

Xenophobic Attacks, Migration Intentions and Networks: Evidence from the South of Africa

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Abstract

We investigate how emigration flows from a developing region are affected by xenophobic violence. Our empirical analysis is based on a unique survey among more than 1000 households, collected in Mozambique in summer 2008, a few months after a series of xenophobic attacks in South Africa killed and displaced hundreds of immigrants from neighbouring countries. We employ both ordered and binary probit models to compare migration intentions of Mozambicans about the periods before and after the attacks occurred in May 2008, while controlling for differing characteristics of the household samples (from a wide range of survey demographic measurements) and intentions over different periods of time (using a placebo period). Other things equal, the intention of the head of the household to migrate after the attacks is lower than before, decreasing from 37% to 33%. More importantly, the sensitivity of migration intentions to violence is larger for household's heads with many children younger than 15 years, decreasing the migration intention by 11% points. This is in line with a simple idea: people are not only concerned about their own health, but also the welfare of their offspring. Most importantly, the sensitivity of migration intentions is highest for those household heads with many young children whose families have no access to social networks. In this case, the intention almost falls by 15% points. It hence seems that social networks provide insurance against the consequences small children suffer when the household head may be harmed by xenophobic violence and consequently cannot provide for the family. The small but growing body of literature on violence and migration has focused on out-migration decisions in environments of high level of violence. To our knowledge our paper is the first to measure how violence or other types of xenophobic behavior in host countries affect migration intentions and behaviour at home countries, and to what extent domestic institutions may provide insurance against the risks associated with migration.

Keywords: violence, risk, household behaviour, Mozambique
JEL: O1, R2, J6, D1

Introduction

Migration is one of the most important actions through which workers can improve their productivity and increase their families' welfare. While the overall effects of migration on host and source countries alike seem to be beneficial, there have been, through the history of mankind, fears of workers in host countries that migrants compete for jobs, leading to unemployment among domestic workers and lower wages. As a reaction, history is full of examples in which domestic workers took violent actions against immigrants in order to deter migration.

We here investigate how emigration flows from a developing region are affected by xenophobia and violent action in a host country. Our empirical analysis is based on a unique survey among more than 1000 households, collected in Mozambique in summer 2008, a few months after a series of xenophobic attacks in South Africa killed and displaced hundreds of immigrants from neighbouring countries. We employ both ordered and binary probit models to compare migration intentions of Mozambicans about the periods before and after the attacks occurred in May 2008, while controlling for differing characteristics of the household samples (from a wide range of survey demographic measurements) and intentions over different periods of time (using a placebo period).

Other things equal, the intention of the head of the household to migrate after the attacks is lower than before, decreasing from 37% to 33%. More importantly, the sensitivity of migration intentions to violence is larger for household's heads with many children younger than 15 years, decreasing the migration intention by 11% points. This is in line with a simple idea: people are not only concerned about their own health, but also the welfare of their offspring. Most importantly, the sensitivity of migration intentions is highest for those household heads with many young children whose families have no access to social networks. In this case, the intention almost falls by 15% points. It hence seems that social networks provide insurance against the consequences small children suffer when the household head may be harmed by xenophobic violence and consequently cannot provide for the family.

The small but growing body of literature on violence and migration has focused on out-migration decisions in environments of high level of violence (see Mesnard 2009 on out-migration flows from Colombia, for example). Yet, very little is known on how violence and xenophobic feelings in migrant receiving countries affect migration intentions and behaviour at origin. To our knowledge our paper is the first to measure how violence or other types of xenophobic behavior in host countries affect migration intentions and behaviour at home countries, and to what extent domestic institutions may provide insurance against the risks associated with migration.

The general use of emigration intentions data as a proxy for actual emigration is not unquestioned with respect to the relation between stated intentions and actual behaviour (Manski 1990). However, emigration intentions have been shown to be a good predictor of future actual emigration behavior (see for example van Dalen and Henkens, 2008). It has also been argued that intentions are a monotonic function of the underlying driving variables that motivate migration (Burda et al.1998). Finally, using migration intentions data avoids the sample selection difficulties that arise from the use of the host country data (see Liebig and Sousa-Poza, 2004; van Dale and Henkens, 2008).¹

Our empirical results confirm that other things being equal, propensity to migrate after the attacks is lower than before. Moreover, violence has the smallest effect on people with small household size/children and the largest on people with many household members whose family is badly connected. People with a numerous family who have a good network will be less sensitive than the ones with bad networks. This confirms that social networks are an important insurance mechanism in developing economies. However, the fact that better access to social networks reduces the sensitivity of migration intentions to violence although access to networks in Mozambique cannot provide any protection against violence in South Africa, also shows that workers seem to care more about the future of their offspring than about their own health.

1. Background

Mozambique has been characterized by slow economic growth until the beginning of the 1990s; poor levels of education of economically active members of households, especially women; high dependency rates in households; low productivity in the family agricultural sector; lack of employment opportunities in the agricultural sector and elsewhere; poor development of basic infrastructures in rural areas, hence the isolation of communities due to the lack of adequate roads, and therefore poor integration of rural-urban markets. Overall Mozambique is still one of the poorest countries in the world, with 35 percent of its population living below the extreme poverty line (and 70 percent living below the poverty line) (PRSP, 2007). In the face of such extreme poverty, informal social arrangements between households are often an important way to cope with a state of permanent vulnerability and eventually substitute for or enhance existing forms of

¹ Papers looking at migration intentions are Burda et al. (1998), Drinkwater and Ingram (2008), Epstein and Gang (2006), Fouarge and Ester (2007), Lam (2000), Liebig and Sousa-Poza (2004), Papapanagos and Sanfey (2001) and Ubelmesser (2006), among others.

capital/investment. Migration is an important way out of poverty but not everybody is able to move away.

1.1 Family vs social networks in Southern Mozambique

Poor households in developing countries face substantial risk from multiple sources but have typically limited access to formal insurance and credit markets. They therefore have to resort to informal arrangements with other households. The theoretical literature suggests that small groups or networks (e.g. Genicot and Ray 2003, Ambrus, Mobius, and Szeidl, 2009), with members who care for or trust each other and can punish renegeing members, can achieve high levels of insurance (e.g. Altonji, Ayashi, and Kotliko, 1992; Foster and Rosenzweig, 2001; Karlan, Mobius, Rosenblat, and Szeidl, 2009; La Ferrara, 2003). The empirical evidence from a disparate set of developing countries is consistent with these predictions (Ligon 1998, Fafchamps and Lund 2003, De Weerdt and Dercon 2006, Dubois, Jullien, and Magnac 2008, Mazzocco and Saini 2009, Ambrus, Mobius, and Szeidl 2009).

