s, have no education, and not be proficient in Kenya’s official languages.

## Recommendations

*Short-term priorities:* Increasing employment opportunities by improving pathways for refugees to legally access work can be further enhanced. Strategies may include the engagement of the private sector to enable the creation of job markets, easing access to credit markets, strengthening business skills coupled with cash grants, second-chance education programs for adults and children out of school linked to financial support, and competency-based training or apprenticeships. Kiswahili and English literacy programs can help increase participation in the paid labor market.



Attendance rates, especially at the secondary level, are low and not significantly different (5 percent in Kalobeyei and 14 percent in Kakuma).

*Short-term priorities:* The transition to secondary school can be enhanced by investing in scholarship programs and conditional cash transfers and strengthening the Free Day Secondary Education program, and recognition of prior learning can be key to support transition.

*Medium-term priorities:* Construction of new facilities and classrooms in existing schools and inclusion of refugees in the National Education Management Information System can also increase transition to secondary school.

### Specific vulnerabilities of refugee women















Women refugees are more likely to live in overcrowded rooms, are less likely to receive remittances, and have lower access to loans and mobile banking. Woman-headed households have worse perceptions of safety than those headed by men. Camp-based women who head households with at least one child under five years of age are less likely to be employed. Youth who are NEET are more likely to be women.

*Short-term priorities:* Women and girls’ empowerment programs in camp and urban areas can help alleviate barriers to accessing socioeconomic opportunities, and build and maintain human capital. Financial inclusion programs coupled with entrepreneurship skills, business training, and cash grants targeting women, especially those with young dependents, can be a starting point to unlock refugee women’s socioeconomic potential.

*Medium-term priorities:* Further research is crucial to obtain a deeper understanding of such barriers and how to overcome them through gender-responsive solutions.

► **TABLE 1:** Summary of refugees' and hosts' living conditions

		Camps			Urban areas	
		Kalobeyei refugees (SES 2018)	Kakuma refugees (SES 2019)	Turkana hosts (KIHBS 2015-16)	Refugees (SES 2020-21)	Hosts (KCHS 2019)
	<b>Gender</b>	Men: 50% Women: 50%	Men: 54% Women: 46%	Men: 52% Women: 48%	Men: 51% Women: 49%	Men: 52% Women: 48%
	<b>Age</b>	Below 18: 71% Above 64: 0.6%	Below 18: 61% Above 64: 0.4%	Below 18: 60% Above 64: 0.4%	Below 18: 45% Above 64: 1.8%	Below 18: 32% Above 64: 0.7%
	<b>Dependency ratio</b>	1.9	1.2	1.4	0.6	0.4
	<b>Woman-headed households</b>	66%	56%	47%	41%	32%
	<b>Improved housing</b>	5%	3%	8%	82%	78%
	<b>Improved drinking water</b>	100%	100%	71%	91%	92%
	<b>Improved sanitation<sup>5</sup></b>	52% Sharing: 66%	78% Sharing: 37%	19% Sharing: --	84% Sharing: 68%	99% Sharing: --
	<b>Biomass fuels as main source of energy for cooking</b>	--	100%	98%	26%	10%
	<b>Primary net enrollment rate*</b>	77%	82%	59%	69%	90%
	<b>Secondary net enrollment rate*</b>	5%	14%	23%	28%	61%
	<b>Employment rate*</b>	39%	20%	42%	42%	66%
	<b>LSCI food insecurity</b>	61%	58%	--	61%	--

**Sources:** Kalobeyei SES 2018; Kakuma SES 2019; Urban SES 2020-21; KCHS 2019.

**Note:** \* Urban estimates may be affected by the COVID-19 pandemic.

<sup>5</sup> Sharing of toilet implies that the household shares the toilet facility with others who are not members of the household.

## A. Context

**Kenya hosts over half a million refugees, who, along with their hosts in urban and camp areas, face difficult living conditions and limited socioeconomic opportunities.**<sup>6</sup> Most refugees in Kenya live in camps located in the impoverished counties of Turkana (40 percent) and Garissa (44 percent), while 16 percent inhabit urban areas—mainly in Nairobi but also in Mombasa and Nakuru.<sup>7</sup> Refugees in Kenya have become an integral part of the social, cultural, and economic fabric of the country and the local communities that host them. Socioeconomic interactions between refugees and hosts, especially in camp areas, have helped to boost the overall economic landscape and improve nutritional outcomes and well-being for both communities.<sup>8</sup> Nevertheless, refugees and host communities continue to face poor living conditions, restricted access to socioeconomic opportunities, and specific vulnerabilities which need to be understood through socioeconomic data to inform the design and implementation of solutions.<sup>9</sup>

**Refugees in Kenya are not systematically included in national surveys, creating a lack of comparable socioeconomic data on camp-based and urban refugees, and their hosts.** Even though preceding research provides useful information on the living conditions of urban and camp-based refugees and their hosts, data gaps persist.<sup>10</sup> Limitations include a lack of comparable socioeconomic data for both communities, as well as scarce and/or outdated data on the living conditions of refugees, especially in urban areas, which limits comparisons between urban and camp-based communities. The present analysis focuses on the latter data limitation. Understanding the socioeconomic needs of urban and camp-based refugees in Kenya is crucial, especially in the face of ongoing conflicts, environmental hazards, and others shocks, as well as the recent government announcement to close Kenya's refugee camps, which highlights the potential move of refugees from camps into urban settings.<sup>11</sup> A deeper understanding of refugees' socioeconomic needs can help inform targeted interventions to enable self-reliance while uncovering under-researched dynamics, adding to the growing body of evidence on the socioeconomic differences between urban and camp-based refugees in sub-Saharan Africa.

**This comparative examination of the socioeconomic conditions of urban and camp-based refugees helps close data gaps by offering an analytical understanding of key differences between refugees while providing explanations and policy recommendations.** The Kalobeyei 2018, Kakuma 2019, and Urban 2020–21 Socioeconomic Surveys (SESSs), initiated by the World Bank and the United Nations High Commissioner for Refugees (UNHCR), were used to select key findings which can help understand factors driving socioeconomic differences between urban and camp-based refugees.<sup>12</sup> The comparative analysis presents differences between urban and camp-based refugees with regards to housing, energy, sanitation, access to finance, and social cohesion, while covering specific differences in education and livelihoods for camp-based refugees in Kalobeyei settlement and Kakuma camp (Box A1).

<sup>6</sup> UNHCR, "Africa."

<sup>7</sup> UNHCR, "Kenya: Registered Refugees and Asylum-Seekers. July 2020."

<sup>8</sup> Betts, Omata, and Sterck, "Refugee Economies in Kenya"; World Bank, "'Yes' In My Backyard? The Economics of Refugees and Their Social Dynamics in Kakuma, Kenya."

<sup>9</sup> Verwimp and Maystadt, "Forced Displacement and Refugees in Sub-Saharan Africa: An Economic Inquiry"; United Nations, "Global Compact on Refugees."

<sup>10</sup> See annex 11 of UNHCR and World Bank, "Understanding the Socioeconomic Conditions of Refugees in Kenya. Volume B: Kakuma Camp."

<sup>11</sup> *The Guardian*, "UN Outlines Plan to Close Camps Housing 430,000 Refugees in Kenya."

<sup>12</sup> To ease readability, the brief refers to Kalobeyei settlement and Kakuma camp as "camps" while acknowledging that they are different.

## Survey design and methodology

**The SESs are representative of urban refugees and camp-based refugees in Turkana County.** For the Kalobeyei 2018 and Urban 2020–21 SESs, households were randomly selected from the UNHCR registration database (proGres), while a complete list of dwellings, obtained from UNHCR’s dwelling mapping exercise, was used to draw the sample for the Kakuma 2019 SES.<sup>13</sup> The Kalobeyei SES and Kakuma SES were done via Computer-Assisted Personal Interviews (CAPI). Due to COVID-19 social distancing measures, the Urban SES was collected via Computer Assisted Telephone Interviewing (CATI). The Kalobeyei SES covers 6,004 households; the Kakuma SES covers 2,127 households; and the Urban SES covers 2,438 households in Nairobi, Nakuru, and Mombasa.

