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Leaving, staying or coming back?

Migration decisions during the Northern Mali conflict[^]

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Abstract

This paper uses a unique dataset to analyse the migration dynamics of refugees, returnees and internally displaced people from the Northern Mali conflict. Individuals were interviewed monthly using mobile phones. Our results cast light on the characteristics of these three groups before and after displacement. In addition, we test how employment and security were related to migration status, as well as the willingness to go back home. Individuals who were employed while displaced were less willing to go back to the North, while those who owned a gun were more likely to plan to go back. Additional indicators of personal safety played a lesser role.

Keywords: forced migration, Mali, refugee, internally displaced people, repatriation.

JEL: J15; O15; R23.

1. Introduction

There are currently 65 million people reported as displaced, including 24 million refugees and asylum-seekers (World Bank, 2017), making for the second largest refugee crisis since World War II. International institutions are responding and expanding their efforts by combining humanitarian and development know-how in order to explore new solutions to this global crisis. Their aim is to not only respond to humanitarian emergencies, but also to provide sustainable and lasting social and economic progress for displaced people and their host communities (OECD, 2017). Despite these attempts, policy makers continue to lack information and have limited awareness of the preferences of these forced migrants. Indeed, the current availability and quality of data is constrained by technical and political issues, thus often leading to unreliable estimates and huge discrepancies across sources.

Within this context of limited data and low research activity, this paper sheds some light on this issue by analyzing important characteristics of refugees, internally displaced people (IDPs) and returnees during the recent crisis in Northern Mali. Furthermore, we investigate the willingness to return to their place of origin for refugees and IDPs. By making use of a unique dataset interviewing the head of household (or another member) up to twelve consecutive waves, we have gathered variables on migration decisions and its possible determinants.

Exploiting mobile phones for interviews has allowed us to obtain information about individuals who tend to be neglected in traditional surveys since they are difficult to reach given their high mobility, precarious living conditions and their proximity to conflict zones. The high-frequency, mobile phone based, panel structure used for this research is well-suited for situations where respondents live in highly-volatile environments. In this instance, we managed to follow individuals *while* they were experiencing a crisis and while on the move, thus avoiding issues common in the literature on violent conflicts (Brück et al., 2016). These frequent interviews also helped avoid measurement errors common to recall surveys. Furthermore, the attrition rate has been exceptionally low even if respondents changed locations and were difficult to contact in person. As a result, this is not only one of the few data available on forced migrants, but also a unique example of a longitudinal study on migration decisions for this population.

In addition to producing new descriptive statistics for refugees, IDPs and returnees, the main goal of this paper is to analyze how employment and safety affect migration decisions in the context of forced displacement. We provide evidence that respondents employed during displacement were less likely to have already returned to Northern Mali when first interviewed in August 2014 (more than two years after the start of the conflict). In addition to this, employed individuals – both refugees and IDPs – were less willing to go back to Northern Mali in the subsequent months. These results support the hypothesis that economic factors play a major role even if lack of information, narrow destination choices, and limited time available to make a decision differentiate these individual from traditional migrants.

Following a standard economic model, individuals are expected to want to go back to Northern Mali when the utility from returning is higher than the one from staying in refugee camps or remaining displaced within Mali. Traditionally, consumption is assumed to be the key input of the utility function. However, non-monetary factors, such as security and exposure to violence, may have been pivotal in this context. We find mixed evidence for this hypothesis as we cannot rule out the

possibility that feeling safe during the day, at night, or at home alone was *not* related with past migration decisions or the intention of refugees and IDPs of going back to Northern Mali. On the other hand, individuals who experienced difficulties with the security forces (police, gendarme, army) during displacement were more likely to have already returned, while gun ownership was associated with higher willingness to go back.

Despite the magnitude of this global refugee crisis, forced migration has not received much attention in the economic literature until recently. A review of the previous works is included in Ruiz and Vargas-Silva (2013), as well as in Verwimp and Maystadt (2015). Some scholars have focused on analysing outcomes in refugee camps (Lehrer, 2010; Bozzoli et al., 2015; Crea et al., 2015). Other researchers have focused on the impact of forced migration on the welfare of the migrants in the short and medium terms (Ibáñez and Vélez, 2008; Kondylis, 2010; Ibáñez and Moya, 2010; Fiala, 2012; Justino and Verwimp, 2013; Eder, 2014; Ruiz et al., 2015), as well as in the long-run (Serc, 2009; Falck et al., 2011; Bauer et al., 2013).

A different strand in the literature has looked at the impact of forced migration on host communities (Whitaker, 2002; Alix-Garcia and Saah, 2010; Baez, 2011; Alix-Garcia et al., 2012; Braun and Mahmoud, 2014; Maystadt and Verwimp, 2014; Ruiz and Vargas-Silva, 2015; Calderón-Mejía and Ibáñez, 2015; Borjas and Monras, 2016; Figlio and Özek, 2017). There is also a fast growing literature on the ongoing European refugee crisis (Damm, 2009; Carrera et al., 2015; Fernández-Huertas Moraga and Rapoport, 2015; Gilbert, 2015; Bansak et al., 2016; Dustmann et al., 2016; Waisman and Larsen, 2016).

Little has been written on the decision to return of forced migrants. However, deciding if and when to return can have serious consequences: a longer duration of displacement has been shown to make it harder to re-adapt and earn a living, thus reducing household welfare (Verwimp and Muñoz-Mora, 2018). Moreover, refugees may have no legal protection and be at risk of institutional discrimination while living abroad (World Bank, 2017). The short list of studies on return migration of forcibly displaced individuals includes Cordero (2002) for the case of Peru, Davies (2004) and Stefansson (2004) for Bosnia-Herzegovina, Bascom (2005) for Eritrea, Omata (2013) for Liberia, and Arias et al. (2014) for Colombia.

Both Cordero (2002) and Arias et al. (2014) argued that direct victims of aggressions were less willing to return. Arias et al. (2014) also found that migration decisions were driven by economic opportunities in both the place of origin and the reception site. Economic problems (and opportunities) may also arise from the social context: researchers have highlighted the risk of discrimination and resentments towards refugees and IDPs from those who stayed behind (Stefansson, 2004), the link between personal networks in the country of origin and repatriation quality (Omata, 2013), as well as the changes in social status within the community of origin (Ruiz et al., 2015). Within this economic sphere, Davies (2004) also stressed the importance of property right restitutions to refugees and IDPs.

This paper provides several contributions to this literature. First, it analyses both the intention to return and the actual migration decisions. Second, it provides a dynamic analysis of how migration decisions changed over time. Third, it compares the relevance of two specific push and pull factors, i.e. employment and safety. Fourth, it considers a larger sample of forced migrants than previous

studies such as Bascom (2005) and Omata (2013). Fifth, it is the first one to focus on Mali, thus also testing the external validity of the aforementioned findings in other developing countries.

This paper is complementary to previous research showing that high levels of inactivity during displacement can lead to long-term economic losses due to human capital deterioration (Fransen et al., 2017): we provide suggestive evidence that employment directly affected the decision to return. From a technical point of view, this result provides a note of caution to scholars comparing returnees to non-migrant households as sample selection is likely to be an issue. International organizations should also be aware of the following: returnees may be an extremely vulnerable group given their non-random selection among forced migrants, and require additional support to compensate for any unemployment spell during displacement.

2. The Northern Mali conflict

As documented by Carew and Dowd (2015), Mali was a country with relatively low levels of violence until late 2011. However, the country had deep issues of political legitimacy, economic development and inclusive governance. Protests from Tuareg rebels (an ethnic group concentrated in the Sahara) were historically spurred by the low economic development of the regions in the Northern Mali and secessionist demands. The last Tuareg uprising lasted from 2006 to 2009, with higher levels of violence in the later phase of the conflict.

Initially, the 2012 crisis was driven by political dissatisfaction among some Tuareg groups seeking independence. Indeed, the first battles occurred between the Malian army and the Movement for the Liberation of the Azawad (MNLA), a Tuareg militant group. At the same time, the instability in the North of the country led to an attempted coup d'état in March 2012 - as well as a counter-coup and associated riots and protests - in the capital Bamako. Islamic groups initially fought alongside the MNLA. A breakdown between the two players occurred in May 2012, resulting in the Islamic faction gaining the major cities in the North and an increase of fatalities among civilians. These religious groups also controlled the trafficking routes in the region.

Such Islamic violence caused a military intervention by the Malian Army, French troops and the ECOWAS-led African-led International Support Missions to Mali in June 2013 (David, 2013). This intervention coincided with a huge increase in fatalities, with a peak of almost 700 deaths in 2013. Urban centers such as Timbuktu were targeted by the French and Malian militaries. Even the MNLA joined the fight to avoid the creation of an Islamic state. Despite the peace agreement in 2013, new battles took place between the Tuareg groups and the Malian army in 2014. A peace accord was finally signed in May and June 2015 between the government and the different actors involved in the rebellion. Nevertheless, the regions of Gao, Kidal and Timbuktu remain in a state of prolonged crisis, with high levels of insecurity and weak governance.

According to the UN Refugee Agency (UNHCR, 2016c), in June 2016 the number of Malian refugees was almost 135,000, while there were more than 36,000 IDPs and around 23,000 returnees (about 49,000 according to the Malian government (UNHCR, 2016b)). Among these refugees, more than 60,500 were in Niger, 41,000 in Mauritania and 32,000 in Burkina Faso. Including returnees, the population of concern has reached the staggering figure of 570,000 (UNHCR, 2016a). Despite these figures and the (scarce) media coverage (WorldPost, 2016), the UN operations in the regions have been constantly underfunded (UNHCR, 2016d).

3. Conceptual and econometric framework

3.1 Key concepts in the economic theory of forced migration and repatriation

For those who have fled, decisions to return or to remain where they are can be conceptualized in an economic framework with a comparison of two alternatives. The choice is determined by the state corresponding with higher utility. Supposing that returning and staying are the states to choose between, the household compares the expected utility associated with staying (S) with that of returning (R), deciding to remain where they are if the following holds:

$$E[u(c_S, A_S)] \geq E[u(c_R, A_R)]$$

E stands for expected value as the level of consumption over lifetime is uncertain and subject to stochastic incomes (as well as many other factors). Households form expectations based on the available information set, which is obviously very limited and contaminated by the violent environment.

The variable A in the utility function stands for amenities (or lack of), which captures non-monetary factors affecting the utility function. A more violent environment would generate a lower level of utility than a peaceful environment, keeping constant the same consumption level. Indeed, utility cannot be measured only in terms of income or consumption as usually done, since non-pecuniary indicators – in particular security and violence (Bohra-Mishra and Massey, 2011) – play a major role in this context. It is also worth stressing that, for the sake of simplicity, consumption refers to lifetime consumption. However, the choice is a dynamic choice, where life is composed by n time periods (Deaton, 1992).

As discussed in Verme (2017), some caution is needed when using neoclassical economic models to analyse the migration decisions of IDPs and refugees. Indeed, as just mentioned, while it is possible to assume that these individuals are attempting to maximize their utility subject to a budget constraint, some concerns should be taken into account in terms of time-span considered, and information set available (Bohra-Mishra and Massey, 2011). Agents may have little time available to make important decisions such as whether and where to migrate, the information available is limited and often manipulated or politicized, and the transportation options are often limited (Fransen et al., 2017), thus restricting the set of available destinations. Peer behaviour is also pivotal in the decision to migrate and to repatriate.

