

## **Forced Migration and Remittance Behavior in Post-Apartheid South Africa**

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**Abstract:** This paper looks at the determinants of international remittances in the context of South-South migration. We use micro-economic data from a 2006 survey on 639 African migrants living in Johannesburg. Due to the diversity of the reasons for migration to South Africa and the regime change there, in addition to the traditional variables (income, household size in the host country, age, sex, education etc.) we consider the impact of departure conditions from the country of origin (war, conflict, persecutions), the regime change and political environment in the host country (access to democracy, restrictive migratory law) and subjective variables (perception of relative wealth, attachment to the country of origin) on remittances. The results highlight the importance of departure conditions and subjective variables as determinants of remittances. Having left one's country of origin due to violence or conflict has a negative effect on the probability of remitting but does not influence the amounts transferred, which depend more on the current situation of the migrant in the host country (income, size of family, etc.). Migrants attached to their country of origin, and who have the feeling of being richer in the host country than in the country before migration, also have a greater probability of remitting.

**JEL classification:** F22, F24, O15, O55.

**Keywords:** Forced migration, South-South remittances, Political environment, South Africa.

## 1. Introduction

Due to their size, international remittances have increasingly attracted the attention of researchers, international organizations and political decision-makers.<sup>1</sup> Stylized facts about remittances are well known. Despite a fall in 2009 as a result of the economic crisis, international remittances increased in 2010 and 2011 to reach 501 billion Dollars (estimate) (Ratha and Silwal, 2012). Developing countries are the principal recipients: 74.3% of these private financial flows were in their favor in 2011 (372 billion Dollars).<sup>2</sup> They are the second most important source of external finance for developing countries after Foreign Direct Investments, and far ahead of Official Development Assistance.

While there is much theoretical and empirical research on these financial flows, the framework is often restricted to remittances from developed to developing countries: there is little work on South-South remittances, i.e. remittances between developing countries. The lack of data in developing countries and worries about its reliability partly explain these gaps. However, the study of remittances between developing countries (30% of all international remittances in 2005) is important for at least two main reasons.

First, there are many migrants in developing countries.<sup>3</sup> South-South migrations are actually larger than migrations from South to High income OECD countries: around 43% of migrants from developing countries are believed to live in other developing countries (World Bank 2010). As is the case in developed countries, migrants in developing countries remit part of their income to their families still in the country of origin. The analysis of remittance flows is therefore both of interest and important.

Second, some of the migrants in developing countries differ from those who migrate to industrialized countries by the generally forced nature of their displacements. The number of people who were forced to migrate due to armed conflicts or persecution at the end of 2010 reached a figure of 43.7 million (0.63% of the world population and 20.42% of international migrants). Among these 80% migrated to developing countries (34.96 million people), 35.2% are refugees (15.4 million), 1.7% are asylum seekers (850 000) and 62.9% are internal displaced persons (27.5 million) (UNHCR 2011). While it seems reasonable to assume that international migrants to industrialized countries mainly migrate by choice, and in particular to benefit from better economic opportunities in the host country, many migrants between developing countries are fleeing armed conflicts, political instability, persecution or natural disasters. In the first case migration can be largely described as “voluntary” or “chosen”, while the second case concerns more “forced” migration. This difference in departure conditions may be reflected in remittance behavior. This question has to date been little explored.

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<sup>1</sup> Remittances are defined by the World Bank as the sum of workers' remittances, compensation of employees and migrant transfers.

<sup>2</sup> In reality these figures are likely to be higher because of informal remittances that are not taken into account in official statistics.

<sup>3</sup> According to the latest data available from the United Nations, the number of international migrants living in developing countries rose from 43.15 to 86.23 million people between 1960 and 2010.

The variable reflecting departure conditions is related to the reasons for migration<sup>4</sup> and not to migrants' legal status. The difficulty of entry into South Africa leads many migrants to attempt to enter through a demand for asylum (Landau, 2004). We thus cannot be sure that legal status really represents forced migration. Instead, forced migration here designates individuals who fled their home country in order to escape wars/conflicts, political oppression or religious, ethnical/tribal or gender persecution and discrimination.<sup>5</sup>

The literature on the remittances of voluntary migrants is rich and covers a relatively broad field. In classical theory (Todaro 1969; Harris and Todaro 1970) and the New Economics of Labor Migration (NELM) remittances are explained by migrant pure altruism or by migrant unlightened selfishness (Lucas and Stark 1985) i.e his/her self interest (exchange, investment, inheritance), the family's desire to insure itself against risks (in particular income risk), the existence of an informal contract between the migrant and his/her family (repaying a loan) or a combination of these factors. On the contrary the economic literature on forced migration is rare and only little work has considered remittances after forced migration (Fagen and Bump 2006; Ruiz and Vargas-Silva 2013; Van Hear et al. 2009) or the impact of political change in the host country.

According to classical theory and the NELM, migration and remittances result from strategies of income maximization and diversification. However forced migration typically implies that migrants have left their home country for reasons of their personal safety. However, nothing then prevents them from behaving like voluntary migrants and remitting. This is what Lindley (2008) calls the “post-hoc strategy”. The latter is made possible by the fact that even if individuals are forced to leave their home country, they generally have more choice with regard to the host country. This choice can be motivated by economic, social and/or political considerations. Forced migration can thus be considered as partly mixed (a combination of constraint and choice) (Van Hear et al 2009). As such, it may be the case that forced and voluntary migrants' behavior converges to a certain extent. We can then ask whether this convergence is partial or total, and whether it applies to the probability of transferring (the extensive margin) and/or to the amounts transferred (the intensive margin). We can reasonably assume that the convergence is only partial as the motivations for migration will likely remain important in determining remittances.