**Questionnaires are aligned with national household survey instruments, while additional modules are added to explore refugee-specific dynamics.** The SES includes modules on demographics, household characteristics, assets, employment, education, consumption, and expenditure, which are aligned with the Kenya Integrated Household Budget Survey (KIHBS) 2015–16 and the recent Kenya Continuous Household Survey (KCHS) 2019. Additional modules on access to services, vulnerabilities, social cohesion, mechanisms for coping with lack of food, displacement trajectories, and durable solutions are administered to capture refugee-specific challenges.<sup>14</sup>

<sup>13</sup> The difference in sampling schemes was driven by the timing of the UNHCR Registration Verification Exercise (VRX) in each location. For the Kalobeyei SES, the survey data collection coincided with the VRX; thus, households were selected during the VRX interviews with a fixed probability. All households were administered the VRX questionnaire, while only a random subset completed the Kalobeyei SES questionnaire. Since the Kakuma SES was completed after the VRX data collection was finalized, a complete list of dwellings was used to select the survey sample. In turn, the Urban SES used as a sampling frame the urban VRX, which was updated before the data collection.

<sup>14</sup> A Linear Probability Model (LPM) is used to examine the differences between urban-based and camp-based refugees:

$$Y = \beta_0 + \beta_1 * Camp + \beta_2 * Kakuma + \beta_3 * Woman\ Head + \beta_4 * Camp * Woman\ Head + \beta_5 * Protracted + \beta_6 * Camp * Protracted + \beta_7 * Origin + \delta * X + \varepsilon$$

Where  $Y$  is the dependent variable,  $Camp$  is a dummy indicating whether the household resides in a camp (Kakuma or Kalobeyei) or not,  $Kakuma$  is a dummy for Kakuma,  $Woman\ Head$  is a dummy for woman-headed households,  $Camp * Woman\ Head$  is a dummy for woman-headed households in a camp,  $Protracted$  is a dummy indicating if the household is protracted or not,  $Camp * Protracted$  is a dummy indicating if the household is protracted and resides in a camp, and  $Origin$  is a categorical variable for country of origin of the head.  $X$  is a vector of household and head characteristics, and  $\varepsilon$  is the error term.  $\beta_1$  is the main variable of interest that measures the impact of residing in a camp.  $\beta_2$  is the effect for Kakuma households compared to Kalobeyei households.  $\beta_3$  is the effect for woman-headed households compared to man-headed households in urban areas.  $\beta_4$  and  $\beta_6$  measure the additional effects for woman-headed households and protracted households in camps, respectively. The parameter combination  $\beta_3 + \beta_4$  measures the effect for woman-headed households compared to man-headed households in camps. Similarly, the parameter combination  $\beta_5 + \beta_6$  measures the effect for protracted households compared to non-protracted households in camps. The LPM would provide consistent and unbiased results for binary response if no or very few predicted probabilities lie outside the unit interval. In our estimation, very few of the observations fall outside the unit interval (Horrace and Oaxaca 2005). As robustness check, we exclude these observations from the estimation and obtain very similar results (see annex). We also use robust standard errors to control for possible heteroskedasticity that Ordinary Least Square (OLS) may impose. As another robustness check, we use logit to estimate the models, and the results are very similar to the LPM. Horrace and Oaxaca, “Results on the Bias and Inconsistency of Ordinary Least Squares for the Linear Probability Mode.”



## Limitations

**The mode of data collection limits comparability between urban and camp-based refugees.** As the Urban SES was collected through CATI, the representativeness of the sample and external validity might be limited due to telephone coverage, low participation, and response rates.<sup>15</sup> These limitations are a possible source of bias, which can be partially addressed by adjusting the survey weights using information from the population data. While the sampling weights for the Urban SES account for differences that might exist between households that have phones and all households, they do not account for differences in responses that may arise as a result of collecting data through CATI and CAPI. In addition, the training of enumerators and fieldwork may differ between phone surveys and face-to-face surveys, which can affect the comparison between urban and camp-based refugees.

**Comparisons between urban and camp-based refugees are also limited by the timing of the data collection.** Since camp-based refugee data were collected before the COVID-19 outbreak, while those of urban refugees were collected after the outbreak, some socioeconomic dimensions are expected to have changed as a result of the pandemic. Socioeconomic dimensions that are assumed not to have significantly changed due to the pandemic are compared between urban and camp-based refugees. These are housing, energy, sanitation, access to finance, and social cohesion. As it is likely that education, livelihoods, and food insecurity fluctuated due to the COVID-19 outbreak, differences in these are presented only for camp-based refugees. Furthermore, comparability between camp-based and urban refugees is limited by a gap of one to two years between the Urban SES and camp-based SES, during which camp averages might have changed. While comparisons with hosts are not included due to time differences in the data collection, the individual SES reports provide comprehensive refugee-host comparisons.<sup>16</sup>

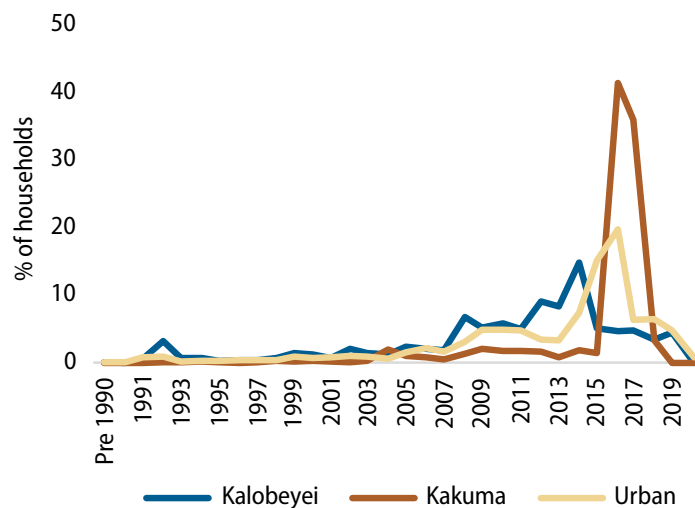
## B. Demographic profiles of refugees in Kenya

**Since the 1990s, Kenya has been hosting refugees mainly from South Sudan, the Democratic Republic of the Congo, and Somalia.** Most refugees were displaced after 2007, with a peak in 2016 and a subsequent fall in 2017 (figure B1). About 74 percent of refugees in Kalobeyei and 52 percent in Kakuma are from South Sudan (figure B2). About 23 percent of Kakuma refugees are from Somalia, while Kalobeyei hosts ethnic Somalis displaced mainly from Ethiopia's Ogaden region (13 percent). About 89 percent of urban refugees live in Nairobi, 4 percent live in Nakuru, and 7 percent live in Mombasa. Most refugees in Nakuru are South Sudanese (73 percent), while Somalis are the majority

<sup>15</sup> Ambel, McGee, and Tsegay, "Reducing Bias in Phone Survey Samples."

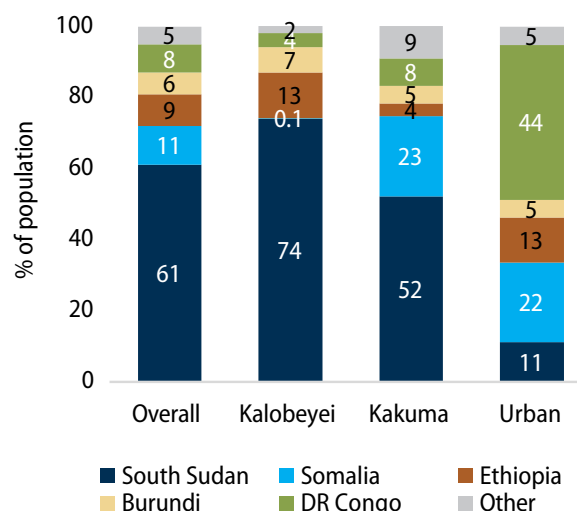
<sup>16</sup> For detailed comparisons between refugees and hosts, see UNHCR and World Bank, "Understanding the Socioeconomic Conditions of Refugees in Kenya. Volume A: Kalobeyei Settlement"; UNHCR and World Bank, "Understanding the Socioeconomic Conditions of Refugees in Kenya. Volume B: Kakuma Camp"; UNHCR and World Bank, "Understanding the Socioeconomic Conditions of Refugees in Kenya. Volume C: Urban Areas."