Even if people have enough information, deviations from rational behaviour have also been documented in the past literature. Individuals may prefer outcomes with known probabilities to those with unknown odds (Ellsberg, 1961), thus explaining why some people would choose to live in a conflict area where the risks are known rather than migrating in a different region or country. Furthermore, Kahneman and Tversky (1979) highlighted that people tend to underweight very low probabilities and overweight very high probabilities. Finally, insights from neuroeconomics have shown that human brains operate differently in short-term and long-term decision processes.

As also mentioned in Arias et al. (2014), when considering whether to return, refugees and IDPs have to take into account that going back to their hometowns would allow them to recover certain assets and social networks. However, the original conflict may have destroyed assets, public goods and infrastructures, deteriorated institutions and social dynamics, and reduced markets. All these factors,

jointly with the need of an initial investment, could obstruct resuming economic activities in the place of origin.

In conclusion, the decision to repatriate is rarely a simple decision: it is not possible to take as given – as often done by international institutions (Omata, 2013) - that refugees and IDPs want to return, and that repatriation is the best durable solution. Their initial location has been subject to social, economic and political shocks, and the forcibly displaced individuals themselves have often had to overcome life changing obstacles, making naïve the idea that everything can smoothly and quickly go back to normal.

3.2 The underlying latent utility model

Given the above considerations, it is possible to model the decision to return to Northern Mali or to remain a refugee/IDPs using a standard choice framework, but taking into account that the choice set is restricted, information is limited, and the set of determinants should include also non-monetary indicators such as security. Therefore, if we normalized the utility of not moving U_{it0} to 0, the probability of returning (1) for an individual i at time t can be written as follow:

$$Pr[y_{it} = 1|x_{it}] = Pr[U_{it1} > U_{it0}|x_{it}] = Pr[x'_{it}\beta + \varepsilon_{it} > 0] = F(x'_{it}\beta)$$

Where $F(.)$ is the cumulative distribution function of $-\varepsilon_{it}$. Following Angrist (2001) and Angrist and Pischke (2009), we have estimated a linear probability model (LPM).

The discussion in the previous paragraph translates to the selection of the covariates x_{it} : not only does this set include typical determinants of migration such as age, gender, education, marital status and wealth, but also non-monetary factors such as whether the respondent experienced issues with the local police, or whether somebody died during the crisis. In particular, this model allows us to investigate the relative importance of pull and push factors. We have focused in the following empirical section on two variables: whether the respondent worked during the displacement, and how much he or she felt safe in the current location. The latter is central in forced displacement models (Verme, 2017), and has also been emphasized in previous studies on repatriation of forced migrants (Bascom, 2005). As already mentioned, the former is instead motivated by the fact that high levels of inactivity while displaced may results in deterioration of human capital, thus contributing to the economic gap between returnees and non-migrant households (Fransen et al., 2017).

We have first used the baseline data to understand how much these two factors were correlated with the migration status. We have therefore estimated the following equation:

$$returned_i = \beta_0 + \beta_1 work_i + \beta_2 safe_i + w_i'\gamma + \varepsilon_i$$

As just mentioned, w_i includes the set of controls which are likely to be correlated with both the regressors of interest (employment during displacement and safety) and the dependent variable (whether the respondent had already returned to Northern Mali): gender, age, education, marital status, ethnicity, region of origin, household size, wealth, whether members of the household or the ethnic groups died during the crisis, whether some of the household members were left behind during the displacement, whether the household migrated more than once during the crisis, and whether the respondent received any formal aid.

Using the same key regressors and set of controls, we have then investigated how much employment and safety were related to the intention to go back:

$$want\ to\ go\ back_i = \beta_0 + \beta_1 work_i + \beta_2 safe_i + w_i' \gamma + \varepsilon_i$$

We have also estimated an individual fixed-effect model when tracking how such stated preferences changed over time.

$$want\ to\ go\ back_{it} = \beta_0 + \beta_1 work_{it} + \beta_2 safe_{it} + w_{it}' \gamma + \theta_t + \mu_i + u_{it}$$

The last model controls for time-invariant unobservable individual characteristics μ_i such as ability, education, stamina, as well as several stable household characteristics and environmental factors (e.g. attitude towards refugees or IDPs in the local community). Furthermore, the time fixed effect θ_t controls for time-specific events, such as weather or military shocks. In other words, the panel structure of the data set has allowed us to take into account several factors omitted in previous cross-sectional studies.

However, the monthly phone interviews were relatively short, so the set of controls w_{it} is limited. This may have led to omitted variable biases. Indeed, there may still be time-varying factors which could have affected both the probability of being employed and the intentions to go back.

Therefore, we cannot make any causality claim in this analysis, but we rather want to describe respondents' characteristics and their migration decisions. Despite this, the panel structure of this survey does allow us to verify that the relations between migration decisions and our regressors of interests are robust to the inclusion of several controls. Moreover, given the novelty of this data, we do believe that these conditional correlations uncover new patterns in the migration dynamics of the forcibly displaced and provide valuable information which contributes to the existing literature and may support the formulation of peace-making policies.

4. Data

4.1 Household selection

The data used in this paper have been collected through the Listening to Displaced People Survey (LDPS).¹ The baseline face-to-face interviews occurred between June and August 2014. The subsequent twelve interviews were conducted in August 2014, September/October 2014 and then from November 2014 every month. Most of the surveyed people were displaced in April 2012, when Gao, Kidal and Timbuktu were occupied by rebels. A second wave of displacement occurred in June 2012 and a third one in January 2013.

More information on high frequency panel data using mobile phone interviews can be found in Hooegeven et al. (2014) and Dabalen et al. (2016). In particular, Dabalen et al. (2016) found in Tanzania that more frequent interviews (e.g. on a weekly basis) were too bothersome for the respondents, as well as too much to handle for the data collection team. Less frequent interviews would have increased the risk of losing the personal connection with the respondents while increasing recall bias. In conclusion, monthly interviews were considered a good compromise.

The original sample comprised 501 respondents (51% Male, 49% Female) and was divided between 100 internally displaced people (IDPs) located in the capital city Bamako, 181 refugees living in

refugee camps in Mauritania and Niger, as well as 220 returnees living in the regional capitals Gao, Timbuktu and Kidal. This survey did not collect information on individuals who were never displaced. The sample size and composition was limited mainly due to budget constraints: the initial team had enough resources to cover around 500 households and wanted to have enough variation among the different groups. The attrition rate was very low, always around 1-2% per wave (respondents were incentivized with phone credits). Therefore, we do not worry that non-response rate may be non-random and different among refugees, IDPs and returnees.

We need to stress that the locations were not randomly selected. Bamako was selected because it hosted a large number of IDPs. Furthermore, the main cities in Northern Mali - which were the most affected by the conflict - were chosen to obtain a large sample of returnees given the funds available. Finally, a refugee camp was located in Niger since bureaucratic issues did not allow the inclusion of a camp in Burkina Faso.

Nevertheless, households were selected randomly within each location. In Bamako, the list of all households with IDPs was available from the International Organization for Migration. Based on these data, 10 districts were selected. Within each district, 10 households were randomly identified. In Gao, Timbuktu and Kidal there was no listing data available. Therefore, the cities were divided into different sectors. The enumerator was assigned a starting point in a sector, a direction (North, South, East, West) and a randomly selected first household. The number of household interviewed from one starting point was capped at six. If the enumerator had to conduct additional interviews, a different point of departure was assigned. A similar sampling strategy was applied in the refugee camp in Mauritania. On the other hand, listing data was available for the camp in Niger, thus a similar methodology to that in Bamako was adopted.

4.2 Household changes and household member selection

Respondents were selected randomly amongst household members above the age of 18 (equal split between men and women) to obtain a good representation of the (subjective) opinions of male and female adults. As a consequence, and unlike more typical welfare surveys, the respondent was often not the male household head.

In line with Verme (2017), we do find that the concept of household is difficult to apply to forced migrants. Indeed, the migration patterns caused deep changes in the composition of households. While 184 of the surveyed individuals were household heads before the conflict and managed to maintain their role during the crisis, 47 individuals completely changed status and effectively became “visitors” (Table 1). This happened also to some other individuals, e.g. spouses or offspring, suggesting that some forcibly displaced individuals merged into recipient families, losing their original family role in the process.

It is also important to note that the vast majority (68%) of the interviewed people did not leave any household member behind (left panel of Figure 1). However, there were some individuals who decided or were forced to migrate without other household members. Indeed, the right panel in Figure 1 shows that some households were split in two and that some respondents left without anybody else. We can also break apart the previous data by migrant status. Almost everybody (86%) among the refugees did not leave anybody behind, while the same figure for IDPs and returnees was around

57%. Furthermore, household heads or their spouses remained in the North during the crisis more frequently for returnees, while the same was very uncommon among refugees.

In conclusion, these changes within households justify the choice of not interviewing always the household head, but rather a random adult member of the household.

5. Descriptive statistics on migration dynamics, security and employment

The aim of this section is to provide a preliminary analysis of the main factors of interest in the paper: migration decisions, employment and security for the different groups included in the survey. A preliminary analysis of these data is included in Etang-Ndip et al. (2015), while additional descriptive statistics on ethnicity, assets, welfare and location choice are available in Appendix A.3 (available online in Supplementary Materials).

Looking at the partition of our sample between refugees, returnees and IDPs, it is possible to claim that if they had not already done so by August 2014 (the time of the baseline), few returned between 2014 and 2015. Indeed, the transition probability from being internally displaced in our sample to having returned to Northern Mali over the twelve waves is barely 2.4%. The same probability is even lower for refugees: only 0.3%. However, it should be pointed out that not only some respondents (4.4%) had already moved more than once before the initial interview, but some respondents changed migration status several times over the period considered in the survey. Having returned (early) to Northern Mali did not always lead to a stable condition either: the transition probabilities from returnee to IDP or to refugee are 1.1% and 0.2% respectively (Table A3).

Due to the sampling procedure discussed in Section 4.1, almost 44% of the people in the sample had already returned by August 2014. Moreover, while both refugees and IDPs expressed interest in returning to their original location, this desire was more common among refugees: 93% of the refugees wanted to go back, while 81% of IDPs expressed the same intention. Among those who did not want to go back, the main reason was because of the insecurity in the North, followed by “life is easier here”, lack of means, or business reasons. This is in line with the evidence provided in World Bank (2017): returning is not always the preferred (or even optimal) solution for many refugees and IDPs.

Unexpectedly, most returnees decided to go back because Northern Mali was their home (23%). Another 10% was driven by the liberation of the area, and 9% of them returned because they were looking for a job. Family was often mentioned as a secondary reason for having returned. In addition to this, it is interesting to note that, 93% of these individuals would have suggested others to return. However, among the main challenges that they faced once returned, many of them mentioned poverty, scarce food, lack of infrastructure and jobs, absence of drinkable water, and insecurity. Only 14% of them indicated not to face any difficulties.

It is surprising – and reassuring – to find that, except in the initial survey, across all subsequent waves almost everybody claimed to feel safe at home both during the day and at night, as well as when they were out alone during the day. Furthermore, the percentage of people in the sample who had been robbed ranged between 0 and 6.9% over time; while between 0 and 3.8% had been victims of physical violence outside the household. Finally, less than 4% owned a weapon. However, several individuals experienced some human losses during the crisis. While very few refugees reported victims in their

households, most of them declared that there had been victims in their ethnic groups or neighbourhood. IDPs were the ones with the highest percentage of violent deaths within their households, while returnees were less affected by this kind of extreme violence.

