

Livelihood baseline assessment of Malian refugees in Bobo-Dioulasso, Burkina Faso: *Quantitative analysis of urban household economies*



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Acronyms and abbreviations

1. Organisations and states

| | |
|----------|--|
| EfD | Evidence for Development |
| FEWS NET | Famine Early Warning Systems Network |
| UNHCR | UN High Commissioner for Refugees; the UN Refugee Agency |
| VSF | Vétérinaires Sans Frontières |
| WFP | World Food Programme |
| WHO | World Health Organization |

2. Other acronyms and abbreviations

| | |
|-------|--|
| AE | Adult equivalent |
| DI | Disposable income |
| DI/AE | Disposable income per adult equivalent |
| FCFA | West African CFA franc |
| HH | Household |
| IHM | The individual household method |
| SoLT | Standard of living threshold |

Tables, figures and equations

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Executive summary

This final baseline assessment of Malian refugees in Burkina Faso covers the situation of refugees residing among the host community in Bobo-Dioulasso. The assessment was conducted between 12th and 18th January 2015 and was led by Evidence for Development (EfD), supported by UNHCR's senior livelihoods assistant. The team included 5 graduates from the University of Bobo-Dioulasso who had been trained in IHM field research methods during the Sept-Oct 2014 assessment, together with one IHM trained member UNHCR's implementing partner, IEDA. New trainees included an academic from the Institute of Development Research, University of Bobo-Dioulasso, four members of UNHCR staff based in the Sahel region, and two programme staff from UNHCR partners, Vétérinaires Sans Frontières (VSF), implementing the Seeds for Solutions project in the Sahel.

An initial sample of 97 households was randomly selected from the 340 refugee households in Bobo-Dioulasso enumerated by UNHCR in December 2014. Households were selected in from each of the city's administrative sectors, in proportion to the number of refugees residing in the sector. 73 households were initially selected for interview, with 24 'reserves'. Due to the extremely high level of mobility among the refugees, all 'reserve' households as well as the initial sample of 73 were contacted. The final sample used in the analysis is comprised of 67 households (around 20% of all refugee households in Bobo-Dioulasso). 3 households were not included as it became evident that the interviewee did not have access to all relevant information, and the final 3 households could not be located. Contextual information was collected mainly through focus group discussions with representatives of the refugee committee (4 male and 4 female).

1. Refugee food and cash income sources

- The same research protocol and analytical method was used in this assessment as in the assessment of the three official camps¹. Households are ranked according to the cash that remains in a 'household budget' after its members have met their basic food energy requirements. This money is referred to as 'disposable income' (DI). To allow for comparison between households of different size, incomes can be further standardised per 'adult equivalent' (AE), based on the food energy requirement of each individual household – resulting in disposable income per adult equivalent (DI/AE).
- All households interviewed in this assessment were able to access their basic food energy requirements. Although higher median cash incomes were recorded among refugees in Bobo-Dioulasso than those residing in the camps, urban refugees remain heavily reliant on food and cash transfers from the World Food Programme (WFP) due to obligatory

¹ Petty, C., Ellis, W., & Seaman, J. (2014) *Livelihood baseline assessment of Malian refugees in Burkina Faso: Quantitative analysis of household economies*, Evidence for Development & UNHCR. Available online at <http://www.efd.org/reports/Baseline-UNHCR-Burkina-Faso-livelihood-assessment-Malian-refugees-part-I/>

expenditure on rent and service charges such as water, electricity and refuse collection.

- Refugees in Bobo-Dioulasso are primarily engaged in trading activities. With the exception of just 3 households, every household included in the sample was involved in local trading activity either on a small scale or, less frequently, on a larger scale. Poorer households earn cash mainly from petty trade in foodstuffs (fruit and vegetables). Importing clothes, which are mostly sold to other refugee households, is an important economic activity among better off households. Around 18% (n 12) of the study population are involved in artisanal work. 16% (n 11) of the 67 households included in the assessment gained income from the sale of livestock and livestock products. In contrast to the camp-based population, where work for NGOs was an important source of employment, only 4 refugees in the Bobo-Dioulasso sample (just under 6%) were employed by NGOs.
- Income levels from trade, small business and livestock sales were low overall: median cash per person remaining after meeting basic food energy needs is around 187,048 FCFA per year (\$0.90 per day). However, this figure does not take account the rent and service charges that refugees living among the host community in Bobo-Dioulasso have to pay. These charges amount to a minimum of 107,568 FCFA per year, leaving a median income after basic food, rent and service charges of just 218 FCFA (\$0.37) per day.
- WFP provides the highest proportion of income from transfers. Gifts from relatives, friends and NGOs make up the rest. For poorer households, cash from WFP is the most important source of money income; for better off households, income from commercial activities is by far the main source of cash.
- Food transfers provide on average 1,254 kcal per adult equivalent per day². This represents 48% of food energy requirements per adult equivalent, based on a reference food energy requirement of 2,600 kcal per adult equivalent per day. WFP was by far the most important provider of food transfers. Only 6 households received significant gifts of cereals from family or friends (ranging from 50 kg to 140 kg per household) and of these, 5 were female-headed. Other small gifts of mutton, ranging from 1 kg to 5 kg per household, were recorded by 6 households.
- 4 households (just under 6%) accessed food from their own livestock products and in all cases only small quantities are consumed. The refugee population relies on market purchases for at least half their food energy requirements.
- As well as identifying these main sources of income (in the forms of both food and cash) from household data, IHM analytical methods were used to assess the ability of households to meet food energy requirements and purchase a minimum set of items needed to meet the local norms for 'social inclusion' (see list of definitions).
- All households in the survey population had sufficient total income to access their basic food energy needs. However, 8 households (11.9%) did not have sufficient income to pay for a minimum set of further basic expenses (clothes, soap, fuel, etc.). When the minimum costs of rent, electricity, water and refuse collection charges were added to the list of basic

² Note that this figure is based on actual recorded food transfers, and calculated per adult equivalent. WFP rations are calculated to provide 1,203 kcal per person, based on an average requirement across the population of 2,100 kcal per person.

expenditure items, 16 households (23.9%) fell below the standard of living threshold.

2. Demographic profile of the refugee population

- The ethnic and demographic profile of the sample was: 34% Tuareg, 19% Fulani, 19% Songhai, 16% Dogon, 6% Bambara, 3% Arab and 1% Marka.
- The 67 households interviewed were made up of 394 individuals: 58% (n 229) of household members were female and 42% (n 165) male. The average household size was 6.
- Just over 44% of households were female-headed. 52% of the survey population was under 18 years of age during the study period and around 3% was over 64 years of age.
- The poorest households in the camps could not be identified consistently on the basis of demographic characteristics such as family size, ethnic group, or elderly- or female-headed status. The highest numbers of female-headed households were found in the poorest quintile (Q1) and the middle quintile (Q3).

3. Assets

- Most urban refugees have re-established income-generating activities with minimal capital and assets, having lost the homes, livestock and other assets during the conflict. Although the capital required to start up in petty trade (e.g. in fruit and vegetables) is very small (10,000 FCFA) the returns are also low, making it hard to trade up to more profitable business enterprises. Trade in higher-value goods, such as traditional clothing items imported from Mauritania, requires a far higher initial investment of between 100,000 and 500,000 FCFA.
- Refugee households have a range of consumer goods. These include mobile phones (owned by 90% of households, with two-thirds of households owning 2 or more phones), bicycles (owned by just over 20% of households), motorbikes (owned by 28% of households), and televisions (owned by half the refugee households). Just one of the sampled households reported owning a car.
- 10 households reported keeping livestock within Burkina Faso and 18 outside the country. Some goats and poultry were kept in the city, but cattle were kept in the Sahel region. The largest herds were kept by households in the top 2 quintiles. Of the livestock kept outside Burkina Faso, most were looked after by relatives who retain any livestock products. However, if the refugee owners need cash, proceeds from the sale of the animal are sent to the owner.

4. Livelihood options and constraints

The main livelihood constraints facing refugees in Bobo-Dioulasso are similar to those of refugees who reside in the camps. The following issues were highlighted in key informant and focus group discussions:

- Lack of capital. This affects all households that were forced to flee, losing their livelihoods and possessions in the conflict. With little cash to invest in business, refugees attempting to establish commercial enterprises have few resources to invest in goods to sell on. Refugees in Bobo-Dioulasso also described problems in gaining access to street markets, as plots are strictly controlled by well-established local traders. This means that most often refugee traders sell directly to other refugees rather than to the wider population.
- For some refugee households, the high cost of accessing higher education is a major concern. Although refugee school leavers were able to return to Mali to take their baccalaureate exams, many who would otherwise have progressed to university are unable to do so due to lack of funds.
- Lack of opportunities to gain employment in high-value jobs. Although there are no legal obstacles to accessing high value, skilled employment, in a competitive jobs market refugees do consider themselves to be at a disadvantage.
- In response to their families' financial difficulties, many refugee women have organised themselves into informal savings groups and small business enterprises. Most of these enterprises involve the manufacture of soap, for which demand is high.

5. Simulations

At the request of UNHCR, two simulations have been produced to separately investigate potential impacts of reduced WFP support, and an external food price shock.

IHM data was first used to simulate a reduction in the WFP cash transfer and its impacts across the income distribution, on household incomes and capacities to access basic food and non-food needs. With a 50% reduction in the WFP cash transfer, 1 household fell below the food poverty line, and 8 households that had previously had income levels above the standard of living threshold fell below it.

To further contextualise the potential impacts of reduced support, a 100% increase in the staple food prices was also simulated. This too had a serious impact on the poorer households, while affecting better-off households less. With this simulation 1 household also fell below the food poverty line, and 6 households that had previously been above the standard of living threshold fell below it.