► **FIGURE B1:** Year of arrival of household head by location



**Source:** UNHCR 2021. UNHCR proGres Registration Database Sub-Sample. Data not publicly available.

► **FIGURE B2:** Main countries of origin



**Sources:** Kalobeyei SES 2018; Kakuma SES 2019; Urban SES 2020–21.

in Mombasa (84 percent). In Nairobi 44 percent are from the Democratic Republic of the Congo, and 22 percent are from Somalia.

**Camp-based refugees are younger, and their households are mostly headed by women and have higher dependency ratios than urban households.** Compared to 45 percent of urban refugees, 71 percent of refugees in Kalobeyei and 61 percent in Kakuma are 18 years and below. Unlike urban households, most camp-based households are headed by women. Dependency ratios are also higher in camps (table 1).

**Living conditions in Turkana County are more difficult and often involve more socioeconomic limitations than those in Nairobi, Nakuru, and Mombasa counties.** Turkana County, where refugees in Kakuma and Kalobeyei reside, is one of the poorest and remotest counties in Kenya, with limited employment opportunities, access to basic services, and infrastructure. In Turkana County, 72 percent of Kenyans live below the international poverty line of US\$1.90 per day, versus 4 percent for Nairobi County, 18 percent for urban Nakuru, and 10 percent for urban Mombasa where urban refugees reside.<sup>17</sup> In Turkana County, access to basic services is very limited compared to urban areas in Nairobi, Nakuru, and Mombasa (table A-1). While 95 percent of urban households have access to electricity, only 9 percent do so in Turkana. Similarly, access to improved sanitation in Turkana is very low compared to urban areas (19 percent and 99 percent, respectively). Education and employment rates are also lower in Turkana than in urban areas (table 1). These factors in Turkana County might exacerbate the difficult living conditions of camp-based refugees.

<sup>17</sup> Kenya National Bureau of Statistics, “Basic Report 2015/16 KIHBS.”

## C. Urban and camp-based refugees' comparative patterns

### i. Housing, energy, and sanitation

*Camp-based refugees are less likely to live in improved houses, more likely to live in overcrowded rooms, and more likely to use biomass fuels for cooking. Access to sanitation varies within urban and camp areas.*

**Camp-based refugees are less likely to live in improved houses than those living in urban areas, with significant variation by the date of arrival in Kenya of the head of household.** Most houses in camps, especially those in Kakuma, are constructed with unimproved materials such as mud, iron sheets, and tent materials (temporary shelters), while urban refugees mostly live in houses constructed with cement blocks and stones.<sup>18,19</sup> The type of housing depends on when the household head arrived in Kenya, with variations by location (table A-1, column 1). In urban areas, overall, protracted households (those whose head arrived in Kenya five or more years ago) are 6 percentage points more likely to live in improved houses than non-protracted households. In camps, there is no difference between protracted and non-protracted households in access to improved housing. Importantly, living in improved housing has been shown to be effective in controlling malaria, while having positive implications for educational outcomes.<sup>20</sup>

**Overcrowded rooms are more common among camp-based refugees, urban woman-headed households, and protracted urban households.**<sup>21</sup> Camp-based refugees are 17 percentage points more likely to live in crowded rooms than urban-based households (table A-1, column 4). This may partly be explained by their larger household sizes compared to urban-based households (6.2 vs. 3.2,  $p < 0.01$ ). In urban areas, woman-headed households are 7 percentage points more likely to face overcrowding in rooms than their male counterparts (table A-1, column 6). Differences by gender are not significant in camps. Protracted households in urban areas are 4 percentage points more likely to be crowded in rooms than non-protracted ones, with no such difference in camps. Protracted households tend to have larger household sizes than non-protracted ones. Thus, the higher incidence of overcrowding among urban protracted households could be linked to household sizes increasing according to the length of displacement and partly to difficulties in accessing affordable housing. Overcrowding is linked to stress, poor health and educational outcomes, and intergenerational transmission of social inequality.<sup>22</sup>

<sup>18</sup> Improved housing is defined as having improved floor, wall, and roof construction. Improved floor consists of floor constructed with tablets/wooden planks, palm/bamboo/mat/adobe/polished wood, vinyl/asphalt, ceramic tiles, cement, carpet, stone, and bricks. Improved wall materials consist of cement, stone with lime/cement, bricks, cement blocks, covered adobe, wooden planks/shingles, and burnt bricks with cement. Improved roof types are made with metal, wood, ceramic tiles, cement, or asbestos. IFC, "DHS Analytical Studies. Using Household Survey Data to Explore the Effects of Improved Housing Conditions on Malaria Infection in Children in Sub-Saharan Africa."

<sup>19</sup> According to UNHCR-Kenya, 5,378 permanent houses were built in Kalobeyei settlement after the SES was conducted in 2018.

<sup>20</sup> Cunningham and MacDonald, "Housing as a Platform for Improving Education Outcomes among Low-Income Children"; IFC, "DHS Analytical Studies. Using Household Survey Data to Explore the Effects of Improved Housing Conditions on Malaria Infection in Children in Sub-Saharan Africa."

<sup>21</sup> Living in an overcrowded room is defined as having three or more people occupying a room.

<sup>22</sup> Solari and Mare, "Housing Crowding Effects on Children's Wellbeing."

**The use of biomass as the main fuel for cooking is more prevalent in camps, mainly among woman-headed households and protracted households in urban areas.**<sup>23</sup> Camp-based refugees in Kakuma are 65 percentage points more likely to use biomass fuels (firewood and charcoal) for cooking than those in urban areas (table A-1, column 7).<sup>24</sup> This may partly be explained by the cost of non-biomass fuels as well as by the limited access to electricity in camps. In Kakuma, refugees are provided with 10 kilograms of firewood every two months, with many of them supplementing their needs by purchasing firewood sold by Turkana hosts (often in exchange for food rations) or collecting it outside camps.<sup>25</sup> In urban areas, households headed by women are 5 percentage points more likely to use biomass fuel for cooking than those headed by men. In addition, urban protracted households are 7 percentage points more likely to use this type of fuel than non-protracted households. Variations by gender and by protracted situation are not significant in camps. Collecting firewood and cooking with it has negative implications, including diseases and increased risk of physical abuse and sexual assault.<sup>26</sup> The combustion of solid fuels emits airborne pollutants which can generate acute respiratory diseases, especially for women and girls, who are usually the main household cooks, as well as for children under age 5, who normally remain in the proximity of the cooking area.<sup>27</sup> Furthermore, the collection and cooking process can take several hours, limiting women's and girls' time to pursue education or engage in paid work. The rising demand for biomass fuels, especially among refugees in camps, if left unmanaged, can lead to conflicts with hosts as a result of increased competition for resources.<sup>28</sup> Moreover, firewood collection degrades land, which has serious long-term implications.

**Refugees in Kakuma and woman-headed households in urban areas are more likely to have access to improved private toilets than Kalobeyei refugees and urban households headed by men, with no differences between camp and urban settings.**<sup>29</sup> Overall, there is no difference in access to private toilets between camp-based and urban-based refugees. However, differences within locations are significant. Refugees in Kakuma are 18 percentage points more likely to have access to private toilets than those living in Kalobeyei.<sup>30</sup> Even though the settlement planning in Kalobeyei accommodates household toilets, the refugee influx in 2016/17 affected the capacity to construct private toilets; thus, community toilets were built instead. However, during the time of comparative analysis, a cash-based intervention for latrines was implemented which considerably increased coverage of household private latrines to 78 percent of households in Kalobeyei and 42 percent in Kakuma.<sup>31</sup> Woman-headed households in urban areas are 5 percentage points more likely to have access to private toilets than those headed by men, while no gender-based difference in camps is noted (table A-1, column 10).