Before the crisis, and unsurprising given the sampling in urban areas, the main occupation for the interviewed people was commerce, while very few were farmers or herders. While most of the civil servants were able to keep their jobs, those working in the commerce were badly affected by the crisis. As shown in the left panel of Figure 2, IDPs had the highest employment rate before the crisis, while fewer returnees used to work. All groups lost jobs during displacement. Nevertheless, most returnees managed to work again once back, and in the last waves (right panel of Figure 2) they reached high employment rates, similar to those for IDPs. On the other hand, employment rates among refugees remained low and actually deteriorated over time. This may be one of the main reasons behind the higher willingness to return among this group. It is interesting to contrast these findings with the results in Kondylis (2010) that displaced Bosnians were more likely to be employed than individuals who were not displaced.

What we retain from this preliminary analysis is that there is a higher willingness to return among refugees, which may be explained by the lack of jobs and the low access to basic services that refugees face. The next section employs multivariate analysis to further understand these phenomena.

6. Multivariate analysis

This section analyses more in depth how employment and safety were correlated with migration decisions. A detailed description of all the variables and their summary statistics are included in the Appendices A.1-2 (available online in Supplementary Materials). The Appendices also includes additional tables and robustness checks. When not reported, tables and Stata codes are available upon request.

6.1 Migration decisions at the baseline

We start our multivariate analysis by showing the characteristics of the respondents who had already decided to return to their place of origin before the first wave of the survey (August 2014). In this first analysis, we aggregate IDPs and refugees into one comparison group (forcibly displaced). Column 1 in Table 2 shows the estimated coefficients from the LPM using the whole sample, while Column 2 presents results for IDPs only, thus excluding refugees from the comparison group. The marginal effects from the probit models are qualitatively similar (Table A5).

The decision to return seems to reflect the conditions during displacement as well as perceptions about the situation at home. Quite surprisingly, safety was not pivotal: whether the respondents considered Northern Mali as a safe area or whether they felt safe at home alone did not significantly affect migration decisions. As highlighted also by the World Bank (2017), changes in threats to physical safety may not be enough to lead people to want to return.

Nevertheless, in line with Cordero (2002) and Arias et al. (2014), whether members of the household or ethnic groups died during the crisis was negatively related with respondents' decision to go back (Table A4). It is also worth mentioning that individuals who experienced some difficulties with national or foreign security forces during the displacement were more likely to return to Northern Mali. Almost 27% of the respondents reported this kind of adversity (Table A1). When asked to give

additional details about these issues, most of the respondents (53%) complained that there were too many controls, while 15% of them stressed the lack of respect during these controls.

Households whose respondents worked during displacement were less likely to return. The magnitude is up to 33 percentage points, thus suggesting that this was a pivotal factor in their migration decisions. Such result has also been found in other studies: Afghans who had set up successful businesses abroad were less incline to repatriate (Monsutti, 2006). Employment (or lack thereof) was also central among returnees in Liberia (Omata, 2013) and Eritrea (Bascom, 2005).

These results are in contrast with the hypothesis in Verme (2017) that push factors such as security are more important with pull factors such as income opportunities in destination areas when analyzing forced migration. Our findings suggest instead that economic conditions may actually still be driving repatriation even in these unstable environments.

Given the small sample size, we have used a parsimonious specification. Nevertheless, it is worth noting that, despite the few covariates, we have managed to explain more than half of the variation of the dependent variable in Column 1, thus reducing concerns about endogeneity due to omitted variables. This conclusion is reinforced by expanding the set of controls: our conclusions do not change if we include additional variables regarding education, marital status, ethnicity, household size, household changes and composition, region of origin, aid, wealth, and occupation (Table A6).

6.2 Intention to return at the baseline

Focusing our attention on refugees and IDPs, we want to deepen our understanding about their migration plans. In particular, we want to explore which characteristics are associated with the desire to return to Northern Mali. To this end we have estimated a LPM using the same regressors as in the previous sections. The dependent variable has been set equal to one when the respondent was considering the possibility of eventually going back to the North, and to zero otherwise. The estimated coefficients are reported in Table 2 Column 3. The marginal effects from the probit model are qualitatively similar (Table A5).

All indicators related to safety show coefficients statistically indistinguishable from zero. As for actual migration decisions, neither perceived safety in Northern Mali, nor whether the individual felt safe at home alone are statistically associated with a greater intention to return. Contrary to the previous section, the coefficients of the variables reporting whether some members of the household or the ethnic groups died during the crisis are not statistically significant (Table A4), suggesting that willingness to return - after a relatively long period of time - is more related to having settled down well and found a job in the current place of residence and the opportunities such a place can offer rather than war casualties. A similar result holds for whether the respondent had trouble with the local security forces. On the other hand, working individuals are associated with a 9 percentage point lower likelihood of willingness to return.

Finally, it is important to point out that there is a positive relation between stated and actual preferences. Indeed, those who declared that they were planning to go back to Northern Mali were more likely to actually having returned in the subsequent waves. However, the magnitude is small, probably because of the short time span considered and the low repatriation rate.

6.3 Intention to return over time

For twelve consecutive waves, refugees and IDPs were asked whether they were considering going back to Northern Mali in the subsequent month. As discussed in Section 3.2, we have estimated how employment and security are correlated with these stated preferences. The estimated coefficients from the LPM are shown in Table 3.

In line with the previous results in Table 2, the main conclusion is that respondents who were employed were less likely to intend to go back to Northern Mali by around 8 percentage points. This result persists even after controlling for immigration status, i.e., whether the individual was a refugee or an IDP. Indeed, refugees were more likely to be willing to go back. Adding controls, as well as estimating the same model for refugees and IDPs separately, does not change our conclusions (Tables A7-A8). Joining the two results on unemployment and refugee status, we may wonder whether this desire to repatriate resulted from a more general malaise experienced by these respondents as they were forced to migrate and halted in a limbo, not fully integrated with the local community and labor market.

Whether an individual felt safe during the day (or at night) was not correlated with the likelihood of planning to go back. However, another regressor indicates that security may still be important: those who owned a weapon were up to 30 percentage points more likely to plan to go back. In addition to this, it is quite surprising that, if the respondent thought that the Northern Mali crisis was improving, she was *less* likely to plan a return.²

From a technical point of view, it is worth pointing out that we have reported the estimates from a LPM even if the dependent variable is a binary outcome. This choice has been made since in this linear model it is straightforward to add fixed-effects. Furthermore, its coefficients can be easily interpreted. A simple logit or probit model would have not allowed for the inclusion of individual fixed-effects because of the incidental parameter problem. An alternative approach would have been to estimate a conditional logit model. However, since the distribution of the fixed effects is unknown, it would have not been possible to estimate the marginal effects in this model, but only the effect of the regressors on the log-odds ratio (see Wooldridge 2010, page 639). Conclusions from the conditional logit model are qualitatively similar (Table A9).

6.4 Additional extensions, robustness checks and limitations

6.4.1 Order Probit

A more comprehensive analysis than the one in Table 2 takes into account all respondents, i.e. it includes those who had returned. Indeed, respondents' options could be naturally ranked from not wanting to go back to Northern Mali, to planning to eventually return there, up to having already returned in the North. In other words, it is possible to jointly analyze the migration decisions discussed in Sections 6.1-2 while looking at them from a unified perspective. To this end, we have estimated in Table A10 an Ordered Probit specification using the same regressors as in Table 2. The estimates confirm our previous findings: thinking that Northern Mali was secure or feeling safe at home are not statistically significant, while having had issues with the local security forces is associated with having already returned. The coefficient of employment is instead negative and statistically significant. The same conclusions can be reached by estimating the model by OLS.

As an additional robustness check, we have exploited the panel dimension of our dataset and estimated the same order probit model using all the available waves. In other words, since respondents were regularly interviewed on a monthly basis, we have been able to use their migration status over time to estimate a pooled ordered probit model (Table A11). The results are in line with the ones in Table A10. The same can be said after estimating the same specification through OLS. Employment is also significant when we estimate a fixed effect linear model with the same dependent variables as Tables A10-A11 and the time-varying covariates of Table 3.

6.4.2 Heterogeneities

Given the fact highlighted in Table 1 that household composition changed over time and some respondents had a different role within the household during the crisis, we have included all observations in Tables 2 and 3. However, since migration decisions are often done at the household level rather than the individual one - and each member of the household has a different bargaining power - we have also replicated Table 3 using only household heads and their spouses. As shown in Table A12, all coefficients are qualitatively similar, and employment remains negative and statistically significant. Despite this, the magnitude of such coefficient is lower, thus implying that employment was more important for other household members (maybe because of weaker family links).

As discussed in Section 2, some of the underlying causes of the Northern Mali crisis were the political and economic unmet needs of Tuareg groups. As a result, ethnicity did affect the intention to return among refugees and IDPs. While we have included an indicator variable for Songhai in Table 2 and the full list of ethnic indicators in Table A6, we have deepened our analysis in Table A13 by looking at how intention to return changed over time for Songhai and Tamasheq (a Tuareg group) separately. Employment remains negative and strongly statistically significant when looking at Songhai respondents only. On the other hand, it is indistinguishable from zero among Tamasheq respondents. The ongoing frictions in Northern Mali were particularly relevant among this groups, thus probably reducing the importance of economic factors in their decision to return.

6.4.3 Weights

The sample used in this analysis is a choice-based sample because the different strata (Bamako, the capital cities in Northern Mali, and the two refugee camps) were selected to survey specific sub-population. In other words, the sampling is endogenous because it is correlated with the dependent variable (migration status). As explained in Solon et al. (2015), consistent estimates can still be obtained by weighting observations. Therefore, we have replicated Tables 2 and 3 by estimating weighted regressions instead of unweighted ones (Tables A14 and A15). Although the magnitude of some coefficients varies slightly, the conclusions highlighted in Section 6.3 do not change.

6.4.4 Limitations

It is important to stress a few limitations of this study due to the sampling methodology. First, as just mentioned, the geographical sites where the interviews were conducted were not chosen randomly. This may imply issues of external validity and sample selection. However, the respondents were selected randomly within each location. Thus, the estimated coefficients in the previous sections are reliable as long as they are interpreted with reference to the selected population. This is not a minority: most IDPs were hosted in the capital Bamako, and around one-fourth of the refugees in the world live in camps (World Bank, 2017). Therefore, our results are relevant for a sizable portion of the population in Mali and for a large fraction of international refugees. But we have to admit that our sample is not nationally representative, as it is also clear from the descriptive statistics on asset ownership presented in Appendix A.3. In particular, future studies should investigate the characteristics and decisions of rural households in the context of forced migration.

Similarly, all the refugees in our studies were interviewed in camps. As a consequence, we cannot disentangle the effect of being a refugee from that of living in a camp. This may affect in particular the results regarding employment since this is a highly regulated activity for refugees (Zetter & Ruaudel, 2016). We do have some respondents changing status over time, thus becoming refugees without necessarily living in a camp. Nevertheless, the sample size is too small to obtain meaningful statistics. We thus hope in the future to be able to collect additional data also on refugees living in alternative locations.

7. Conclusion

This paper has analyzed the characteristics of individuals subject to forced migration during the recent (ongoing) crisis in Northern Mali and the factors related to their migration decisions. We have based our study on a unique micro-dataset that used new technologies to collect information in highly risky environments and among a population with relatively high mobility. We have provided descriptive statistics on respondent's migration decision, their employment status, and their safety.

