



Poverty & Equity Global Practice Working Paper 102

LEAVING, STAYING, OR COMING BACK?

MIGRATION DECISIONS DURING THE
NORTHERN MALI CONFLICT

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March 2017

ABSTRACT

This paper uses a unique data set to analyze the migration dynamics of refugees, returnees, and internally displaced people during the Northern Mali conflict. Individuals were interviewed monthly using mobile phones. The results cast light on the characteristics of these three groups before and after the crisis. In addition, the paper tests how employment status, security, and expectations affect people's willingness to go back home. The findings suggest that the decision to return is affected by a comparison of (opportunity) costs and benefits, but also by other factors. Individuals who are employed while displaced are less willing to go back to the North, as are better educated individuals or those receiving assistance. The opposite is true for those whose ethnicity is Songhai, as well as for those who originated from Kidal. The results show that higher educated individuals performed better when displaced and in case they decide to return, they find a job more easily.

This paper is a product of the Poverty and Equity Global Practice Group. It is part of a larger effort by the World Bank to provide open access to its research and contribute to development policy discussions around the world. The authors may be contacted at jhoogeveen@worldbank.org or at mariacristina.rossi@econ.unito.it or ds1289@georgetown.edu.

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– Poverty & Equity Global Practice Knowledge Management & Learning Team

Leaving, Staying, or Coming Back?

Migration Decisions during the Northern Mali Conflict[▲]

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

JEL: J15; O15; R23.

[▲] We benefitted from feedback and suggestions from Andrew Dabalen and José Calix and are grateful to participants to the SITES/IDEAs 2016 conference for their helpful comments. The usual caveats apply.

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1. Introduction

The Northern Mali conflict started in January 2012. It was caused by several secessionist groups and led to a coup d'état in March 2012 and to the occupation of the three regions of the North – Gao, Kidal and Timbuktu – by rebels and Islamist factions. These territories were regained following a military intervention by a coalition composed of the Malian Army, French troops and the ECOWAS-led African-led International Support Missions to Mali (AFISMA) in June 2013 (David, 2013). A Peace Accord was finally signed in May and June 2015 between the government and different actors involved in the rebellion. Nevertheless, in spite of the Accord, 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 Internally Displaced People (IDPs) and around 23,000 returnees (about 49,000 according to the Mali 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).

The scope of this paper is to analyze some important characteristics of refugees, IDPs and returnees. Furthermore, we investigate the willingness to return to their place of origin for refugees and IDPs after the conflict in Mali. By making use of a unique data set interviewing the head of household (or another member) for as many as 12 consecutive waves, we managed to gather information on welfare and subjective well-being, as well as on willingness to return. Using mobile phones for interviews 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. 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, Justino, Verwimp, Avdeenko, & Tedesco, 2016). Still, the attrition rate was exceptionally low even if respondents changed locations and were difficult to contact in person. We note that the high-frequency, mobile phone based, panel structure used for this research is well-suited for situations where respondents live in highly-volatile environments.

Our goal is to provide as much information as possible on the conditions of people following displacement, whether they are in a refugee camp or in another locality in Mali or outside the country. The place where respondents lived after the conflict might be related to the willingness to return, or

to different perceptions about security, but it may also be that different localities attracted people with different characteristics. For example, refugee camps are settings where everything is pre-arranged, i.e., food, living quarters, as well as where children go to school. This may affect people's return decision. However, we could argue that more educated people might be more inclined to search for better opportunities, and thus be less likely to stay in refugee camps.

This paper is structured as follows. In this section we have given some background information about the Northern Mali crisis and we motivated our paper. We have also highlighted the peculiarity of our data set, which allows us to shed light on individuals who are usually hard to track and, hence, disregarded in other studies. Section 2 reviews the current literature on forced migration. Sections 3 and 4 describe the data used in the empirical section and provide descriptive statistics. Particular attention is devoted to describing the demographic characteristics of migrants and their welfare.

Section 5 represents the core of our analysis. We start by showing in which dimensions respondents who returned to the North differ from those who stayed in the South or abroad in refugee camps (Section 5.1). We have then move to simultaneously comparing returnees, refugees and IDPs (Section 5.2). Subsequently, focusing on refugees and IDPs, we analyze which variables are associated with the willingness to return to Northern Mali (Section 5.3). We jointly consider those who did not want to go back, those who are considering such option, and those who had already returned (Section 5.4). Finally, we use a fixed-effect estimation strategy to verify how employment, security and expectations drive future migration decisions (Section 5.5). Section 6 concludes, while the Appendix includes summary statistics and the description of all variables used in the empirical section.

2. Literature Review

Despite its growing importance, forced migration has not received much attention by economists until recently. A review of the most recent literature on the economic impacts of forced migration has been provided by (Ruiz & Vargas-Silva, 2013), while (Verwimp & Maystadt, 2015) gave an overview on forced migration in Sub-Saharan Africa. Early evidence from Finland ((Serc, 2009)) and Germany ((Falck, Link, & Heblich, 2011), (Bauer, Braun, & Kvasnicka, 2013)) found often positive long-term impact of forced migrations following WWII. On the other hand, (Justino & Verwimp, 2013) found evidence of economic convergence between richer and poorer provinces and households in Rwanda following the violent conflicts in the 1990s. Furthermore, they stressed that, while rich households may be more resilient to economic shocks, such assets and wealth could make them a target during violent conflicts or political shocks.

Focusing on the effects in the short-term and medium-term, (Kondylis, 2010) found that displaced people after the war in Bosnia and Herzegovina had lower employment and participation rates than people who stayed, while (Eder, 2014) found a negative impact on children's education in households who were forced to move during that war. Fiala, (2012) showed a decrease in consumption and asset levels among displaced individuals in Northern Uganda even two years after the shock, especially among the poorest households. Looking at forced displacement in Colombia, (Ibáñez & Vélez, 2008) found substantial welfare losses, while (Ibáñez & Moya, 2010) showed that displaced households had a reduced ability to smooth consumption and did not have access to risk-sharing mechanisms.