A relatively common presumption is that the extended family is the most important resource-sharing institution, since its members know each other well, care for each other, and are able to monitor and punish deviating behavior by imposing sanctions. Yet, since Coate and Ravallion (1993) the above argument has been remarked as being a rather “romanticized view” of kinship-based sharing systems. Indeed, recent contributions have shown that credibly committing to enforcement is more difficult in homogenous kinship groups, where family obligations (the ‘family tax’) are likely to play a role (Anderson and Francois 2006). Without credible punishment in case of rule transgression, informal social arrangements cannot work. Also recent empirical evidence considering endogenous formation of risk sharing groups in an economic experiment concludes that “genetically related individuals tend to distrust one another and so do not group when enforcement depends on intrinsic motivations alone” (Barr et al. (2008); see also Barr and Genicot 2008). In response, such kinship groups often prefer to voluntarily delegate part of their responsibilities to an “outsider” (see Anderson and Baland (2002) and recent papers by Karlan 2010).

Furthermore, the way in which risk sharing arrangements are formed and enforced varies with the socio-economic and institutional environment, and Mozambique is peculiar in this respect. People in Mozambique predominantly organise their social life around their kin, which largely define a vital realm in a person’s life. A person is ‘incomplete’ if she is not linked to an ascent group (including dead ancestors, through spiritism or witchcraft) and if she does not produce any descendants. However, kinship relations and alliances also reflect the common practice of polygamous marriages and the temporary or impermanent nature of family life in this poor context.

Social relations typically extend into non-family forms, like relations with neighbours and *xarás* (quasi-kin), in addition to church relations, community group participation and friendships of varying degrees of formality. So alliances in southern Mozambique go beyond matrimonial linkages and beyond the kinship circle. This set alliances defines a person, and the construction of this network is a subject's major investment for socio-economic life in Mozambique.²

Following this line of argument we measure social networks beyond family links and focus on the relation of the family with social organizations and members of the community. In order to take into account the heterogeneity of social interaction, we use the approach followed by other authors in which it is important to distinguish between participation in (formal) groups that provide some economic benefits and (informal) mutual social arrangements with key members in the community (papers that using this classification are Miguel et al. 2006, Gallego and Mendola, 2010).

Our measures of social networks are standard in the empirical literature and they try to account for several dimensions of social interaction outside of the family. Methodologically, we carried out an original household survey in Southern Mozambique in the summer 2008, in which we collected information on the two dimensions stated above. For instance, we have information whether any household member participates in various types of community groups, both economic and socio-political³, and whether the household interacts with key persons in the community like the traditional community leader, elected village chief, school teacher, doctor or 'curandeiro', agricultural agent and neighbours. With respect to the informal interaction with important persons of the community the information includes whether households give or receive (or both) any good or services with each of their network partner.

1.2 Xenophobic attacks

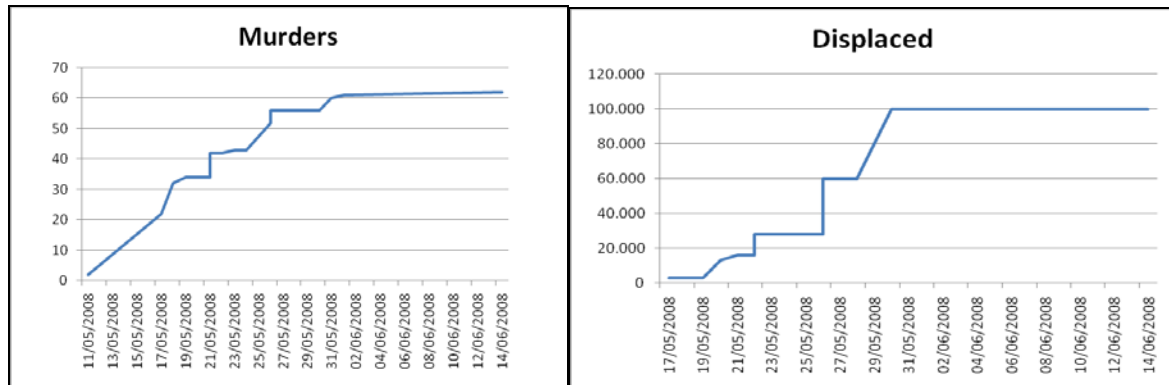
The first attacks occurred on May 11, 2008, in the Alexandra township, north-east of Johannesburg and one week later they spread to the whole Gauteng region, the North West Province as well as to the Kraaifontein and Khayelitsha townships in Cape Town, and to the Durban area. The attacks spread fast around all provinces with large migrant population. They focus on immigrants from other African countries with Mozambicans and Zimbabweans more affected. The last reported attacks happened around one month later the 14th of June, when a Mozambican man was burned alive in Atteridgeville township of Pretoria. The number of murders account for 62 on the whole month, but the numbers of displaced and refugees were reported around 100.000 and 25.000

² See Luiz Henrique Passador "Tradition, person, gender, and STD/HIV/AIDS in southern Mozambique", <http://www.scielo.br/pdf/csp/v25n3/24.pdf>

³ In addition to the membership status we asked whether the member is a beneficiary or promoter/decision maker within the group.

respectively. They are large numbers for the short period of attacks (see figure 1). Consequently at a stock of some ten thousand migrants in the affected region, there was a substantial risk of being hurt, murdered or displaced.

Figure 1



2. An illustrative Model

We here present a simple model to illustrate and sharpen our hypotheses. The model is not meant to explain migration decisions in general terms. Rather, it is supposed to explain while the migration decisions of some groups would react to violence in South Africa more intensively than others. In our model, households are heterogeneous with respect to two characteristics; first, the number of small children, and second, access to social networks. With respect to wages in Mozambique and South Africa we assume households to be homogeneous. This is correct with respect to wages in South Africa, but is a simplification with respect to Mozambique. We will, however, take this into account in the empirical part of the paper by controlling for wealth (as reliable income data are not available).