Taking into account this potential convergence, the motivations to remit highlighted in the literature on labor migration are applied to the typical case of “forced” migration. However these motivations cannot be applied without taking into account the particularity and complexity of the context in which these displacements took place. Instability in the country of origin is likely to affect the behavior of the migrants as regards remittances.

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<sup>4</sup> Migrants were asked the following question: "Why did you ultimately decide to leave your country of origin?" They were allowed to give at most two answers. All the variables and relative questions are presented in appendix in tables A.3 and A.4.

<sup>5</sup> More precisely, forced migrants are those who indicate at least one of these factors as the reason for their migration.

Among all the theoretical determinants of remittances, insurance motives are very important regarding forced migration behavior<sup>6</sup>. Remittances may reflect the family's wish to insure itself against risks (Lucas and Stark 1985; Gubert 2002; Sana and Massey 2005; Niimi et al. 2009). In the presence of imperfect credit and insurance markets in the home countries, families may decide to send some of their members abroad with the aim of receiving transfers in the event of negative and unexpected income shocks (disease or drought for example). This seems particularly apt in the case of “forced” migrations. As Lindley (2008) notes, conflicts or natural disasters constitute events creating a need for insurance. The climate of insecurity in the country of origin may then lead forced migrants to remit in order to minimize or compensate their family's loss of means. Research on Somali migrants shows that transfers of money by forced migrants constitute an important assistance mechanism in the face of income risk and that they respond to crises in the family (Lindley 2007a).

The political regime in the host country can also affect transfers. Its impact is *a priori* ambiguous. On the one hand structural barriers can restrict migrants' access (voluntary or forced) to the labour market, education or social services (Lindley 2008; Riak Akuei 2005). The political environment in the host country can thus negatively affect remittances. This negative effect may also pertain if policy in the host country allows families to rejoin each other, thus reducing the need for transfers. On the other hand, it may be easier for some migrants, in particular refugees and asylum seekers, to obtain official support and profit from help in finding work. This will increase their transfer probability. In the same way, the potential labor requirements in the host country can favor job access and thus remittances.

In order to study the impact of forced migration and political environment in the host country on remittances, an original database on African migrants living South Africa is used. South Africa is an interesting country for the study of migrant behavior in the context of South-South remittances for at least two reasons. First, being the richest country in the continent, it attracts a considerable number of African migrants in search of economic opportunities and/or political security for several decades and even more so since the first democratic elections in 1994<sup>7</sup>. Second, the country knew important political changes in the last century. Pre-1994, South Africa was characterized by sharp racial segregation under apartheid, affecting the black and migrant populations (1946-1991). From the middle of the 20<sup>th</sup> Century onwards, political change led to changes in migratory policy and the composition of migrant flows. Whereas racial criteria dominated migratory policy under apartheid, nowadays policy rather satisfies the country's need for qualified labor<sup>8</sup>. As a result of this change in immigration policy, migrant flows changed to the detriment of whites and in favor of blacks and Asians, refugees and illegal migrants (Wa Kabwe-Segatti and Landau 2008; Kok et al. 2006; Maharaj 2004). This paper then uses data on

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<sup>6</sup> As the literature on remittances of voluntary migrants is well known, we only focus here on motivations that are relevant both in voluntary and forced migration. See Rapoport and Docquier (2005) and Hagen-Zanker and Siegel (2007) for a detailed review of the literature on the motivations to remit.

<sup>7</sup> While before democracy South Africa was a refugee-producing country, it now receives one of the largest number of asylum applications in the world (UNHCR Global Report 2009).

<sup>8</sup> Under apartheid, South African immigration policy was a blatant instrument of white racial supremacy. Section 4 (1) of the Aliens Control Act stated unambiguously that a person could only immigrate to South Africa if his/her habits of life suit to the requirements of South Africa. The official definition of an immigrant was therefore that he/she had to be able to be assimilated into the white population. Africans were then not considered for immigration. This did not mean that Africans from neighbouring countries were not allowed to enter into South Africa. However, their entry was highly restricted and they were solely allowed to enter as migrants labourers (Khan 2007).

639 African migrants living in Johannesburg that allow us to distinguish differences in remittance behavior according to *i*) departure conditions (forced/non-forced) and *ii*) the political situation in South Africa (apartheid/democracy).

The paper is organized as follows. Section 2 describes the data on migrants and their remittances. Section 3 estimates the probability of remitting and the transferred amounts, adding departure conditions and political change in the host country to the traditional explanatory variables. Last, Section 4 concludes.

## 2. Description of the MNAC survey

The “*Migration and the New African City: Citizenship, Transi, and Transnationalism*” (MNAC) survey was conducted in 2006 by the African Centre for Migration & Society, University of Witwatersrand (Johannesburg), in association with the French Institute of South Africa (IFAS) and Tufts University in Boston. The survey contains both objective and subjective information: *(i)* the demographic profile of the migrant; *(ii)* the conditions prevailing in the country of origin before migration; *(iii)* the living conditions of the migrant during the migration and once arrived in South Africa and *(iv)* a series of subjective variables such as migrants’ perceptions of the country’s institutions, the political environment and their relative wealth in the host country.

