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## Tracking Displaced People in Mali

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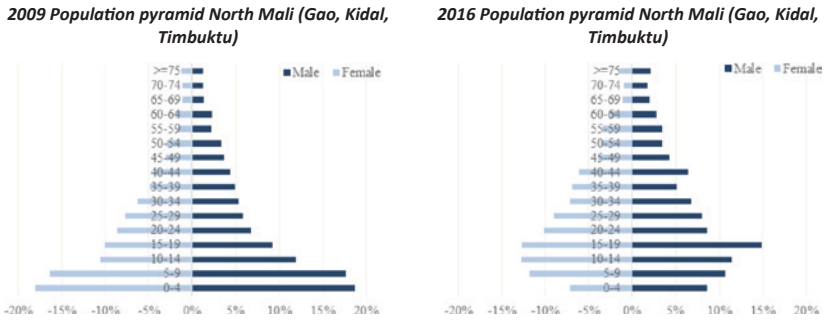
### 1 The Data Demand and Challenge

For decades prior to the 2012 rebellion, political leaders in northern Mali asserted that their people were marginalized and consequently impoverished. Separatist groups staged unsuccessful rebellions in 1990 and in 2007. In 2012, however, many of those fighting in the rebellion had received training from Gaddafi's Islamic Legion and were experienced with a variety of warfare techniques, and the rebellion that started with attacks on the Malian army in Menaka in mid-January 2012 culminated in a coup d'état by March 2012 and an attempt to take over the country by force. The three northern regions of Mali, Gao, Timbuktu, and Kidal became occupied by various rebel and Islamist factions until early 2013, when a coalition composed of the Malian

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**Fig. 1** Population pyramids before and after the 2012 crisis (Source Mali census data for 2009, INSTAT 2012; authors' calculations using January 2016 Permanent Monitoring baseline survey)

Army, French troops, and the ECOWAS-led International Support Missions to Mali (AFISMA) recaptured the occupied areas. Fighting between the Malian Army and the rebel factions broke out again in May 2014, and even though a peace accord was signed in June 2015, northern Mali remains insecure and contested.

At the height of the security crisis in Mali, over 500,000 people were displaced, nearly half of the estimated 1.2 million people who were living in the north (based on the 2009 population census). By October 2014, the number of displaced people was halved: the number of Internally Displaced Persons (IDPs) was estimated at 86,026, and the total number of Malian refugees was 143,471, with around 55,414 living in Mauritania, 53,491 in Niger, 32,771 in Burkina Faso, and 1330 in Algeria.<sup>1,2</sup>

The impact of the crisis on the population of northern Mali can be illustrated by looking at the age structure for the population in the north. Prior to the crisis, the population pyramid for the three northern regions was comparable to that of the entire country, but by 2015, the population pyramid for the north had changed considerably, reflecting the vast population movements that occurred during the crisis (Fig. 1). The biggest change occurred among children aged ten or younger.

<sup>1</sup>UNOCHA (November 2014): Mali: Evolution de Movements de Population.

<sup>2</sup>See UNHCR: <http://data.unhcr.org/SahelSituation/country.php?id=501>.

Information on the wellbeing of refugees and IDPs is typically hard to come by (Verwimp and Maystadt 2014), but is needed to formulate a response to the crisis. Information on returnees is particularly difficult to access. The reason for this is obvious: while it is relatively straightforward to interview people while they are displaced, tracking them after their return is much harder.