Consider a household which maximizes its utility over two periods. The household takes decisions in line with the unitary model. It can send one household member to South Africa to work and this decision is taken with a view to maximize household utility, i.e., we abstract from any potentially diverging interests within the household. In the first period the household has the choice to migrate or to stay in Mozambique. In the beginning of the second period, the household member in question works in Mozambique. We choose this setting to simplify; permanent migration could be incorporated into the model, but would not add much. Moreover, most of the migrants from Mozambique are temporary.

We first look at the migration decision when there is no risk of violence. Assume that the household maximizes the sum of utilities over the migration decision m , where $m = 1$ stands for migration, and $m = 0$ for staying in Mozambique. To make things simple assume that time discount is nil, then the utility of a family is $U = U_1(w(m), c(m), N) + U_2(w, N)$. The household's first period utility depends on the wage it is paid, the costs of migrations, and the number of small children N . If the household member migrates to South Africa, the household receives $w_{SA} > w_{MO}$, i.e. the wage in South Africa is higher than the wage in Mozambique. The household member then has to pay migration costs c . If he does not migrate, he receives w_{MO} and incurs no migration cost. In the second period, the household always receives w_{MO} . The household consumes any income it has in the period in which it accrues. Put differently, there is no access to credit markets.

In this simplistic model, it is immediately clear that the household member will migrate if and only if the net benefit of migration $w_{SA} - w_{MO} - c$ is positive. As we are not interested in knowing about migration decisions in general, we do not impose structure on the utility function with respect to the number of children N . Rather we want to know which groups should be most and least affected by the violence in South Africa. We hence allow for the risk of violence in South Africa to affect the second period wage in Mozambique. Indeed, when the household member becomes a victim of violence, his productivity will be severely affected. The household member takes a risk to die or be severely hurt. Consequently, the expected wage in Mozambique in the second period can be written as $E(w_{MO2}(m=1)) < w_{MO2}(m=0)$.

To derive predictions about the type of household members most affected by violence in South Africa, it suffices to assume that $\delta^2 U / \delta N \delta w > 0$ (at least for a sufficiently large wage shock). This means that a decrease in the expected wage w will affect the utility of a family with many children more strongly than one with less young children. The idea behind the assumption is that when there is a negative wage shock, the household may not have enough income to feed its children, leading to famine, illness or death of children, which strongly affects the utility of the household. Our assumption is founded on a very simple fact. To keep a child (or any human being) healthy a minimum amount of calorie intake per day is required. A family with less children, other things equal, can adapt its consumption pattern to a change in income in a way that all children stay healthy, but a household with more children will ultimately reach the critical calorie level.

The effect of having access to a network is quite simple: households that are in a network can get some transfer compensating in part for the wage loss. Consequently the decrease in second-period consumption will be weaker. Notice that we assume that network membership to be exogenous and that we are not concerned about investments in the network or how the transfer is paid back. We simply consider that network access can overcome (partially) the credit constraints

many developing economies suffer from. We do not claim any deep theoretical insights, neither explain in general migration decisions. Rather, we try to explain heterogeneity in sensitivity of intentions to violence.

3. Empirical Analysis

3.1 Data and Descriptive Statistics

Our empirical analysis is based on a unique survey conducted in 42 communities (both urban and rural) in 2 regions (Maputo and Gaza) in the South Mozambique. We designed the interview questions to, among other things, shed light on the effect of xenophobic attacks in South Africa on migration intentions of people in Mozambique. The survey was conducted in August 2008 and contains information on household migration intentions after South African xenophobic attacks along with detailed demographic characteristics of household members, migration status, educational levels and household asset endowments from a sample of 1002 households.⁴

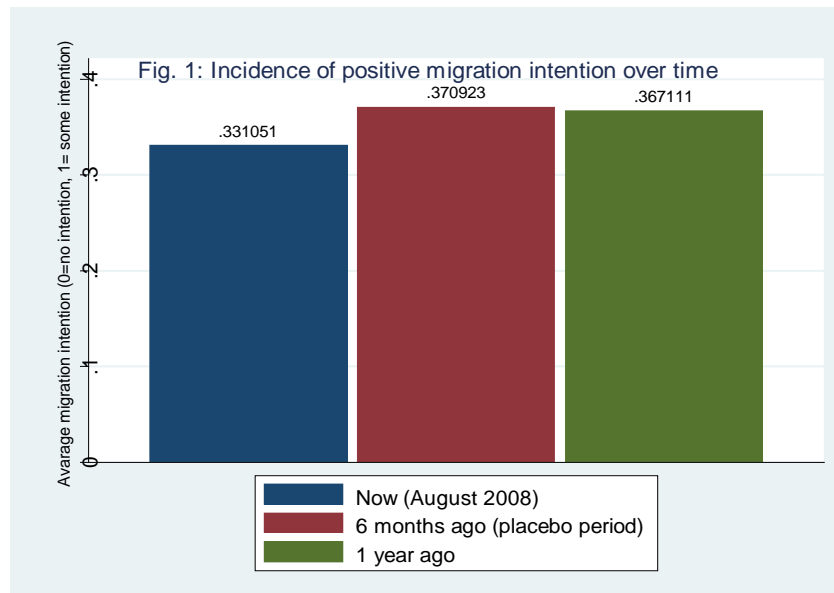
With respect to migration intentions, a retrospective survey instrument was used asking specific questions to the most informed person in the household on current migration intention (in August 2008) and past migration intention (1 year earlier) of household members. Despite the brief period of time that elapses between the time of the survey and the xenophobic attacks, which should foster a good perception of current and past intentions⁵, we can control for a “good old times” bias (or for any other aggregate shock that might affect migration intentions even in the absence of xenophobic attacks) by using the same information relative to a ‘placebo’ period (when no major occurrence had arisen). Thus, the actual survey questions are as follow: (1) ‘Do you or any member of your household have any intention to migrate to South Africa in the next 6 months?’, (ii) Are you aware of the xenophobic attacks occurred in South Africa in the last few months?’ (iii) Did you or any member of your household have any intention to migrate to South Africa in the last year?’ (iv) Did you or any member of your household have any intention to migrate to South Africa in the last 6 months? (placebo period)’. Answers to migration intentions were chosen from the pre-set list of four alternatives: ‘no intention’ ‘weak intention’, ‘strong intention’, ‘surely’.

TABLES 1, 2, 3 ABOUT HERE

⁴ The sample is representative at the regional level and demographic, ethnic and community characteristics are very similar to distributions of the general population living in the South of Mozambique (in general there is a relative homogeneity in the south of the country being the greatest socio-economic disparities those which divide the South of the country from the North).