It is worth noting that the sample surveyed is not representative of migrants in South Africa. Several reasons explain this issue. First, as inestimable portions of migrants enter South Africa through informal channels, do not formalize their status and cannot be traced on the Department of Home Affairs’ movement control database, migrants are under-represented in government census. Second, migrants are concentrated in particular areas in Johannesburg and we haven’t appropriate weight to make the sample representative. Third, the database was initially created within the framework of the African Cities Project (ACP) whose purpose was to collect data documenting the phenomena of transit in Southern, Central and East Africa and the integration of migrants in their reception towns in the continent. The countries were thus selected not for their potential migratory links but due to their geographical location.<sup>9</sup> These criteria explain why there are no Zimbabwean migrants in the sample, despite their considerable presence in South Africa.<sup>10</sup>

Contrary to the case in other cities, the objective in the town of Johannesburg was not to survey a pure random sample but to interview a given number of migrants divided into two groups: 600 Somali, Mozambican and Congolese migrants and a group of 200 South-African internal migrants<sup>11</sup>. To construct this sample, a multi-stage cluster approach was used. After having identified areas (suburbs) where migrants tend to concentrate, the first stage involved randomly selecting sub-units within the chosen suburbs from which to sample. In a second stage, eight

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<sup>9</sup> Information on the migratory situation and remittances in South Africa, the Democratic Republic of Congo, Mozambique and Somalia are presented in Appendix in table A.1.

<sup>10</sup> Statistics from 2001 census data on international migrants in South Africa are presented in Appendix in table A.2. For more details about the construction of the sample, see Vigneswaran (2007).

<sup>11</sup> The survey was also made in Maputo (the capital of Mozambique), Nairobi (the capital of Kenya) and Lubumbashi (the second town of Democratic Republic of Congo after the capital Kinshasa).

respondents from each sub-unit were selected in proportion with the total sample ratio of subjects to the internal migrants group (3 non national for 1 national). The main characteristics of the migrants are presented in the next sub-section<sup>12</sup>.

## 2.1. Migrant Characteristics

Among the 847 migrants in the initial sample, 77.4% (656) are international migrants and 22.6% are South African internal migrants. As we want to examine the determinants of international remittances, the South African migrants were dropped from the sample.<sup>13</sup> Our sample thus consists of 639 international migrants. Among these 252 come from the Democratic Republic of Congo (DRC) (39.4% of the sample), 202 from Mozambique (31.6%) and 185 from Somalia (29%) (Table 1).

The migrants in the sample are mainly men (63.2%), especially the forced migrants, and relatively young, in particular voluntary migrants. Men are historically more likely to migrate than are women, partly because they were officially recruited, notably in the mining sector.

Half of migrants are aged between 18 and 30, and 40% are aged between 31 and 40; the average age is 31. The recent arrival of the majority of the migrants explains their relative youth. Only 11.2% of the migrants came to South Africa before 1995 (i.e. during apartheid or in the year of the first democratic elections in 1994). On the other hand 47.7% arrived between 1995 and 2002, just after the advent of democracy, in a period during which South Africa signed and ratified the 1951 Refugee Convention of the United Nation (accession in 1996 and ratification in 1998). Last, 41.1% of the migrants entered after 2002, when South Africa had adopted a more restrictive migratory law (2002-2003) but also allowed asylum seekers to work and study in the country (2004). A significant higher proportion of forced migrants than voluntary migrants arrived in South Africa in 2003 and 2004. This result can be explained by the instable conditions prevailing in RDC and Somalia.

Nearly half of the migrants are married or live together (49.6 %) and 43.7 % are single. Younger, voluntary migrants tend to be more single than forced migrants. Migrant households are made up of three and four people on average (including the migrant) in the host country. In addition, a majority of migrants, and particularly forced migrants, come from a home household including at least one other migrant.

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<sup>12</sup> Questions asked to migrants are presented in appendix, table A.3.

<sup>13</sup> Fifteen people were excluded because they were interviewed by mistake during the survey. Another migrant was excluded because he remitted within the host country. Last, in order to have a homogenous sample of adults, we dropped the one international migrant under the age of 18.