In addition to this, we have compared refugees, returnees and internally displaced people. We have looked at the differences between those who had returned or were willing to go back to Northern Mali and those who did not want to return and noted how the decision to return voluntarily reflected conditions during displacement as well as perceptions about the situation at home. Better conditions during displacement (having a job) favored remaining displaced. Therefore, even in the context of forced migration, we have found evidence that economic factors were pivotal in shaping migration decisions. On the other hand, even if gun ownership and issues with police were correlated with

migration decision in some specifications, we cannot reject the null hypothesis that feeling safe at home or at night did not influence the intention to go back to Northern Mali.

These findings are in contrast with the results regarding traditional migrants: for instance, Gibson and McKenzie (2011) argued that income opportunities did not drive the decision to return among high-skilled voluntary migrants from the Pacific. Future research should further investigate the importance of monetary and non-monetary factors among forced migrants. If possible, it would be interesting to analyze how migration decisions differ across individuals with different levels of educational attainment, or between employees and self-employed.

Such considerations of how benefits and costs affected the decision to return may help shape public policies whose goal is to stimulate the voluntary return of displaced people. Our conclusion on the central role of employment provides an additional justification for programs aimed at increasing skills in demand in the labor market. Unemployment leads to human capital losses which have long-term negative consequences (Fransen et al., 2017). Reintegration is much easier for those who come back with resources, skills, and networks. Since our analysis suggests that returnees are a self-selected group more likely to have been inactive during displacement, international organizations should be aware of this weakness and provide these returnees with additional support. For instance, well-designed vocational training programs has been shown to be effective to tackle youth unemployment in low-income countries (Alfonsi et al., 2017).

It is important to note, however, that while the decision to return was subject to typical economic incentives of costs and benefits, it is remarkable that over the course of the study few additional households returned. Most displacement was of short duration and most returned prior to our survey. Even though the expressed willingness to return amongst those who were still displaced was high, actual return rates during the 12 months of the study were low for both IDPs and refugees.

As a consequence, there is another, more sobering policy conclusion that follows from this analysis, namely that most people who remained forcibly displaced at the time of the study are likely to remain displaced in the foreseeable future (Table A3 Panel B). As displaced people integrate more and more economically in their host communities, the likelihood that they will return is decreasing in time. Unless the security situation in Northern Mali improves – or the situation in refugee camps and host communities deteriorates.

We hope that this analysis will allow researchers and policy-makers to better understand these groups and be better equipped to design policy able to address their needs and incorporate their preferences. If deemed desirable, the forcibly displaced can be incentivized to voluntarily return by making returning more attractive economically. Alternatively, given the realities of low actual return rates, activities that facilitate the economic integration of displaced people in their host communities would be justified. For instance, as suggested in (World Bank, 2017), development actors could support policies that enhance freedom of movement and the right to work. However, one needs to be cognizant of the fact that doing so will further reduce the likelihood of return.

Endnotes

¹ All data from this survey can be downloaded from <http://www.gisse.org/pages/enquete-continue-sur-les-deplaces-refugies/enquete-sur-les-deplaces-et-les-refugies.html> and from: <http://bit.ly/2nsxSd6>.

² To avoid issues of reverse causality, we have also tried to estimate a model with lagged coefficients. The coefficient of gun ownership remains positive and significant. On the other hand, even if the coefficient of employment is still negative, the estimate is quite noisy, so it is no longer statistically significant. Large confidence intervals are also obtained if we estimate a fixed-effect model with lagged values as instruments for contemporaneous ones.

We have also examined the likelihood of having returned to Northern Mali rather than the willingness to go back by estimating a similar fixed effect specification to the one shown in Table 3. However, as discussed in Section 5, the transition probability from being internally displaced or in a refugee camp to having return to Northern Mali is extremely low. Given this low variability of the dependent variable, it is not surprising that most estimates become statistically insignificant. Only refugee status is consistently negatively associated with having return. Tables available upon request.

Bibliography

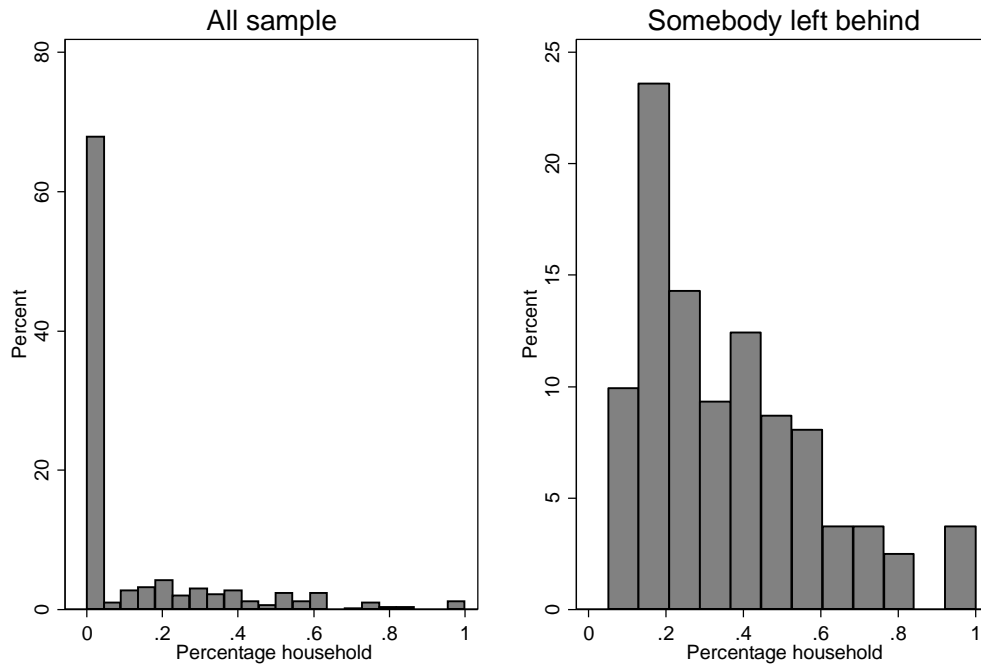
- Alfonsi, L., Bandiera, O., Bassi, V., Burgess, R., Rasul, I., Sulaiman, M., & Vitali, A. (2017). Tackling Youth Unemployment: Evidence from a Labor Market Experiment in Uganda. *LSE Working Paper*.
- Alix-Garcia, J., Bartlett, A., & Saah, D. (2012). Displaced Populations, Humanitarian Assistance and Hosts: A Framework for Analyzing Impacts on Semi-urban Households. *World Development*, 40(2), 373–386.
- Alix-Garcia, J., & Saah, D. (2010). The Effect of Refugee Inflows on Host Communities: Evidence from Tanzania. *The World Bank Economic Review*, 24(1), 148–170.
- Angrist, J. D. (2001). Estimation of Limited Dependent Variable Models With Dummy Endogenous Regressors. *Journal of Business & Economic Statistics*, 19(1), 2–28.
- Angrist, J. D., & Pischke, J. S. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.
- Arias, M. A., Ibáñez, A. M., & Querubin, P. (2014). The desire to return during civil war: Evidence for internally displaced populations in Colombia. *Peace Economics, Peace Science and Public Policy*, 20(1), 209–233.
- Baez, J. E. (2011). Civil wars beyond their borders: The human capital and health consequences of hosting refugees. *Journal of Development Economics*, 96(2), 391–408.
- Bansak, K., Hainmueller, J., & Hangartner, D. (2016). How economic, humanitarian, and religious concerns shape European attitudes toward asylum seekers. *Science*, 354(6309), 217–222.
- Bascom, J. (2005). The Long, “Last Step”? Reintegration of Repatriates in Eritrea. *Journal of Refugee Studies*, 18(2), 165–180.
- Bauer, T. K., Braun, S., & Kvasnicka, M. (2013). The Economic Integration of Forced Migrants: Evidence for Post-War Germany. *Economic Journal*, 123(September), 998–1024.
- Bohra-Mishra, P., & Massey, D. S. (2011). Individual Decisions to Migrate During Civil Conflict. *Demography*, 48(2), 401–424.
- Borjas, G. J., & Monras, J. (2016). The Labor Market Consequences of Refugee Supply Shocks. *IZA Discussion Paper*, 10212.
- Bozzoli, C., Brueck, T., & Muhumuza, T. (2016). Activity Choices of Internally Displaced Persons and Returnees: Quantitative Survey Evidence From Post-War Northern Uganda. *Bulletin of Economic Research*, 68(4), 329–347.
- Braun, S., & Mahmoud, T. O. (2014). The Employment Effects of Immigration: Evidence from the Mass Arrival of German Expellees in Postwar Germany. *The Journal of Economic History*, 74(1), 69–108.
- Brück, T., Justino, P., Verwimp, P., Avdeenko, A., & Tedesco, A. (2016). Measuring violent conflict in micro-level surveys: Current practices and methodological challenges. *World Bank Research Observer*, 31(1), 29–58.
- Calderón-Mejía, V., & Ibáñez, A. M. (2016). Labour market effects of migration-related supply shocks: evidence from internal refugees in Colombia. *Journal of Economic Geography*, 16(3), 695–713.
- Carew, M. B., & Dowd, C. (2015). *Country Report: Mali*.
- Carrera, S., Blockmans, S., Gros, D., & Guild, E. (2015). The EU's Response to the Refugee Crisis Taking Stock and Setting Policy Priorities. *CEPS Essay*, 20, 1–24.
- Cordero, I. C. (2002). Displacement, Insertion and Return in Ayacucho (1993-1997). *Migration Dan Les Andes, Chili et Pérou*, 5.
- Crea, T. M., Calvo, R., & Loughry, M. (2015). Refugee Health and Wellbeing: Differences between Urban and Camp-Based Environments in Sub-Saharan Africa. *Journal of Refugee Studies*, 28(3), 319–330.
- Dabalén, A., Etang, A., Hoogeveen, J., Mushi, E., Schipper, Y., & von Engelhardt, J. (2016). *Mobile Phone Panel Surveys in Developing Countries*. Washington, D.C.: The World Bank.