## 2 The Innovation

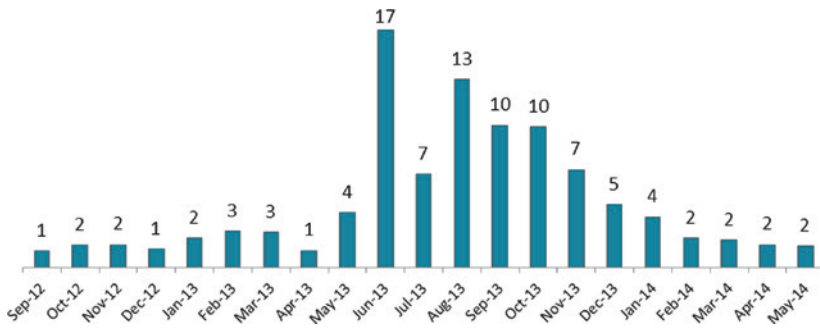
The Listening to Displaced People Survey (LDPS)<sup>3</sup> set out to address the information vacuum around the living conditions of displaced people and returnees. It did so in two ways. First, a baseline face-to-face survey was implemented that exclusively sampled displaced people, refugees, and returnees. Identifying the three target populations was made possible by the fact that each of these groups could be found in an identifiable location. Many displaced people were hosted by families in Bamako and had been registered by UN agencies; refugees were living in camps across the border, and returnees had returned to their locations of origin, predominantly in the northern cities of Gao, Kidal, and Timbuktu.<sup>4</sup> This approach to identifying returnees was possible because by August 2014, when the baseline survey was implemented, many displaced people had already started to return (see Fig. 2). The majority had returned between June and October 2013, a period that followed the signing of a peace deal between the interim government and the rebel factions to allow presidential elections to be held in July and August 2013.

During the baseline survey, information was collected on a range of household characteristics, including household composition, assets and

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<sup>3</sup>Questionnaires, data and metadata of the LDPS are publicly available and can be downloaded from: <http://bit.ly/2nsxSd6>.

<sup>4</sup>It should be emphasized that locations were not randomly selected. Bamako was selected because it hosted a large number of IDPs, while the main cities in the north of Mali were chosen in order to obtain a large sample of returnees, given the available funds. A refugee camp in Niger was also chosen, as bureaucratic issues did not allow for the inclusion of a camp in Burkina Faso.



**Fig. 2** Timing of return (percentage) (*Source* Authors' calculations based on the Mali Listening to Displaced People Survey)

income sources, as well as food security and experiences during the crisis. The baseline survey also asked perception questions about trust, security, about changes in wellbeing and perspectives on the future.

To track living conditions over time, the baseline survey was complemented with follow-up mobile phone interviews. This approach had the added advantage that if households chose to return during the research period, they remained within the sample. The ability to trace displaced people while they were still on the move was the most important innovation of the LDPS.

The baseline survey was used to identify respondents for the mobile phone interview. Because the survey intended to ask questions about perceptions and was seeking to be representative of the adult population, it was important that one adult was identified from within each household to be the main respondent throughout the survey period. It was equally important for the sake of representation that the person was not always the head of household. As a result, within each household, one person was selected randomly from all household members above the age of 18. Respondents were equally split between men and women to obtain a good representation of the opinions of both genders.

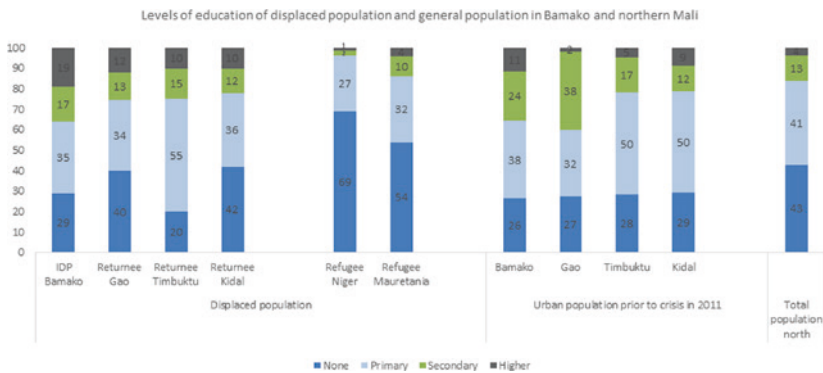
Upon completion of the baseline interview, all respondents received a mobile phone to avoid bias with regard to phone ownership. Mobile interviews were conducted in monthly intervals, using a specialized call center in Bamako. Interviews were conducted in the relevant local

languages, French, Bambara, Kel-Tamashek, or Songhai. During the phone interviews (lasting 20–30 minutes) structured questions were asked about the welfare of the household and changes in location, as well as perception questions. Upon completion of the interview, respondents received a small token of appreciation in the form of US\$2 worth of phone credit.