Several papers have also looked at the impact of forced migration on host communities regarding labor markets ((Whitaker, 2002), (Braun & Omar Mahmoud, 2014), (Maystadt & Verwimp, 2014), (Ruiz & Vargas-Silva, 2015), (Calderón-Mejía & Ibáñez, 2015), (Borjas & Monras, 2016)), education and health ((Baez, 2011)), as well as prices ((J. Alix-Garcia & Saah, 2010), (Jennifer Alix-Garcia, Bartlett, & Saah, 2012)).

A different branch of the literature has investigated outcomes in refugee camps. Using data about displaced people in Northern Uganda, (Lehrer, 2010) argued that labor market participation was lower in older refugee camps for men, while no such impact was found among women. Similarly, (Bozzoli, Brueck, & Muhumuza, 2015) looked at the activity choices of internally displaced people and returnees in Northern Uganda. They found that IDPs were more likely to work in the agricultural and trading sectors. Crea, Calvo, & Loughry (2015) compared health and well-being of refugees between camps and cities in Sub-Saharan Africa: they found higher self-reported welfare in urban areas.

Last but not least, there is a fast expanding literature on the ongoing European refugee crisis. This has been analyzed from a political perspective ((Carrera, Blockmans, Gros, & Guild, 2015), (Fernández-Huertas Moraga & Rapoport, 2015), (Gilbert, 2015), (Dustmann, Fasani, Frattini, Minale, & Schonberg, 2016)), and in term of public attitudes in term of asylum seekers (Bansak, Hainmueller, & Hangartner, 2016); as well as by focusing on the refugees' well-being (Waisman & Larsen, 2016) and location choices (Damm, 2009).

3. Data

The data used in this paper have been collected through the Listening to Displaced People Survey (LDPS).⁴ The baseline face-to-face interviews were executed between June and August 2014. The following 12 monthly interviews – from August 2014 until August 2015 - were conducted using mobile phones.⁵ The original sample comprised 501 respondents (51% Male, 49% Female) and was divided between internally displaced people (IDPs) located in the capital city Bamako,⁶ refugees living in refugee camps in Mauritania and Niger, as well as returnees living in the regional capitals Gao, Timbuktu and Kidal in Northern Mali. This survey did not collect information on individuals who were never displaced. The attrition rate was very low, always around 1-2% per wave.

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 the north of Mali 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. It should also be noted that the respondent was selected randomly among household members above the age of 18 (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 often was not the male household head or spouse. Additional information on the data methodology can be found in (Etang-Ndip, Hoogeveen, & Lendorfer, 2015).

⁴ 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>.

⁵ More precisely, the subsequent interviews were conducted in August 2014, September/October 2014 and then from November 2014 every month. More information on high frequency panel data using mobile phone interviews can be found in (J. Hoogeveen, Croke, Dabalen, Demombynes, & Giugale., 2014) and (Dabalen et al., 2016).

⁶ 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.

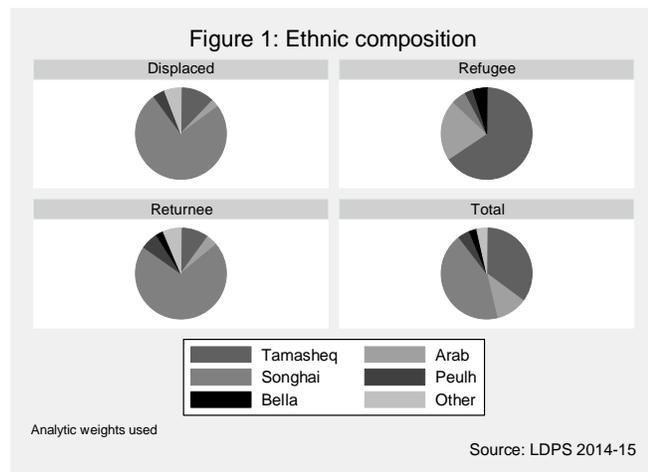
4. Descriptive Statistics

The aim of this section is to describe the characteristics of the different groups included in the survey, and to illustrate their living conditions, as well as their future migration plans. A preliminary analysis of these data has already been done by (Etang-Ndip et al., 2015). 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.

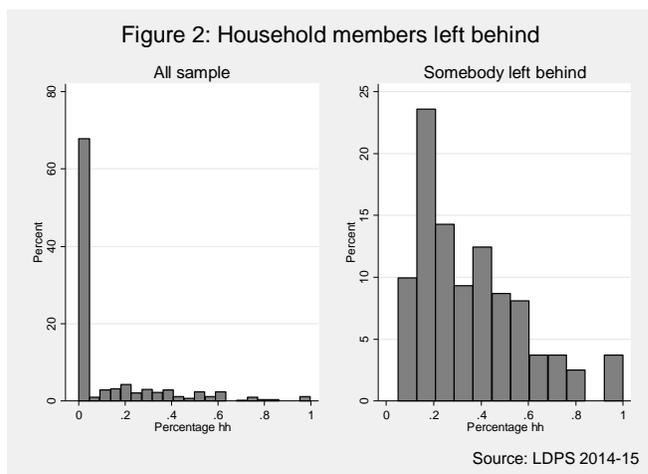
4.1 Demographic characteristics

Looking at the composition 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. The transition probability from being internally displaced in our sample to having returned to Northern Mali over the 12 waves is 2.4%. The same probability is even lower for refugees: only 0.3%. However, it should be pointed out that some refugee 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.

As we can see from Figure 1, the majority of the sample is Songhai and Kel Tamasheq (almost everybody identified themselves as Muslim). There are clear differences in migration decisions between ethnic groups. The reaction of most of Arab and Kel Tamasheq origin was to leave the country, while most Songhai people preferred to go south, to 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 have 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 towns and villages outside the regional capitals of Northern Mali.