**Table 1 Migrant Characteristics (% , except other specification)**

	<b>Total</b>	<b>Voluntary Migrants</b>	<b>Forced Migrants</b>	<b>Difference</b>
<b><u>Migrants characteristics</u></b>				
<b>Nationality</b>				
Congolese	39.4 (0.019)	34.7 (0.029)	42.9 (0.026)	**
Mozambicans	31.6 (0.018)	62.4 (0.029)	8.7 (0.015)	***
Somali	29.0 (0.018)	3.0 (0.010)	48.4(0.026)	***
<b>Sex and age</b>				
Men	63.2 (0.019)	51.3 (0.030)	72.1 (0.023)	***
18 -30 years old	49.8 (0.020)	56.7 (0.030)	44.9 (0.026)	***
31 -40 years old	39.6 (0.019)	36.9 (0.030)	41.6 (0.026)	
41 years old and more	10.6 (0.012)	6.3 (0.015)	13.5 (0.018)	***
<b>Marital Status</b>				
Married/lived together	49.6 (0.020)	41.3 (0.030)	55.5 (0.026)	***
Single	43.7 (0.020)	55.0 (0.030)	35.5 (0.025)	***
Divorced/widower	6.7 (0.010)	3.7 (0.011)	9.0 (0.015)	***
<b>Migrant's level of education</b>				
Without or primary education	28.2 (0.018)	28.5 (0.028)	27.9 (0.023)	
Secondary education	47.2 (0.020)	50.6 (0.031)	45.1 (0.026)	
Tertiary education	24.6 (0.017)	21.0 (0.025)	27.1 (0.023)	*
<b>Date of arrival in South Africa</b>				
Before 1995	11.2 (0.013)	13.0 (0.021)	9.8 (0.016)	
Between 1995 and 2002	47.7 (0.020)	50.9 (0.031)	45.2 (0.026)	
Between 2003 and 2004	21.3 (0.016)	16.4 (0.023)	25.0 (0.023)	***
After 2004	19.8 (0.016)	19.7 (0.024)	19.9 (0.021)	
<b>Migrant's income</b>				
Mean annual income (Rand)	24,858 (1324.04)	25,717 (2120.20)	24,319 (1697.06)	
<b><u>Household's characteristics in South Africa</u></b>				
Household size	3.5 (0.090)	3.4 (0.113)	3.5 (0.132)	
Mean annual income (Rand)	47,703 (2150.37)	56,393 (3684.05)	42,942 (2605.13)	***
<b><u>Origin household</u></b>				
Family in the country of origin	94.1 (0.009)	95.9 (0.012)	92.8 (0.014)	*
Other migrant	52.9 (0.020)	43.7 (0.030)	59.8 (0.026)	***
<b><u>Subjective variables</u></b>				
Relative wealth perception	35.1 (0.019)	42.7 (0.031)	29.5 (0.024)	***
Attachment to origin country	56.9 (0.020)	62.2 (0.030)	53.0 (0.026)	**
<b><u>Remitting migrants</u></b>				
	45.7 (0.020)	47.6 (0.031)	44.3 (0.026)	

Source: MNAC and authors' calculations. Standard errors in brackets.

Note: significant difference between voluntary and forced migrants are indicated at 1% \*\*\*, 5% \*\* and 10% \*.

Most migrants are educated, especially Congolese migrants: 44% of the latter have at least tertiary education, against only 10% of Mozambicans and 13.5% of Somalis. Little difference distinguishes forced and voluntary migrants. Overall, 28.2% of migrants do not have any education or reached only the primary education level, 47.2% have secondary education, and 24.6% the tertiary level. However, and despite being relatively educated, the majority of migrants, both forced and voluntary, do not have any income or earn very little<sup>14</sup>: 30.2% of them have no income and 33.5% earn less than 500 Rand per week (74 Dollars). On the contrary, only 1.8% earns between 1500 and 2000 Rand per week, and 3.9% earn over 2000 Rand (295 Dollars). The average annual income of migrants who declare an income was 24,877 Rand (3674 Dollars).<sup>15</sup>

Another picture emerges when we focus on migrants' perceptions of their wealth. Despite their low income, 35.1% of migrants think they are better off economically in South Africa than they were in their home country prior to migration. This perception is much more spread among voluntary than forced migrants. An explanation is that voluntary migrants significantly belong to wealthier household in the host country than forced migrants. This result can be explained by the presence of networks in the host country that helps migrants and their relatives to find a relatively good job. A significant higher proportion of voluntary migrants than forced migrants have then benefited from a network : 60.5% of voluntary migrants knew people in South Africa prior to migration and were in contact with them against a third of forced migrants.

Attachment to the home country is taken into account via two separate variables. The first is an objective variable relating to the continued presence of family in the home country. The second, more subjective, is used as a proxy for attachment and refers to being proud to identify as a citizen of the country of origin, and to following political events of the home country.<sup>16</sup> Almost all migrants still have family in the home country (94.1%), essentially siblings, parents, cousins, uncles and aunts. This objective familial link with the home country seems to be accompanied by a more subjective feeling of attachment which concerns 56.9% of the migrants<sup>17</sup>. Because of the conditions of departure, this attachment feeling is significantly more pronounced among voluntary than forced migrants.

Last, it seems that both push and pull factors explain migration to South Africa. Pull factors are those that attract migrants to the host country (e.g. a dynamic economy); push factors refer to the negative conditions in the home country that drive people to emigrate (e.g. violence, poverty or unemployment). As noted above, the forced or voluntary nature of migration is based on the migrants' own declarations, and thus differs between migrants from the same country. Based on

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<sup>14</sup> The incomes earned refer to incomes from work.

<sup>15</sup> Migrants' annual income is calculated using the central value of each class to transform this figure into a continuous measure. A value of 2750 Rand is assigned to the top open-ended class (over 2500 Rand).

<sup>16</sup> Migrants were asked: "Please, tell me if you agree, disagree, or if you don't have an opinion about this statement: I am proud to identify as a citizen of my country of origin" and "How often do you follow political affairs of your country of origin? Would you say you follow them regularly, from time to time, or never?"