Definition of terms and concepts as used in IHM analysis

- **Household:** A group of people sharing pooled resources and eating from a common pot.
- **Household food energy requirement:** The sum of the food requirement of each individual in the household, according to their sex and age³ and time present in the household during the study period.
- **The staple diet** (and price per kcal of the staple diet): The staple diet consists of the foods that form the basis of the local diet purchased by poor households after their own food production (and/or rations, in the case of refugee households) has run out. This is identified in consultation with local key informants. A weighted price per kilocalorie is calculated⁴ based on the average (or mid-year) local market price of that diet during the study year. After taking account of food energy already derived from the household's consumption of rations or own-produced food, the price per kcal of the staple diet is used to calculate the cost of purchasing the remaining calories needed to make up the household's total annual household food energy requirements. In this study, the staple diet identified by poorer refugee households consisted of maize (80%) and rice (20%). The average prices during the study year were 125 FCFA per kg for maize and 300 FCFA per kg for rice.
- **Cash income:** All cash income from all sources (i.e. crop sales, sale of livestock and livestock products, employment/self-employment, cash transfers, and the sale of wild foods). Note that production and input costs are deducted from cash income. Where income is derived from petty trade, commerce, the sale of livestock or other sources, the amount recorded represents the profit made by the household after production or input costs are deducted. This means that a 'negative' income can be recorded if, for example, animals are sold at a loss.
- **Food income:** All sources of income as food consumed (e.g. from crops, livestock products, payment in kind, food gifts and transfers and wild foods). Recorded in kilocalories (kcal).
- **Disposable income:** The cash remaining to each household after it has met its total food energy needs, based on WHO reference standards⁵. This can be a negative value, if the household is unable to meet its full food energy needs with its available income.

³ Food energy requirements derived from 1985 WHO reference standards: 'Energy and protein requirements', *Report of a Joint FAO/WHO/UNU Expert Consultation* (1985), World Health Organization Technical Report Series 724. Available online at <http://www.fao.org/docrep/003/aa040e/aa040e00.HTM>

⁴ For example, if the diet is 90% maize at 20 shillings per kg (with 3,630 kcal per kg) and 10% beans at 50 shillings per kg (with 5,600 kcal per kg), the price of the diet (per kcal) = $((20 / 3,630) \times 0.9) + ((50 / 5,600) \times 0.1)$.

⁵ Food energy requirements derived from 1985 WHO reference standards (see above).

Equation 1: Disposable income

Disposable income =

Sum of all household cash income – ((Household food energy requirement [kcal] –
Sum of all household food income [kcal]) × Price per kcal of staple diet)

- The relationship between **food income, cash income and disposable income**: Disposable income (DI) is an outcome measure. It represents the money that remains to a household after the household's food and cash incomes have been allocated to meet its members' basic food energy (kcal) needs⁶. In the model, cash income is used to 'buy' the required kilocalories not covered by food aid or own production, in order to meet the household's basic food energy needs. The detailed information collected on the different types of food and cash income can be used to model impacts of changes in the prices, production or values of any income source(s) as well as changes to other defined variables
- **Adult equivalents**: Disposable incomes and other figures can be standardised to take account of variation in household size by dividing them by the number of 'adult equivalents' in each household. The number of adult equivalents is calculated as the total household energy requirement divided by the energy requirement of a young adult (2,600 kcal per day)⁷. The standard IHM income distribution chart shows 'disposable income per adult equivalent' (DI/AE).
- **The food poverty line**: Households that cannot access their basic food energy requirements⁸ – either through own production, transfers, food purchase using cash income, or a combination of these – are described as being 'below the food poverty line'. Data for these households appears below the x axis (as negative y axis values) on the disposable income charts. The income deficit shown on the chart is equivalent to the cost of purchasing the quantity of food required to meet reference food energy standards, based on the cost of the cheapest staple(s) that form the local staple diet, established with key informants.
- **The standard of living threshold**: This is the cost of a basket of goods and services sufficient to achieve a minimum acceptable standard of living, which incorporates the cost of meeting basic food energy needs. The items are established in discussion with poorer residents and typically include clothes, soap, fuel, primary education costs and other items deemed locally-necessary for 'social inclusion'. Personal costs (such as clothes and primary education) are allocated to households on a per-person basis: for example, primary school costs would be allocated to a household only for their children of primary school age. Other, more general costs such as fuel are allocated on a per-household basis. Table 6 shows the annual costs of the 'standard of living' items identified in discussion with residents in the three refugee camps.

⁶ Food energy requirements derived from 1985 WHO reference standards (ibid).

⁷ Food energy requirements derived from 1985 WHO reference standards (ibid).

⁸ Food energy requirements derived from 1985 WHO reference standards (ibid).

- **Social inclusion:** See ‘standard of living threshold’ above. A precondition for social inclusion is that households are able to meet their basic needs so they can live in dignity, participate in normal social activities and meet local norms in terms of clothing and personal hygiene.
- **Quantiles:** Data from individual households can be grouped into ‘quantiles’ (essentially equal-sized data subsets) to allow for grouped analysis and to identify, where possible, trends and characteristics of households at similar income levels. This can be useful for targeting purposes, or to test assumptions concerning a particular section of the community or social category (for example people with disabilities, or female-headed households). To retain a reasonable degree of disaggregation, some of the data in this report is sub-divided into five equal (or almost-equal⁹) ‘**quintiles**’, grouped and presented in ascending order of ‘disposable income per adult equivalent’ – with the poorest households starting at the bottom of quintile 1, and the richest households located at the top of quintile 5. Within each quintile the **median value** (i.e. the numerical value separating the higher half of the dataset from the lower half) is sometimes indicated, along with the range of values for that quintile.
- **Open-IHM:** Individual household data is analysed using IHM software developed by Evidence for Development. This has been placed on an open source platform known as ‘open-IHM’, which can be downloaded at <http://code.google.com/p/open-ihm/>

⁹ Where total numbers of households do not divide equally between the 5 quintiles, decisions must be made about which quintile(s) should include an extra household. There are no fixed rules, but in general the first extra household has been added to the poorest quintile, with further additions to other quintiles depending on the total number of odd households.

Introduction

At the time of the enumeration exercise, carried out in December 2014, there were 340 registered Malian refugee households in Bobo-Dioulasso. Many of these households arrived in 2012 with the first wave of refugees fleeing the conflict in the north of Mali. In the early stages of the emergency, before camps were set up, refugees who chose to continue south, away from the Sahel region, sheltered informally in and around Ouagadougou. As information on the relatively cheaper cost of living in Bobo-Dioulasso reached the refugees, some chose to move away from Ouagadougou, seeking accommodation and work in Burkina Faso's second city. Many of these households chose to remain in Bobo-Dioulasso after the official camps were set up. The refugees have settled mostly in the north and central areas of the city, either in market areas or with easy access to them where rents are relatively less expensive. A few are located in more prosperous suburbs with higher rental costs.

1. Assessment team and training

The assessment was led by part of the EfD team responsible for conducting the initial IHM training and assessment on behalf of UNHCR, which took place in September-October 2014, supported by UNHCR's senior livelihoods assistant. A core group of 6 interviewers and 5 refugee translators, all of whom had been trained in the earlier baseline assessment of the three official camps, participated in the Bobo-Dioulasso assessment, together with 7 new trainees. These included an academic from the University of Bobo-Dioulasso Institute of Development Research (IDR), 4 local UNHCR staff and 2 livestock experts from VSF, UNHCR's implementing partner for the Seeds for Solutions project in the Sahel. The main objective of the training provided for this assessment was to enhance the questioning, cross-checking and probing skills required for individual household interviews, key informant interviews and focus group discussions. Emphasis was also placed on the need to gain the confidence and informed consent of interviewees, explaining the purpose of the interview and the voluntary nature of participation.

The EfD field manual was pre-circulated to participants and new trainees were given a brief orientation and introduction to the methodology before starting field work, together with written guidelines. Trainees were paired with experienced interviewers and given individual support and mentoring in data collection, consolidation and use of the IHM spreadsheets for data entry.

2. Limitations and constraints

The refugee population in Bobo-Dioulasso is extremely mobile, with households frequently moving across the city to find better-value rented accommodation. This led to difficulties locating many of the selected households from lists that were up-to-date as recently as December 2014. However,

with the exception of just 4 households, all households in the sample were eventually located with the assistance of the refugee committee, who also acted as guides for the interview teams.

Difficulties in mobilising refugees for focus group discussions and time and cost constraints also meant that contextual information – on subjects such as availability and seasonality of paid employment, costs and returns from petty trade, basic expenditure items, etc. – that is normally collected from a number of different focus group discussions had to be replaced by a single focus group discussion, supplemented with key informant interviews carried out during the course of the assessment.

Finally, due to the recent closure of the UNHCR office in Bobo-Dioulasso and uncertainty about the future of their community, great care was needed to explain the purpose of the assessment to members of the refugee committee. Discussions led by UNHCR's senior livelihoods assistant emphasised the need for accurate information that would allow UNHCR's partners to design programmes that matched the needs of the population, and committee members were asked to pass on this message to the community. Additional training was also provided to ensure that interviewers were able to clearly explain the need for accurate information at the start of each household interview, and that the terminology and concepts used were fully understood by translators.

3. Research protocol

The same IHM research protocol, data checking process and sampling methodology was used in Bobo-Dioulasso as in the Sag Nioniogo, Mentao and Goudebou camps¹⁰.

Before individual household interviews were undertaken, a meeting was held with members of the refugee committee. This included 6 men and 5 women of different ages. The committee played an important role in mobilising the community and, over the course of the assessment, guided the interview teams to households across the city. The aim of this initial meeting was to reinforce earlier communications explaining the purpose of the study and to establish contextual information relevant to refugee livelihoods opportunities. This included a discussion of the activities carried out by the refugees and the returns on these activities, capital and input costs for different types of commerce, and transfers received from WFP and other agencies, as well as informal exchanges within the community.