As it is clear from the left panel in Figure 2, the vast majority of the interviewed people did not leave



any household member behind. However, there were some individuals who decided or were forced to migrate without other members of the household. Indeed, the right panel in Figure 2 shows that some households were split in two and that some migrants left without anybody else.

We can deepen our analysis by breaking apart the previous data by migrant status.

Indeed, almost everybody (86%) among the refugees did not leave anybody behind, while the same figure for IDPs and returnees was around 57%. Furthermore, the household head or the spouse remained in the North during the crisis more frequently for returnees, while the same was very uncommon among refugees.

These migration patterns have caused deep changes in the composition of households. While 184 of the surveyed individuals were household heads before the conflict who managed to maintain their role during the crisis, 47 individuals completely changed status and effectively became ‘visitors’ (Table D1). 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.

Table D1: Role inside the household before and after the crisis

Role before	Role After						Total
	Head	Spouse	Son/ Daughter	Father/ Mother	Brother/ Sister	Other	
Head	184	2	8	5	19	47	265
Spouse	2	56	1	4	21	27	111
Son/Daughter	2	0	15	0	3	29	49
Father/Mother	1	1	1	24	3	10	40
Brother/Sister	6	0	0	0	13	5	24
Other	1	1	0	0	0	10	12
Total	196	60	25	33	59	128	501

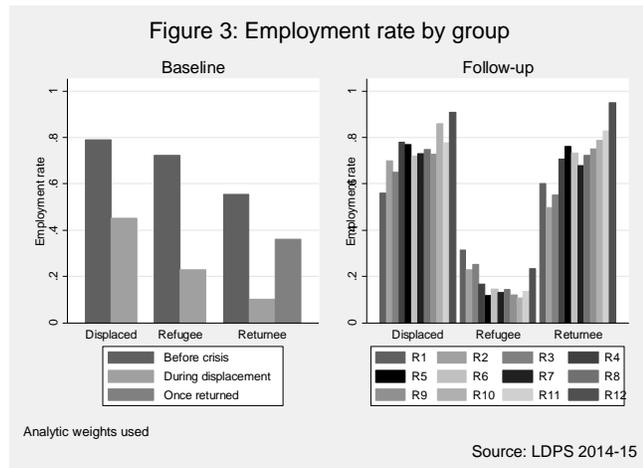
4.2 Security, employment, and welfare

One of the main goals of this analysis is to understand the willingness to return among refugees and IDPs. Almost 44% (unweighted percentage) 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.

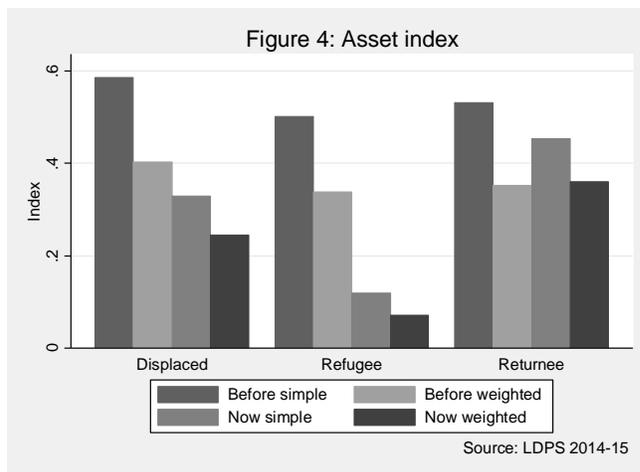
Unexpectedly, most returnees decided to come back because Northern Mali is their home (23%). Another 10% of was driven by the liberation of the area, and 9% because they were looking for a job. Family was often mentioned as a secondary reason for having returned. In addition to this, it is interesting to note that, in August 2014, 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% indicated that they did not face any such challenges.

It is quite surprising – and reassuring – to find out 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 had gone out alone during the day. Furthermore, the percentage of people in the sample who had been robbed ranged between 0.6% and 6.9% over time; while between 0.2% 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. Indeed, while very few refugees reported some victims in their households, most of them declared that there had been victims in their tribe or neighborhood. IDPs were the ones with the highest percentage of violent deaths within their households, while returnees were less hit by this kind of violence.

Before the crisis, and unsurprising given the sampling strategy, the main occupation for the interviewed people was commerce, while very few were farmers or shepherds. While most of the civil servants were able to keep their jobs, those working in commerce were badly affected by the crisis. As shown in the left panel of Figure 3, IDPs had the highest employment rate before the crisis, while only around half of the returnees used to work. All groups lost jobs during the displacement. Nevertheless, most returnees managed to work again once back, and in the last waves (right panel or Figure 3) 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 high willingness to return among this group.



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 simple and weighted asset indices. These are shown in Figure 4.⁷ It is interesting to note that before the crisis IDPs were on average better off,

while the conflict deeply affected the refugees. On the other hand, returnees were least affected and their weighted asset index in August 2014 was roughly at the pre-crisis level.⁸ In addition to this, both

⁷ A detailed description of how we computed these asset indices is available in the Appendix.

⁸ Nevertheless, it should be stressed that this index gives 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).

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, even if the growth path for IDPs had been slightly more volatile. Therefore, all three groups had on average almost 3 meals per day in the spring of 2015.

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.

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 access to basic services refugees face. The next section will employ multivariate analysis to further understand these phenomena.

5. Multivariate Analysis

5.1 Returned (Y/N)

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 Table 1 shows the estimated probit marginal effects using the whole sample, while in Column 2 only respondents who were the household head or spouse are considered.⁹ For the sake of completeness Column 3 presents results for IDPs only.

It is interesting to note that asset-rich households were much more likely to return (up to 46 percentage points). The same can be said about households belonging to the Songhai ethnic group. We find an even larger increase in the likelihood of return among respondents who were originally from Kidal. We should also mention the positive coefficient associated to the regressor “Police issues”: individuals who experienced some difficulties with the national security forces or with strangers during the displacement were more likely to return to Northern Mali. 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.