<sup>17</sup> It is worth noting that the majority of migrants remain informed about political events in their country, whatever their education. The main sources of information on home country political affairs are South African or foreign newspapers, radio and television (41% of migrants follow political affairs of their country in this way). The other means of information are the internet (23%), community leaders, elders/relatives, immigrants or refugees in South Africa (12.3%) and phone calls (7.9%). Many of these means of information do not require a particularly high level of education: there is indeed no relation between education and following political affairs in the home country.



the two possible answers to the question “Why did you ultimately decide to leave your country of origin?”, 57.5% left due to violence, conflict or persecution (push factors): these are considered as forced migrants.<sup>18</sup> Among these, 42.9% are Congolese, 48.4% Somalis and 8.7% Mozambicans. Regarding pull factors, 18.9% of all migrants chose South Africa as a destination in order to avoid violence and 55.5% to benefit from economic or educational opportunities.

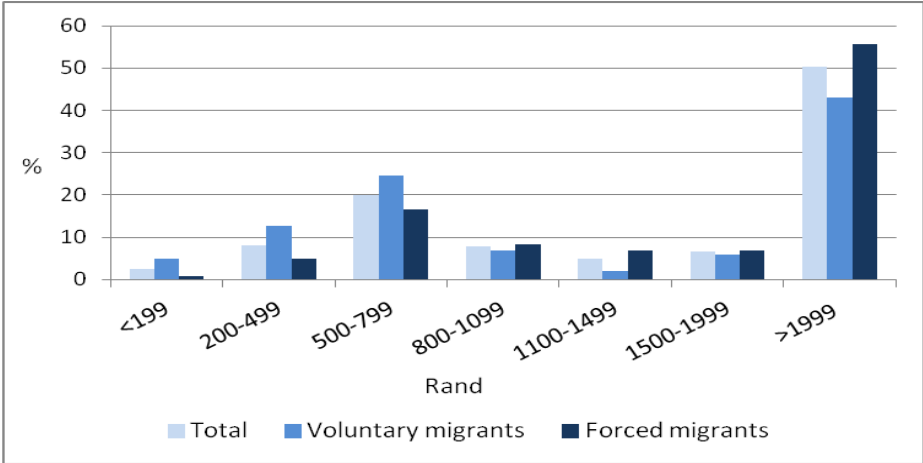
Overall, migrants in this sample are generally men, relatively young, recently arrived in South Africa and with low incomes despite their relatively high levels of education. Most still have family in their country of origin and migrated to flee violence or conflict.

**2.2. Remittance characteristics**

About one half of the migrants in the sample have ever sent money or goods to their home country. There is little variation according to departure condition: 44.3% of forced migrants have ever remitted against 47.6% of voluntary migrants but the difference is not significant.

Remittance characteristics are presented in table 2. The amounts transferred are relatively high. 50.4% of transfers are over 1999 Rand (295 Dollars) per year, whereas only 2.4% of transfers are less than 200 Rand (29.5 Dollars) (Figure 1).<sup>19</sup> On average, migrants transfer 1545 Rand per year (228 Dollars), i.e. 4% of their average annual income. With respect to household average annual income in the host country instead of that of the migrant, the remittances amount to 2.7%.<sup>20</sup> On average, forced migrants remit a significant higher amount than voluntary migrants. They remit 1667 Rand per year (4.4% of their average annual income) against 1373 Rand for voluntary migrants (4%).

**Fig. 1 Transferred Amounts by remitting migrants by departure conditions**



Source: MNAC survey.

<sup>18</sup> 10.2% of migrants indicate only violence as a reason for their migration, whereas 47.25% invoke both economic problems and violence.  
<sup>19</sup> The percentage calculations don't take into account individuals who did not want to answer the question.  
<sup>20</sup> These figures should be interpreted with caution due to the difficulty in estimating the percentage of transfers in migrants' income (the hypothesis of homogenous income by income class, abstraction from seasonal volatility etc.).

Migrants remit regularly: 40.8% send money almost every month (table 2). Voluntary migrants remit more regularly than do migrants who fled war or conflict in their country: 48.8% of the former remit almost every week or almost every month, as against 38.3% of the latter. Migrants remit essentially to their family, in particular to parents and siblings.

**Table 2 Frequency, recipients and means of sending remittances**  
(%, except other specification)

	<b>Total</b>	<b>Voluntary Migrants</b>	<b>Forced Migrants</b>	<b>Difference</b>
<i>Annual mean remitted amount (rand)</i>	1545 (49.90)	1373 (82.86)	1667 (60.03)	***
<i>Remittance's frequency</i>				
Almost weekly	2.1 (0.009)	4 (0.018)	0.6 (0.006)	*
Almost monthly	40.8 (0.029)	44.8 (0.045)	37.7 (0.039)	
Few time yearly	20.4 (0.024)	21.6 (0.037)	19.5 (0.032)	
For special needs	29.9 (0.027)	24.8 (0.039)	34 (0.038)	*
Rarely	6.7 (0.015)	4.8 (0.019)	8.2 (0.022)	
<i>People to whom money is sent</i>				
Parents	78.2 (0.024)	73.2 (0.039)	82.1 (0.030)	*
Siblings	33.9 (0.028)	37 (0.043)	31.5 (0.037)	
Spouse	15.6 (0.021)	7.9 (0.024)	21.6 (0.032)	***
Other	25.3 (0.026)	30.7 (0.041)	21 (0.032)	*
<i>Means of sending remittances</i>				
Friends	28.4 (0.027)	48.8 (0.045)	11.6 (0.026)	***
Family members	22 (0.025)	33.1 (0.042)	12.9 (0.027)	***
Money Gram/Western union	13.5 (0.020)	17.3 (0.034)	10.3 (0.025)	*
Commercial bank	6 (0.014)	7.9 (0.024)	4.5 (0.017)	
Religious organisation/CRO <sup>(1)</sup>	44.3 (0.030)	15.7 (0.032)	67.7 (0.038)	***
Other channel	10.3 (0.018)	14.2 (0.031)	7.1 (0.021)	*

Source: MNAC and authors' calculations. Standard errors in brackets. (1) Community Remittance Organisation.