The main items of food and non-food expenditure members of their community had to cover from their income were also established with the focus group. This information was subsequently verified during the course of the assessment through interviews with a range of men and women of different

¹⁰ Petty, C., Ellis, W., & Seaman, J. (2014) *Livelihood baseline assessment of Malian refugees in Burkina Faso: Quantitative analysis of household economies*, Evidence for Development & UNHCR. Available online at <http://www.efd.org/reports/Baseline-UNHCR-Burkina-Faso-livelihood-assessment-Malian-refugees-part-I/>

ages, living in different parts of the city. The ‘standard diet’, i.e. the staple foods purchased by poorer refugees when rations ran out, was identified by refugees as 80% maize and 20% rice. In the study year (September 2013-August 2014) the mid-year price for maize was 125 FCFA per kg and the average mid-year price for rice was 300 FCFA per kg. The minimum costs of essential items that refugee households needed to buy to reach the ‘standard of living’ norms for their community are shown in Table 6.

4. Sampling

Before the start of the survey, the locations of refugee households in Bobo-Dioulasso were mapped, the numbers of refugees in each ‘sector’ of the city counted and a number allocated to each household. Households were systematically selected in proportion to the number of refugees in each sector. As most refugees had a mobile phone number, it was possible to arrange appointments by phone. Where this was not possible, a member of the refugee committee visited the household to arrange the meeting. 73 households with 24 reserves were included in the sample. Of these, 67 households were included in the final analysis. 4 households could not be located and in 2 cases the interviewee did not have access to all relevant information.

5. Household interviews

For the individual household interviews, the group was divided into 8 interview teams, including an experienced lead interviewer and a translator. The 7 new trainees were each allocated to a team, and joined the interviews as observers. Additional supervision was provided by EfD trainers who gave daily feedback to the group. Households were allocated to each team at the start of each day, and teams aimed to interview two households per day – with each interview lasting on average 1 hour 30 minutes. Care was taken at the beginning of each interview to explain the purpose of the assessment, highlighting the need for accurate information that would allow UNHCR partners to develop programmes that were well-aligned to the realities of refugee livelihoods in Bobo-Dioulasso. On return from the field rigorous data-checking took place, and new trainees received additional mentoring and supervision from the core team to support this process. Survey information was consolidated on spreadsheets and uploaded into the open-IHM software. Finally, interview forms and spreadsheets were cross-checked by a core data management team including EfD and UNHCR’s senior livelihoods assistant.

6. Presentation of assessment findings

Findings for Bobo-Dioulasso are presented together under the following themes:

- Population demographics.
- Analysis of income distributions in the study population, with breakdowns of disposable income per adult equivalent by income quintiles.

- Description of the expenditure items required to meet basic needs, and the capacities of households in different sections of the income distribution to purchase these. The additional costs of rent, electricity, water and refuse collection, which camp-based refugees do not have to pay, were included in this analysis.
- Analysis of the main sources of food income across the study population, from poorer to better-off households.
- Analysis of the main sources of cash income across the study population, including the types of employment and self-employment and their returns among different households.
- Analysis of assets, focusing on livestock asset holdings and the main tradable goods.
- Analysis of households' access to credit.
- Simulations of the likely (separate) effects of a reduction in WFP cash support and a food price shock.

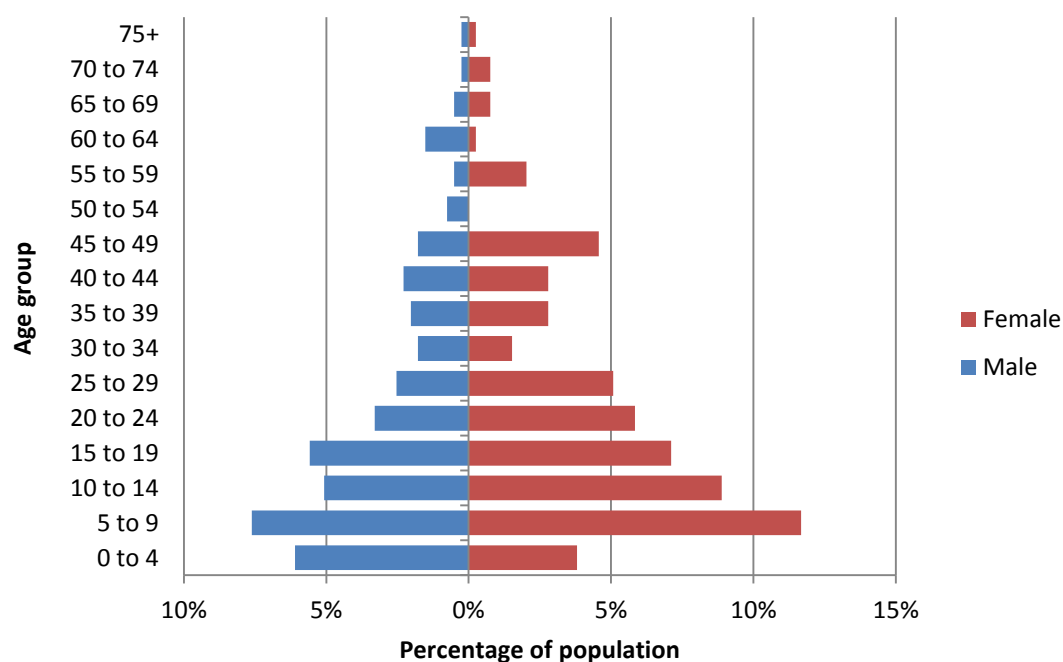
The appendix of this report contains case studies for the livelihoods of three refugee households living in Bobo-Dioulasso.

Assessment findings

1. Demography

Approximately 52% of the refugee population in Bobo-Dioulasso is under 18 years of age and around 3% of people are over 64. There are significantly more female than male refugees in Bobo-Dioulasso. This may be partly due to split households, with some men staying with livestock in the Sahel region. However, there is also a high rate of separation and abandonment. Female key informants attributed this to financial difficulties, and reported that men often left their wives and families when they could not earn enough to support them. Sometimes this was on a temporary basis, but cases of desertion were also common. Female-headed households make up nearly 45% of those interviewed.

Figure 1: Population pyramid



The ethnic self-descriptions of households were as follows:

Table 1: Households' ethnic self-descriptions

| Ethnic group | % of HHs |
|--------------|----------|
| Arab | 2.99% |
| Bambara | 5.97% |
| Dogon | 16.42% |
| Fulani | 19.40% |
| Marka | 1.49% |
| Songhai | 19.40% |
| Tuareg | 34.33% |

As in the official camps, Tuaregs made up the largest ethnic group. Most of the interviewed refugees fled from their home areas in the north and east of Mali, with just under half coming from Tombouctou, nearly 40% from Mopti and around 10% from Gao.

Table 2: Households' regions of origin

| Region of origin of refugee households | % of HHs |
|--|----------|
| Bamako | 2.99% |
| Gao | 10.45% |
| Kayes | 1.49% |
| Mopti | 37.31% |
| Tombouctou | 47.76% |

The relationship between ethnic group and income is discussed in the following section.

2. Disposable income

Fig. 2 shows the income distribution of refugee households in Bobo-Dioulasso. All households in the sample were able to meet their basic food energy requirements. However, disposable income levels (the cash remaining to each household once its food energy requirements have been met) were below 200,000 FCFA per adult equivalent for more than half the population.

Female-headed households are found across the income distribution (Table 3), although a disproportionate number are found in the poorest quintile (n 9) and in the middle quintile (n 9). A total of 30 female-headed households were recorded in the assessment.

Figure 2: Annual disposable income per adult equivalent¹¹

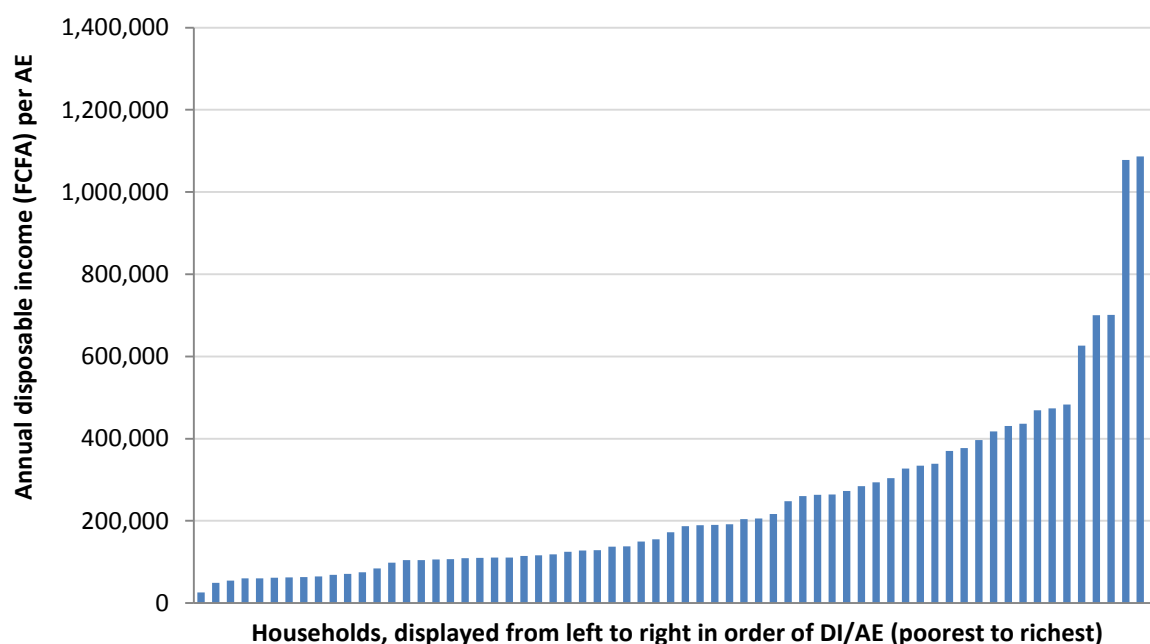


Table 3: Annual disposable income per adult equivalent, by quintile¹²

| | DI/AE quintile | | | | |
|---------------------------------|--------------------|---------------------|---------------------|---------------------|-----------------------|
| | 1 (poorest) | 2 | 3 | 4 | 5 (richest) |
| Median DI/AE | 62,813 FCFA | 110,470 FCFA | 187,078 FCFA | 293,687 FCFA | 554,828 FCFA |
| <i>Lowest DI/AE</i> | <i>25,734 FCFA</i> | <i>104,211 FCFA</i> | <i>128,749 FCFA</i> | <i>248,034 FCFA</i> | <i>396,171 FCFA</i> |
| <i>Highest DI/AE</i> | <i>98,085 FCFA</i> | <i>127,682 FCFA</i> | <i>216,733 FCFA</i> | <i>377,063 FCFA</i> | <i>4,444,059 FCFA</i> |
| No. of HHs | 14 | 13 | 13 | 13 | 14 |
| No. of female-headed HHs | 9 | 6 | 9 | 2 | 4 |

Median incomes in all quintiles are higher in Bobo-Dioulasso than in the three official refugee camps (Table 4). However, when the additional costs of rent, water, electricity and refuse collection are taken into account, the income differentials are far less marked or reversed. Based on a comparison of the combined expenditure per person and per household required to meet the local standard of living norms, the cost of living in Bobo-Dioulasso is 48% higher than in the camps¹³.