<sup>23</sup> We define the energy for cooking indicator as whether the household uses biomass fuel (firewood, coal/lignite, charcoal, straw/shrub/grass, animal dung) or modern fuel (electricity, LPG, natural gas, biogas, kerosene) for cooking.

<sup>24</sup> The source of energy for cooking is only available in the Kakuma SES and the Urban SES.

<sup>25</sup> Since firewood collection is reserved for Turkana hosts, it is dangerous for refugees, as it can generate conflicts with hosts for whom selling firewood constitutes a main source of income. Betts, Omata, and Sterck. 2018. "Refugee Economies in Kenya."

<sup>26</sup> Global Alliance for Clean Cookstoves. 2016. "Gender-Based Violence in Humanitarian Settings: Cookstoves and Fuels"; UN Women. 2019. "Gender Assessment of Kalobeyei Settlement and Kakuma Camp. Determining the Level of Gender Mainstreaming in Key Coordination Structures."

<sup>27</sup> Smith, Mehta, and Feuz. 2004. "Indoor Air Pollution from Household Use of Solid Fuels"; Kurmi et al. 2012. "Lung Cancer Risk and Solid Fuel Smoke Exposure: A Systematic Review and Meta-Analysis"; Dasgupta et al. 2004. "Who Suffers from Indoor Air Pollution? Evidence from Bangladesh."

<sup>28</sup> Thulstrup et al., "Assessing Woodfuel Supply and Demand in Displacement Settings. A Technical Handbook."

<sup>29</sup> Improved private toilet is defined as having access to an improved toilet facility that is not shared with other household members.

<sup>30</sup> Sanitation coverage has increased in 2020/21 in Kalobeyei settlement as part of conditional cash-based interventions for toilet construction.

<sup>31</sup> UNHCR Kenya operation.



Sharing of toilets is linked to sexual and gender-based violence and psychosocial stress among users, especially when using the toilet late at night.<sup>32</sup>

## ii. Access to finance

*Camp-based refugees have greater access to bank accounts but lower access to mobile banking and loans than urban refugees. Access to remittances varies within urban and camp areas.*

**The level of ownership of bank accounts is higher in camps, and of mobile banking is higher in urban areas.** Ownership of bank accounts is low in both areas (10 percent). However, camp-based refugees are 40 percentage points more likely to have bank accounts than urban refugees.<sup>33</sup> The higher incidence of bank account ownership among refugees in camps can be explained by the cash-based intervention for shelter in Kalobeyei settlement which requires refugees to receive cash through regular bank accounts. Refugee beneficiaries of this intervention are supported to open bank accounts, enhancing their financial inclusion.<sup>34</sup> Furthermore, since the SESs were conducted in 2018–2019, access to bank accounts has increased, as new bank accounts for refugees (60 percent women) have been opened in Kakuma (34,958 accounts) and Kalobeyei (7,386).<sup>35</sup> Despite the requirement of documentation to buy a SIM card—needed for mobile banking—most refugees own a mobile banking account, often by acquiring SIM cards registered in the name of a Kenyan. Urban refugees are 25 percentage points more likely to use mobile banking than camp-based refugees, which is consistent with their higher ownership of mobile phones (69 percent vs. 41 percent,  $p < 0.01$ ). In terms of gender of the head of household, in urban areas, woman-headed households are 12 percentage points less likely to own mobile banking accounts than those headed by men, with no such difference in camps (table A-2). Protracted households in urban areas are 6 percentage points more likely to own bank accounts, whereas in camps, ownership of bank and mobile banking accounts does not vary between protracted and non-protracted households.

**Access to loans is greater in urban areas than in camps.**<sup>36</sup> With very limited access to formal financial services, refugees, especially in low-income countries, rely on informal services by borrowing primarily from relatives and friends.<sup>37</sup> A similar trend is noted in Kenya. More than 90 percent of loans accessed by urban and camp-based refugees were from friends and relatives, while only 2 percent were from formal sources. Key challenges to accessing loans through formal financial institutions are linked to their lack of assets and the perception that refugees may disappear at any time and thus will not pay the loan back.<sup>38</sup> Access to loans differs significantly between camps and urban areas. Camp-based refugees are 22 percentage points less likely to have access to loans than urban refugees (table A-2, column 4). The low level of

<sup>32</sup> Sommer et al., “Violence, Gender and WASH.”

<sup>33</sup> In Kenya, refugees can open bank accounts with their proof of registration document from UNHCR and the Refugee Affairs Secretariat, now the Department of Refugee Services (DRS).

<sup>34</sup> UNHCR, “Cash for Shelter in Kenya. A Field Experience.”

<sup>35</sup> UNHCR Kenya operation. Some of these accounts include the Equitel service which facilitates access to quick emergency loans.

<sup>36</sup> Access to loans includes borrowing from informal sources (family/friends/community saving groups) and formal sources such as banks.

<sup>37</sup> UNHCR, GCAF, and Sida, “Assessing the Needs of Refugees for Financial and Non-Financial Services - Jordan.”

<sup>38</sup> IFC, “Kakuma as a Marketplace. A Consumer and Market Study of a Refugee Camp and Town in Northwest Kenya”; Betts, Omata, and Sterck, “Refugee Economies in Kenya.”

access to loans for these predominantly Muslim communities might partly be due to the preponderance of non-*shariah*-compliant loans; however, through UNHCR leadership, new service providers started providing *shariah*-compliant loans in camps. Woman-headed households in camps are 6 percentage points more likely to borrow than those headed by men, while in urban areas they are 4 percentage points less likely to borrow than men. Low access to formal loans may partly be explained by a lack of information regarding the availability of loans and application requirements.<sup>39</sup> A lack of access to formal financial services affects savings practices, thus limiting access to credit and hindering opportunities to start businesses.

**Access to remittances is greater among urban households headed by men and urban protracted households, with no differences between camps and urban areas.** The level of access to remittances does not differ significantly between camp-based and urban refugees. However, differences exist within communities (table A-2, column 1). Urban households headed by women are 5 percentage points less likely to receive remittances than those headed by men, while there is no gender-based difference in camps. Access to remittances varies with the date of arrival of the household head. Urban protracted households, overall, are 3 percentage points more likely to receive remittances than non-protracted households. In camps, protracted households are 4 percentage points less likely to receive remittances than non-protracted ones. Remittances help maintain consumption during shocks and contribute to local economic activity.

### iii. Social cohesion

*Camp-based refugees are less likely to have positive perceptions about trust in the host community; however, their perceptions of security are better than those of urban-based refugees. Perceptions of participation in decision-making are better in camps than in urban areas.*

**Perceptions of trust, safety, and participation in decision-making are used as proxies to measure social cohesion.** Social cohesion is key to strengthen resilience among refugees.<sup>40</sup> Given the multidimensional and context-specific nature of social cohesion, and the lack of a clear-cut definition, there are no standard instruments to measure it.<sup>41</sup> The most common proxy for measuring social cohesion often includes generalized levels of trust, membership in associations, or civic engagement. In the context of forced displacement, social cohesion focuses on intergroup perceptions and interactions.<sup>42</sup>

**While camp-based refugees are less likely to agree that the host community is trustworthy, their perceptions of safety are more positive than those of urban refugees.** Camp-based refugees are about 19 percentage points less likely than urban refugees to agree that their hosts are trustworthy (table A-3, column 2). This could be explained by the fewer interactions that refugees in camps might have with hosts compared to urban refugees (50 percent vs. 58 percent;  $p < 0.01$ ). While refugees in camps mainly interact with hosts through market transactions, urban refugees live mixed with the host community. In addition, differences in access to services have often created tension between the host community and camp refugees.<sup>43</sup> Poor refugee-host relations can be a threat to local integration. Regarding safety, refugees in camps feel safer in

<sup>39</sup> For example, Equity Bank, which is available in camp areas, has a program (Equitel) that allows small loans associated with bank accounts.