The decision to return seems to reflect the conditions during displacement as well as perceptions about the situation at home. Better conditions during displacement favor remaining displaced, while the prospect to be reunited with one’s family incentivizes return. Age or gender do not affect the decision to return. Thus, having received assistance is associated with a lower probability of returning home. Larger households are less likely to go back to Northern Mali (perhaps because returning is more costly). Households whose respondent worked during displacement are also less likely to return, as are households in which the respondent had completed secondary education, or higher. One may wonder whether this last result is due to these individuals being better informed about the situation in northern Mali, or whether their educational level gave them more flexibility and a greater ability to adapt and integrate in the new environment, which led them to not wanting to go back. The former hypothesis can be sustained by considering that, among these highly educated individuals, almost all of them received some news from their place of origin, while 15% of the lower educated respondents did not receive any information. Furthermore, highly educated individuals received this news mainly

⁹ Following (Joshua D Angrist, 2001) and (J. D. Angrist & Pischke, 2009), we have also estimated the same models using OLS. Results are qualitatively similar. When not reported, tables are available upon request. A detailed description of the variables used in this section is available in the Appendix. We should also stress that we are not making any causality claim in this section, but we rather want to describe respondents’ characteristics and their migration decisions.

through mobile phones and had access to the Internet more frequently, while the other respondents depended more on the radio and word of mouth, a potentially unreliable source.

The age of the respondent was not relevant for the decision to return. If the decision to return is taken by the head of household and others follow his decisions, this could be the consequence of the fact that respondents were selected randomly among the household members. However, the same result applies when considering household heads and spouses only (Column 2). Along the same line of reasoning, gender and marital status did not seem to matter for the decision to return.¹⁰ Quite surprisingly, safety was not pivotal: whether the respondents felt safe at home alone did not significantly affect their migration decisions. Nevertheless, whether some members of the household or the tribe died during the crisis negatively affected respondents' decision to go back. Last but not least, there is evidence suggesting that members left behind act as a pivot in shaping the decision to go back home. In particular, whether the household head's spouse was left behind, rather than the household head, is associated with a higher probability of returning to Northern Mali.

Given the small sample size, we had to use a parsimonious specification. Nevertheless, it is worth noting that, despite the few covariates, we managed to explain around half of the variation in this migration decision (the R^2 in the OLS estimation was similar). The pseudo- R^2 was even 0.54 in the model with only respondents who were household heads or their spouses. We tried to include additional regressors, but their coefficients were not statistically significant. In particular, whether the respondent was literate did not appear as a key variable in these specifications. Similarly, unlike formal aid, having received informal assistance from other family members or friends before or during the crisis was not correlated with the decision to go back. Finally, we also did not find any difference between public employees and other workers, as well as any effect of the household gender ratio on this migration decision.

¹⁰ We should stress that almost all spouses were female, while 69% of the interviewed household heads were male.

Table 1: Did you return (1) or are you still forcibly replaced?**Table: Returned (Y/N) - Probit Baseline (August 2014)**

	(1) All	(2) Head&Spouse	(3) IDP only
Female (d)	0.041 (0.064)	0.027 (0.027)	0.008 (0.058)
Age	-0.001 (0.002)	0.001 (0.001)	0.000 (0.002)
Higher Education (d)	-0.146** (0.069)	-0.034* (0.017)	-0.232*** (0.072)
Married (d)	-0.031 (0.069)	0.002 (0.032)	-0.057 (0.059)
Songhai ethnicity (d)	0.131** (0.065)	0.020 (0.027)	-0.101* (0.059)
Kidal region of origin (d)	0.552*** (0.077)	0.250 (0.164)	0.239*** (0.048)
HH size (August 2014)	-0.034*** (0.009)	-0.008** (0.004)	-0.039*** (0.008)
Member tribe dead in crisis (d)	-0.243*** (0.062)	-0.020 (0.022)	-0.222*** (0.079)
HH members dead in crisis (d)	-0.172 (0.105)	-0.030** (0.015)	-0.290* (0.151)
HH members behind (d)	0.141** (0.067)	0.020 (0.032)	0.054 (0.057)
HH head left behind (d)	0.186 (0.135)	-0.034** (0.015)	0.113 (0.080)
HH spouse left behind (d)	0.461*** (0.112)	0.307 (0.301)	0.221*** (0.042)
Northern Mali safe (d)	-0.047 (0.077)	-0.034** (0.017)	-0.069 (0.078)
Safe at home (d)	-0.016 (0.072)	-0.037 (0.033)	0.010 (0.064)
Police issues (d)	0.327*** (0.065)	0.116** (0.054)	0.174*** (0.053)
>1 transfers before settling (d)	0.270** (0.126)	0.108 (0.110)	0.158** (0.065)
Asset index above median (d)	0.463*** (0.054)	0.280*** (0.075)	0.249*** (0.074)
Have received assistance (d)	-0.367*** (0.064)	-0.164** (0.078)	-0.111** (0.057)
Work during displacement (d)	-0.304*** (0.062)	-0.032* (0.019)	-0.439*** (0.083)
Observations	470	233	306
Pseudo R ²	0.50863	0.54966	0.38677

Marginal effects; Standard errors in parentheses
Robust SE.

Asset index above median is computed using information about asset ownership in August 2014.

Source: LDPS 2014-15

5.2 Returnees, Refugees, IDPs

A natural continuation of our econometric analysis is to focus on refugees and IDPs separately. After all, the characteristics of these groups are quite different. In particular, we have used a Heckman probit model to take the selection process into account (Table 2). In other words, in the first step (Column 1) the selection equation was a probit model where the dependent variable was equal to one if the respondent had not yet returned to Northern Mali by August 2014, zero otherwise (note that this is specific to Column 1 Table 1). In the second step, the dependent variable of the probit equation was one if the respondent was a refugee, zero if he or she was an IDP (Column 2). Given the estimated coefficients, we computed the marginal effects on the probability of being a refugee conditional on not having returned (Column 3). Finally, we repeated the same exercise by restricting the sample to respondents who were the household heads or their spouses. The corresponding marginal effects on the conditional probabilities have been reported in Column 4.