¹¹ Richest household (DI/AE of 4,444,059 FCFA) omitted for display purposes.

¹² DI/AEs rounded to no decimal places.

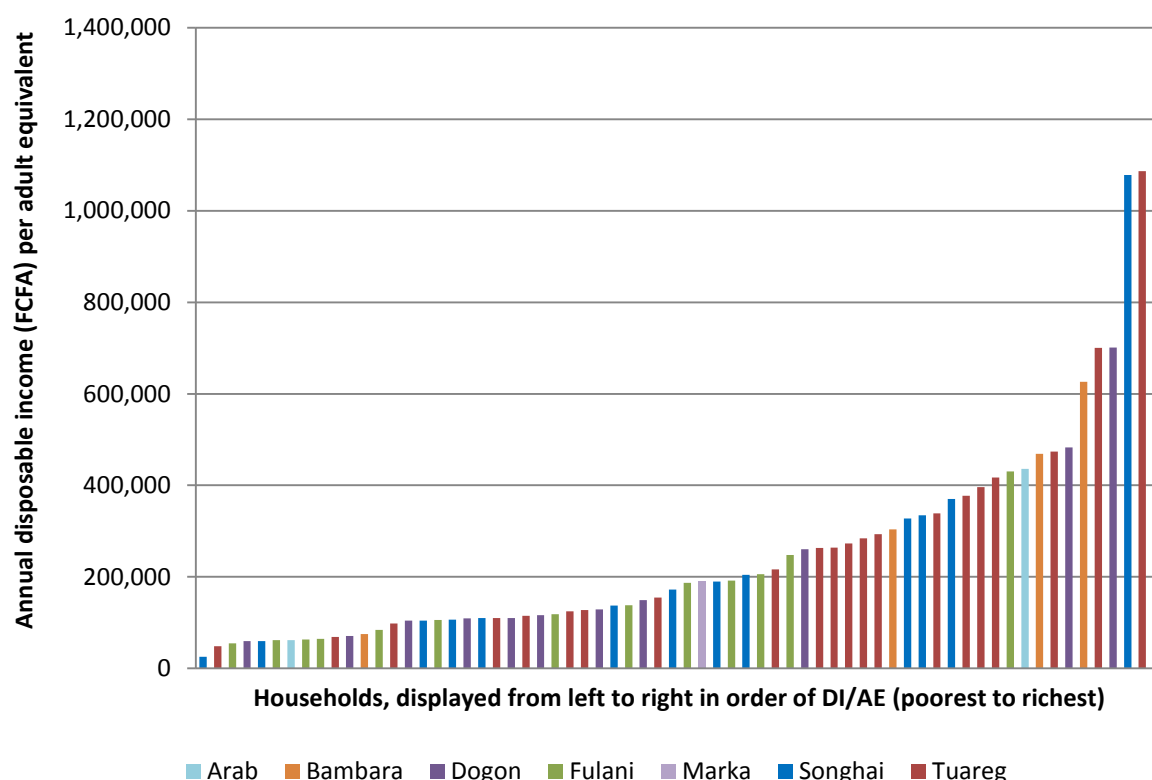
¹³ Combined cost of standard of living items in Bobo-Dioulasso: 394,968 FCFA; average combined cost of standard of living items in the three official camps: 189,807 FCFA.

Table 4: Median annual disposable incomes per adult equivalent by quintile, all sites

| | Median DI/AE per quintile | | | | |
|-----------------------|---------------------------|--------------|--------------|--------------|--------------|
| | 1 (poorest) | 2 | 3 | 4 | 5 (richest) |
| Sag Nioniogo | 38,057 FCFA | 84,969 FCFA | 136,767 FCFA | 217,323 FCFA | 510,352 FCFA |
| Goudebou | 14,285 FCFA | 42,080 FCFA | 73,021 FCFA | 149,879 FCFA | 417,182 FCFA |
| Mentao | 25,352 FCFA | 57,210 FCFA | 99,836 FCFA | 182,472 FCFA | 308,921 FCFA |
| Bobo-Dioulasso | 62,813 FCFA | 110,470 FCFA | 187,078 FCFA | 293,687 FCFA | 554,828 FCFA |

In Bobo-Dioulasso, as in the camps, there is no clear relationship between ethnic origin and economic status (Fig. 3). Songhai, Arab, Bambara and Marka ethnic groups are distributed more or less evenly across the income distribution, or had very few households in the sample. However, Tuareg households appear more frequently in the 2 richest quintiles and Fulani households appear more frequently in the 3 poorest quintiles (Table 5). Dogon households also appear more frequently in the poorer quintiles.

Figure 3: Annual disposable income per adult equivalent, by ethnic group¹⁴



¹⁴ The richest household (DI/AE of 4,444,059 FCFA), omitted from this chart for display purposes, is a Tuareg household.

Table 5: Ethnic groups' numbers of households in each disposable income quintile

| | No. of HHs in each DI/AE quintile | | | | |
|----------------|-----------------------------------|---|---|---|-------------|
| | 1 (poorest) | 2 | 3 | 4 | 5 (richest) |
| Arab | 1 | 0 | 0 | 0 | 1 |
| Bambara | 1 | 0 | 0 | 1 | 2 |
| Dogon | 2 | 4 | 2 | 1 | 2 |
| Fulani | 5 | 2 | 4 | 1 | 1 |
| Marka | 0 | 0 | 1 | 0 | 0 |
| Songhai | 2 | 3 | 4 | 3 | 1 |
| Tuareg | 3 | 4 | 2 | 7 | 7 |

3. Standard of living threshold

Refugees in Bobo-Dioulasso need to cover the cost of rent, water, electricity and refuse collection in addition to the other essential items necessary for social inclusion. As in the camp assessments, this set of items was developed through discussions with community members. In Bobo-Dioulasso, initial estimates were established in a focus group with refugee leaders. These figures were cross-checked in discussion with key informants. Individual household expenditure on rent, water, electricity and refuse collection was also recorded, and an average of the lowest 14 costs for each of these items was used in the standard of living threshold calculations¹⁵.

In addition to rent, water, electricity and refuse collection costs, the following items were identified as essential for social inclusion by focus groups with poorer people: clothes, soap, lotion, charcoal, sugar and tea, *condiments* (groceries and seasonings) and transport to nearby markets. Primary education and basic healthcare are free to Malian refugees in Burkina Faso and so do not impact on households' abilities to meet the locally-defined basic needs. The estimated costs of the items identified by refugee key informants in Bobo-Dioulasso as necessary for social inclusion are shown in Table 6 (on the next page).

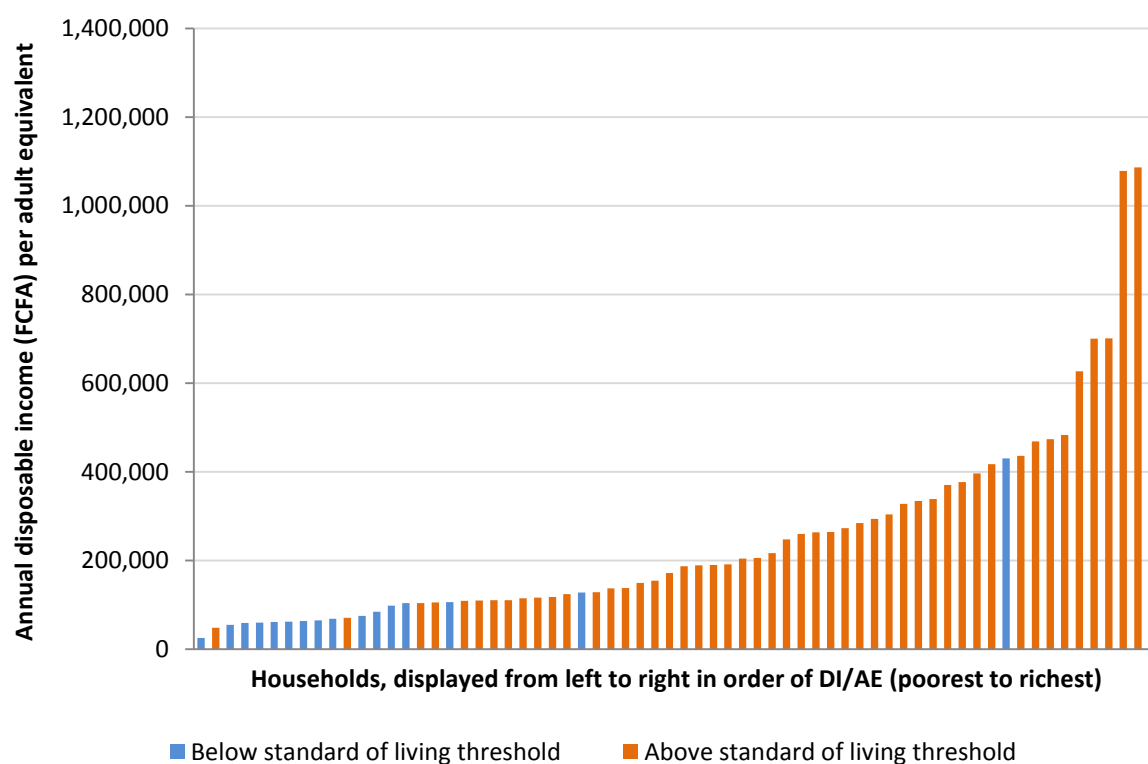
Fig. 4 shows the distribution of disposable income per adult equivalent in Bobo-Dioulasso with households falling below the standard of living threshold shown in blue. The proportion of households falling below the standard of living threshold could be seen as a proxy for the prevalence of poverty.