<sup>40</sup> 3RP, "Regional Strategic Overview. Regional Refugee and Resilience Plan."

<sup>41</sup> Kuhnt et al., "Social Cohesion in Times of Forced Displacement – the Case of Young People in Jordan."

<sup>42</sup> De Berry and Roberts, "Social Cohesion and Forced Displacement."

<sup>43</sup> Rodgers. 2020. "What does 'Social Cohesion' Mean for Refugees and Hosts? A View from Kenya."

their neighborhoods than those in urban areas. However, those in Kakuma feel less safe at night than those in Kalobeyei (table A-3). The difference between camp and urban settings may be partly explained by a higher perception of crime in urban areas, where 60 percent of households agree that crimes are common in their neighborhood. Perceptions of safety are worse among woman-headed households in camps. Refugee women are vulnerable to sexual and gender-based violence and often live in fear.<sup>44</sup>

**Perceptions of participation in decision-making are more positive in camps than in urban areas.**

Camp-based refugees are 15 percentage points more likely to agree that they are able to express their opinions through the existing community leadership structure, and 23 percentage points more likely than those in urban areas to feel their opinions are being considered for decisions that affect their well-being (table A-4). In both areas, woman-headed households are less likely to agree that their opinions are considered for decision-making than those headed by men, which could be linked to cultural differences and lower educational levels that would prevent women from occupying decision-making positions.<sup>45</sup> The exclusion of the opinions of women from decision-making could hinder the protection and economic and social empowerment opportunities they require.

BOX  
C1

## Country of origin analyses

**Separate analyses are done to understand key differences between the two main countries of origin: South Sudan and Somalia.** The country of origin of the household head is used to explore variations in housing characteristics and access to finance between households headed by refugees from South Sudan and Somalia. Half (50 percent) of household heads in camps are from South Sudan, while 17 percent are from Somalia. In urban areas, 24 percent of heads of households are from Somalia (mainly living in Mombasa), while 7 percent are from South Sudan (mainly residing in Nakuru).

**Housing characteristics are generally poorer in camps than in urban areas, with households headed by South Sudanese facing worse housing conditions.** Camp-based households headed by refugees from South Sudan and Somalia are less likely to live in improved houses than their counterparts in urban areas (table A-1, columns 2 and 3). Urban and camp-based households headed by Somali refugees are equally likely to live in overcrowded rooms and to have access to private toilets. In turn, camp-based households headed by refugees from South Sudan are more likely to be crowded in rooms and less likely to have access to private toilets than those in urban areas (table A-1). In addition, protracted households headed by South Sudanese refugees are 11 percentage points less likely to live in improved houses than those that are not protracted (table A-1, columns 1 and 2).

**The use of biomass varies by country of origin and area of residence.** Camp-based households with Somali heads are 59 percentage points more likely to use biomass fuels than

<sup>44</sup> Sexual and Gender-Based Violence Strategy, Kakuma Refugee Camp, 2017; The Impact of Sexual and Gender-Based Violence in Kalobeyei Integrated Settlement and Host Community, 2019.

<sup>45</sup> UNSW, "The World's Biggest Minority? Refugee Women and Girls in the Global Compact on Refugees."

those in urban areas (table A-1, columns 8 and 9). Variations in the use of biomass fuels by area of residence are not significant for households with heads from South Sudan.

**Ownership of bank accounts is higher for camp-based households with South Sudanese heads than for those in urban areas; however, South Sudanese-headed households in camps are less likely to have access to loans than those in urban areas.** South Sudanese-headed households living in camps are 40 percentage points more likely to have bank accounts than those living in urban areas, while there is no such difference among Somali households (table A-2, columns 8 and 9). The higher ownership of bank accounts among South Sudanese-headed households in camps is likely to be because most of them live in Kalobeyei and might have benefited from the cash-based intervention for shelter that required them to open a bank account. Even though South Sudanese-headed households in camps are more likely to have bank accounts than those in urban areas, they are 24 percentage points less likely to have access to loans. For Somali-headed households, this difference is not significant (table A-2, columns 5 and 6).

## D. Kakuma- and Kalobeyei-based refugees' comparative patterns

*Refugees in Kalobeyei are more likely to be employed and to consume more food and nonfood items than those in Kakuma. However, refugees in Kalobeyei are less likely to own assets, while there is no difference in school attendance or food insecurity.*

**Even though refugees have the right to work in Kenya, they face practical restrictions.** The 2006 Refugee Act stipulates that refugees can work in Kenya if they have a work permit. The migration section of the Ministry of Interior issues “Class M” work permits that enable refugees to legally work in the country. By the end of 2021, when this brief was written, applications for permits needed a recommendation from a prospective employer and had to be accompanied by a letter from the Refugee Affairs Secretariat confirming refugee status.<sup>46</sup> While refugees are legally allowed to work, in practice it is reportedly much more difficult, given that work permits are very rarely issued for asylum-seekers or refugees.<sup>47</sup> Access to business permits and business registration is also difficult. Permits are issued only to enterprises with permanent facilities, while street vendors or traders with temporary stalls are charged daily fees that lack clear regulation.<sup>48</sup> In addition, Kenya’s encampment policy restricts freedom of movement, and refugees in Kakuma and Kalobeyei are not allowed to travel beyond the town of Kakuma and adjacent areas unless a movement pass is granted.<sup>49</sup> Passes are issued for a lim-

<sup>46</sup> Zetter and Ruaudel. 2016. “KNOMAD Study Part-II Refugees’ Right to Work—An Assessment.”

<sup>47</sup> Refugee Consortium of Kenya. 2012. “Asylum Under Threat. Assessing the Protection of Somali Refugees in Dadaab Refugee Camps and along the Migration Corridor.”

<sup>48</sup> UNHCR. 2017. “Kakuma Integrated Livelihoods Strategy 2017-2019. Towards Sustainable Solutions for Refugee and Host Communities in Kakuma and Kalobeyei, Turkana West, Kenya.”

<sup>49</sup> O’Callaghan et al. 2019. “The Comprehensive Refugee Response Framework. Progress in Kenya.”



ited set of reasons, such as medical and educational requirements, or protection concerns. Movement restrictions and the obstacles faced in obtaining work permits fundamentally curtail refugees' ability to work and generate income, undermining self-reliance.

**Refugees in Kalobeyei, men, and those who are literate in English or Kiswahili are the most likely to be employed, with self-employment, apprenticeship, and volunteering being more common in Kalobeyei.**<sup>50</sup> Camp-based refugees' employment rates are generally low, especially for those in Kakuma (table 1), who are 21 percentage points less likely to be employed than those in Kalobeyei (table A-5, column 1). The higher employment rate in Kalobeyei is partly due to the larger number of volunteers and apprentices in Kalobeyei than in Kakuma (table A-5, columns 4 and 5). Due to regulatory frameworks that curtail refugees' opportunities to move and work, many refugees take low-paying jobs, usually in the informal sector.<sup>51</sup> Formal jobs in Kakuma town are scarce and primarily filled by nationals. In the camp, jobs are mostly offered by partners of UNHCR and other United Nations agencies, which employ approximately 2,400 refugee "incentive workers," who must demonstrate literacy in English or Kiswahili to get an incentive job.<sup>52</sup> Therefore, although most employed refugees are paid workers, they are not necessarily self-reliant. Women, especially heads of household who have at least one child under 5 in the household, are less likely to be employed. Due to traditional gender norms that prevent women from participating in the paid labor market, women with young children may drop out or not join the workforce, in order to take care of dependents. In fact, 45 percent of Kakuma refugee women and 24 percent of Kalobeyei women did not look for work in the 7 days prior to the data collection because of family responsibilities. In turn, women heads with older children (5–14 years), who may demand less care time from women, are more likely to be employed than those with younger children. Literacy in English or Kiswahili is positively correlated with being employed. Refugees in Kakuma are less likely to work on their own account, as an apprentice, or as a volunteer than those in Kalobeyei (table A-5, columns 2–5).