First, looking at the demographics characteristics of the respondents, we can note that being female, highly educated, Songhai, or originally from Kidal was associated with a lower probability of being a refugee. The same was true for larger households, for those who left some members behind, and for those who experienced losses during the crisis. As before, feeling safe alone at home did not seem to drive these migration decisions. On the other hand, having migrated more than once during the crisis, having low wealth, and working were less frequently associated with refugees than IDPs. In line with the descriptive statistics, humanitarian assistance was instead recorded more frequently in the former group.

Table 2: Returned, Refugee, IDPs - Heckman Probit Baseline (August 2014)

	(1) Not Returned	(2) Refugee/IDPs	(3) Mfx All	(4) Mfx Head&Spouse
Female	-0.105 (0.166)	-0.674** (0.303)	-0.082** (0.037)	-0.069** (0.032)
Age	0.003 (0.006)	0.013 (0.010)	0.002 (0.001)	0.002 (0.001)
Higher Education	0.403** (0.199)	-0.550 (0.344)	-0.091** (0.042)	-0.078* (0.040)
Married	0.108 (0.182)	-0.392 (0.286)	-0.056 (0.041)	-0.032 (0.036)
Songhai ethnicity	-0.374** (0.173)	-1.759*** (0.356)	-0.209*** (0.035)	-0.215*** (0.028)
Kidal region of origin	-1.642*** (0.359)	-1.347*** (0.419)	-0.094* (0.057)	-0.111** (0.047)
HH size (August 2014)	0.090*** (0.023)	-0.145*** (0.042)	-0.023*** (0.005)	-0.016*** (0.005)
Member tribe dead in crisis	0.696*** (0.183)	0.138 (0.323)	-0.016 (0.043)	-0.010 (0.033)
HH members dead in crisis	0.498 (0.352)	-1.778*** (0.513)	-0.255*** (0.062)	-0.276*** (0.064)
HH members behind	-0.346** (0.173)	-0.980*** (0.310)	-0.110** (0.044)	-0.085** (0.041)
HH head left behind	-0.456 (0.343)	0.113 (0.749)	0.037 (0.098)	0.192*** (0.046)
HH spouse left behind	-1.310*** (0.429)	-1.287 (0.880)	-0.102 (0.115)	-0.179*** (0.059)
Northern Mali safe	0.136 (0.205)	0.325 (0.408)	0.035 (0.052)	0.041 (0.042)
Safe at home	0.044 (0.186)	0.047 (0.334)	0.004 (0.043)	-0.047 (0.043)
Police issues	-0.870*** (0.174)	-0.867** (0.381)	-0.069 (0.052)	-0.105* (0.054)
>1 transfers before settling	-0.695** (0.339)	-2.596*** (0.562)	-0.302*** (0.062)	-0.245*** (0.057)
Asset index above median	-1.285*** (0.172)	-1.349*** (0.270)	-0.111*** (0.032)	-0.062* (0.035)
Have received assistance	0.967*** (0.177)	2.838*** (0.507)	0.320*** (0.040)	0.298*** (0.039)
Work during displacement	0.918*** (0.231)	-0.976*** (0.377)	-0.171*** (0.046)	-0.140*** (0.031)
Constant	-0.353 (0.381)	1.198 (0.896)		
Ath(rho)		0.795** (0.346)		
Observations	470	470	470	233

Standard errors in parentheses. Robust SE. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

“Asset index above median” is computed using information about asset ownership in August 2014.

Full Maximum-Likelihood Estimation

Marginal effect on $\Pr(\text{depvar}=1 \mid \text{depvar_selection}=1)$

Source: LDPS 2014-15

5.3 Desire to return (Y/N)

Keeping our attention on refugees and IDPs, we wanted to deepen our understanding about their migration plans. In particular, we would like to discover which characteristics are associated with the desire to return to Northern Mali. To this end, we estimated a probit model using the same regressors as in the previous sections. The dependent variable was set equal to one when the respondent was considering the possibility to eventually go back to the North, zero otherwise. The estimated marginal effects have been reported in Table 3 for all respondents (Column 1-2), as well as for only the household heads or their spouses (Column 3-4).

The strongest predictor of a planned future return was refugee status: individuals living abroad in refugee camps were up to 25 percentage points more willing to go back than IDPs. Joining this result with those on unemployment presented in the descriptive statistics, we may wonder whether this desire to go back home may have resulted from a more general malaise experienced by these respondents forced to migrate and halted in a limbo not fully integrated with the local community and labor market. An alternative explanation may be found by taking into account that most of the individuals in the sample who went back before the baseline interview (August 2014) were previously displaced within Mali, thus many among the IDPs who wanted to return had already done so.

Given this result, we have expanded our analysis by estimating the same model for refugees and IDPs separately. Despite the small sample size, it is interesting to note that educated IDPs were less likely to indicate their desire to return. The same held for IDPs who were working. On the other hand, the opposite held for female and younger respondents. Younger *refugees* on the other hand were *less* likely to be willing to go back.

Among the other regressors, very few of them were statistically significant, probably because of the small sample size. The only covariates which were significant in some specifications were ethnicity, household size, receiving assistance, and employment. In addition to this, as expected, those who believed that the regions in Northern Mali were secure were more likely to plan to return. While this “pull” factor is significant, “push” factors, i.e., whether the individual felt safe at home alone or whether he or she had trouble with the local security forces, did not appear to be pivotal in this decision.

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 have actually returned in the subsequent waves. However, the magnitude is small, probably because of the short time span considered.