¹⁵ The average of the lowest 14 costs was chosen to provide a realistic estimate of the actual amounts paid by poor but not destitute refugees.

Table 6: Items essential for social inclusion

| | | Cost per year |
|---------------------|-------------------------------|---------------------|
| Per-person items | Girls' clothes [ages 3-14] | 12,000 FCFA |
| | Boys' clothes [ages 3-14] | 12,000 FCFA |
| | Women's clothes [ages 15-101] | 18,000 FCFA |
| | Men's clothes [ages 15-101] | 25,000 FCFA |
| Per-household items | Soap | 12,000 FCFA |
| | Body lotion | 12,000 FCFA |
| | Charcoal | 54,000 FCFA |
| | Sugar and tea | 54,000 FCFA |
| | Condiments | 52,000 FCFA |
| | Transport to nearby markets | 36,400 FCFA |
| | Rent | 71,143 FCFA |
| | Electricity | 19,143 FCFA |
| | Water | 14,861 FCFA |
| | Refuse collection | 2,421 FCFA |
| Total | | 394,968 FCFA |

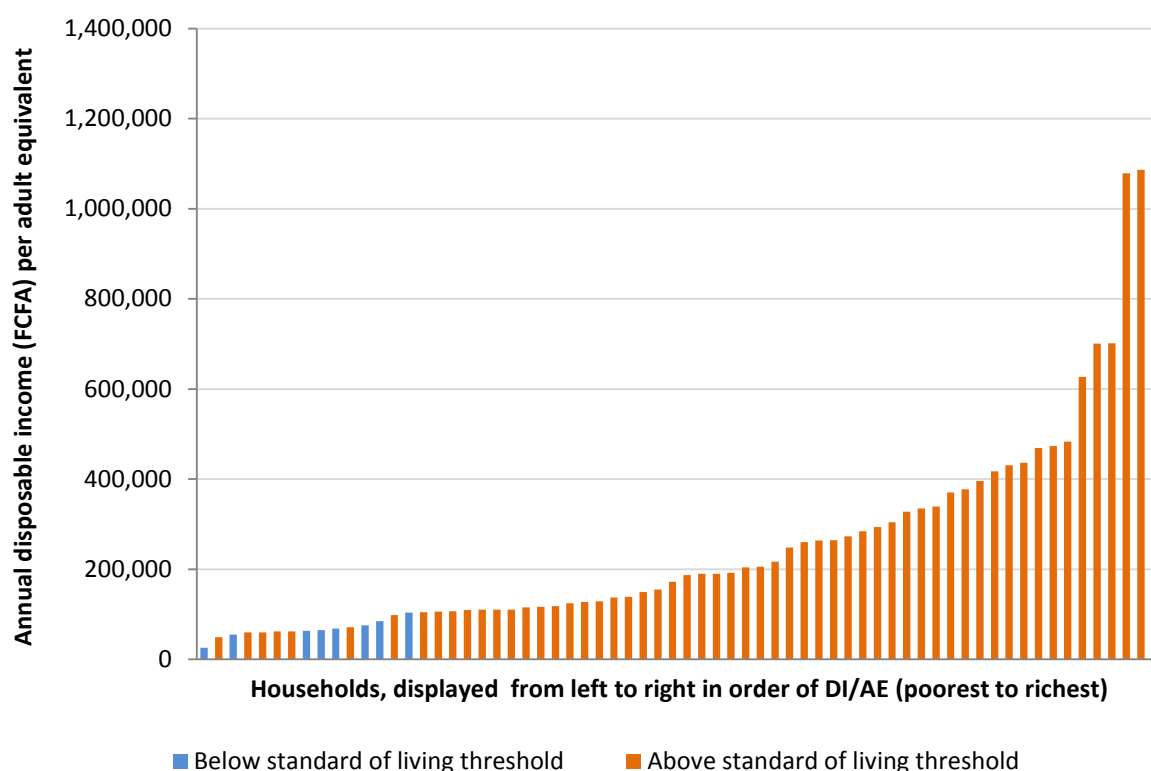
Figure 4: Annual disposable income per adult equivalent, with standard of living threshold including rent, water, electricity and refuse collection costs (using average of 14 lowest costs recorded)¹⁶



¹⁶ Richest household (DI/AE of 4,444,059 FCFA) omitted for display purposes.

Whilst all households can meet their basic food energy needs, 16 households do not have sufficient income to meet the other costs needed to reach the locally-defined ‘standard of living’ norms. This can mainly be attributed to the high cost of rent and basic services, with rent making up around two-thirds of the combined costs of rent and services¹⁷. If rent, water, electricity and refuse collection are excluded from the standard of living calculation (Fig. 5), the number of households falling below the standard of living thresholds falls from 16 to 8.

Figure 5: Annual disposable income per adult equivalent, with standard of living threshold excluding rent, water and electricity costs¹⁸



4. Sources of food income and cash income

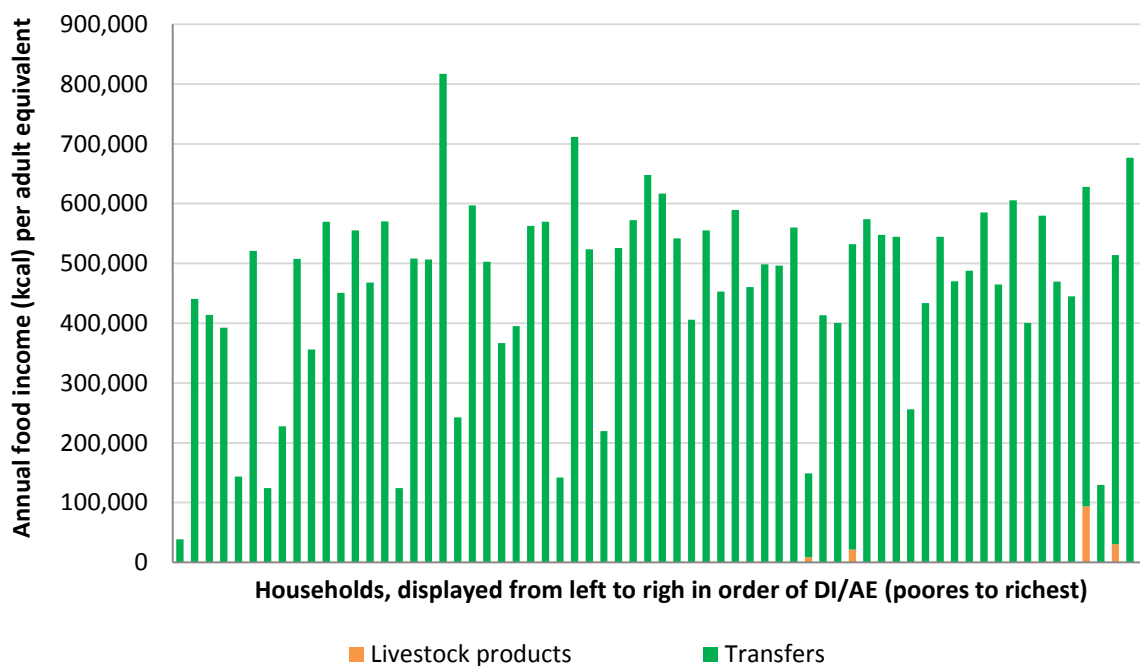
Fig. 6 (on the next page) shows the annual food income per adult equivalent for each household, measured in kilocalories, and the sources of this food. Overall, households met an average of 48% of their food energy requirements from food income. Most of this is from food transfers, which provide an overall average of 99.5% household food income per adult equivalent. WFP food aid provides by far the largest proportion of this food – about half the food energy needs of the refugee population,

¹⁷ Note that the apparent outlier in Fig. 4 (a household in the top quintile, below the standard of living threshold) has an unusual household composition, as it is made up of a single person. The fixed costs allocated ‘per household’ amount to 327,968 FCFA and are borne by just 1 ‘adult equivalent’ for this household, not divided among a number of ‘adult equivalents’.

¹⁸ Richest household (DI/AE of 4,444,059 FCFA) omitted for display purposes.

on average. Unlike in the camps, refugees in Bobo-Dioulasso do not receive the same smaller quantities of food aid from local relief agencies around the time of religious festivals.

Figure 6: Sources of food income (per adult equivalent), main categories



A small number of refugees kept livestock in the city; just 4 households in the study consumed small quantities of their own livestock products. This accounts for just 0.5% of food income. No food was collected from the wild, and no work was paid for in food. Similarly, no urban agriculture was reported.