**About 52 percent of refugee youth (aged 15–29 years) are not in employment, education, or training (NEET).** Youth who are NEET are more likely to be in their 20s, have no education, lack skills in Kenya's official languages, and to be women (table A-6). If measures are not adopted to increase refugee youth integration into the labor market and encourage their participation in education, their existing vulnerabilities will be exacerbated. Being NEET has severe consequences for mental health, social exclusion, and welfare, and is linked with increased crime.<sup>53</sup>

**While most refugee children attend primary school, transition into secondary is very low, with members of protracted households being more likely to attend secondary school than those who are members of non-protracted households.** School attendance does not significantly differ between Kalobeyei and Kakuma (table A-7). Secondary attendance rates are extremely low, with only 5 percent of secondary school-age children in Kalobeyei and 14 percent in Kakuma attending secondary school (table 1). Girls in Kalobeyei are 2 percentage points less likely to attend primary school than boys, while there is no such difference in Kakuma and no gender-based difference in secondary school

<sup>50</sup> Employed is defined as having worked at least one hour either as a wage employee, own account/employer in a non-farm business enterprise, own account/employer in agriculture, contributing family worker, apprentice/intern, or volunteer in the seven days preceding the interview.

<sup>51</sup> Betts, Omata, and Sterck. 2018. "Refugee Economies in Kenya."

<sup>52</sup> IFC. 2018. "Kakuma as a Marketplace. A Consumer and Market Study of a Refugee Camp and Town in Northwest Kenya."

<sup>53</sup> OECD, "The NEET Challenge."

attendance. Children living in protracted households (whose head arrived in Kenya five or more years ago) are more likely to attend secondary school than those living in non-protracted households. In addition, children with disabilities are less likely to attend school than those without disabilities. Efforts need to be scaled up to meet disability needs and mainstream them in schools.

**While consumption expenditure is higher in Kalobeyei, asset ownership is higher in Kakuma, and food insecurity is alarmingly high in both camps.** Refugees in Kalobeyei spend 57 percent and 53 percent more than those in Kakuma on food and nonfood items, respectively (table A-8, columns 1 and 2). This may be explained by the difference in the type of food assistance, as well as by the growth in farm activities. While refugees in Kakuma receive 70 percent of food aid in kind and 30 percent in cash, refugees in Kalobeyei receive 100 percent of food aid in cash through the Bamba Chakula program.<sup>54,55</sup> This program seems to have brought better socioeconomic outcomes than food rations, although food insecurity rates have remained high.<sup>56</sup> In contrast, refugees in Kakuma are more likely to own assets than those in Kalobeyei (table A-8, column 4).<sup>57</sup> This may partly be linked to Kakuma refugees' more protracted situation and their possibility to have accumulated more assets over time.<sup>58</sup> High levels of food insecurity are widespread in both camps (table 1), with no significant differences between them.<sup>59</sup>

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<sup>54</sup> Bamba Chakula ("get your food") is a monthly transfer to SIM cards that beneficiaries use to purchase food items from registered traders.

<sup>55</sup> The 70 percent of food aid received in kind by refugees in Kakuma includes a mixture of dry grains, pulses, and cooking oil.

<sup>56</sup> MacPherson and Sterck, "Empowering Refugees through Cash and Agriculture: A Regression Discontinuity Design"; Delius and Sterck, "Cash Transfers and Micro-Enterprise Performance: Theory and Quasi-Experimental Evidence from Kenya."

<sup>57</sup> Consumption expenditure is measured by using expenditure on food and nonfood items. The food consumption component consists of food items that were consumed over a seven-day period, with data collected by recall. The nonfood expenditure includes expenditure on energy, education, and other nonfood items such as clothing, footwear, transport, toiletries, etc.

<sup>58</sup> Asset ownership is determined by a composite indicator constructed using the Principal Component Analysis (PCA) on the type of owned asset (radio, television, satellite dish, smartphone, refrigerator, table, bed, mattress, mosquito net, fan, bicycle, motorcycle, car, generator, solar panels, kerosene stove, charcoal jiko, wheelbarrow, corrugated iron fencing, chickens/ducks or other animals).

<sup>59</sup> Food insecurity is measured using the Livelihood Coping Strategy Index (LSCI). The LSCI assesses the coping strategies used by households to address a lack of food in the last 30 days. These can include selling assets or livestock, reducing spending on health and education, using savings, and begging. A household is food secure if the household did not use any of the strategies in the last 30 days.

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## F. Annex: Regression Tables

Standard errors are clustered at the enumeration area level. Regressions include other control variables such as characteristics of household head (age, education level, marital status, literacy in English and Kiswahili), household size, asset quintiles, access to private toilet, insufficient drinking water, improved housing, source of lighting, remittances. The asset index is determined by a composite indicator constructed using the Principal Component Analysis (PCA) on the type of owned asset.<sup>60</sup>

### i. Main results using linear probability model

► **TABLE A-1:** Impact of refugee characteristics on housing characteristics

	Improved housing			Overcrowded rooms			Biomass fuel			Private toilet		
	Full sample (1)	South Sudanese (2)	Somali (3)	Full sample (4)	South Sudanese (5)	Somali (6)	Full sample (7)	South Sudanese (8)	Somali (9)	Full sample (10)	South Sudanese (11)	Somali (12)
<b>Camp</b>	-0.649*** (0.081)	-0.796*** (0.064)	-0.932*** (0.060)	0.174*** (0.029)	0.165** (0.053)	-0.078 (0.161)				0.057 (0.072)	-0.476** (0.148)	0.345 (0.246)
<b>Kakuma</b>	-0.024 (0.051)	-0.053 (0.045)		-0.001 (0.033)	-0.031 (0.044)		0.653*** (0.080)	0.212 (0.194)	0.586*** (0.147)	0.180*** (0.025)	0.123*** (0.026)	
<b>Woman head</b>	0.005 (0.013)	0.080*** (0.024)	0.003 (0.010)	0.073*** (0.012)	0.113 (0.077)	0.154** (0.045)	0.050* (0.021)	-0.015 (0.088)	0.030 (0.043)	0.049*** (0.011)	0.094 (0.111)	0.063 (0.049)
<b>Camp* Woman head</b>	-0.009* (0.005)	-0.061* (0.029)	-0.004 (0.018)	-0.051* (0.023)	-0.043 (0.080)	-0.159** (0.052)	-0.090*** (0.018)	0.034 (0.123)	-0.029 (0.046)	-0.024 (0.025)	-0.047 (0.102)	-0.017 (0.033)
<b>Protracted</b>	0.056*** (0.014)	-0.111*** (0.018)	-0.052* (0.025)	0.039*** (0.007)	-0.100*** (0.026)	-0.075 (0.041)	0.071*** (0.012)	-0.062 (0.087)	0.087 (0.052)	-0.028* (0.015)	0.120 (0.086)	-0.099* (0.050)
<b>Camp* Protracted</b>	-0.084*** (0.018)	0.119*** (0.016)	0.079 (0.050)	-0.085*** (0.031)	0.083** (0.032)	0.178 (0.148)	-0.076** (0.022)	0.053 (0.081)	-0.047 (0.073)	0.046 (0.050)	-0.120 (0.095)	0.012 (0.273)
<b>R2 (%)</b>	65.0	73.0	76.8	42.7	39.1	43.3	58.5	51.2	47.7	17.1	16.3	25.4
<b>N</b>	5,326	2,046	1,251	5,325	2,045	1,251	4,177	1,300	1,180	5,326	2,046	1,251

**Sources:** Kalobeyei SES 2018; Kakuma SES 2019; Urban SES 2020-21.

**Note:** Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*). In column (3), data are only available for Kakuma and Urban.