Note: significant difference between voluntary and forced migrants are indicated at 1% \*\*\*, 5% \*\* and 10% \*.

In order to send money or goods, migrants first use informal channels (informal remittance organisations, friends and family members). On the contrary, and because of high costs, few migrants use commercial banks or other money transfer organisations such as Western Union or Money Gram. Voluntary migrants resort relatively more to family, friends and money transfer organisation to remit than forced migrants. On the contrary, forced migrants largely use religious and community remittance organisations. Two reasons can explain these results. First, forced migrants can face difficulties to access money transfer organisation because of the official documents (work permits, ID card, fixed address, etc.) needed to remit through them.

Second, family and friends of forced migrants are probably in the same situation of them. So they can't or don't want return to origin country. The possibility to remit through family or friends can be then more difficult for forced than voluntary migrants.

### 3. Who are the remitting migrants and how much do they remit ?

Our aim here is to evaluate the extent to which forced migration from the home country and the political environment in the host country influence remittance behavior - both in terms of extensive and intensive margins - conditional on migrants' individual characteristics.

#### 3.1. The model estimated

As the data available on transferred amounts are grouped and since not all migrants actually remit, an ordered probit with Heckman selection modelling (1979) is used and implemented under stata with the “cmp” command developed by Roodman (2011).

In the case of categorical variables, the sample selection model is written as a system of equations for two latent variables: the probability to remit (selection equation) and the transferred amounts (main outcome). The probability to remit, denoted by  $PR_i$ , is a dummy variable depending on a latent continuous variable  $PR_i^*$ , which is unobserved and has the following form:

$$PR_i^* = c + \phi X_i + \eta HH_i + \omega MIG_i + \delta FM_i + \mu DATE_i + v_i$$

and

$$PR_i = \begin{cases} 1 & \text{if } PR_i^* > 0 \\ 0 & \text{otherwise} \end{cases}$$

With :  $c$ , the intercept

$X_i$ , a vector of migrant  $i$ 's individual characteristics (age, education, sex, etc.)<sup>21</sup>;

$HH_i$ , a dummy variable equals to 1 if the migrant  $i$  has still family in country of origin, and 0 otherwise<sup>22</sup>.

$MIG_i$ , a dummy variable equals to 1 if there is at least one other migrant in the origin household of the migrant  $i$ , and 0 otherwise<sup>23</sup>;

$FM_i$ , a dummy variable for departure conditions, which equals 1 if  $i$  migrated due to violence, war, conflict or persecution, and 0 otherwise;

$DATE_i$ , a vector of arrival dates in South Africa taking into account the political environment in the host country;

$v_i$ , the error term.  $v_i \sim N(0; 1)$ .

<sup>21</sup> All variables included in the model are presented in appendix, table A.4.

<sup>22</sup> Unfortunately, there is no information about the composition of the receiving household in the database. Likewise, except the size, there is no information about the composition of the migrant's household in the host country.

<sup>23</sup> The total number of migrants in the household is not informed in the survey.

The transferred amounts, denoted by  $R_i$ , is an ordered variable with  $m$  responses and depends on a latent continuous variable  $R_i^*$ , which is unobserved and has the following form:

$$R_i^* = \alpha X_i + \beta FM_i + \gamma DATE_i + \varepsilon_i$$

And

$$R_i = \begin{cases} 1 & \text{if } R_i^* \leq K_1 \\ 2 & \text{if } K_1 < R_i^* \leq K_2 \\ 3 & \text{if } K_2 < R_i^* \end{cases}$$

$X_i$ ,  $FM_i$  and  $DATE_i$  are the same as before;  $\varepsilon_i$  is the error term ( $\varepsilon_i \sim N(0; 1)$ ) and  $R_i = 1$  if migrant  $i$  transfer less than 800 Rand per year, 2 if  $i$  remits between 800 and 1999 Rand, and 3 if  $i$  remits at least 2000 Rand.

The variables  $HH_i$  (family still in country of origin) and  $MIG_i$  (there is at least one other migrant in the migrant's household of origin) are not included in the equation of transferred amounts. These two variables are then our selection variables. The idea is the following: whereas still having family members in the country of origin probably influences the decision to remit, we can assume that transferred amounts are more determined by the composition of the family (size, number of children, etc.) than by the presence of family in origin country. In the same way, whereas the presence of at least one another migrant can influence the probability to remit, we can assume that it is more the total number of migrants in the household than the presence of at least one another migrant that influences the transferred amounts.