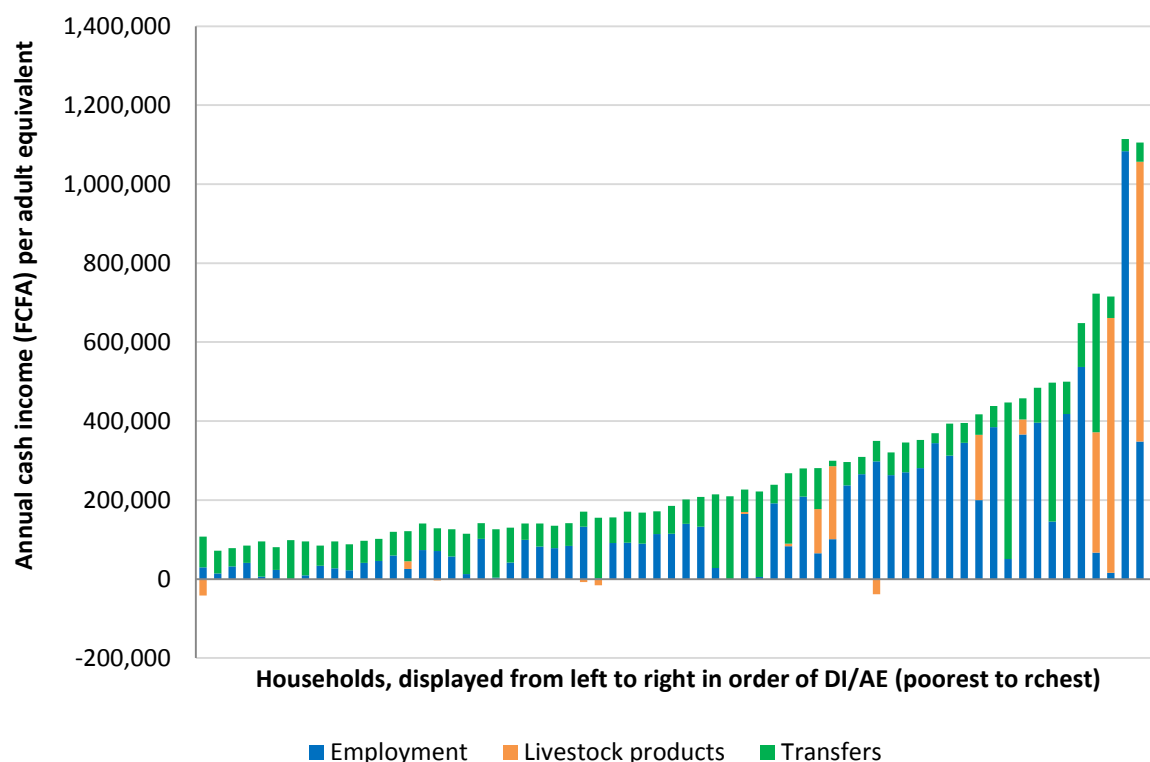
Across all households interviewed, transfers provided around 27% of cash incomes per adult equivalent (Fig. 7), income from trade and other commercial activities around 60%, and income from livestock around 13%.

Petty trade and commerce provide the most important sources of earned cash income. Average net earnings from commercial activities were around 207,300 FCFA per adult equivalent per year, although values range from less than 40,000 FCFA to just under 1,000,000 FCFA per adult equivalent per year.

The proportion of total household income derived from transfers is highest among the poorest households, although there is considerable variation across the income distribution, with some better-off households receiving substantial transfers from family members in addition to their WFP rations. Only 7 households derive a large part of their cash income from livestock, and all of these are in the top half of the distribution. Negative livestock income was recorded in 5 households, all of which were paying for livestock inputs, but in the study year did not receive any income from these

animals.

Figure 7: Sources of cash income (per adult equivalent), main categories¹⁹



Access to credit is also important for refugees in the city (see Fig. 8). This is used both for consumption (particularly among poorer households) and for investment. Around half of all households in quintiles 3 and 4 took credit during the study year, with far fewer at the two extremes of the income distribution.

5. Livestock and other assets

Livestock numbers should be treated with caution. Whilst many of the refugees who chose to settle outside the camps in Bobo-Dioulasso were urban dwellers in Mali, the better-off also kept livestock and it seems that some have retained their herds across the border in Mali, or moved them to the north of Burkina Faso. These livestock are kept by relatives or paid herdsmen and provide a useful 'safety net' if the household needs cash to pay for unexpected outgoings such as medical care. Small numbers of goats and chickens were observed in a number of households in Bobo-Dioulasso. These are kept mainly for domestic consumption and milk.

¹⁹ Richest household omitted for display purposes.

Table 7: Reported numbers of livestock kept in Burkina Faso (10 households)

| Cattle | Goats | Sheep | Chickens |
|--------|-------|-------|----------|
| 500 | 234 | 222 | 40 |

Table 8: Reported numbers of livestock kept outside Burkina Faso (18 households)

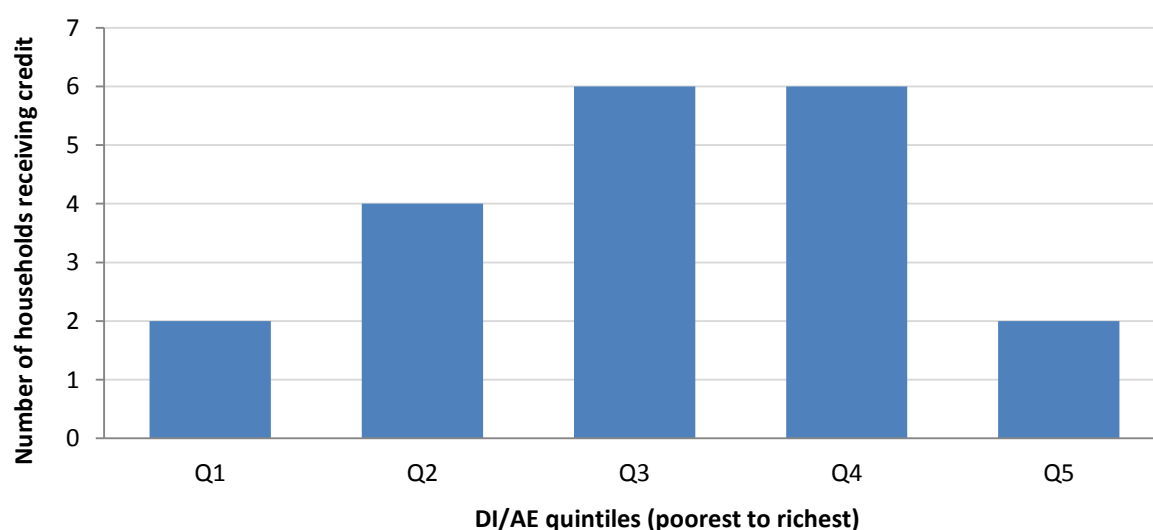
| Sheep | Milking cows | Goats | Cattle | Chickens | Donkeys | Horses | Dromedaries |
|-------|--------------|-------|--------|----------|---------|--------|-------------|
| 431 | 378 | 335 | 320 | 66 | 42 | 40 | 34 |

Other assets include mobile phones (owned by 90% of households), bicycles and motorbikes (owned by around half the sample population), and televisions (also owned by around half the population). The relatively high proportion of households owning a television is probably explained by the fact that most households have access to electricity and second-hand electrical goods are widely available in Bobo-Dioulasso.

6. Credit

Credit plays an important part in the economies of many refugee households and in every quintile households took credit, either to cover immediate consumption or for business investment. Just two households in the sample took out ‘formal’ credit – all other transactions were on an informal basis, between friends and neighbours, and in general without interest being charged. A summary of households receiving credit is shown in Fig. 8.

Figure 8: Number of households receiving credit, by quintile



Just two of the sampled households in the poorest quintile (Q1) took out credit, and the amounts

were small (on average 35,000 FCFA). Around half the households in Q3 and Q4 took credit, with an average value of 115,000 FCFA in Q3 and 87,500 in Q4. The average credit value of the two households taking credit in Q5 was 150,625 FCFA. In nearly all cases, this credit was used for business investment, although there were also examples of loans used for healthcare, to buy clothes and to buy food.

7. Simulations

To assess the potential impacts of changes in relief assistance currently provided to refugees in Bobo-Dioulasso, two simulations were carried out: a 50% cut in the cash transfers provided by WFP and an increase of 100% in the price of the staple diet used in the IHM analysis (see 'Definition of terms and concepts', p.11). The simulations use the individual household data collected during the assessment and assume that there are no changes in the household income and livelihood activities recorded in the study year. The purpose is to identify the sections of the population that are most vulnerable to potential shocks, and to describe the potential impacts on food security and welfare – using disposable income per adult equivalent and access to basic standard of living items as indicators.

7.1. Simulated 50% reduction in WFP cash transfers

This simulation looks at the impacts of a 50% reduction in WFP cash transfers on individual households across the income distribution, based on the reported values of the WFP cash transfers received by households in the study year.

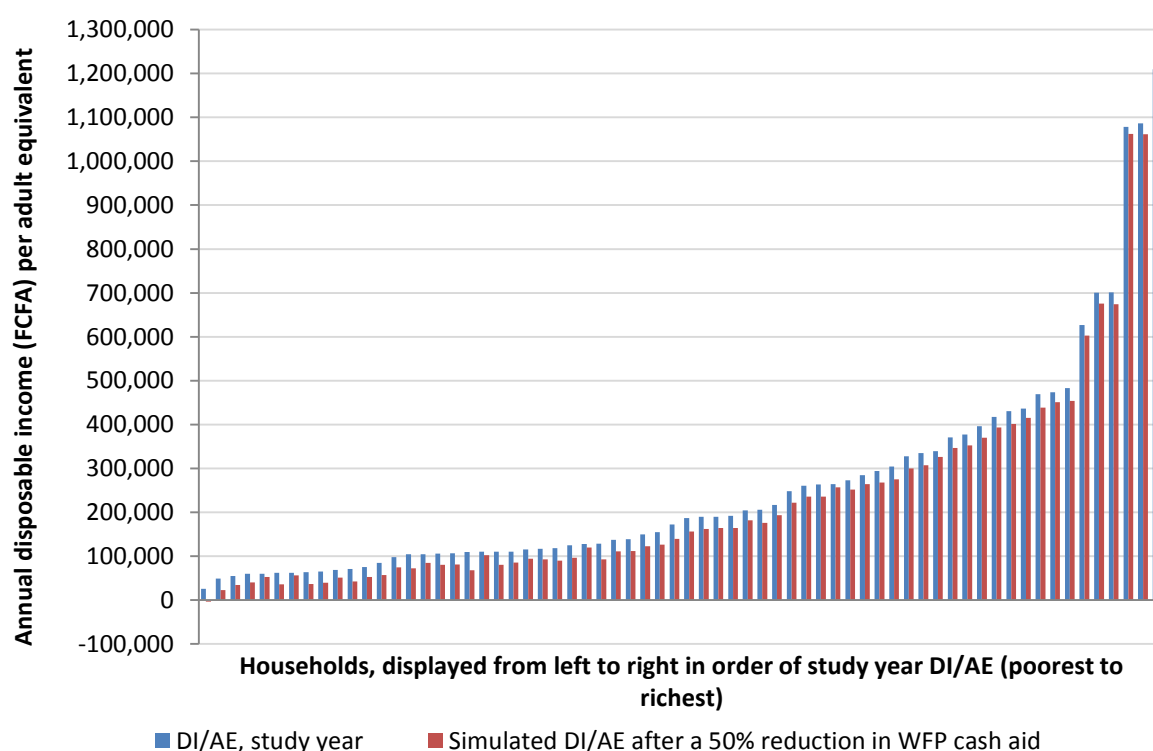
The average reduction in disposable income per adult equivalent is 24,644 FCFA, with some variation between quintiles. The highest average fall is in Q5. This is due to the demographic characteristics of households in Q5, which have fewer adult equivalents than other quintiles – note that cash transfers are allocated 'per person' and IHM calculations are based on 'adult equivalents'. The impact is least in Q1, again due to the demographic make-up of households in this quintile.