<sup>60</sup> Assets: radio, television, satellite dish, smartphone, refrigerator, table, bed, mattress, mosquito net, fan, bicycle, motorcycle, car, generator, solar panels, kerosene stove, charcoal jiko, wheelbarrow, corrugated iron fencing, chickens/ducks or other animals.

► **TABLE A-2:** Impact of refugee characteristics on access to finance

	Remittances			Access to loans			Ownership of bank account			Ownership of mobile banking account		
	Full sample	South Sudanese	Somali	Full sample	South Sudanese	Somali	Full sample	South Sudanese	Somali	Full sample	South Sudanese	Somali
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<b>Camp</b>	-0.011 (0.024)	0.140 (0.129)	-0.021 (0.166)	-0.222*** (0.030)	-0.241** (0.098)	0.213 (0.141)	0.400*** (0.041)	0.403*** (0.076)	0.057 (0.032)			
<b>Kakuma</b>	0.007 (0.011)	0.018 (0.016)		0.021* (0.010)	0.006 (0.020)		-0.206*** (0.024)	0.202*** (0.023)	0.586*** (0.147)	-0.276*** (0.037)	-0.301* (0.146)	-0.150* (0.068)
<b>Woman head</b>	-0.048** (0.017)	0.046 (0.070)	-0.062 (0.041)	-0.037** (0.013)	-0.224 (0.162)	-0.013 (0.036)	0.028*** (0.005)	-0.136*** (0.038)	0.057*** (0.010)	-0.119*** (0.007)	-0.067 (0.054)	-0.186*** (0.022)
<b>Camp* Woman head</b>	0.034 (0.024)	-0.082 (0.067)	0.040 (0.045)	0.096*** (0.024)	0.245 (0.159)	0.095** (0.031)	-0.044** (0.017)	0.176*** (0.050)	-0.061** (0.021)	0.085*** (0.021)	-0.067 (0.052)	0.149*** (0.036)
<b>Protracted</b>	0.030*** (0.008)	0.034 (0.030)	-0.120*** (0.021)	-0.008* (0.004)	0.063 (0.044)	0.030 (0.027)	0.058*** (0.008)	-0.088*** (0.020)	0.061*** (0.012)	-0.031** (0.012)	-0.090 (0.074)	-0.098 (0.053)
<b>Camp* Protracted</b>	-0.062** (0.021)	-0.051 (0.044)	-0.019 (0.166)	-0.005 (0.018)	-0.036 (0.055)	-0.381** (0.137)	-0.060* (0.030)	0.059** (0.021)	0.026 (0.040)	0.095* (0.046)	0.167* (0.081)	-0.032 (0.088)
<b>R2 (%)</b>	23.5	18.9	26.4	10.5	19.5	9.8	10.6	13.5	4.3	24.3	32.2	14.7
<b>N</b>	5,326	2,046	1,251	5,326	2,046	1,251	5,326	2,046	1,251	4,277	1,305	1,251

**Sources:** Kalobeyi SES 2018; Kakuma SES 2019; Urban SES 2020-21.

**Note:** Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*). In column (4), data are only available for Kakuma and Urban.

► **TABLE A-3:** Impact of refugee characteristics on social cohesion proxies

	Trust		Safety		
	Neighbor	Host	Safe to go to town by self	Safe to walk in neighborhood during day	Safe to walk in neighborhood at night
	(1)	(2)	(3)	(4)	(5)
<b>Camp</b>	0.076	-0.189***	0.121**	0.218***	0.104*
	(0.060)	(0.045)	(0.043)	(0.052)	(0.046)
<b>Kakuma</b>	-0.001	0.085**	0.057	0.010	-0.142**
	(0.021)	(0.029)	(0.033)	(0.018)	(0.046)
<b>Woman head</b>	0.002	-0.009	0.050***	0.027	0.039**
	(0.006)	(0.023)	(0.006)	(0.016)	(0.015)
<b>Camp*Woman head</b>	-0.012	0.032	-0.060**	-0.033*	-0.068**
	(0.017)	(0.034)	(0.027)	(0.015)	(0.026)
<b>Protracted</b>	-0.012	-0.023	-0.021	0.008	0.019
	(0.011)	(0.021)	(0.029)	(0.011)	(0.032)
<b>Country of origin (base: South Sudan)</b>					
Somalia	0.002	0.030*	0.005	-0.021*	0.035
	(0.029)	(0.015)	(0.019)	(0.011)	(0.032)
Other	-0.030	0.011	-0.078***	-0.024**	-0.033
	(0.025)	(0.024)	(0.014)	(0.010)	(0.025)
<b>R2 (%)</b>	26.8	36.1	29.5	27.4	12.3
<b>N</b>	5,007	5,007	5,007	5,007	5,007

Sources: Kalobeyei SES 2018; Kakuma SES 2019; Urban SES 2020–21.

Note: Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*).

► **TABLE A-4:** Impact of refugee characteristics on decision-making

	Express opinions	Opinions considered
	(1)	(2)
<b>Camp</b>	0.150***	0.229***
	(0.023)	(0.046)
<b>Kakuma</b>	0.005	-0.139***
	(0.013)	(0.023)
<b>Female head</b>	-0.050**	-0.031**
	(0.016)	(0.012)
<b>Camp*Female head</b>	0.073**	-0.001
	(0.030)	(0.024)
<b>Protracted</b>	0.033***	-0.017
	(0.006)	(0.015)
<b>Country of origin (base: South Sudan)</b>		
Somalia	-0.055	-0.028
	(0.035)	(0.020)
Other	-0.019	-0.033
	(0.023)	(0.021)
<b>R2 (%)</b>	37.9	36.0
<b>N</b>	4,849	4,849

Sources: Kalobeyei SES 2018; Kakuma SES 2019; Urban SES 2020–21.

Note: Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*).



► **TABLE A-5:** Impact of refugee characteristics on labor force participation

Source of livelihood among the employed					
	Employed	Wage employment	Business	Apprentice-ship	Volunteer
	(1)	(2)	(3)	(4)	(5)
<b>Kakuma</b>	-0.205***	0.053	-0.188***	-0.089**	-0.164*
	(0.049)	(0.035)	(0.026)	(0.027)	(0.072)
<b>Woman</b>	-0.163***	-0.178***	-0.133*	0.021	0.052
	(0.024)	(0.032)	(0.054)	(0.028)	(0.063)
<b>Kakuma*Woman</b>	0.040	0.020	0.071	-0.030	-0.020
	(0.024)	(0.031)	(0.058)	(0.032)	(0.073)
<b>Woman head</b>	0.039	0.012	0.079	-0.024	-0.099
	(0.031)	(0.055)	(0.060)	(0.028)	(0.070)
<b>Has child in household (0–4 years)</b>	0.049**	-0.015	-0.033	0.010	0.049
	(0.019)	(0.020)	(0.023)	(0.023)	(0.028)
<b>Woman head*Child (0–4 years)</b>	-0.087**	-0.029	0.008	-0.002	0.044
	(0.028)	(0.088)	(0.075)	(0.020)	(0.040)
<b>Has child in household (5–14 years)</b>	-0.011	-0.043	-0.004	-0.016	-0.010
	(0.018)	(0.027)	(0.024)	(0.013)	(0.018)
<b>Woman head*Child (5–14 years)</b>	0.113**	0.048	-0.022	0.033	0.083
	(0.034)	(0.102)	(0.024)	(0.025)	(0.056)
<b>Education level (base: None)</b>					
Primary	0.057**	-0.033	-0.020	-0.010	0.032
	(0.019)	(0.030)	(0.014)	(0.026)	(0.021)
Higher	0.100***	-0.007	-0.089*	0.010	-0.020
	(0.015)	(0.036)	(0.039)	(0.025)	(0.039)
Technical/vocational	0.162***	-0.022	-0.030	0.020	0.044
	(0.040)	(0.060)	(0.038)	(0.035)	(0.055)
<b>Country of origin (base: South Sudan)</b>					
Somalia	0.088***	0.081***	0.051	0.045	0.006
	(0.012)	(0.018)	(0.042)	(0.024)	(0.040)
Other	0.078**	0.091***	0.067	-0.032	-0.058
	(0.021)	(0.016)	(0.053)	(0.019)	(0.034)
<b>Literacy in Swahili/English</b>	0.111***	0.066	0.024	0.012	0.006
	(0.018)	(0.056)	(0.058)	(0.020)	(0.026)
<b>Poor</b>	-0.101***	-0.035	-0.083***	-0.032	0.006
	(0.021)	(0.025)	(0.015)	(0.017)	(0.029)

(continued next page)

Primary employer (base: Other household)					
International/ non-governmental organization		-0.079 (0.050)	-0.046* (0.020)	-0.049 (0.060)	-0.079 (0.050)
Own household		-0.104*** (0.025)	0.002 (0.031)	0.549*** (0.094)	-0.104*** (0.025)
<b>R2 (%)</b>	21.2	39.7	14.7	7.4	27.6
<b>N</b>	5,391	1,868	1,868	1,868	1,868

Sources: Kalobeyei SES 2018; Kakuma SES 2019.