Table 3: Desire to go back (Y/N) - Only refugees and IDPs - Probit Baseline

	(1) All	(2) All <i>...with refugee dummy</i>	(3) Head&Spouse	(4) Head&Spouse <i>...with refugee dummy</i>
Female (d)	0.050 (0.039)	0.058 (0.039)	-0.008 (0.045)	-0.002 (0.044)
Age	0.001 (0.002)	0.001 (0.002)	0.000 (0.002)	-0.001 (0.002)
Higher Education (d)	-0.080 (0.063)	-0.060 (0.062)	-0.090 (0.082)	-0.064 (0.078)
Married (d)	0.048 (0.049)	0.051 (0.049)	-0.014 (0.052)	-0.012 (0.050)
Songhai ethnicity (d)	0.039 (0.040)	0.091** (0.039)	-0.008 (0.053)	0.074 (0.045)
HH size (August 2014)	-0.008* (0.004)	-0.004 (0.005)	-0.004 (0.006)	0.001 (0.005)
Member tribe dead in crisis (d)	0.060 (0.043)	0.051 (0.041)	0.043 (0.045)	0.029 (0.044)
HH members dead in crisis (d)	-0.057 (0.096)	-0.002 (0.070)	-0.084 (0.127)	-0.008 (0.082)
HH members behind (d)	-0.012 (0.049)	0.012 (0.043)	-0.019 (0.060)	0.003 (0.052)
HH head left behind (d)	0.043 (0.062)	0.035 (0.067)	-0.088 (0.137)	-0.125 (0.158)
Northern Mali safe (d)	-0.145* (0.085)	-0.146* (0.084)	-0.153 (0.097)	-0.163* (0.099)
Safe at home (d)	0.015 (0.046)	0.005 (0.044)	-0.001 (0.051)	-0.008 (0.047)
Police issues (d)	-0.030 (0.053)	-0.013 (0.049)	-0.068 (0.070)	-0.048 (0.065)
Asset index above median (d)	-0.013 (0.045)	0.018 (0.042)	0.021 (0.046)	0.041 (0.039)
Have received assistance (d)	-0.019 (0.048)	-0.058 (0.039)	-0.041 (0.047)	-0.079** (0.034)
Work during displacement (d)	-0.097** (0.049)	-0.063 (0.047)	-0.092 (0.060)	-0.058 (0.056)
Refugee (d)		0.186** (0.090)		0.259* (0.136)
Observations	243	243	180	180
Pseudo R ²	0.11899	0.14438	0.09456	0.13529

Marginal effects; Standard errors in parentheses. Robust SE. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

"Asset index above median" is computed using information about asset ownership in August 2014.

Source: LDPS 2014-15

(d) for discrete change of dummy variable from 0 to 1

5.4 Do not want to go back, want to go back, returned

A more comprehensive analysis than the previous one takes into account all respondents, i.e. it includes those who had returned. This has been done here by using an ordered probit model. 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, in this section we aim to jointly analyze the migration decisions discussed in the previous sections while looking at them from a unified perspective. To this end, we estimate an ordered probit specification using the same regressors as in the previous sections (Table 4). Column 1 contains the estimated coefficients. From these, we computed 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).

The estimates confirm our previous findings. Better educated individuals are less likely to have already returned, while the opposite is true for those whose ethnicity is Songhai or those who are originally from Kidal. As already discussed, household size matters, as well as whether some family members were left behind, particularly if it concerned the household head's spouse. However, and as before, thinking that Northern Mali is secure or feeling safe at home are not statistically significant, although having had issues with the local security forces is associated with having already returned. Finally, high previous mobility and high wealth are more prevalent among returnees, while the opposite is true for assistance and employment.¹¹

As an additional robustness check, we exploited the panel dimension of our data set and estimated the same ordered probit model using all the available waves. In other words, since respondents were regularly interviewed on a monthly basis, we could use their migration status over time to estimate a pooled ordered probit model (Table 5). The dependent variable is similar to the previous one (see the Appendix for the details). Column 1 contains the estimated coefficients. From these, we computed the marginal effects on the probability of not wanting to go back (Column 2), on the probability of wanting to go back (Column 3), and on the probability of having already returned (Column 4). The results are in line with the ones in Table 4.¹²

¹¹ We have also estimated the same model using only respondents who were the household head or the spouse. Results are qualitatively similar. The same can be said about the OLS estimates.

¹² We have also estimated the same model using only respondents who were the household head or the spouse. Results are qualitatively similar.

Table 4: Order Probit - Don't want to go back, want to go back, returned - Baseline

	(1) Coefficients	(2) Marginal fx <i>No desire to return</i>	(3) Marginal fx <i>Wanting to return</i>	(4) Marginal fx <i>Returned</i>
Female	0.124 (0.129)	-0.012 (0.013)	-0.018 (0.018)	0.029 (0.031)
Age	-0.001 (0.005)	0.000 (0.000)	0.000 (0.001)	-0.000 (0.001)
Higher Education	-0.421** (0.179)	0.040** (0.018)	0.060** (0.026)	-0.100** (0.043)
Married	0.017 (0.142)	-0.002 (0.014)	-0.002 (0.020)	0.004 (0.034)
Songhai ethnicity	0.262* (0.151)	-0.025* (0.015)	-0.037* (0.021)	0.062* (0.036)
Kidal region of origin	1.576*** (0.315)	-0.151*** (0.036)	-0.223*** (0.043)	0.375*** (0.072)
HH size (August 2014)	-0.067*** (0.015)	0.006*** (0.002)	0.010*** (0.002)	-0.016*** (0.004)
Member tribe dead in crisis	-0.269* (0.142)	0.026* (0.013)	0.038* (0.021)	-0.064* (0.033)
HH members dead in crisis	-0.532 (0.325)	0.051 (0.032)	0.075 (0.047)	-0.126 (0.077)
HH members behind	0.189 (0.156)	-0.018 (0.015)	-0.027 (0.022)	0.045 (0.037)
HH head left behind	0.354 (0.296)	-0.034 (0.029)	-0.050 (0.042)	0.084 (0.070)
HH spouse left behind	1.247*** (0.345)	-0.120*** (0.037)	-0.177*** (0.051)	0.296*** (0.083)
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)
>1 transfers before settling	0.708** (0.290)	-0.068** (0.030)	-0.100** (0.042)	0.168** (0.070)
Asset index above median	0.922*** (0.154)	-0.089*** (0.017)	-0.131*** (0.022)	0.219*** (0.033)
Have received assistance	-0.790*** (0.166)	0.076*** (0.018)	0.112*** (0.022)	-0.188*** (0.036)
Work during displacement	-0.742*** (0.159)	0.071*** (0.016)	0.105*** (0.024)	-0.176*** (0.038)
Threshold 1	-2.572*** (0.411)			
Threshold 2	-0.117 (0.365)			
Observations	469	469	469	469
Pseudo R ²	0.34258			