⁵ The brief time span between the attacks and the time of survey may be also a limitation as it may be argued that there is a ‘shock bias’, as it is ‘too early’ to have an objective feeling about migration intentions (i.e. low migration intention right after the attacks may actually convert in the opposite decision after the ‘shock effect’ is over). But maybe this is a minor issue.

Some descriptive statistics of main variables of interest can be found in Tables 1, 2, 3. Overall, 95% of our sample households report being aware of xenophobic attacks occurred in South Africa in May 2008. Migration intentions are plotted in Figure 1: 33% of our sampled household respondent had no intention to migrate in 2008 compared to 37% 6 months and 1 year before the year of the survey. The difference between one year before and the placebo moment 6 months before is not while the difference to 2008 is statistically significant. There are also some asymmetries in migration intentions between subgroups of population, such as households with different levels of education, or households with different levels of ‘social networks’, which we will control for in regressions.



4.2 Estimation strategy

The estimation approach is based on comparing migration intentions about the periods before May 2008 and after, while controlling for differing characteristics of the household samples (from a wide range of survey demographic measurements) and differing time perception. We estimate migration intentions as follows:

$$P_{it} = \beta_0 + \beta_1 M_{it} + \beta_2 X_i + \gamma T_1 + \varepsilon_{it}$$

where P_{it} is an indicator for migration intention in household i in year t (with $t=August2007, August2008$); T_1 is a dummy that takes the value one if the observation comes from the period after attacks (August2008), and zero otherwise; M_{it} measures the migration experience in the household at present and in the past.; and X_i is a vector of individual and family characteristics, including age education and community of residence. Standard errors will be estimated allowing for clustering at the household level as the error is serially correlated because of repeated observations for the same household.

The main identification issue of this equation estimation arises from the fact that the estimated coefficient γ captures not only the effects of the attacks, but also of any other time-varying factors contemporaneous with the attacks that might have affected migrants' intention behavior. To disentangle the effects of xenophobic attacks from any other time trend effects of the economy, beside controlling for a wide range of household and community characteristics (including community fixed effects), we include the "placebo period effect" in the equation as follows:

$$P_{it} = \beta_0 + \beta_1 M_{it} + \beta_2 X_i + \gamma T_1 + \phi T_2 + \varepsilon_{it}$$

where T_2 takes value one if the observation comes from the placebo period (Jan2008). We expect the coefficient of this variable to be non-significant, as no major changes occurred with respect to August 2007. Yet, in order to control for migration seasonality issues, we provided some descriptive figures of the (insignificant) patterns of seasonal migration in Mozambique (to be included), and we further include as an extra control whether households experienced seasonal migration of household members.

Finally, we run a sensitivity analysis of our results across subsample of households, according to both their educational level and their degree of engagement in community-based social networks.

5. Empirical Analysis

Table 4 summarises probit regression results, where the dependent variable is binary variable equal to 1 if the household respondent reports a positive intention to emigrate of any household member (i.e. whether the answer to migration intentions reported above is any of the following alternatives: 'weak intention', 'strong intention', 'surely'). The dependent variable is equal to 0 if the answer is 'no intention'.

In order to have a direct interpretation of results, in the following tables we always report marginal (or discrete) effects, that is the change in the predicted probability associated with changes in the explanatory variables. In table 4, we begin with a restricted specification and then include household and community controls, community fixed effects and other specific controls related to the ‘placebo effect’. Controls include: gender, age and occupation of household head, household size, number of females and children (0-4) in the household, household ethnicity and religion, average years of schooling in the household, and a household wealth indicator. The last two variables are included also in squared terms as to allow for a potential non-linear relationship between migration intentions and the household skill and wealth position. We further include a dummy variable for urban areas and community level characteristics, such as the quality of roads, school and health facilities, formal bank and market availability. We finally rule out any community level characteristics potentially associated with variation in migration intentions and we fully focus on the within-community variation only by running specifications with community fixed effects (where the community is our primary sampling unit). Including community fixed effects will control in particular for any differences across communities which might affect the level of migration, such as differences in attitudes towards migration, migration history and networks, infrastructure.

In all specifications, with both controls and community of residence fixed effects, Mozambican intentions of migrating is estimated to decrease after the xenophobic shock occurred in South Africa. Adding controls for the household migration experience does not reduce the significance of the post-attack drop nor its dimension. In particular, in the less parsimonious specification, other things being equal, the average propensity to migrate after the attacks is lower than before by 4.6 percentage points. Importantly, the placebo period has no effect on migration intentions (while controlling also for seasonal migration experience).

These results suggest that a drop in the propensity to migrate between August 2008 and August 2007 is attributable to South African violence episodes occurred in May 2008. Yet, migration behavior entails a risky decision that may be heterogeneous with respect to key household characteristics related to level of protection or ‘insurance’ the household might have (e.g. community based social networks).

TABLE 5 ABOUT HERE

We hence run the same probit regressions in a set of population sub-samples. Tables 5-7 present our probit marginal effects for a set of sub-groups defined by observable household attributes correlated with both migration intentions and the risky nature of migration behaviour, that

is (i) the number of household members (both adults and children), (ii) the degree of household engagement in community based social networks (i.e. household membership in a community group and household engagement in informal exchanges of goods or services with other households in the community); (iii) the intersection of both household size and social networks.

Results show that larger households are more sensitive to the xenophobic shock- in other words the average decrease in migration intentions after the shock is mostly due to large households' responses. For example, other things being equal, households with more children (i.e. more than 4 children of 0-15 years old) are less likely to migrate after the shock by 11 percentage points (Table 5). We have also run robustness checks including adult children, who through their may provide some insurance in case the household head is affected by violence, but nothing changes.

TABLE 6 ABOUT HERE

Table 6 shows that households with no group membership or no informal social networks are less likely to migrate after the shock by more than 6 percentage points. This seems to suggest that people who do have access to social networks or a family buffer have a much lower sensitivity of migration intentions than people who have no access to social networks.

TABLE 7 ABOUT HERE

Yet, the two forms of social insurance are very different. Table 7 shows that social networks do not have the same 'mitigating effect' effect on migration intentions when people have few children or households are small. Large families with no social networks, however, significantly decrease their likelihood to migrate by 15 percentage points. This seems to suggest that, according to the theory, having family (and children) has a deterrent effect in risky migration behavior, but if the family is 'well connected' this mitigating effect disappears.