- Damm, A. P. (2009). Determinants of recent immigrants' location choices: quasi-experimental evidence. *Journal of Population Economics*, 22, 145–174.
- David, F. (2013). *The regional impact of the armed conflict and French intervention in Mali*.
- Davies, A. (2004). Restitution of Land and Property Rights. *Forced Migration Review*, 21, 12–14.
- Deaton, A. (1992). Household Saving in LDCs: Credit Markets, Insurance and Welfare. *The Scandinavian Journal of Economics*, 94(2), 253–273.
- Dustmann, C., Fasani, F., Frattini, T., Minale, L., & Schonberg, U. (2016). The Economics and Politics of Refugee Migration. *IZA Discussion Paper Series*, 10234.
- Eder, C. (2014). Displacement and Education of the Next Generation: Evidence from Bosnia and Herzegovina. *IZA Journal of Labor and Development*, 3(12), 1–24.
- Ellsberg, D. (1961). Risk, Ambiguity, and the Savage Axioms. *Quarterly Journal of Economics*, 75(4), 643–669.
- Etang-Ndip, A., Hoogeveen, J., & Lendorfer, J. (2015). *Socioeconomic impact of the crisis in Northern Mali on displaced people. Policy Research Working Paper* (Vol. 7253). Washington, D.C.
- Falck, O., Link, S., & Heblich, S. (2011). The Evils of Forced Migration: Do Integration Policies Alleviate Migrants' Economic Situations? *IZA Discussion Paper*, (5829).
- Fernández-Huertas Moraga, J., & Rapoport, H. (2015). Tradable Refugee-admission Quotas (TRAQs), the Syrian Crisis and the new European Agenda on Migration. *IZA Journal of European Labor Studies*, 4(1), 1–13.
- Fiala, N. (2012). The Economic Consequences of Forced Displacement. *HiCN Working Paper*, 137, 1–35.
- Figlio, D., & Özek, U. (2017). Unwelcome Guests? The Effects of Refugees on the Educational Outcomes of Incumbent Students. *NBER Working Paper Series*, 23661.
- Fransen, S., Ruiz, I., & Vargas-Silva, C. (2017). Return Migration and Economic Outcomes in the Conflict Context. *World Development*, 95, 196–210.
- Gibson, J., & McKenzie, D. (2011). The microeconomic determinants of emigration and return migration of the best and brightest: Evidence from the Pacific. *Journal of Development Economics*, 95(1), 18–29. <https://doi.org/10.1016/j.jdeveco.2009.11.002>
- Gilbert, G. (2015). Why Europe does not have a refugee crisis. *International Journal of Refugee Law*, 27(4), 531–535.
- Hoogeveen, J., Croke, K., Dabalén, A., Demombynes, G., & Giugale, M. (2014). Collecting representative high-frequency panel data in Africa using mobile phone interviews. *Canadian Journal of Development Studies*, 35(1), 186–207.
- Ibáñez, A. M., & Moya, A. (2010). Vulnerability of Victims of Civil Conflicts: Empirical Evidence for the Displaced Population in Colombia. *World Development*, 38(4), 647–663.
- Ibáñez, A. M., & Vélez, C. E. (2008). Civil Conflict and Forced Migration: The Micro Determinants and Welfare Losses of Displacement in Colombia. *World Development*, 36(4), 659–676.
- Justino, P., & Verwimp, P. (2013). Poverty Dynamics, Violent Conflict, and Convergence in Rwanda. *Review of Income and Wealth*, 59(1), 66–90.
- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47, 263–291.
- Kondylis, F. (2010). Conflict displacement and labor market outcomes in post-war Bosnia and Herzegovina. *Journal of Development Economics*, 93(2), 235–248.
- Lehrer, K. J. (2010). *Economic Behaviour During Conflict: Education and Labour Market Participation in Internally Displaced People's Camps in Northern Uganda*. University of British Columbia.
- Maystadt, J.-F., & Verwimp, P. (2014). Winners and Losers Among a Refugee-hosting Population. *Economic Development and Cultural Change*, 62(4), 769–809.
- Monsutti, A. (2006). *Afghan Transnational Networks: Looking Beyond Repatriation*. Kabul, Afghanistan.
- OECD. (2017). *Addressing Forced Displacement through Development Planning and Co-operation:*

- Guidance for Donor Policy Makers and Practitioners*. Paris.
- Omata, N. (2013). Repatriation and Integration of Liberian Refugees from Ghana: the Importance of Personal Networks in the Country of Origin. *Journal of Refugee Studies*, 26(2), 265–282.
- Ruiz, I., Siegel, M., & Vargas-Silva, C. (2015). Forced Up or Down? The Impact of Forced Migration on Social Status. *Journal of Refugee Studies*, 28(2), 183–201.
- Ruiz, I., & Vargas-Silva, C. (2013). The Economics of Forced Migration. *Journal of Development Studies*, 49(6), 772–784.
- Ruiz, I., & Vargas-Silva, C. (2015). The Labour Market Impacts of Forced Migration. *American Economic Review: Papers & Proceedings*, 105(5), 581–586.
- Serc, M. S. (2009). Long-Term Effects of Forced Migration. *SERC Discussion Paper*, 15(March).
- Solon, G., Haider, S. J., & Wooldridge, J. M. (2015). What Are We Weighting For? *Journal of Human Resources*, 50(2), 301–316.
- Stefansson, A. (2004). Refugee Return to Sarajevo and their Challenge to Contemporary Narratives of Mobility. In L. D. Long & E. Oxfeld (Eds.), *Coming Home: Refugees, Migrants and Those Who Stayed Behind* (pp. 170–186). Philadelphia, PA: University of Pennsylvania Press.
- UNHCR. (2016a). *Mali - Factsheet*.
- UNHCR. (2016b). *Mali - UNHCR Operational Update*.
- UNHCR. (2016c). *Mali Situation*.
- UNHCR. (2016d). *Mali Situation - Funding Update*.
- Verme, P. (2017). The Economics of Forced Displacement: An Introduction. *World Bank Policy Research Working Paper*, 8038, 1–26.
- Verwimp, P., & Maystadt, J.-F. (2015). *Forced displacement and refugees in Sub-Saharan Africa: An economic inquiry* (Policy Research Working Paper WPS7517). Washington, D.C.
- Verwimp, P., & Muñoz-Mora, J. C. (2018). Returning Home after Civil War: Food Security and Nutrition among Burundian Households. *Journal of Development Studies*, 54(6), 1019–1040.
- Waisman, G., & Larsen, B. (2016). Income, amenities and negative attitudes. *IZA Journal of Migration*, 5(8), 1–32.
- Whitaker, B. E. (2002). Refugees in Western Tanzania: The Distribution of Burdens and Benefits Among Local Hosts. *Journal of Refugee Studies*, 15(4), 339–358.
- Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data* (II Edition). MIT Press.
- World Bank. (2017). *Forcibly Displaced: Toward a Development Approach Supporting Refugees, the Internally Displaced, and Their Hosts*. Washington, D.C.: The World Bank Group.
- WorldPost. (2016, April 21). 3 Years After French Intervention In Mali, Refugees Still Afraid To Go Home. *The Huffington Post*.
- Zetter, R., & Ruaudel, H. (2016). Refugees' Right to Work and Access to Labor Markets – An Assessment. *KNOMAD Study*, September.

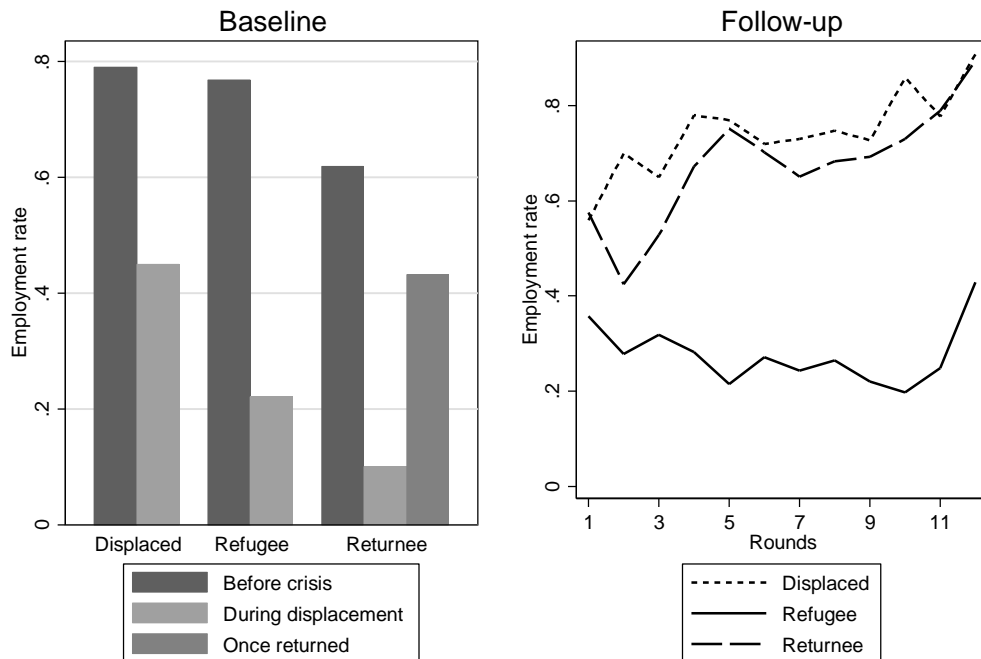
Figures and Tables

Figure 1: Household members left behind



Source: LDPS 2014-15

Figure 2: Employment rates by group



Source: LDPS 2014-15

Table 1: Role inside the household before and during the crisis

Role before	Role during the displacement						Total
	Head	Spouse	Offspring	Parent	Sibling	Other	
Head	184	2	8	5	19	47	265
Spouse	2	56	1	4	21	27	111
Offspring	2	0	15	0	3	29	49
Parent	1	1	1	24	3	10	40
Sibling	6	0	0	0	13	5	24
Other	1	1	0	0	0	10	12
Total	196	60	25	33	59	128	501

Note: the table shows the role of the respondent within her household before the Northern Mali crisis and during the displacement. This information was obtained in the baseline interviews (August 2014). The category “Other” includes sons-in-law, close relatives, friends, acquaintance, or no relationship. Most of them (90 out of 128) are close relatives. Source: LDPS 2014-15.

Table 2: Migration decisions and future plans at the baseline.

	Returned (Y/N)		Intention to return
	(1) All	(2) IDPs and Returnees	(3) IDPs and Refugees
Northern Mali safe	-0.002 (0.049)	-0.011 (0.056)	-0.119 (0.079)
Safe at home	0.032 (0.042)	0.034 (0.050)	0.017 (0.054)
Police issues	0.177*** (0.043)	0.148*** (0.049)	-0.024 (0.055)
Work during displacement	-0.171*** (0.042)	-0.328*** (0.066)	-0.093* (0.051)
Observations	470	306	259
R ²	0.530	0.397	0.095
Adjusted R ²	0.510	0.357	0.023

Robust standard errors in parenthesis. The dependent variable in the first two columns is whether the respondent had already returned to Northern Mali by August 2014. The first column includes all observations, while the second column includes only IDPs and returnees, this excluding refugees. The dependent variable in the last columns is whether in August 2014 the respondent was considering eventually going back to Northern Mali. Controls not shown: gender, age, education, marital status, ethnicity, region of origin, household size, wealth, whether members of the household or the ethnic groups died during the crisis, whether some of the household members were left behind during the displacement, whether the household migrated more than once during the crisis, and whether the respondent received any formal aid. Appendix Table A4 reports all the estimated coefficients. A detailed description of all the variables and their summary statistics are included in the Appendices A.1-2. Source: LDPS Baseline (August 2014). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Plan to go back (Y/N).