The sample selection model is then the following:

$$\begin{cases} R_i^* = \alpha X_i + \beta MF_i + \gamma DATE_i + \varepsilon_i \\ PR_i^* = c + \phi X_i + \eta HH_i + \omega MIG_i + \delta FM_i + \mu DATE_i + \nu_i \end{cases}$$

with  $\varepsilon_i \approx N(0,1)$

$\nu_i \approx N(0,1)$

$\text{corr}(\varepsilon, \nu) = \rho$

When  $\rho \neq 0$ , the estimate of the first regression induces skewed results as we assume that the migrants who remit do not constitute a random sample of the whole migrants, but show specific characteristics. The ordered probit with Heckman selection modeling (Roodman 2011) then makes it possible to obtain estimates asymptotically efficient for all the parameters of such a model.

## 3.2. Results

### 3.2.1. Objective determinant of remittances

Table 3 analyzes the impact of objective variables linked to the size of the household in the host country and the presence of family in the home country on the probability of remitting (column 1) and on the transferred amounts (column 2). The traditional objective variables such as income, education, age, sex, nationality, etc. are also included. Furthermore the model explicitly introduces the migrant's departure condition (war, conflict, persecutions, etc.) and the political environment in the host country.

First of all, it appears that the correlation coefficient  $\rho$  is negative but non significant which implies that the risk of sample selection bias is weak.

Contrary to Mozambicans, the results suggest that Somalis have a greater probability to remit than do Congolese migrants (extensive margin). Indeed, the descriptive statistics show that 56% of Somali migrants remit as against only 33% of the Congolese. Lindley (2007a, 2008) notes that in a country characterized by insecurity and instability such as Somalia, remittances made by forced migrants constitute an important insurance mechanism against the risk of income loss or other shocks experienced by the family members who remain in Somalia. Contrary to Somalia, Mozambique has been relatively stable since the end of the 1990s and the end of internal conflict. However it appears that once the decision of remitting is taken, both Somali and Mozambican migrants remit higher amounts than Congolese migrants (intensive margin).

As many empirical studies show, the probability of transferring and the transferred amounts significantly rise with income of the migrant's household in the host country (Holst and al 2010; Niimi and al 2009; Lucas and Stark 1985).

As expected and in line with the results of Markova and Reilly (2007), household size in the host country is negatively and significantly correlated with both the probability of remitting and the amount of remittances. Given the income of the migrant's household, the larger is the household, the less the migrant is willing to remit. One possible explanation is that the migrant anticipates future expenditure, on children's education and health for example, which leads him/her today to stop transferring (extensive margin). Moreover the larger is the migrant's household in the host country, the greater is current expenditure and thus the less the migrant can remit high amounts (intensive margin).

As men are mainly household heads in the sample (73% are primary wage earners, as opposed to only 30% of women) they have a greater probability of remitting and remit higher amounts than women.

**Table 3 Probability of remitting and amount of remittances  
Impact of objective variables**

	Probability of remitting (Yes/No)	Amount of remittances
Constant	<b>-1.78*** (0.60)</b>	
Democratic Republic of Congo	Reference	Reference
Somalia	<b>0.66*** (0.23)</b>	<b>1.27*** (0.31)</b>
Mozambique	0.08 (0.31)	<b>1.25*** (0.36)</b>
Monthly income of the migrant's household		
< 2000 Rand	Reference	Reference
2000 - 7999 Rand	<b>0.77*** (0.17)</b>	<b>0.74** (0.33)</b>
≥ 7999 Rand	<b>0.97*** (0.20)</b>	<b>1.36*** (0.39)</b>
Household size in the host country	<b>-0.09* (0.05)</b>	<b>-0.14* (0.07)</b>
Male	<b>0.49*** (0.17)</b>	<b>0.87*** (0.28)</b>
18 – 30 years old	Reference	Reference
31 – 40 years old	<b>0.56*** (0.16)</b>	0.38 (0.32)
> 40 years old	0.06 (0.26)	<b>1.47** (0.57)</b>
Without or primary education	Reference	Reference
Secondary education	0.09 (0.18)	0.13 (0.23)
Tertiary education	0.09 (0.23)	-0.06 (0.30)
Family remain in the country of origin	<b>1.22*** (0.35)</b>	
Other migrant in the household of origin	<b>-0.29* (0.16)</b>	
Arrival in South Africa before 1995	Reference	Reference
Arrival in South Africa between 1995 and 2002	-0.003 (0.31)	0.50 (0.50)
Arrival in South Africa between 2003 and 2004	0.05 (0.37)	0.57 (0.57)
Arrival in South Africa after 2004	-0.23 (0.40)	0.75 (0.65)
Forced Migration	<b>-0.40** (0.20)</b>	0.03 (0.37)
$\rho$		0.34 (0.67)
Number of observations	384	176

Source: MNAC survey and calculations of the authors.

Threshold of significance: \*\*\* 1%, \*\*5%, \* 10%. The standard errors are given into brackets.