Overall, the results are consistent with predictions: "Other things equal, violence has the smallest effects on migration intentions in households without kids and the largest on people with kids whose family is badly connected. People with kids who have a good network will be less sensitive than the ones with bad networks".

6. Discussion

A first important question we need to deal with is whether networks may affect labor outcomes in South Africa. Consider that people who are better connected in Mozambique would receive higher wages. Then what we may measure would not be the insurance effects of social networks against the risk of the loss or injury of the household head, but rather a simple wage effect. However, we have two arguments against this. First, this would not explain that it is in particular large families for whose migration intentions networks play a role. Second, migrants from Mozambique sell their work on the South African spot market to South Africans. Hence being connected in Mozambique does not affect the South African labor market outcome. Network membership may affect the wage in Mozambique, though. But if anything, this would make our results even stronger, because it would imply that connected people would be less, and not more likely to migrate.

A second, related question, is whether being a network member could reduce the risk of being harmed in South Africa, which again we would deny. It seems little convincing to believe that network membership in Mozambique could help people against street violence in South Africa, where people who would be identified as non-natives could become victim at any time during the riots.

On a more general level, it could be argued that social networks are not exogenous to migration behaviour. There is indeed ample evidence that immigrants' social networks in the country of destination are important, because former migrants help newcomers to settle down, while far less evidence exists on the role of group participation and social arrangements at origin (see Munshi and Rosenzweig, 2009 for an exception). However, we have evidence that indicates that it this is not the case in Mozambique; family plays an important role on the migration (see table 8).

TABLE 8 ABOUT HERE

For instance, household with migrants in our survey answered that the main source of help on the migration process was family members at origin or destination (46% for current migrants and 51% for returned migrants), followed by their own experience (34% for current migrants and 24% for returned migrants). An in addition, family members give housing at destination to the new migrants (40% of current migrants live with some family members). Second, the inclusion of community fixed effects in our estimates allow us to control for the community migration network (i.e. the proportion of former migrants in a given community), that is the network potentially acting to lower the costs of migrating and finding a job at destination (Massey, 1988; Massey, Goldring and Durand 1994; Dolfin and Genicot, 2006; McKenzie and Hillel Rapoport 2007). Third, we are

not observing the onset of the migration phenomenon in Mozambique, when social help through networks would be more likely to push migration. And we are not even observing permanent (life cycle) labor mobility, but temporary or circular migration, whereby the role of networks is believed to be less important (Massey, Goldring and Durand, 1994)⁶. Indeed, migration flows between Southern Mozambique and South Africa are a long-lasting widespread phenomenon, with Mozambicans being historically the main labour force for South African mines, and currently still largely dependent on South Africa's goodwill and whims (since a real immigration policy is far from being set in the region). After the end of the apartheid, when a contingent immigration policy was in place (mostly on a temporary basis), the modernisation of the South African economy in the 1990s resulted in large numbers of job losses not only in mining but also in the farming and industrial sectors. Hence, unemployed Mozambican miners and the younger generations - badly hit by both poverty at home and large job losses in SA— resort to a new cycle of impermanence through sub-contracting, job casualization and undocumented migration in SA. Following the historical lines of foreign workers' specialisation depending on their origin, Mozambicans still represent cheap, unqualified and docile spot labour often on the most dangerous sites for South African employers.⁷

TABLE 9 ABOUT HERE

The SA Census in 2001⁸ shows that Mozambicans are low skill migrants and they do not cluster at one particular occupation as it can be the case if a migration network is acting at destination, but they serve to different occupation with unskilled requirements like agricultural, mining, construction and retail trade (see panel A and panel B of table 9). In Panel C of table 5 shows that Mozambican migrants spread on 4 regions located on the north province of South Africa (North West, Gauteng, Mpumalanga and Limpopo). Panel C shows that the 97% of Mozambican migrants do not cluster in one or two cities but they spread on the four north provinces in South Africa (North West, Gauteng, Mpumalanga and Limpop), which is consistent with the idea of cross-border migration phenomenon between Mozambique and South Africa. The path of location is similar to the flows of migrants from other African countries (with Zimbabwe as the main sending country after Mozambique). But it is different from the location of non-African migrants who

⁶ From our survey we know that 80% of the current migration is temporary migration. An the spell migration for the last migration experience from the returned migrants is in average 9 months.

⁷ See Aurelia Wa Kabwe-Segatti and Loren Landau, *Migration in post-apartheid South Africa: challenges and questions to policy-makers*, AFD Notes & Documents n°38, Paris.

⁸ The most recent South African census refers to the year 2007, but there is not information on the country of origin for migrants. The census of 1996 shows the same path that those presented here for the 2001 census.

cluster mainly on two provinces Western Cape (the region of Cape Town) and Gauteng (the region of Johannesburg), and those migrants are the more high skill migrants with the British as the large nationality representing the migration population on non-African migrants.

We hence argue that group participation in Mozambique is exogenous to migration behaviour and labor market outcomes (wages) of immigrants in South Africa, as well as to the migrant's likelihood to be hit by xenophobic attitudes in regions of destination.

Furthermore, by comparing migration intentions from different communities in a single one-year period (before and after exogenous xenophobic shocks), we are much less concerned about the interaction between community networks and labor market outcomes in Mozambique as well. This is so as access to groups and social networks is not an open process, but there are frictions to participation (related to convex transactions costs, imperfect commitment, asymmetric information, lack of enforceability or any other process that limits informal social arrangements (Fafchamps, 2002, Ligon et al., 2002)). Thus, we can rule out the possibility that households start joining networks at origin due to xenophobic attacks at destination over such a short period of time.

7. Concluding Remarks

We have shown that migration intentions to South Africa have been affected substantially after violent attacks. The effects are largest for household with many young children. Access to social networks, however, mitigates the perceived danger, or, more precisely, the consequences of being killed or injured on the family's welfare. Social networks hence seem to play an important role at the country of origin, an insurance device against the risks associated with migration. Social networks in the country of origin cannot offer protection against violence in the destination country, but they can insurance families against the income losses owing to injury or death of the household head.