Note: Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*).

► **TABLE A-6:** Impact of refugee characteristics on youth who are not in employment, education, or training (NEET)

	NEET
<b>Kakuma</b>	0.031 (0.021)
<b>Woman</b>	0.051** (0.015)
<b>Kakuma*Woman</b>	-0.007 (0.010)
<b>Has child in household</b>	-0.003 (0.010)
<b>Woman*Child</b>	0.057* (0.024)
<b>Age (base:15-19)</b>	
20-24	0.145*** (0.015)
25-29	0.205*** (0.044)
<b>Education level (base: None)</b>	
Primary	-0.260*** (0.032)
Higher	-0.322*** (0.024)
Technical/vocational	-0.350*** (0.063)

	NEET
<b>Country of origin (base: South Sudan)</b>	
Somalia	0.064** (0.018)
Other	0.047* (0.022)
<b>Literacy in Swahili/ English</b>	-0.172** (0.052)
<b>Woman head</b>	-0.035** (0.013)
<b>Head working</b>	-0.035** (0.013)
<b>R2 (%)</b>	32.1
<b>N</b>	5,173

Sources: Kalobeyei SES 2018; Kakuma SES 2019.

Note: Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*).

► **TABLE A-7:** Impact of refugee characteristics on school attendance rates

	Primary net attendance rate	Secondary net attendance rate
	(1)	(2)
<b>Kakuma</b>	0.049	0.029
	(0.034)	(0.022)
<b>Woman</b>	-0.021***	0.017
	(0.001)	(0.014)
<b>Kakuma*Woman</b>	0.017	-0.036
	(0.023)	(0.019)
<b>Country of origin (base: South Sudan)</b>		
Somalia	-0.060	0.059**
	(0.033)	(0.022)
Other	0.016	-0.003
	(0.024)	(0.022)
<b>Disability</b>	-0.115**	-0.049**
	(0.032)	(0.017)
<b>Protracted</b>	0.013	0.100***
	(0.029)	(0.024)
<b>Gender of head</b>	-0.002	0.043***
	(0.030)	(0.009)
<b>Education level of head (base: None)</b>		
Primary	0.015	-0.014
	(0.023)	(0.010)
Higher	-0.009	0.065***
	(0.020)	(0.015)
Technical/vocational	0.042	0.073
	(0.055)	(0.040)
<b>Head working</b>	0.049	0.029
	(0.034)	(0.022)
<b>Poor</b>	0.001	-0.006
	(0.017)	(0.031)
<b>R2 (%)</b>	1.4	5.6
<b>N</b>	5,591	2,656

**Sources:** Kalobeyei SES 2018; Kakuma SES 2019.

**Note:** Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*).

► **TABLE A-8:** Impact of refugee characteristics on consumption expenditure, food insecurity, and asset index

	Food consumption expenditure	Nonfood consumption expenditure	LCSI food insecurity	Asset index
	(1)	(2)	(3)	(4)
<b>Kakuma</b>	-0.829***	-0.748***	-0.008	0.234***
	(0.061)	(0.067)	(0.033)	(0.061)
<b>Woman head</b>	-0.127*	-0.116**	-0.071**	0.032
	(0.053)	(0.037)	(0.027)	(0.034)
<b>Kakuma*Woman head</b>	0.136**	0.130**	0.051*	-0.119**
	(0.055)	(0.053)	(0.024)	(0.037)
<b>Protracted</b>	-0.060**	0.103**	0.007	0.239***
	(0.017)	(0.037)	(0.029)	(0.043)
<b>Country of origin (base: South Sudan)</b>				
Somalia	0.108***	-0.004	-0.077**	0.361***
	(0.033)	(0.043)	(0.033)	(0.049)
Other	0.149***	0.118**	0.004	0.478***
	(0.037)	(0.049)	(0.037)	(0.055)
<b>R2 (%)</b>	39.7	35.9	4.8	43.1
<b>N</b>	2,935	2,935	2,978	2,978

**Sources:** Kalobeyei SES 2018; Kakuma SES 2019.

**Note:** Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*). LCSI = Livelihoods-Based Coping Strategies Index (World Food Programme).

## ii. Regression results using alternative estimation methods<sup>61</sup>

► **TABLE A-9:** Impact of refugee characteristics on housing characteristics

	Improved housing		Overcrowded rooms		Use of biomass fuel	
	LPM	Logit	LPM	Logit	LPM	Logit
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Camp</b>	-0.649***	-0.521***	0.122***	0.084**		
	(0.081)	(0.072)	(0.033)	(0.036)		
<b>Kakuma</b>	-0.024	-0.081**	0.013	0.012	0.650***	0.464***
	(0.051)	(0.039)	(0.029)	(0.019)	(0.072)	(0.071)
<b>Female head</b>	0.005	-0.005	0.063***	0.042**	0.045*	0.004
	(0.013)	(0.015)	(0.012)	(0.017)	(0.020)	(0.017)
<b>Camp*Female head</b>	-0.008	0.008	-0.038**	-0.038*	-0.095***	0.056
	(0.005)	(0.023)	(0.017)	(0.023)	(0.020)	(0.117)
<b>Protracted</b>	0.056***	0.023	0.032***	0.015	0.068***	0.040**
	(0.014)	(0.014)	(0.007)	(0.018)	(0.009)	(0.016)
<b>Camp*Protracted</b>	-0.084***	-0.084*	-0.089**	-0.067***	-0.072**	0.165
	(0.018)	(0.046)	(0.031)	(0.023)	(0.019)	(0.125)
<b>Country of origin (base: South Sudan)</b>						
Somalia	-0.015	-0.013	-0.064	-0.032	0.036	-0.082*
	(0.009)	(0.022)	(0.042)	(0.025)	(0.059)	(0.046)
Other	-0.049	-0.053**	-0.012	-0.002	-0.073	-0.148***
	(0.028)	(0.021)	(0.032)	(0.019)	(0.048)	(0.045)
<b>R2 (%)</b>	64.9		45.7		57.5	
<b>N</b>	5,309		5,043		3,982	
<b>% of predicted probabilities within unit interval</b>	99.7		94.7		93.8	

**Sources:** Kalobeyei SES 2018; Kakuma SES 2019; Urban SES 2020–21.

**Note:** In columns (1), (3), and (5), the models are estimated by using observations whose predicted probabilities fall within the unit interval. In columns (2), (4), and (6), the models are estimated using logit and the marginal effects are shown. Significance level: 1% (\*\*\*), 5% (\*\*), 10% (\*).

<sup>61</sup> We use the alternative methods to estimate the impact of refugee characteristics on housing characteristics, access to finance, social cohesion, labor force status, NEET, school attendance rates, food insecurity, and asset index. Results are very similar to the estimates by LPM. Due to space limitations, we present only the results for housing characteristics. Other statistics are available on request.