Table 9: Impacts of a simulated 50% reduction in the value of the WFP cash transfer

| | DI/AE quintiles | | | | |
|---|-----------------|--------------|--------------|--------------|--------------|
| | Q1 (poorest) | Q2 | Q3 | Q4 | Q5 (richest) |
| Median DI/AE before reduction in cash transfers | 62,813 FCFA | 110,470 FCFA | 187,078 FCFA | 293,687 FCFA | 554,828 FCFA |
| Mean drop in DI/AE after simulated 50% reduction in WFP cash aid | 22,106 FCFA | 24,432 FCFA | 28,081 FCFA | 23,026 FCFA | 25,691 FCFA |
| Median DI/AE after simulated 50% reduction in WFP cash aid | 41,164 FCFA | 85,123 FCFA | 155,967 FCFA | 267,943 FCFA | 528,362 FCFA |

Results show that the impact on the overall incomes of richer households is relatively insignificant. However, the poorest households would be severely affected, with eight more households falling below the standard of living threshold – taking the total proportion below this threshold to over a third (35.8%; see Table 11) – and one household falling below the food poverty line (see Figs. 9 and 10).

Figure 9: Simulated impacts on DI/AE of 50% reduction in WFP cash transfers²⁰

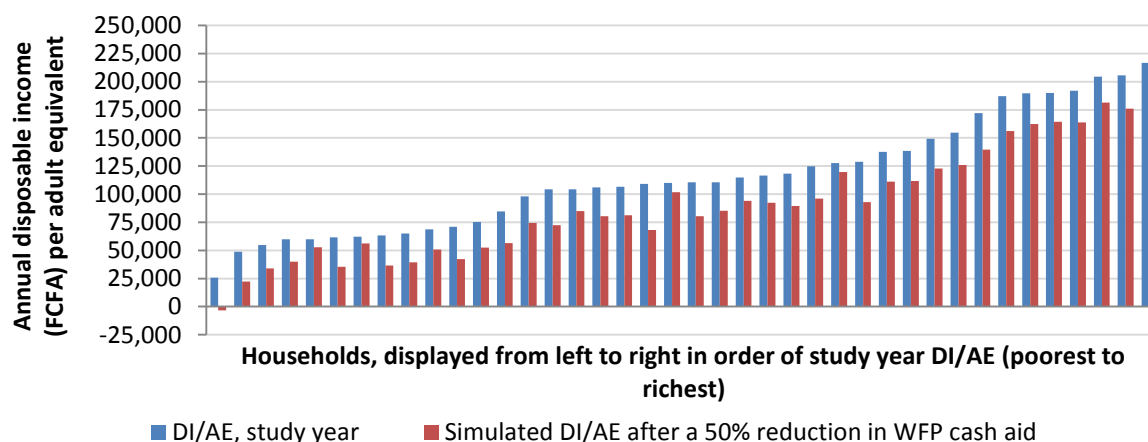


Impacts on poorer households

Households in all quintiles would be affected by a reduction in the WFP cash transfer; however, as the cash transfer provides a higher proportion of overall cash income in poorer households, its impact would be felt most keenly by these households (Fig. 10). The poorest household would fall just below the food poverty line, with a deficit of 21 kg of maize and 2 kg of rice per adult equivalent.

²⁰ Richest household (DI/AE of 4,444,059 FCFA before the simulation, and 4,417,851 FCFA afterwards) omitted for display purposes.

Figure 10: Simulated impacts on DI/AE of 50% reduction in WFP cash transfers - poorest 3 quintiles



During the study year, 12 households (85.7%) from quintile 1 and 3 households (23.1%) from quintile 2 were below the standard of living threshold. After the simulation, all of the poorest quintile and almost half of the households in the second-poorest quintile fall below the standard of living threshold. The overall percentage of households below the threshold increases from almost a quarter of households (23.9%) in the study year to over one-third (35.8%), as shown in Table 11.

7.2. Simulated 100% increase in staple diet price

A second simulation was carried out, increasing the price of the staple diet used in this assessment (80% maize and 20% rice) by 100%. The average original prices during the study year were 125 FCFA per kg for maize and 300 FCFA per kg for rice.

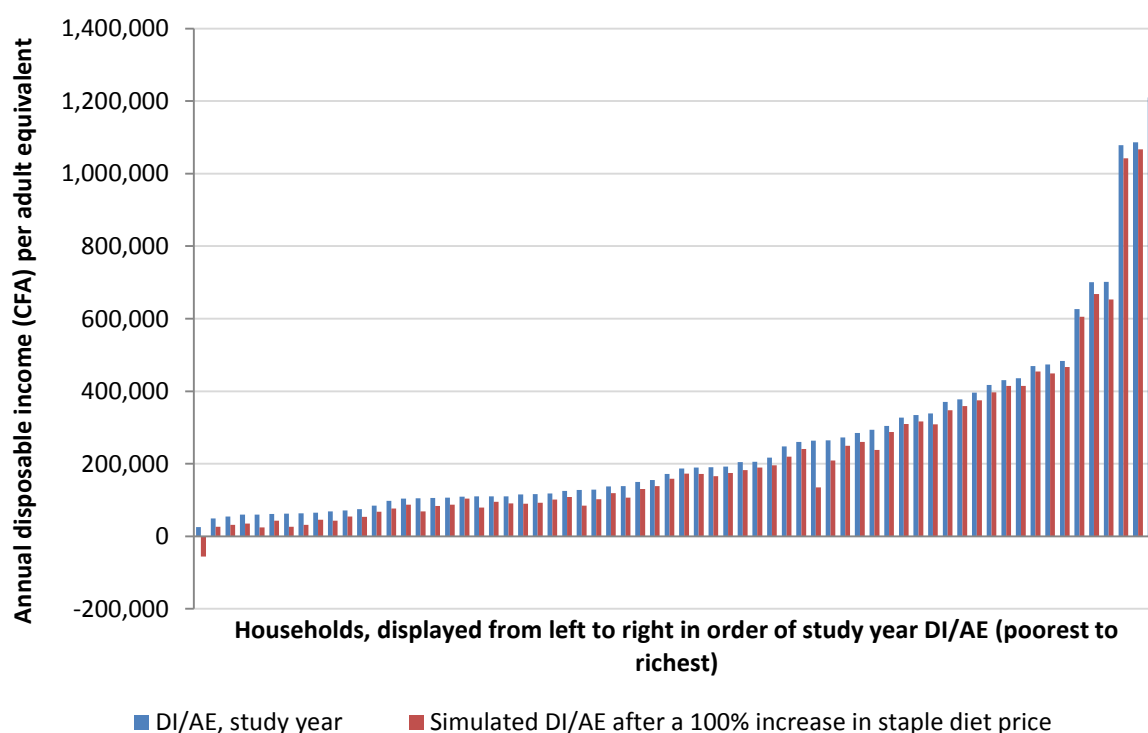
The simulation results show that an increase in staple diet price would have the greatest impact on the poorest households, potentially affecting consumption patterns and livelihood activities. At the aggregate level the simulated doubling of the staple diet price resulted in 22 households overall (32.8%) falling below the standard of living threshold (see Table 11), with disposable incomes per adult equivalent falling by an overall average of 32,006 FCFA. This is a slightly higher figure than the average reduction in disposable income caused by the simulated halving of WFP cash transfers (24,644 FCFA).

Overall, an extra 6 households fall below the standard of living threshold with the doubled staple diet price than was the case during the study year, and one household also falls just below the food poverty line in this simulation (see Figs. 11 and 12).