REFERENCES (INCOMPLETE)

- Burda, M. C., Härdle, W., Müller, M., and Werwatz, A., (1998),. “Semiparametric Analysis of German East-West Migration Intentions: Facts and Theory”, *Journal of Applied Econometrics* 13(5): 525-541.
- van Dalen, H. P., Henkens, K., (2008), “Emigration Intentions: Mere Words or True Plans? Explaining International Migration Intentions and Behavior”, Discussion Paper 2008-60, Tilburg University, Center for Economic Research.
- Drinkwater, S., Ingram, P., (2008), “How Different are the British in their Willingness to Move? Evidence from International Social Survey Data”, *Regional Studies*, April 2008, pp 1-17
- Epstein, G. S., Gang, I.N., (2006). “The Influence of Others on Migration Plans”, *Review of Development Economics* 10(4): 652-665.
- Fouarge, D. , Ester, P., (2007). “Determinants of international and regional migration intentions in Europe”. Luxembourg: Office for Official Publications of the European Communities.
- Lam, K.-C., (2002), “Interaction Between Economic and Political Factors in the Migration Decision”, *Journal of Comparative Economics* 30(3): 488-504.
- Liebig, T. and Sousa-Poza, A., (2004), ‘Migration, self-selection and income inequality: an international analysis’, *Kyklos* 57: 125-146.
- Manski, C. F., (1990), “The Use of Intentions Data to Predict Behavior: A Best-Case Analysis”, *Journal of American Statistical Association* 85 (412): 934-940.
- Mesnard, A. 2009, Migration, violence and welfare programmes in rural Colombia, mimeo.
- Papapanagos, H., Sanfey, P., (2001), “Intention to Emigrate in Transition Countries: The Case of Albania”, *Journal of Population Economics* 14(3): 491-504.
- Uebelmesser, S., (2006), “To Go or Not to Go: Emigration from Germany”, *German Economic Review* 7(2): 211-231.

TABLES

Table1- Migration intentions over time (%)				
	Now (Aug-08)	1 year earlier (Aug-07)	6 months earlier (Jan-08)- placebo period	Total
No intention	66.89	63.29	62.91	64.36
Weak Intention	9.05	10.79	12.35	10.73
Strong intention	11.31	11.84	11.63	11.59
Surely	12.75	14.08	13.11	13.31
Total	100	100	100	100

Table 2- Migration intentions over time, by household size (%)				
	Now (Aug-08)	1 year earlier (Aug-07)	6 months earlier (Jan-08)- placebo period	Total
Hh sub-sample with small household size (<4)				
No intention	73.31	74.48	73.62	73.81
Weak Intention	9.63	5.39	9.07	8.03
Strong intention	6.59	9.34	7.77	7.9
Surely	10.47	10.79	9.54	10.27
Hh sub-sample with big household size (>7)				
No intention	50.96	50.98	60.22	54.06
Weak Intention	18.5	17.59	10.6	15.56
Strong intention	13.87	13.89	13.66	13.81
Surely	16.67	17.53	15.52	16.57

Table3- Migration intentions over time, by hh group membership/ social network (%)				
	Now (Aug-08)	1 year earlier (Aug-07)	6 months earlier (Jan-08)- placebo period	Total
Hh sub-sample with no group membership				
No intention	61.82	61.67	66.89	63.46
Weak Intention	10.93	12.32	8.84	10.7
Strong intention	10.92	11.37	9.97	10.75
Surely	16.33	14.64	14.31	15.09
Hh sub-sample with group membership				
No intention	67.34	66.3	66.92	66.85
Weak Intention	10.41	12.41	9.64	10.82
Strong intention	14.37	12.36	14.99	13.91
Surely	7.88	8.93	8.46	8.42
Total	100	100	100	100

Table 4: Probit marginal effects of positive migration intentions

	(1)	(2)	(3)	(4)	(5)	(6)
COVARIATES						
Tdummy (Aug 08)b	-0.040*** (0.015)	-0.039** (0.016)	-0.041** (0.018)	-0.043** (0.019)	-0.046** (0.019)	-0.046** (0.019)
Tdummy (Jan 08)		0.003 (0.009)	0.003 (0.010)	0.003 (0.011)	0.004 (0.011)	0.004 (0.011)
HH migration experience (current)				0.240*** (0.039)	0.262*** (0.041)	0.263*** (0.041)
HH migration experience (past)				0.163*** (0.047)	0.189*** (0.048)	0.188*** (0.048)
Seasonal migration experience				-0.010 (0.083)	-0.027 (0.086)	-0.033 (0.085)
Female HH head			-0.073* (0.039)	-0.081** (0.039)	-0.076* (0.041)	-0.071* (0.040)
Age of HH head			-0.000 (0.005)	0.004 (0.005)	0.003 (0.006)	0.003 (0.006)
Age of HH head squared			-0.000 (0.000)	-0.000* (0.000)	-0.000 (0.000)	-0.000 (0.000)
HH size (including migrants)			0.035*** (0.011)	0.016 (0.011)	0.023** (0.011)	0.023** (0.011)
Number of females in the HH			0.001 (0.017)	0.018 (0.017)	0.018 (0.017)	0.018 (0.017)
Number of children in the HH (<5years-olc			-0.011 (0.026)	-0.016 (0.025)	-0.022 (0.026)	-0.020 (0.026)
Average hh years of schooling			-0.003 (0.021)	-0.023 (0.021)	-0.054** (0.022)	-0.053** (0.022)
Average hh years of schooling squared			-0.001 (0.002)	0.001 (0.002)	0.003 (0.002)	0.003 (0.002)
HH head occupation- farmer			-0.142*** (0.039)	-0.143*** (0.039)	-0.167*** (0.042)	-0.166*** (0.042)
Wealth index (c)			0.034*** (0.011)	0.031*** (0.011)	0.029** (0.013)	0.028** (0.013)
Wealth index squared			-0.006* (0.003)	-0.007** (0.003)	-0.006* (0.003)	-0.005 (0.003)
Urban area			-0.075* (0.041)	-0.079* (0.041)	0.119 (0.296)	0.128 (0.297)
Being informed about attacks in SA						-0.104 (0.103)
Ethnicity, religion controls	yes	yes	yes	yes	yes	yes
Community controls	no	no	yes	yes	no	no
Community Fe	no	no	no	no	yes	yes
Observations	2701	2701	2701	2701	2701	2701

Robust standard errors clustered at household levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Notes: (a) The dependent variable is a discrete variable equal to 1 if the household respondent reports a positive intention of emigration (0 otherwise). (b) The reference category is August 2007. (c) The wealth index is the first component of a principal component analysis, which uses dwelling conditions and assets ownership of the HH. (d) Columns 5-6 show estimates with fixed effects at the community level. (e) Household characteristics include ethnic group (Changana, Ronga, Chope, Other minorities) and religion (Catholic, Presbyterian, Methodist, Anglican, Baptist, Adventist, Islam, Tradition spiritsm, other). (f) Community level characteristics include the quality of roads, school, health facilities, formal bank and market availability.