Standard errors in parentheses. Robust SE. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

“Asset index above median” is computed using information about asset ownership in August 2014.

Source: LDPS 2014-15

Table 5: Order Probit - Don't want to go back, want to go back, returned - Pooled Panel

	(1) Coefficients	(2) Marginal fx <i>No desire to return</i>	(3) Marginal fx <i>Wanting to return</i>	(4) Marginal fx <i>Returned</i>
Female	0.017 (0.122)	-0.004 (0.026)	-0.000 (0.002)	0.004 (0.028)
Age	-0.003 (0.004)	0.001 (0.001)	0.000 (0.000)	-0.001 (0.001)
Higher Education	-0.299* (0.161)	0.064* (0.034)	0.004* (0.002)	-0.068* (0.037)
Married	-0.102 (0.129)	0.022 (0.028)	0.001 (0.002)	-0.023 (0.029)
Songhai ethnicity	-0.033 (0.131)	0.007 (0.028)	0.000 (0.002)	-0.007 (0.030)
Kidal region of origin	1.303*** (0.318)	-0.278*** (0.067)	-0.018*** (0.005)	0.296*** (0.069)
HH size (August 2014)	-0.070*** (0.016)	0.015*** (0.003)	0.001*** (0.000)	-0.016*** (0.004)
Member tribe dead in crisis	-0.685*** (0.125)	0.146*** (0.026)	0.009** (0.004)	-0.155*** (0.028)
HH members dead in crisis	-0.269 (0.228)	0.057 (0.048)	0.004 (0.003)	-0.061 (0.051)
HH members behind	0.320** (0.133)	-0.068** (0.028)	-0.004* (0.002)	0.073** (0.030)
HH head left behind	0.397 (0.304)	-0.085 (0.065)	-0.005 (0.004)	0.090 (0.069)
HH spouse left behind	0.752** (0.349)	-0.160** (0.075)	-0.010* (0.006)	0.171** (0.080)
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)
>1 transfers before settling	0.700*** (0.259)	-0.149*** (0.056)	-0.010** (0.004)	0.159*** (0.059)
Asset index above median	1.080*** (0.143)	-0.230*** (0.028)	-0.015*** (0.005)	0.245*** (0.029)
Have received assistance	-0.691*** (0.154)	0.147*** (0.031)	0.010*** (0.003)	-0.157*** (0.033)
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)			
Observations	6005	6005	6005	6005
PseudoR ²	0.33878			

Standard errors in parentheses. SE clustered at the individual level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Asset index above median is computed using information about asset ownership in August 2014. Column (1) regression includes time dummies.

Source: LDPS 2014-15

5.5 Intention to return (Y/N) – Fixed-Effect

This last empirical section represents an attempt to use the panel dimension of our data set to estimate causal effects. In particular, for 12 consecutive waves, refugees and IDPs were asked whether they were considering going back to Northern Mali in the subsequent month. We tried to test how employment, security and expectations affect these decisions. We did so by estimating a fixed-effect linear probability model (LPM). The estimated coefficients are shown in Table 6. Columns 1 and 2 have been estimated using the whole sample, while only respondents who were the household heads or the spouses were included in the regressions presented in Columns 3 and 4.

The main conclusion is that being employed reduces the intention to go back to the regions in Northern Mali by around 8 percentage points. This result persists across all specifications, even when we control for immigration status, i.e., whether the individual is a refugee or an IDP. Indeed, refugees are more likely to be willing to go back. Estimating the same model for refugees and IDPs separately does not change our conclusions.

In line with the previous findings, whether an individual felt safe during the day (or at night) did not affect the likelihood of planning to go back. However, another regressor indicates that security may still be pivotal: 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, he or she was *less* likely to plan a return to that area.

From a technical point of view, we should point out that we have used an LPM even if the dependent variable was a binary outcome. This choice has been made since in this linear model it is straightforward to add fixed-effects. Furthermore, the coefficients can be interpreted as average partial effects. A simple logit or probit model would not have allowed 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 not have been possible to estimate the average partial effects in this model, but only the effect of the regressors on the log-odds ratio.¹³

We conclude by stressing that the monthly phone interviews were relatively short, so we did not have a rich panel data set. 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 respondents' intentions to go back. Nevertheless, we believe that our model managed to control for

¹³ See (Wooldridge, 2010) page 639. Conclusions from the conditional logit model are qualitatively similar.

most of the observables. Indeed, the individual fixed-effects capture all time invariant individual characteristics 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-effects controlled for events specific to a certain time period, such as weather shocks or military events.