	Refugees and IDPs	
	(1)	(2)
Improvement Mali crisis	-0.076*** (0.014)	-0.075*** (0.014)
Safe during day	-0.085 (0.153)	-0.099 (0.177)
Safe at night	0.140 (0.085)	0.144 (0.091)
Own a weapon	0.299*** (0.084)	0.301*** (0.084)
Work	-0.082*** (0.018)	-0.080*** (0.018)
Refugee		0.409*** (0.040)
Time dummies	Yes	Yes
Observations	3,272	3,254
Overall R ²	0.0001	0.0019
Within R ²	0.0791	0.0800

Reported coefficient estimates from linear probability models with time and individual fixed effects. Standard errors clustered at the individual level in parenthesis. Constant term omitted. A detailed description of all the variables and their summary statistics are included in Appendices A.1-2. Source: LDPS 2014-15. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Leaving, staying or coming back?
Migration decisions during the Northern Mali conflict

Online Appendix

Appendix A.1: Summary Statistics

Table A1: Summary Statistics

Variable	Obs	Mean	SD	Min	Max
Panel A: Baseline sample					
Returned (Y/N)	501	0.439	0.497	0	1
Want to go back - Baseline	280	0.889	0.314	0	1
Female	501	0.489	0.500	0	1
Age	501	38.7	13.8	18	80
Higher Education	501	0.214	0.410	0	1
Married	501	0.693	0.462	0	1
Songhai ethnicity	501	0.475	0.500	0	1
Kidal region of origin	501	0.110	0.313	0	1
HH size (August 2014)	501	7.9	4.1	1	22
Member ethnic group dead in crisis	479	0.397	0.490	0	1
HH members dead in crisis	501	0.046	0.209	0	1
HH members behind	501	0.321	0.467	0	1
HH head left behind	495	0.085	0.279	0	1
HH spouse left behind	495	0.048	0.215	0	1
Northern Mali safe	497	0.161	0.368	0	1
Safe at home	501	0.715	0.452	0	1
Police issues	501	0.265	0.442	0	1
>1 transfers before settling	501	0.044	0.205	0	1
Asset index above median	501	0.499	0.500	0	1
Have received assistance	501	0.677	0.468	0	1
Work during displacement	501	0.214	0.410	0	1
Panel B: Panel sample					
Plan to go back - Panel	3,277	0.336	0.473	0	1
Employed	5,946	0.546	0.498	0	1
Safe during day	5,951	0.989	0.105	0	1
Safe at night	5,951	0.961	0.194	0	1
Own a weapon	5,951	0.005	0.073	0	1
Improvement Mali crisis	5,951	0.703	0.457	0	1
Refugee	3,336	0.638	0.481	0	1

Note: this table includes all observations in the relevant sample. Panel B includes all follow-up waves excluding the baseline interviews. The actual number of observation used in each regression may vary since not all variables were observed for each individual. Household is abbreviated as HH.

Appendix A.2: Variable description

A.2.1 Dependent variables

Returned (Y/N) is an indicator variable equal to one if the respondent had returned in Northern Mali by August 2014, while it is equal to zero if the respondent was a refugee or IDP at the time of the baseline interview. It should be noted that the definition of IDPs used in this survey is different from the one adopted from the UNHCR. This agency considers as IDPs also people displaced in the northern part of the country.

Want to go back - Baseline is an indicator variable equal to one if the respondent declared in August 2014 that he was considering eventually going back to Northern Mali, zero if she was not considering such a possibility.

Plan to go back – Panel is an indicator variable equal to one if the respondent declared that she was not considering going back to Northern Mali in the subsequent month, zero if she was not considering such a possibility. It is worth stressing the slight difference between the baseline question (considering going back one day) and the follow-up surveys (considering going back in the subsequent month). For this reason, the estimated coefficients reported in Table 3 do not include the baseline interviews.

A.2.2 Independent variables (Baseline)

Female is an indicator variable equal to one if the respondent's sex was female, zero if the respondent's sex was male.

Age is a variable recording the respondent's age in number of years.

Higher Education is an indicator variable equal to one if the respondent's highest self-reported educational level was secondary education (even if not completed) or higher, zero otherwise.

Married is an indicator variable equal to one if the respondent was married (monogamous or polygamous) or partnered, zero if she was single, divorced or widowed.

Ethnicity has been expressed using different indicator variables. Individuals were asked to which ethnic groups they belonged to. Given their answer, we constructed five categories: *Songhai*, *Tamasheq*, *Arab*, *Peulh*, *Bella* (Tamasqueq noir), and *Other*. The last group included Malinké, Dogon, Senufo, Bambara, Soninké / Saracolé, Khassonké, Bozo. Nobody identified herself as Mianka or Bobo.

Kidal region of origin is an indicator variable equal to one if the respondent came from Kidal (55 observations), zero otherwise. The other two Malian regions in the North are Gao (206) and Tombouctou (229). 11 respondents came from different regions in the South: Bamako (2), Koulikoro (1), and Mopti (8).

HH size is a variable recording the total number of individuals in the household at the time of the initial interview (August 2014).

Member ethnic group dead in crisis is an indicator variable equal to one if the respondent experienced some losses in her ethnic groups during the 2012 crisis, zero otherwise. Note that some individuals (22 respondents, i.e., 4% of the sample) answered “Don’t know”. In these cases, the constructed indicator variable is also missing.

HH members dead in crisis is an indicator variable equal to one if the respondent experienced some losses in her original household during the 2012 crisis, zero otherwise.

HH members behind is an indicator variable equal to one if some members of the respondent’s original household were left behind despite the 2012 crisis, zero otherwise.

HH head left behind is an indicator variable equal to one if household head was left behind in Northern Mali, zero if she moved together with the respondent. Here the relevant household is the one to whom the respondent belonged before the 2012 crisis.

HH spouse left behind is an indicator variable equal to one if household head’s spouse was left behind in Northern Mali, zero if she moved together with the respondent, or if the household head was not married. Here the relevant household is the one to whom the respondent belonged before the 2012 crisis.

Northern Mali safe is an indicator variable equal to one if the respondent deemed Northern Mali as an area “Absolutely Secure” or “Secure”, zero if she considered it as “Not Secure” or “Completely Unsecure”.

Safe at home is an indicator variable equal to one if the respondent felt “Very Safe” or “Safe” while at home alone, zero if she declared that she felt “Unsafe” or “Very Unsafe” in that situation.

Police issues is an indicator variable equal to one if the respondent experienced some difficulties with the national or foreign security forces during the displacement, zero otherwise.

>1 transfers before settling is an indicator variable equal to one if the respondent moved more than once during the 2012 crisis before finding a stable zone.

Asset Index. The questionnaire asked if the interviewed individuals had the following items: bed, table, chair, fan, AC, radio, CD/DVD reader, TV, fridge, motorbike, car, phone. In order to create the *Simple Asset Index*, we assigned one point to an individual if she owned a certain asset, and then we took the average across all items for each individual. For the *Weighted Asset Index*, we weight each item by 1 minus the average ownership rate of such asset, we summed across items for each individual, and we normalized such summation to one by dividing for the sum across items of 1 minus the average ownership rate of each asset. We computed these two indices using information about asset ownership both before the conflict and in August 2014. *Asset Index above median* is an indicator variable equal to one if the respondent’s weighted asset index in August 2014 was above the median weighted asset index in the sample.

Have received assistance is an indicator variable equal to one if the respondent’s household received any formal assistance (food, health assistance or another forms of aid), zero otherwise.

Work during displacement is an indicator variable equal to one if the respondent had a paid work occupation during the displacement.

Appendix A.2.3: Independent variables (Follow-up)

Work is an indicator variable equal to one if the respondent worked in the week before the interview, zero otherwise. Only paid work was considered.

Safe during day is an indicator variable equal to one if the respondent felt safe when she went out alone during the day, zero otherwise.

Safe at night is an indicator variable equal to one if the respondent felt safe at home at night, zero otherwise.

Own a gun is an indicator variable equal to one if the respondent owned a weapon for her self-defense, zero otherwise.

Improvement Mali crisis is an indicator variable equal to one if the respondent believed that the likelihood of achieving peace in Northern Mali had increased in the previous month, zero otherwise.

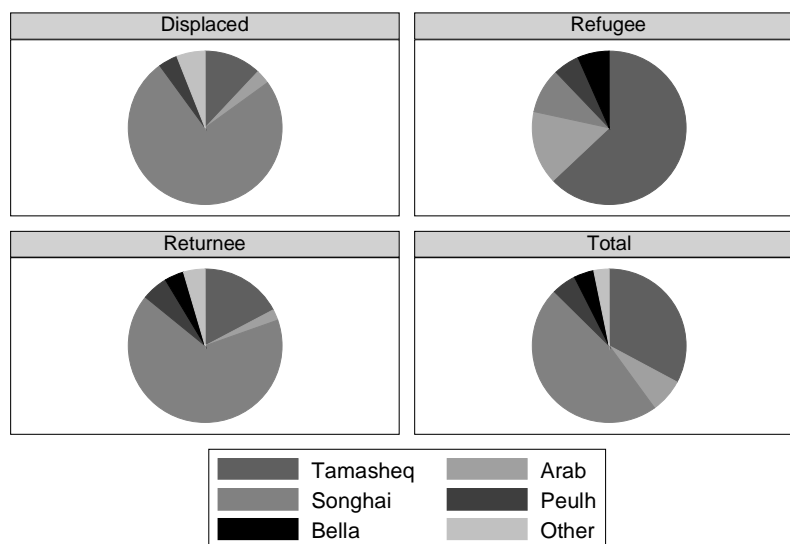
Refugee is an indicator variable equal to one if the respondent was a refugee at the time of the interview, zero if she was internally displaced.

Appendix A.3: Additional descriptive statistics

A.3.1 Ethnicity

As we can see from Figure A1, the majority of the sample is Songhai and Kel Tamasheq (Tuareg). Almost everybody identified themselves as Muslim. There are clear differences in migration decisions between ethnic groups, probably driven by the conflicts between the Tuareg group, the Malian army, and the Islamic groups. The reaction of most of Arab and Kel Tamasheq individuals was to leave the country, while most Songhai people preferred to go south (Bamako), or, by the time of our survey, had already returned to Northern Mali. In fact, as pointed out in Etang-Ndip et al. (2015), IDPs and returnees had a similar ethnic composition because 94% of returnees in our sample were IDPs. Far fewer returnees in the sampled cities of Gao, Tombouctou and Kidal returned from refugee camps in the neighboring countries for the simple reason that most refugees used to live in town and villages outside the regional capitals of Northern Mali.

Figure A1: Ethnic composition of the sample



Source: LDPS 2014-15

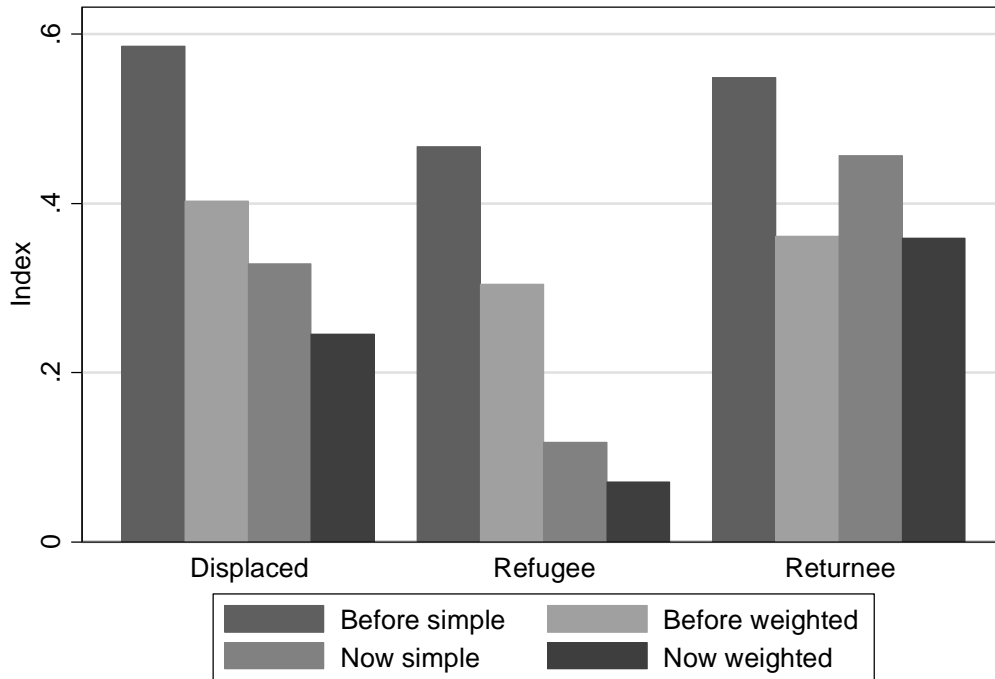
A.3.2 Welfare

As already pointed out in Etang-Ndip et al. (2015), average asset ownership of the people in the sample was higher than the average inhabitant of the North. All three respondent groups reported big losses of livestock. To deepen our analysis, and using the information on asset ownership before the conflict and in August 2014 (the time of the baseline), we computed some simple and weighted asset indices, as described in Appendix A.2. There are shown in Figure A2. It is interesting to note that before the crisis IDPs were on average better off, while the conflict deeply affected the refugees. This is in contrast with the idea that refugees are wealthier individuals who can fund the longer distance migration (Bohra-Mishra and Massey, 2011). On the other hand, returnees were the least affected and their weighted asset index in August 2014 was roughly at the

pre-crisis level.