Table 5 Heterogeneous probit models- marginal effect

Panel A: HH size (including migrants)		
	Low (<4)	High (>7)
Tdummy (Aug 08)b	0.029 (0.030)	-0.144*** (0.038)
Tdummy (Jan 08)	-0.003 (0.017)	0.002 (0.020)
HH migration experience (current)	0.197*** (0.072)	0.285*** (0.067)
HH migration experience (past)	0.229*** (0.075)	0.066 (0.075)
HH and community controls	yes	yes
Observations	1164	777
Panel B: HH size (excluding migrants)		
	Low (<4)	High (>6)
Tdummy (Aug 08)b	0.005 (0.028)	-0.109*** (0.034)
Tdummy (Jan 08)	0.004 (0.017)	0.011 (0.020)
HH migration experience (current)	0.186*** (0.063)	0.266*** (0.063)
HH migration experience (past)	0.212*** (0.066)	0.149** (0.073)
HH and community controls	yes	yes
Observations	1398	905
Panel C: N.of children (<15 years old)		
	Low (<2)	High (>4)
Tdummy (Aug 08)b	-0.003 (0.029)	-0.111*** (0.035)
Tdummy (Jan 08)	-0.016 (0.016)	0.005 (0.018)
HH migration experience (current)	0.178*** (0.062)	0.203*** (0.059)
HH migration experience (past)	0.067 (0.071)	0.100 (0.070)
HH and community controls	yes	yes
Observations	1216	950
Panel D: N.of females		
	Low (<2)	High (>4)
Tdummy (Aug 08)b	-0.013 (0.025)	-0.136*** (0.041)
Tdummy (Jan 08)	-0.010 (0.012)	0.017 (0.021)
HH migration experience (current)	0.212*** (0.062)	0.331*** (0.070)
HH migration experience (past)	0.214*** (0.064)	0.046 (0.081)
HH and community controls	yes	yes
Observations	1383	733

Robust standard errors clustered at household level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Notes: (a) We distinguish between 'low' and 'high' by using always the first two and the last two quantiles of all demographic variable distribution.

Table 6 Heterogeneous probit models- marginal effects

Panel B: Community group membership				
	NO group member		Group member	
Tdummy (Aug 08)b	-0.061*** (0.020)	-0.061*** (0.021)	-0.008 (0.041)	-0.002 (0.041)
Tdummy (Jan 08)		-0.002 (0.014)		0.013 (0.019)
HH migration experience (current)	0.269*** (0.046)	0.269*** (0.046)	0.134* (0.070)	0.134* (0.070)
HH migration experience (past)	0.193*** (0.060)	0.193*** (0.060)	0.093 (0.077)	0.093 (0.077)
HH and community controls	yes	yes	yes	yes
Observations	1996	1996	684	684

Panel B: Informal social networks				
	NO inter-hh exchange		Inter-hh exchange	
Tdummy (Aug 08)	-0.073*** (0.019)	-0.069*** (0.021)	0.026 (0.042)	0.021 (0.042)
HH migration experience (current and past)		0.007 (0.014)		-0.008 (0.017)
Migr experience before the war	0.279*** (0.045)	0.280*** (0.045)	0.101 (0.081)	0.101 (0.081)
Tdummy (Jan 08)- placebo	0.209*** (0.058)	0.209*** (0.058)	0.087 (0.077)	0.087 (0.077)
HH and community controls	yes	yes	yes	yes
Observations	1799	1799	884	884

Robust standard errors clustered at household level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Notes: (a) The dependent variable is a discrete variable equal to 1 if the household respondent reports a positive intention of emigration (0 otherwise). (b) Group membership is a binary variable equal to 1 if any member of the household has participated in any of the following community group: ROSCAs, bank, farmers association, burials association, ONGs actions, self-help religious group, political group, women group, civic group, migrant's group, young group, others. (c) Give or receive a binary variable equal to 1 if the HH has given or received products or services in the last month from at least one of the following key persons in the community: traditional leader, elected leader, teacher, agricultural agent, priest, neighbours, health provider, healer, employer.

Table 7 Heterogeneous probit models- marginal effects

Panel A: HH size (excluding migrants)				
	Low (<4)		High (>7)	
	No group member	Group member	No group member	Group member
Tdummy (Aug 08)b	-0.018 (0.031)	0.058 (0.055)	-0.141*** (0.041)	-0.075 (0.072)
Tdummy (Jan 08)	0.001 (0.021)	0.012 (0.028)	0.000 (0.027)	0.028 (0.036)
HH migration experience (current)	0.210*** (0.078)	-0.063 (0.077)	0.282*** (0.079)	0.307** (0.129)
HH migration experience (past)	0.273*** (0.086)	0.105 (0.095)	0.150 (0.094)	0.104 (0.123)
HH and community controls	yes	yes	yes	yes
Observations	1101	288	614	282
Panel B: N children (>15 years old)				
	Low (<2)		High (>4)	
	No group member	Group member	No group member	Group member
Tdummy (Aug 08)b	-0.030 (0.029)	0.103 (0.091)	-0.145*** (0.038)	-0.061 (0.083)
Tdummy (Jan 08)	-0.019 (0.016)	-0.007 (0.044)	-0.005 (0.025)	0.022 (0.027)
HH migration experience (current)	0.274*** (0.069)	-0.275*** (0.085)	0.248*** (0.076)	0.178 (0.113)
HH migration experience (past)	0.048 (0.082)	-0.157** (0.077)	0.201** (0.089)	-0.157 (0.130)
HH and community controls	yes	yes	yes	yes
Observations	973	237	662	276
Panel C: N females				
	Low (<4)		High (>6)	
	No group member	Group member	No group member	Group member
Tdummy (Aug 08)b	-0.040 (0.026)	0.060 (0.068)	-0.166*** (0.050)	-0.106 (0.081)
Tdummy (Jan 08)	-0.020 (0.014)	0.012 (0.027)	0.008 (0.029)	0.027 (0.031)
HH migration experience (current)	0.277*** (0.073)	-0.134 (0.095)	0.372*** (0.081)	0.535*** (0.133)
HH migration experience (past)	0.228*** (0.087)	0.195* (0.116)	0.042 (0.106)	0.213 (0.156)
HH and community controls	yes	yes	yes	yes
Observations	1044	324	514	213