Over a period of twelve months, from August 2014 to August 2015, monthly interviews were conducted. The original sample comprised 501 respondents (51% men, 49% women) split between IDPs located in the capital city of Bamako (100), refugees living in refugee camps in Mauritania (100) and Niger (81), and returnees living in northern Mali, in the regional capitals of Gao (90), Timbuktu (80), and Kidal (50).

### 3 Key Results

The households in the sample only comprise displaced or formerly displaced people, so to investigate how those in the sample compare to non-displaced households, they need to be compared with existing data. Figure 3 illustrates the comparison for level of education, against baseline data collected prior to the crisis in 2011. It compares levels



**Fig. 3** Level of education of population aged 18+ (percentages) (Source Authors’ calculations using the Listening to Displaced People Survey and the Enquête Modulaire et Permanente, EMOP 2011, of the Mali National Institute for Statistics, INSTAT)

of education of adults in the four cities of Bamako, Gao, Timbuktu, and Kidal. It is important to note that levels of education in Mali are extremely low. Even in the capital city of Bamako, more than half of the adults have not progressed beyond primary education, while in Kidal and Timbuktu, 80% completed primary education at most. In comparison, IDPs and returnees are better educated, aside from those in Gao. IDPs in Bamako have levels of education comparable to the general adult population of Bamako, which is higher than that of the urban population in the north. Returnees are also more likely than the overall populations of Kidal and Timbuktu to have achieved secondary education or higher.<sup>5</sup>

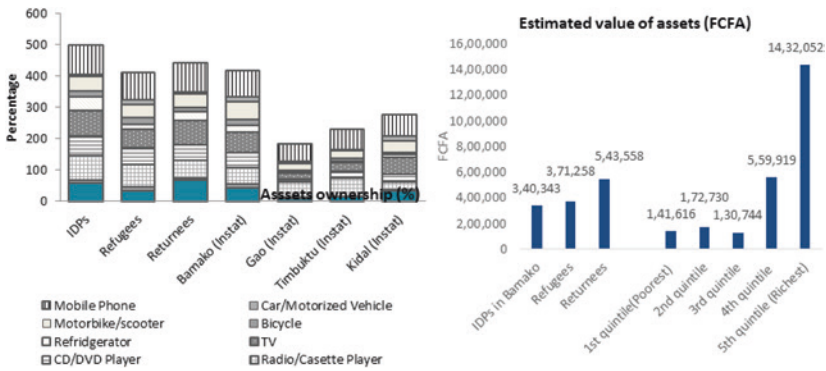
Refugees, in contrast, are less educated. In particular, refugees who went to Niger have lower levels of education than the overall population of northern Mali.

Regarding consumer durables, all three sub-populations, IDPs, refugees, and returnees were revealed to have higher levels of ownership than the average citizen of the north. As such, despite the loss of consumer durables due to the crisis, IDPs, refugees, and returnees still own more than or similar amounts of assets to the average population of the north prior to the crisis. This is shown in Fig. 4, which presents the proportion of IDPs, refugees, and returnees who own assets after the crisis and compares this with the percentage of households who owned assets prior to the 2011 crisis in Gao, Timbuktu, and Kidal. The value of assets owned by IDPs and refugees was found to be comparable to that of households between the third and fourth wealth quintiles, locating displaced people in the middle or upper-middle classes. As with education, displaced people's levels of asset ownership are more comparable to those of the average citizen in Bamako rather than the average citizen of the urban areas of Gao, Timbuktu, and Kidal.

This finding that displaced people were better off than others is confirmed by Peña-Vasquez and Mueller (2017), who use the same database. They conclude that people were more likely to opt for displacement when they felt more at risk, when they were relatively better

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<sup>5</sup>Some of the results presented in this section have also been reported in Etang Ndip et al. (2016).