Table 6: Plan to go back (Y/N) - Only refugees and IDP - LPM with FE

	(1) All	(2) All	(3) Head and Spouse	(4) Head and Spouse
Employed	-0.082*** (0.018)	-0.080*** (0.018)	-0.075*** (0.019)	-0.071*** (0.018)
Safe during day	-0.085 (0.153)	-0.099 (0.177)	-0.091 (0.178)	-0.109 (0.212)
Safe at night	0.140 (0.085)	0.144 (0.091)	0.155* (0.091)	0.159 (0.097)
Own a weapon	0.299*** (0.084)	0.301*** (0.084)	0.225** (0.107)	0.225** (0.107)
Improvement Mali crisis	-0.076*** (0.014)	-0.075*** (0.014)	-0.068*** (0.014)	-0.069*** (0.014)
Refugee		0.409*** (0.040)		0.417*** (0.040)
Constant	0.382*** (0.125)	0.126 (0.141)	0.389** (0.160)	0.116 (0.183)
Time dummies	Yes	Yes	Yes	Yes
Observations	3272	3254	2489	2479
Within R ²	0.07912	0.08002	0.07254	0.07409

Standard errors in parentheses. SE clustered at the individual level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Source: LDPS 2014-15

6. Conclusion

This paper analyzed the well-being and characteristics of those subject to forced migration during the recent (ongoing) crisis in Northern Mali. We based our study on a unique micro-data set that used new technologies to collect information in highly risky environments and among a population with relatively high mobility. We provided descriptive statistics on respondents' welfare over time, their employment status, their wealth, and access to basic services.

In addition to this, we compared refugees, returnees and internally displaced people. We looked at differences between those who were willing to go back to Northern Mali and those who did not want to return, and noted how the decision to return voluntarily reflect the conditions during displacement as well as perceptions about the situation at home. Better conditions during displacement (receipt of assistance; having a job) favor remaining displaced, while the prospect to be reunited with one's family incentivizes return. Age or gender do not affect the decision to return.

We find that considerations of benefits and costs that affect the decision to return may help shape public policies, aimed at stimulating the voluntary return of displaced people. More support in host communities or refugee camps is likely to reduce the incentive to return; better conditions in the location of origin are likely to stimulate return.

It is important to note, however, that while the decision to return is 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 among those who were still displaced was high (more than 90% for refugees and over 80% for displaced people), actual return rates during the 12 months of the study were low for IDPs as well as refugees.

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. Already the rate of return is low and as the security situation in Northern Mali remains tense and 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.

It is also worth mentioning that one variable stands out throughout this study: human capital. Better educated individuals are better positioned to deal with shocks and displacement. Human capital is

portable and better educated individuals turned out to be better equipped to find jobs while displaced. The greater economic potential and adaptability that comes from higher levels of schooling makes investments in education a desirable risk mitigation strategy. Given this result, it is important to address the extremely low school attendance rates in Northern Mali, as well as elsewhere in the country.

We hope that this analysis will allow researchers and policy makers to better understand these groups and be better equipped to design policy to address their needs. If deemed desirable, the forcibly displaced can be incentivized to voluntarily return, by making returning more attractive economically. Investing in human capital –health, education– in Northern Mali would be one way to do so; reducing the cost of returning another. Investing in human capital would have the additional benefit of making the next generation more resilient to any future shocks. Alternatively, given the realities of a low revealed preference for returning, activities that facilitate the economic integration of displaced people in their host communities would be justified, but one needs to be cognizant of the fact that doing so will further reduce the likelihood of return.

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Appendix

A1. Summary statistics – Baseline sample

Variable	Obs	Mean	SD	Min	Max
Returned (Y/N)	501	0.439	0.497	0	1
Refugee (Y/N) - Heckman	281	0.644	0.480	0	1
Want to go back - Baseline	280	0.889	0.314	0	1
Returned (3 Categories) - Baseline	500	2.378	0.600	1	3
Female	501	0.489	0.500	0	1
Age	501	39	14	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	8	4	1	22
Member tribe 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

Note: this table and the one in Appendix A2 include all observations in the relevant sample. The actual number of observation used in each regression may vary since not all variables were observed for each individual.

A2. Summary statistics – Panel sample (All follow-up waves)

Variable	Obs	Mean	SD	Min	Max
Returned (3 Categories) - Panel	5,865	2.073	0.899	1	3
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

A3. Variable description

Dependent Variables

Returned (Y/N) is an indicator variable equal to one if the respondent had returned in Northern Mali in August 2014, while it is equal to zero if the respondent was a refugee or IDP at the time of the baseline interview.

Refugee (Y/N) - Heckman is an indicator variable equal to one if the respondent was a refugee in August 2014, while it is equal to zero if the respondent was internally displaced at the time of the baseline interview. This variable was missing if the respondent had already gone back to Northern Mali.

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 he or she was not considering such a possibility.

Returned (3 Categories) - Baseline is a categorical variable equal to one if the respondent declared in August 2014 that he or she was not considering eventually going back to Northern Mali. It was 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.

Returned (3 Categories) - Panel is a categorical variable equal to 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. Note the slight difference between the baseline question (considering going back one day) and the follow-up surveys (considering going back in the subsequent month).

Plan to go back – Panel is an indicator variable equal to 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, zero if he or she was not considering such a possibility.

Independent Variables (Baseline interview)

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

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

Literate is an indicator variable equal to one if the respondent had acquired at least some level of education, zero otherwise. Individuals who had only received an informal education (e.g. Koranic

education) were also considered literate. Educational levels were self-reported.

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 he or she was single, divorced or widowed.

Ethnicity has been expressed using different indicator variables. Individuals were asked to which ethnicity or tribes 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 himself/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. This baseline interview was conducted in August 2014.

Member tribe dead in crisis is an indicator variable equal to one if the respondent experienced some losses in his or her tribe or ethnic group during the 2012 crisis, zero otherwise. Note that some individuals (22 respondents, i.e., 4% of the sample) answered "Don't know".

HH members dead in crisis is an indicator variable equal to one if the respondent experienced some losses in his or 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 he or 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 he or 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 he or 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 he or 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 security forces or with strangers 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 he or 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.

Independent Variables (Panel)

Employed 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 he or 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 his 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 he or she was internally displaced.



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