Table 10: Impacts of a simulated 100% increase in the staple diet price

| | DI/AE quintiles | | | | |
|---|-----------------|--------------|--------------|--------------|--------------|
| | Q1 (poorest) | Q2 | Q3 | Q4 | Q5 (richest) |
| Median DI/AE before increase in staple diet price | 62,813 FCFA | 110,470 FCFA | 187,078 FCFA | 293,687 FCFA | 554,828 FCFA |
| Mean drop in DI/AE after simulated 100% increase in staple diet price | 28,336 FCFA | 22,566 FCFA | 19,883 FCFA | 35,344 FCFA | 52,599 FCFA |
| Median DI/AE after simulated 100% increase in staple diet price | 38,965 FCFA | 89,340 FCFA | 166,090 FCFA | 260,471 FCFA | 536,170 FCFA |

Figure 11: Simulated impacts on DI/AE of 100% increase in staple diet price²¹



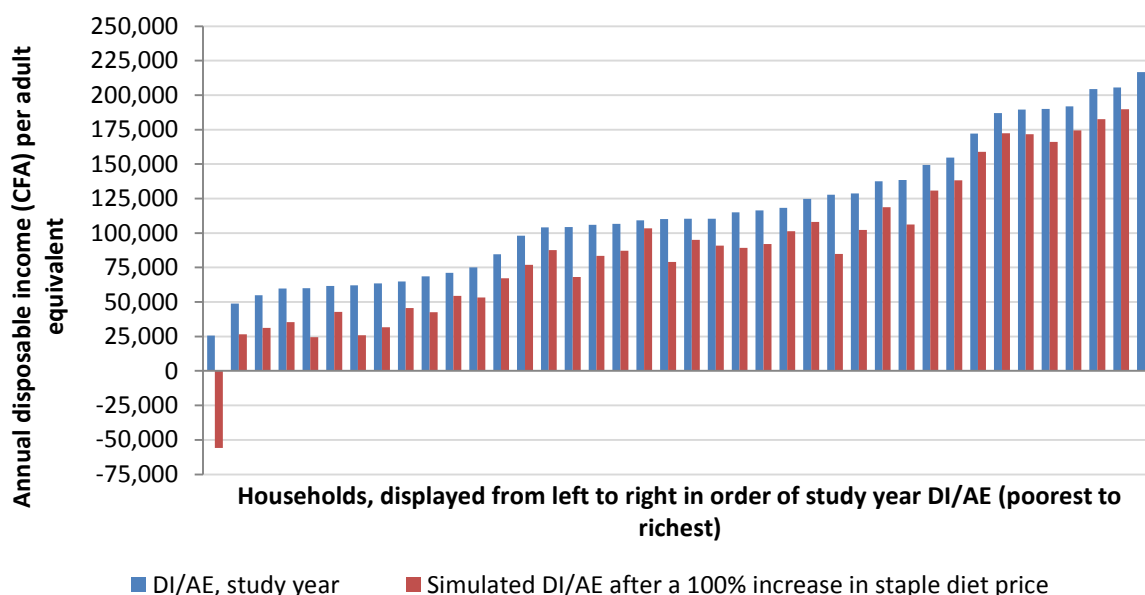
Impacts on poorer households

The proportion of households affected by doubling the staple diet price is not very different from the proportion of households affected by the 50% reduction in WFP cash aid. Currently all surveyed households are able to meet their food energy needs; if the staple food price were to increase by 100%, one household would be unable to meet these needs and would fall below the 'food poverty line'. This household would have a deficit equivalent to 36 kg of rice and 139 kg of maize per adult

²¹ Richest household (DI/AE of 4,444,059 FCFA before the simulation, and 4,011,147 FCFA afterwards) omitted for display purposes.

equivalent.

Figure 12: Simulated impacts on DI/AE of 100% increase in staple diet price - poorest 3 quintiles



7.3. Changes in the numbers of households below the standard of living threshold under different conditions

Results show that both the reduction in WFP cash transfers by 50% and the 100% increase in staple diet price would affect household incomes and wellbeing. Overall the changes would have least impact on better-off households, but could have major consequences for poorer households – for example, worse housing conditions, less time for child care and supervision if adults need to work longer hours, etc. Investment in small businesses would also be likely to be affected, as many households reported using WFP cash transfers to reinvest in their business.

During the study year, 16 households in the study population (23.88%) fell below the standard of living threshold (SoLT). The simulated reduction in the WFP cash transfers results in an additional 8 households (11.9% of the study population) falling below this threshold, and the simulated increase in the staple diet price leads to an additional 6 households (9% of the study population) falling below the threshold. Households in the poorest two quintiles are affected in this way by both simulations, while the SoLT numbers for quintiles 4 and 5 remain unchanged and are only affected for the middle quintile in the reduced cash transfers simulation. Changes in the numbers of households below the SoLT under different conditions before and after the simulations are shown in Table 11²².

²² One household in quintile 5 falls below the standard of living threshold despite having a relatively high income 'per adult equivalent' compared with other households. This is because the household is made up of just 1 adult male, and so their standard household costs – amounting to 327,968 FCFA for rent, water, electricity and refuse collection as well as soap, charcoal and other essential items (see Table 6) – are not shared among a number of 'adult equivalents' as is the case with most households, but are borne by a single individual.

Table 11: Percentages of households below the SoLT, in study year and two different simulations

| | DI/AE quintile | | | | | All households |
|---|--------------------|------------------|------------------|-----------------|-----------------|---------------------------------|
| | 1 (poorest) | 2 | 3 | 4 | 5 (richest) | |
| % of HHs below SoLT in study year | 85.71% (12/14) | 23.08% (3/13) | 0.00% (0/13) | 0.00% (0/13) | 7.14% (1/14) | 23.88% (16/67) |
| % of HHs below SoLT after simulated 50% reduction in WFP cash aid | 100.00% (14/14) | 53.85% (7/13) | 15.38% (2/13) | 0.00% (0/13) | 7.14% (1/14) | 35.82% (24/67) |
| <i>Extra households below SoLT after simulated 50% reduction in WFP cash aid</i> | 14.29% (2/14) | 30.77% (4/13) | 15.38% (2/13) | 0.00% (0/13) | 0.00% (0/14) | 11.94% (8/67) |
| % of HHs below SoLT after simulated 100% increase in staple diet price | 92.86% (13/14) | 61.54% (8/13) | 0.00% (0/13) | 0.00% (0/13) | 7.14% (1/14) | 32.84% (22/67) |
| <i>Extra households below SoLT after simulated 100% increase in staple diet price</i> | 7.14% (1/14) | 38.46% (5/13) | 0.00% (0/13) | 0.00% (0/13) | 0.00% (0/14) | 8.96% (6/67) |

Recommendations

- Work with partners to find sustainable ways of increasing the incomes of poorer refugees. Without the relief assistance provided by WFP, these households would have difficulty in paying for rent and basic services in the city.
- Groups of refugee women are collaborating to establish small enterprises for which there is strong local demand, such as soap making. UNHCR partners should engage with these groups to consider the additional investments that would help them improve their businesses and generate higher returns, reducing their vulnerability to changes in relief assistance.
- Although basic education is available to refugees, some households are concerned that access to higher education in Burkina Faso is impossible due to the high costs. Widening access to higher education would have long-term benefits to the refugee population, both in Burkina Faso and ultimately when refugees return to their home communities in Mali.
- Refugees have difficulty gaining spaces in established street markets, and would welcome the opportunity to trade in these areas. The rent on shop spaces is beyond the means of small traders, who mainly sell directly to members of their own community.
- As in the camps, no single characteristic or set of characteristics can be used to identify the poorest households, who would be most severely affected by any change in the assistance provided by WFP. If changes were to take place, it would be necessary to work closely with members of the refugee community to identify those in need of welfare safety nets to cover their basic needs for food and shelter.

Appendix: Case studies

These three short case studies provide examples of the ways that households with different assets and characteristics have been able to generate income in Bobo-Dioulasso, and of some of the challenges they face. They are typical of middle/better-off, poor and very poor households.

Case study 1

Family size: 8 (4 male, 4 female)

This was a pastoral household in Mali. However, having lost all their livestock when they fled to Burkina Faso in 2012 and recognising that they could not start up again with livestock in Burkina Faso, the household head looked for other ways of supporting his family. He began importing 'veils' (long strips of fabric worn by Malian women) from Mauritania, with a loan of 500,000 FCFA from a Burkinabé friend. The loan has now been repaid.

Business is generally good, particularly at festival times (*Tabaski* [Eid al-Adha], Ramadan, *Mouloude* [Mawlid], and the New Year) and reasonable at other times. The average annual profit from the business is around 2,640,000 FCFA, which allows the household to cover mandatory outgoings (rent, electricity, water, etc.) and leaves enough for general outgoings and investment. The head of this middle/better-off household is a member of the 'committee of the wise' (*comité des sages*).

Profit per item

| Product | Quantity | Purchase price | Sale price | Profit |
|---------------------------|----------|----------------|-------------|------------|
| Damasks (<i>bazins</i>) | 1 | 25,000 FCFA | 30,000 FCFA | 5,000 FCFA |
| Veils (<i>voiles</i>) | 1 | 5,000 FCFA | 10,000 FCFA | 5,000 FCFA |

Seasonal income

Low season

| Product | Number sold | Profit per month | Profit for 8-month 'low season' |
|---------------------------|-------------|------------------|---------------------------------|
| Damasks (<i>bazins</i>) | 12 | 60,000 FCFA | 480,000 FCFA |
| Veils (<i>voiles</i>) | 24 | 120,000 FCFA | 960,000 FCFA |

High season

| Product | Number sold | Profit per month | Profit for 4-month 'high season' |
|---------------------------|-------------|------------------|----------------------------------|
| Damasks (<i>bazins</i>) | 24 | 120,000 FCFA | 480,000 FCFA |
| Veils (<i>voiles</i>) | 36 | 180,000 FCFA | 720,000 FCFA |

Case study 2

Widow (45 years old) with 2 children

This household of a single woman and two children arrived in Burkina Faso in 2012, having lost all their possessions in the conflict. They live in a small house (around 4 m²) for which they pay just 5,000 FCFA per month. Early on, the mother learned how to make soap, and this is now her main source of income, providing some degree of independence. In April 2014 she also received 50,000 FCFA from Terre des Hommes, which she invested in her business – and she is now able to sell her soap in the villages around Bobo-Dioulasso. This makes a profit of at least 10,000 FCFA each day she goes out to sell, and has allowed her to reinvest some of her income. She now sells fruit and fish in town as well as continuing to manufacture soap, and this brings in an additional 5,000 FCFA to 15,000 FCFA per day. The interview team remarked on the outstanding courage and initiative of the household head, which has allowed her to improve the situation of her family.

Case study 3

Family size: 8 (wife, unwell husband and 6 children)

This is a household of 8 people. The husband suffered a serious heart attack in 2014, and at 57 years of age is no longer able to work. The wife now finds herself as the main breadwinner, with 6 children and a sick husband to support. She has started to do some petty trade, but only makes around 500 FCFA per day, which does not cover all the household expenses. Without any help from family or friends, their only support comes from UNHCR and its partners. It was clear from the interview that this household is surviving under very difficult circumstances, and, whilst the wife still has energy and a positive outlook, any reduction in relief assistance would have a devastating impact on this very vulnerable household.