Nevertheless, it should be stress that these indices give only a partial picture of their wealth. Indeed, we cannot say a priori if the refugees completely lost almost all their assets, or they just sold it before leaving since most of them were heavy to carry or useless in a refugee camp. If the latter case is true, the drop described above would simply indicate a shift from durable assets to liquid wealth (cash).

Figure A2: Asset Index

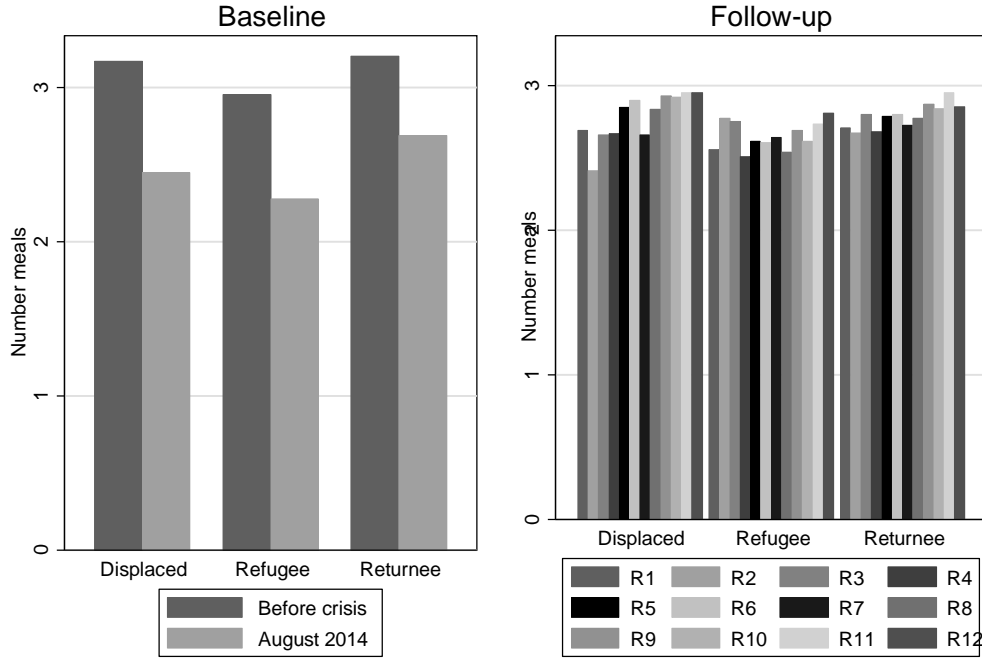


Source: LDPS 2014-15

In addition to this, both IDPs and returnees seem to have universal access to health and education services, electricity, water and housing. On the other hand, refugee camps were ill-equipped to face health-related issues and few households living there had access to electricity.

Another indicator of welfare is nutrition. Using a multivariate analysis, Etang-Ndip et al. (2015) did not find that the duration of displacement significantly affected the number of meals consumed even though the data do show a drop in the number of meals during the initial part of the crisis. However, there was a rapid growth in the subsequent months (Figure A3). As a result, all three groups had on average almost 3 meals per day in the spring of 2015.

Figure A3: Number of meals per day



Source: LDPS 2014-15

Foreign and domestic assistance can play a crucial role in helping people not only to survive during a major crisis or conflict, but also to successfully transit from one period to another. Due probably also to the fact that they were easy to target, almost all refugees obtained some aid. On the other hand, while more than half of the IDPs received assistance, several people among the returnees did not receive any assistance.

A.3.3 Location Choice

The initial region of origin is strongly correlated to subsequent migration decisions. Indeed, in line with the previous literature stressing the role of limited transportation options (Fransen et al., 2017), respondents chose the refugee camp closest to their region of origin. As shown in Table A2, all refugees in Niger came from Gao, while almost all refugees in Mauritania came from Timbuktu.

Furthermore, as expected, returnees came back to their region of origin. In particular, almost all individuals from Kidal had already returned to Northern Mali when initially interviewed in 2014. On the other hand, around 25% of the respondents originally from Timbuktu were still internally displaced, while 40% of them were in the refugee camp in Mauritania. Also 17% of the respondents from Gao were still displaced in Bamako, while 40% of them were in the refugee camp in Niger.

Table A2: Location of Origin and at Baseline

		Location at Baseline					Mauritania
		Timbuktu	Gao	Kidal	Bamako	Niger	
Region of Origin	Timbuktu	80	0	0	58	0	91
	Gao	0	89	0	36	81	0
	Kidal	0	1	49	4	0	1

Note: each cell reports the number of respondents by region of origin and location at the baseline interview (August 2014). 11 individuals have been omitted because originally from a different region (mainly Mopti).

Location choices were also related to other demographic characteristics. For instance, 34% of respondents with secondary education or higher were located in Bamako when initially interviewed. On the other hand, almost 42% of individuals with lower education were displaced in the refugee camps in Niger and Mauritania.

If we focus on the relation between wealth and location, we can notice that 24% of “rich” respondents – that is, those whose weighted asset index before the crisis (as in Figure A2) was above median – were located in Bamako in 2014, while 21% were in Mauritania. The refugee camp in Niger attracted mainly poor households. Quite interestingly, most of the respondents (61%) who experienced losses within the household during the crisis were displaced in the capital city. In contrast with this, the majority (56%) of those who had experienced losses within their ethnic groups had migrated to the two refugee camps. Given these results, we have controlled for these variables when looking at the relation between employment, safety and migration decisions in the multivariate analysis (Table 2).

Appendix A.4: Additional tables

Table A3: Transition matrices

Panel A: Transition probabilities: all waves

	Displaced	Refugee	Returnee
Displaced	97.44	0.17	2.4
Refugee	0.09	99.62	0.28
Returnee	1.12	0.19	98.69

Panel B: Transition matrices: selected rounds

Round 0 to 1	Displaced	Refugee	Returnee	Round 3 to 4	Displaced	Refugee	Returnee
Displaced	98	0	2	Displaced	96	0	4
Refugee	0	175	1	Refugee	0	168	1
Returnee	3	0	216	Returnees	6	2	205
Round 6 to 7	Displaced	Refugee	Returnee	Round 8 to 9	Displaced	Refugee	Returnee
Displaced	99	0	3	Displaced	97	1	1
Refugee	0	181	1	Refugee	0	176	0
Returnee	0	0	215	Returnees	0	0	219
Round 11 to 12	Displaced	Refugee	Returnee	Round 1 to 12	Displaced	Refugee	Returnee
Displaced	99	0	4	Displaced	97	0	3
Refugee	0	177	0	Refugee	0	171	0
Returnee	0	0	215	Returnees	2	1	215

Table A4: Migration decisions and future plans at the baseline. All controls reported.

	Returned (Y/N)		Intention to return
	(1) All	(2) IDPs and Returnees	(3) IDPs and Refugees
Northern Mali safe	-0.002 (0.049)	-0.011 (0.056)	-0.119 (0.079)
Safe at home	0.032 (0.042)	0.034 (0.050)	0.017 (0.054)
Police issues	0.177*** (0.043)	0.148*** (0.049)	-0.024 (0.055)
Work during displacement	-0.171*** (0.042)	-0.328*** (0.066)	-0.093* (0.051)
Female	0.021 (0.034)	0.004 (0.044)	0.043 (0.043)
Age	-0.001 (0.001)	0.000 (0.002)	0.001 (0.002)
Higher Education	-0.074 (0.049)	-0.154*** (0.054)	-0.073 (0.060)
Married	-0.003 (0.035)	-0.017 (0.045)	0.048 (0.051)
Songhai ethnicity	0.086** (0.042)	-0.067 (0.050)	0.044 (0.056)
Kidal region of origin	0.341*** (0.061)	0.222*** (0.065)	0.251** (0.099)
HH size (August 2014)	-0.016*** (0.004)	-0.028*** (0.006)	-0.009* (0.005)
Member ethnic group dead in crisis	-0.122*** (0.038)	-0.162*** (0.055)	0.054 (0.046)
HH members dead in crisis	-0.117 (0.074)	-0.162* (0.089)	-0.083 (0.116)
HH members behind	0.062 (0.039)	0.044 (0.043)	-0.014 (0.057)
HH head left behind	0.111 (0.076)	0.087 (0.078)	0.013 (0.086)
HH spouse left behind	0.206** (0.083)	0.147** (0.074)	0.218*** (0.064)
>1 transfers before settling	0.127 (0.083)	0.144 (0.097)	0.174*** (0.054)
Asset index above median	0.312*** (0.045)	0.174*** (0.056)	-0.023 (0.049)
Have received aids	-0.247*** (0.046)	-0.097** (0.048)	-0.019 (0.063)
Observations	470	306	259

Robust standard errors in parenthesis. This table is equivalent to Table 2, but reports all the estimated coefficients for the controls. The dependent variable in the first two columns is whether the respondent had already returned to Northern Mali by August 2014. The first column includes all observations, while the second column includes only IDPs and returnees, this excluding refugees. A detailed description of all the variables and their summary statistics are included in Appendices A.1-2. Source: LDPS Baseline (August 2014)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A5: Migration decisions and future plans at the baseline. Probit Marginal Effects.

	Returned (Y/N)		Intention to return
	(1) All	(2) IDPs and Returnees	(3) IDPs and Refugees
Northern Mali safe	-0.047 (0.077)	-0.069 (0.078)	-0.145* (0.085)
Safe at home	-0.016 (0.072)	0.010 (0.064)	0.015 (0.046)
Police issues	0.327*** (0.065)	0.174*** (0.053)	-0.030 (0.053)
Work during displacement	-0.304*** (0.062)	-0.439*** (0.083)	-0.097** (0.049)
Observations	470	306	243
Pseudo R ²	0.509	0.387	0.119

Marginal effects reported. Robust standard errors in parenthesis. The dependent variable in the first two columns is whether the respondent had already returned to Northern Mali by August 2014. The first column includes all observations, while the second column includes only IDPs and returnees, this excluding refugees. The dependent variable in the last columns is whether in August 2014 the respondent was considering eventually going back to Northern Mali. Controls not shown: gender, age, literacy, secondary or tertiary education, marital status, ethnicity, region of origin, household size, wealth, whether members of the household or the ethnic group died during the crisis, whether some of the household members were left behind during the displacement, whether the household migrated more than once during the crisis, and whether the respondent received any formal aid. Source: LDPS Baseline (August 2014)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A6: Migration decisions and future plans at the baseline. Additional controls.