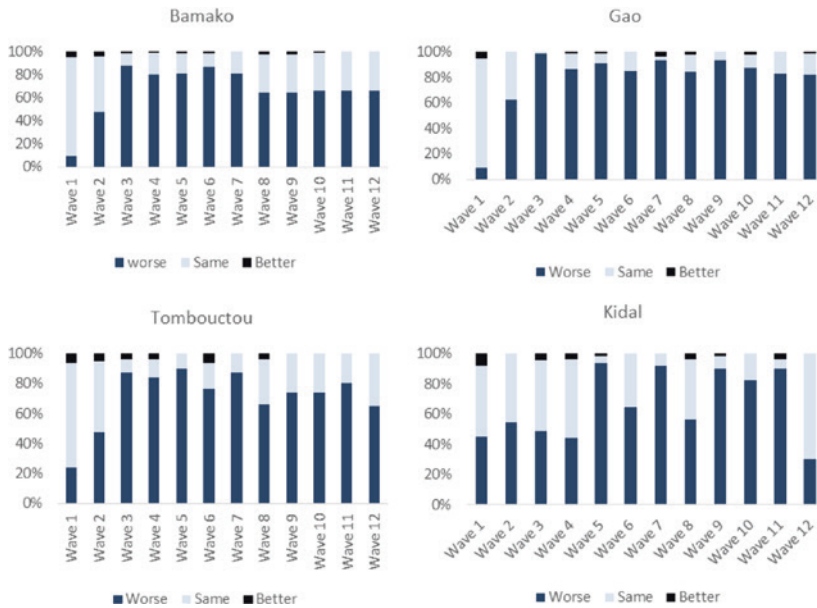


**Fig. 4** Asset ownership compared with regional average (*Source* Authors’ calculations using the Listening to Displaced People Survey, 2014 and the Enquête Modulaire et Permanente, EMOP, 2011 of the Mali Institute of Statistics (INSTAT))

off, and interestingly, when they lived in villages with greater access to transportation, either by land or water.

The main purpose in tracking displaced people, for the purposes of this chapter, is what the survey can tell us about their living conditions over time. The results show how the respondents’ perception of their living conditions changed over time and across locations. In wave 12 in Kidal, for instance, there is a large decrease in the proportion of respondents stating that their living conditions were worsening, and an increase in respondents stating that they remained the same. This wave followed the signing of the Peace Accord in June 2015; however, the optimism found in Kidal at this time was not shared by the other three cities covered by the survey (Fig. 5).

The data collected takes the form of a longitudinal (panel) dataset, which allows to control for individual fixed effects. Hoogeveen et al. (2019) exploit the panel nature of the dataset to investigate the drivers of the decision to return, exploring how employment status, security, and expectations affect people’s willingness to go back home. The findings suggest that the decision to return is affected by a comparison of (opportunity) costs and benefits, but also by other factors: Individuals who are employed while displaced are less willing to return home, as are better-educated individuals, or those receiving assistance. The



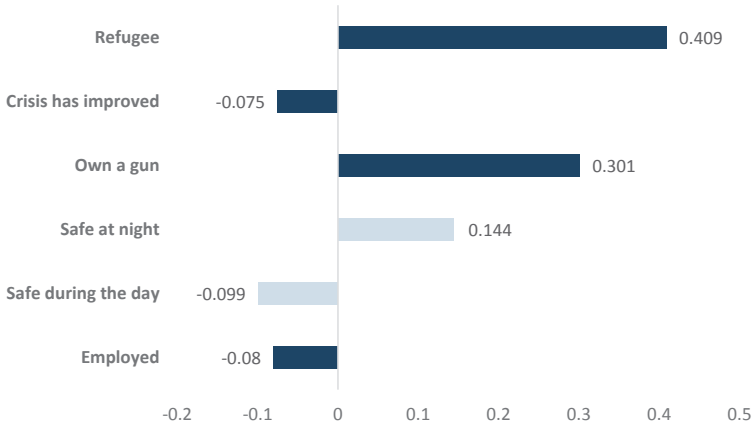
**Fig. 5** Changes in perceived living conditions over the duration of the survey (Source Authors' calculations based on Mali Listening to Displaced People Survey)

opposite is true for ethnic Songhais and people from Kidal. The results show that individuals with higher levels of education do better when displaced, and if they return, they find jobs more easily than those with less education.

Using all twelve waves of the survey, Hoogeveen et al. ran a fixed effects linear probability model. These individual fixed effects capture all time-invariant individual characteristics such as ability, education, and stamina, as well as several stable household characteristics and environmental factors (e.g. attitude toward refugees or IDPs in the local community), while the time fixed effects control for events specific to a time period, such as weather shocks or military events. They find that those who found employment while being displaced were significantly less likely to return, while refugees and those who owned a gun were more likely to return (Fig. 6).