Robust standard errors clustered at household level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Table 8: Source of help on the migration process

	Current Migrants	Past Migrants
Family in Mozambique	33.75	33.89
Family abroad	12.97	17.94
Friends in Mozambique	4.53	2.99
Friends abroad	5.16	1.33
Previous Experience	34.69	24.58
Neighbors	0.78	0.66
Government	0.78	3.32
Recruitment agency	4.69	11.63
Other	2.66	3.65

Table 9: Characteristic of Migrants in South Africa by Country of Origin

Panel A: Education			
	Mozambique	Other African Countries	Non-African Countries
Less than primary completed	46.20	16.61	1.68
Primary completed	46.35	35.28	13.06
Secondary completed	6.88	36.98	57.78
University completed	0.57	11.13	27.48
Panel B: Occupation			
Agriculture, fishing, and forestry	23.16	9.33	1.99
Mining	23.09	18.27	1.93
Manufacturing	8.00	9.53	17.32
Electricity, gas and water	0.23	0.55	0.84
Construction	12.57	4.91	4.87
Wholesale and retail trade	13.24	12.21	18.20
Hotels and restaurants	1.03	2.60	3.28
Transportation and communications	2.10	3.31	5.22
Financial services and insurance	0.26	3.04	4.93
Public administration and defense	0.72	3.22	3.14
Real estate and business services	1.97	8.27	12.89
Education	0.18	3.23	5.30
Health and social work	0.52	3.66	5.72
Other services	1.80	3.34	4.55
Private household services	4.57	6.81	0.30
Unknown	6.57	7.72	9.55
Panel C: Location			
Western Cape	0.30	6.24	18.23
Eastern Cape	0.02	1.91	4.80
Northern Cape	0.01	0.97	0.35
Free State	2.38	5.45	1.74
KwaZulu-Natal	2.49	6.85	13.63
North West	14.50	11.96	2.35
Gauteng	46.12	46.79	55.02
Mpumalanga	22.43	11.46	2.03
Limpopo	11.75	8.37	1.83

Source: South African Census 2001. IPUMSI.

ADDITIONAL TABLES

ROBUSTENSS CHECK using n.of children above 15 years old ('adult children')- nothing changes with respect to the table above. I don't think this is very useful for us.

Table A1-CHECK: Heterogeneous probit models- marginal effect

Panel C: N.of 'adult children' (>15 years old)		
	Low (<1)	High (>2)
Tdummy (Aug 08)b	-0.008 (0.026)	-0.117*** (0.035)
Tdummy (Jan 08)	0.019 (0.016)	-0.009 (0.021)
HH migration experience (current)	0.220*** (0.056)	0.292*** (0.072)
HH migration experience (past)	0.179*** (0.060)	0.172** (0.088)
HH and community controls		
Observations	1509	763
Panel D: N.of male 'adult children' (>15 years old)		
	Low (<0)	High (>2)
Tdummy (Aug 08)b	-0.011 (0.023)	-0.112*** (0.033)
Tdummy (Jan 08)	0.015 (0.014)	-0.019 (0.017)
HH migration experience (current)	0.238*** (0.051)	0.214*** (0.067)
HH migration experience (past)	0.183*** (0.057)	0.142* (0.086)
HH and community controls		
Observations	1754	947

Robust standard errors clustered at household level in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Notes: (a) We distinguish between 'low' and 'high' by using always the first two and the last two quantiles of all demographic variable distribution.

Table A2- Determinants of household migration behavior

	Dependent variable			
	(1)	(2)	(3)	(4)
	Positive migration intention (Probit marginal effects)	N.of current migrants in the hh (OLS)	Household migration experience (Probit marginal effects)	Migrant have a permanent job contract at destination (a) (Probit marginal effects)
Community group participation	-0.037 (0.048)	-0.059 (0.082)	-0.046 (0.055)	-0.125 (0.089)
Past HH migration	0.180*** (0.054)	0.057 (0.126)	0.037 (0.069)	-0.044 (0.080)
Female HH head	-0.067 (0.052)	-0.123* (0.070)	0.010 (0.053)	0.006 (0.079)
Age of HH head	0.005 (0.006)	0.011 (0.016)	0.002 (0.007)	0.005 (0.013)
Age of HH head squared	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
HH size	-0.010 (0.013)	-0.184*** (0.041)	-0.069*** (0.013)	0.012 (0.019)
Number of females in the HH	0.039** (0.018)	0.318*** (0.061)	0.096*** (0.021)	0.014 (0.025)
Number of children in the HH (<5years-ol	0.005 (0.033)	0.112* (0.059)	0.098*** (0.027)	-0.044 (0.042)
Average hh years of schooling	0.024 (0.017)	0.157*** (0.044)	0.152*** (0.021)	0.046 (0.049)
Average hh years of schooling squared	-0.003 (0.002)	-0.015*** (0.004)	-0.014*** (0.002)	-0.005 (0.005)
HH head occupation- farmer	-0.114*** (0.041)	0.046 (0.101)	-0.030 (0.063)	-0.081 (0.081)
Wealth index (b)	0.025* (0.013)	0.074*** (0.023)	0.026** (0.013)	-0.007 (0.020)
Wealth index squared	-0.005 (0.004)	-0.002 (0.006)	-0.001 (0.004)	0.001 (0.005)
Urban area	-0.089** (0.043)	0.024 (0.073)	-0.070** (0.034)	0.008 (0.073)
Constant		0.058 (0.390)		
Ethnicity, religion controls	yes	yes	yes	yes
Community controls	yes	yes	yes	yes
Observations	914	919	919	353

Robust standard errors clustered at household levels in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Notes: (a) The dependent variable is a discrete variable equal to 1 if the household respondent reports the migrant has a permanent job contract at destination, conditional on having migrant household members (0 otherwise). (b) The wealth index is the first component of a principal component analysis, which uses dwelling conditions and assets ownership of the HH. (c) Household characteristics include ethnic group (Changana, Ronga, Chope, Other minorities) and religion (Catholic, Presbyterian, Methodist, Anglican, Baptist, Adventist, Islam, Tradition spiritism, other). (d) Community level characteristics include the quality of roads, school, health facilities, formal bank and market availability.