	Returned (Y/N)		Intention to return
	(1) All	(2) IDPs and Returnees	(3) IDPs and Refugees
Northern Mali safe	0.008 (0.050)	0.011 (0.061)	-0.093 (0.072)
Safe at home	0.036 (0.044)	0.047 (0.052)	-0.005 (0.060)
Police issues	0.154*** (0.044)	0.157*** (0.053)	0.007 (0.063)
Work during displacement	-0.201*** (0.045)	-0.307*** (0.070)	-0.111** (0.055)
Observations	470	306	259
R ²	0.546	0.432	0.199
Adjusted R ²	0.504	0.352	0.052

Robust standard errors in parenthesis. The dependent variable in the first two columns is whether the respondent had already returned to Northern Mali by August 2014. The first column includes all observations, while the second column includes only IDPs and returnees, this excluding refugees. The dependent variable in the last columns is whether in August 2014 the respondent was considering eventually going back to Northern Mali. Controls not shown: gender, age, age squared, education, marital status indicators (single, cohabitating, married, married polygamous, divorced, widowed), ethnicity indicators (Tamasheq, Arab, Songhai, Peulh, Bella, Other), region of origin indicators (almost everybody from Tombouctou, Gao, Kidal), current household size, household size before conflict, ratio women in the household before crisis, number household members left behind during the displacement, whether members of the household or the ethnic group died during the crisis, whether household head left behind during the displacement, whether household head spouse left behind during the displacement, whether grand-parents left behind during the displacement, whether the household migrated more than once during the crisis, whether the respondent received any formal aid, whether the respondent received any informal aid by family or friends, weighted asset index before crisis above median, weighted asset index August 2014 above median, public employee before crisis. Source: LDPS Baseline (August 2014)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A7: Plan to go back (Y/N). Additional controls.

	Refugees and IDPs	
	(1)	(2)
Improvement Mali crisis	-0.076*** (0.014)	-0.075*** (0.014)
Safe during day	-0.084 (0.153)	-0.098 (0.177)
Safe at night	0.142* (0.086)	0.145 (0.091)
Own a weapon	0.298*** (0.083)	0.299*** (0.083)
Work	-0.081*** (0.018)	-0.079*** (0.018)
Number meals/day	-0.007 (0.011)	-0.006 (0.011)
Refugee		0.406*** (0.042)
Time dummies	Yes	Yes
Observations	3,272	3,254
Overall R ²	0.0008	0.0024
Within R ²	0.0793	0.0801

Reported coefficient estimates from linear probability models with time and individual fixed effects. Standard errors clustered at the individual level in parenthesis. Constant term omitted. Source: LDPS 2014-15.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A8: Plan to go back (Y/N). Refugees and IDPs separately.

	(1) IDPs	(2) Refugee
Improvement Mali crisis	-0.175*** (0.028)	-0.032** (0.013)
Safe during day	0.045 (0.181)	-0.239 (0.242)
Safe at night	0.105 (0.126)	0.235** (0.118)
Own a weapon	0.228* (0.129)	0.330*** (0.101)
Work	-0.114*** (0.034)	-0.076*** (0.021)
Time dummies	Yes	Yes
Observations	1,149	2,105
Overall R ²	0.2368	0.0027
Within R ²	0.1453	0.1156

Reported coefficient estimates from linear probability models with time and individual fixed effects. Standard errors clustered at the individual level in parenthesis. Constant term omitted. Source: LDPS 2014-15.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A9: Plan to go back (Y/N). Conditional Logit Model.

	Refugees and IDPs	
	(1)	(2)
Improvement Mali crisis	-1.248*** (0.376)	-1.250*** (0.383)
Safe during day	-0.085 (11.851)	-0.091 (12.329)
Safe at night	1.113 (5.918)	1.101 (5.592)
Own a weapon	2.587 (3.147)	2.588 (2.879)
Work	-1.231*** (0.275)	-1.199*** (0.306)
Refugee		13.271*** (1.530)
Time dummies	Yes	Yes
Observations	1,388	1,369
Pseudo R ²	0.2359	0.2358

Reported coefficient estimates from conditional logit models with time and individual fixed effects. Bootstrapped standard errors (500 replications) in parenthesis. Source: LDPS 2014-15. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A10: Baseline Order Probit (don't want to go back, want to go back, returned).

	Marginal effects			
	(1) Coefficients	(2) Don't want to go back	(3) Want to go back	(4) Returned
Northern Mali safe	-0.246 (0.190)	0.024 (0.018)	0.035 (0.027)	-0.059 (0.045)
Safe at home	0.111 (0.160)	-0.011 (0.016)	-0.016 (0.023)	0.026 (0.038)
Police issues	0.486*** (0.156)	-0.047*** (0.015)	-0.069*** (0.023)	0.115*** (0.037)
Work during displacement	-0.742*** (0.159)	0.071*** (0.016)	0.105*** (0.024)	-0.176*** (0.038)
Observations	469			
Pseudo R ²	0.343			

Robust standard errors in parenthesis. The first column reports the estimated coefficients of the order probit model. The dependent variable is equal to one if the respondent declared in August 2014 that he or she was not considering eventually going back to Northern Mali. It is equal to two if he or she was actually considering such a possibility, while it is equal to three if he or she had already returned in Northern Mali. Columns 2-4 reports the marginal effects on the probability of not wanting to go back (Column 2), the probability of wanting to go back one day (Column 3), and the probability of having already returned (Column 4). Controls not shown: gender, age, literacy, secondary or tertiary education, marital status, ethnicity, region of origin, household size, wealth, whether members of the household or the ethnic group died during the crisis, whether some of the household members were left behind during the displacement, whether the household migrated more than once during the crisis, and whether the respondent received any formal aid. Source: LDPS 2014-15

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A11: Pooled panel Order Probit (don't want to go back, want to go back, returned).

	Marginal effects			
	(1) Coefficients	(2) Don't want to go back	(3) Want to go back	(4) Returned
Northern Mali safe	0.174 (0.160)	-0.037 (0.034)	-0.002 (0.002)	0.039 (0.036)
Safe at home	-0.206 (0.133)	0.044 (0.028)	0.003 (0.002)	-0.047 (0.030)
Police issues	0.727*** (0.137)	-0.155*** (0.029)	-0.010*** (0.004)	0.165*** (0.031)
Work during displacement	-0.640*** (0.148)	0.136*** (0.031)	0.009** (0.004)	-0.145*** (0.033)
Threshold 1	-2.045*** (0.304)			
Threshold 2	-1.171*** (0.296)			
Time dummies	Yes			
Observations	6,005			
Pseudo R ²	0.339			

Standard errors clustered at the individual level in parenthesis. The first column reports the estimated coefficients of the order probit model. The dependent variable is equal to equal one if the respondent declared in the follow-up interviews that he or she was not considering going back to Northern Mali in the subsequent month. It is set equal to two if he or she was actually considering such a possibility, while it is equal to three if he or she had already returned in Northern Mali. Columns 2-4 reports the marginal effects on the probability of not wanting to go back (Column 2), the probability of wanting to go back one day (Column 3), and the probability of having already returned (Column 4). Controls not shown: gender, age, literacy, secondary or tertiary education, marital status, ethnicity, region of origin, household size, wealth, whether members of the household or the ethnic group died during the crisis, whether some of the household members were left behind during the displacement, whether the household migrated more than once during the crisis, and whether the respondent received any formal aid. Source: LDPS 2014-15

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A12: Plan to go back (Y/N). Only household head and spouse.

	Refugees and IDPs	
	(1)	(2)
Improvement Mali crisis	-0.068*** (0.014)	-0.069*** (0.014)
Safe during day	-0.091 (0.178)	-0.109 (0.212)
Safe at night	0.155* (0.091)	0.159 (0.097)
Own a weapon	0.225** (0.107)	0.225** (0.107)
Work	-0.075*** (0.019)	-0.071*** (0.018)
Refugee		0.417*** (0.040)
Time dummies	Yes	Yes
Observations	2,489	2,479
Overall R ²	0.0002	0.0018
Within R ²	0.0725	0.0741

Reported coefficient estimates from linear probability models with time and individual fixed effects. Standard errors clustered at the individual level in parenthesis. Only household head and spouse have been considered. Constant term omitted. Source: LDPS 2014-15.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A13: Plan to go back (Y/N). Songhai or Tamasheq only.

	Songhai		Tamasheq
	(1)	(2)	(3)
Improvement Mali crisis	-0.181*** (0.042)	-0.181*** (0.041)	-0.022 (0.014)
Safe during day	0.045 (0.243)	0.041 (0.241)	-0.525 (0.344)
Safe at night	0.161 (0.172)	0.160 (0.171)	0.278 (0.349)
Own a weapon	0.237 (0.155)	0.238 (0.155)	0.097* (0.054)
Work	-0.162*** (0.043)	-0.157*** (0.043)	-0.014 (0.013)
Refugee		0.249*** (0.026)	
Time dummies	Yes	Yes	Yes
Observations	1,087	1,082	1,464
Overall R ²	0.1689	0.1926	0.0226
Within R ²	0.1242	0.1224	0.0530

Reported coefficient estimates from linear probability models with time and individual fixed effects. Standard errors clustered at the individual level in parenthesis. Only observations whose ethnicity is Songhai or Tamasheq has been included in Columns 1-2 and 3 respectively. The model for Tamasheq only does not control for refugee status because there was no variation over time in this variable among this subpopulation, so the variable would be omitted. Constant term omitted. Source: LDPS 2014-15.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A14: Migration decisions and future plans at the baseline. Weighted regressions.

	Returned (Y/N)		Intention to return
	(1) All	(2) IDPs and Returnees	(3) IDPs and Refugees
Northern Mali safe	0.068 (0.053)	0.065 (0.061)	-0.104 (0.081)
Safe at home	0.028 (0.046)	0.001 (0.058)	0.038 (0.061)
Police issues	0.191*** (0.047)	0.188*** (0.057)	-0.037 (0.060)
Work during displacement	-0.160*** (0.039)	-0.286*** (0.068)	-0.092* (0.050)
Observations	470	306	259
R ²	0.457	0.417	0.133
Adjusted R ²	0.434	0.379	0.064

Robust standard errors in parenthesis. This table replicates Table 2, but weights observations to take into account the endogenous sampling. The dependent variable in the first two columns is whether the respondent had already returned to Northern Mali by August 2014. The first column includes all observations, while the second column includes only IDPs and returnees, this excluding refugees. The dependent variable in the last column is whether in August 2014 the respondent was considering eventually going back to Northern Mali. Controls not shown: gender, age, secondary or tertiary education, marital status, ethnicity, region of origin, household size, wealth, whether members of the household or the ethnic group died during the crisis, whether some of the household members were left behind during the displacement, whether the household migrated more than once during the crisis, and whether the respondent received any formal aid. Source: LDPS Baseline (August 2014)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A15: Plan to go back (Y/N). Weighted regressions.

	Refugees and IDPs	
	(1)	(2)
Improvement Mali crisis	-0.075*** (0.015)	-0.075*** (0.015)
Safe during day	-0.121 (0.155)	-0.140 (0.181)
Safe at night	0.129 (0.087)	0.135 (0.093)
Own a weapon	0.256*** (0.090)	0.258*** (0.090)
Work	-0.080*** (0.018)	-0.077*** (0.018)
Refugee		0.419*** (0.041)
Time dummies	Yes	Yes
Observations	3,272	3,254
Overall R ²	0.0000	0.0015
Within R ²	0.0635	0.0638

Reported coefficient estimates from linear probability models with time and individual fixed effects. Standard errors clustered at the individual level in parenthesis. This table replicates Table 3, but weights observations to take into account the endogenous sampling. Constant term omitted. Source: LDPS 2014-15.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$