*Those who found employment while being displaced were less likely to return to northern Mali; refugees and those who owned a gun were more likely to return.*



**Fig. 6** Fixed effects regression on the decision to return (Source Hoogeveen et al. 2019)

## 4 Implementation Challenges, Lessons Learned, and Next Steps

The success of the tracking survey depended on the ability to maintain a stable sample. The measures employed were not unlike those discussed in Chapter 2: respondents received phones, were rewarded for participation with phone credit, and were given the opportunity to carry out the interview in their own language. The survey team emphasized approaches that might reduce drop-out, e.g. respondents were asked to indicate the time at which they preferred to be called. During the call, they would always speak to the same enumerator, thus building rapport. In the refugee camp in Mauritania, response rates declined due to weak network coverage. This was resolved by working with field-based enumerators who relayed the responses back to the call center in Bamako. The team also asked community members to follow up on respondents who could not be reached over the phone. This tracking mechanism was set-up at the survey design stage

by collecting alternative phone numbers of the respondents such as phone numbers of other household members, friends, and neighbors. This helped enumerators reach respondents who did not answer their own phones. These measures were effective: the non-response rate was very low, between 1 and 2% per wave. The percentage of households not responding to more than two consecutive rounds, was even lower, only 0.8%. Attrition rates bore little relation to the movement of the respondent. For instance, in the area with the highest amount of movement, Bamako, the initial sample comprised 100 households. Of these, 12% indicated one year later that they had moved, but only one household dropped out of the sample. A similar finding holds true for Gao, where the sample initially comprised 90 households, and although some 7% moved, only two households dropped out of the sample.

Not only is the stability of the sample quite remarkable, but this survey also demonstrates that mobile phone surveys are useful tools for collecting data in hard-to-reach places. The case of Kidal, a desert town, illustrates this point. Kidal lies in a remote corner of northern Mali and is only accessible by ‘piste’ (i.e. unmarked dirt road), and the nearest town, Gao, is 285 km away. Moreover, during the period in which the data were collected, the government of Mali exercised no control over the town. Despite these factors which would normally greatly hinder data collection, the mobile phone survey collected information on a monthly basis with response rates that were near-universal (see Fig. 7, right panel).

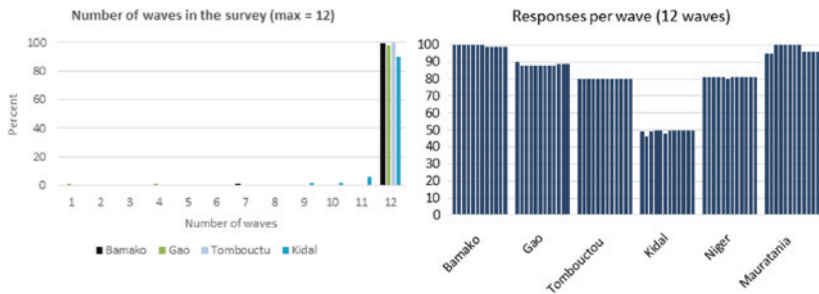


Fig. 7 Attrition rates (Source Authors’ calculations using the Mali Listening to Displaced People Survey)

The ability to follow respondents as they change locations offers exciting new possibilities for welfare monitoring, as movement is often associated with large societal changes in welfare. We know, for instance, that rural-to-urban migration is associated with declining poverty of the movers in a process called structural transformation, in which increases in agricultural production facilitate rural–urban migration by increasing rural incomes while simultaneously suppressing (urban) food prices. Once this process starts, markets become more important, the non-farm and agribusiness sectors grow, and the food value chain and rural–urban linkages are strengthened. As rural incomes grow even further, second-order effects emerge: the stock of human and physical capital increases as households invest part of their increased incomes in their offspring. This leads to further productivity gains, and to emigration of better-educated people. While this process is well-understood, surprisingly little is known about how individual migrants fare during the process of transition. Nor is much understood about the characteristics of successful migration, as opposed to migration in which one ends up chronically poor in an urban slum. Mobile phone tracking surveys can be used to collect the data needed to fill this knowledge gap, and can be applied equally to returning IDPs and refugees, to school leavers, to those completing a job training program, or those having gone through a DDR program.

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