The age variable presents differentiated results. Migrants who are in their thirties have a greater probability of remitting than migrants who are under 31 or older than 40. This result is in line with Shire (2006), which finds that the working middle age group of Somalis migrants is more likely to remit than other groups. There are two possible explanations. First, and as Shire (2006) underlines, contrary to younger migrants, migrants in their thirties have a lesser probability to be studying and are more likely to be engaged emotionally with people left behind. Second, those in their thirties may face greater social constraints than others. They may have had to borrow from their families to finance their migration and installation in South Africa and now have to repay. This constraint may be spread over a relatively long period. Migrants do not repay their debts immediately but wait until they are employed with an income. One third of those in their

thirties migrated in the past five to ten years (as opposed to 21% who migrated during the past two years). On the other hand, once the decision of remitting is taken, it appears that the forty year old migrants and older remit significantly higher amounts. Controlling for income level, one can assume that the older migrants have better opportunities to remit higher amounts as they are more stable in their economic and social conditions than the younger.

The regression results show that migrant education does not affect remittances both at the extensive and intensive margins. Existing results in this respect are in fact ambiguous. On the one hand, and in line with human capital theory, educated migrants have a greater probability of transferring not only because they receive higher incomes but also because they are potentially in debt to their families that financed their education, or because they have a lower probability of being clandestine and thus are more likely to have a bank account for example (Bollard et al. 2011). On the other hand the more educated may be less inclined to remit as they may have migrated with their whole household, they are more likely to come from relatively rich households with less need for remittances, and may be better integrated in the host country (and thus have less intention of returning to their home country). In the case of South Africa, an additional explanation lies in the difficulty for migrants to find a job in the formal sector and in the lack of systematic correlation between migrants' skills and their job, so that many migrants do not occupy jobs corresponding to their skills (Havolli 2009).

As noted by Havolli (2009), the presence of family members remaining in the country of origin has a positive and significant effect on the transfer probability<sup>24</sup>. This is in particular true for having parents in the country of origin<sup>25</sup>. On the contrary, the presence of at least another migrant in the household of origin has a negative and significant effect on the probability of remitting.<sup>26</sup> The negative impact on the probability of the transfer can be explained by the fact that supporting family left behind is not only covered by one person but is also shared between several individuals. Therefore, feeling obliged to remit is less imperative.

After these standard variables, we now turn our attention to the role of forced migration from the home country and political conditions in the host country. Forced migrants have a lower probability of remitting. This could be because migrants who left their country in violent conditions (war, conflict) have likely broken the emotional links they have with their home country. Furthermore, even when family ties are controlled for this lower probability can also be explained by the potential loss of close relatives during the conflict in the home country, which would have an obvious effect on remittances (Lindley 2008). The difficulty of forwarding funds to unstable countries or the fear that the money will be lost, mislaid or stolen during the transfer may also be relevant. Last, the fact of having family in the home country does not mean that the migrants have retained physical contact with the remaining family members in their home country. Young (2006) notes that communication was disturbed and that it was difficult, if not

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<sup>24</sup> When the variable is introduced in both the selection equation and the equation of transferred amounts, the results do not change, and the variable is only significant in the selection equation. It is then a good selection variable.

<sup>25</sup> Another estimate breaking up the family ties (parents, brothers and sister, spouse, children) was carried out and shows this result.

<sup>26</sup> The variable "existence of at least one another migrant" is used as a second selection variable. When it is introduced both in the probability and the transferred amounts equations, the results are the same and the variable is not significant in the transferred amounts. So it is also a good selection variable.

impossible, for migrants to locate their families after the 2003 crisis in Darfur. However, the results suggest that the departure conditions are not a determining factor of the transferred amounts. One possible explanation is that once the forced migrant has decided to remit, it is more his/her current situation in the host country (income level, family size) than the conditions of leaving that influences the amount of remittances.

If the departure conditions are significantly determinant to explain the probability to remit, arrival in South Africa after the end of apartheid and the start of democracy does not affect remittances; neither do the various changes in the refugee and migratory laws in 1998, 2002 and 2004. Institutional changes in the host country (proxied by the different dates of arrival in South Africa) then have no influence on migrant behavior. Whatever political situation in South Africa at the time of their arrival, migrants behave in the same way.

To sum up, departure conditions play a key role. The migrants who have a greater probability of remitting are those who did not emigrate for reasons of political and/or ethnic violence or conflict in their home country.

To complete this analysis it is necessary to introduce the role of subjective variables, i.e. the attachment of the migrants to their country of origin and the perception of their wealth, in the decision to remit.

### **3.2.2. Taking into account subjective variables**

As Bertrand and Mullainathan (2001) note, the results in a large experimental literature by and large support economists' skepticism regarding subjective questions, and cast serious doubt on attempts to use subjective data as dependent variables in an econometric framework, as the measurement error appears to be correlated with a wide array of characteristics and behaviors. This is a rather pessimistic conclusion if we want to use these kinds of measures as dependent variables. However, the same authors argue that these measures may be useful as explanatory variables. This is the case here.

The first subjective variable is the attachment of the migrants to their country of origin, approximated by a dummy variable equal to 1 if the migrant is proud to identify as a citizen of the country of origin and if he/she follows political events in the home country, and 0 otherwise. The second subjective variable is the migrant's perception of his/her wealth. It is a dummy variable equal to 1 if the migrants feel richer in the host country than they were in their country of origin prior to migration, and equal to 0 otherwise.

The results are shown in table 4. As previously, there is a very weak risk of selection bias ( $\rho$  is not statistically significant). Furthermore, the introduction of the subjective variables does not change the results found concerning the impact of objective variables on the determinants of remittances.



**Table 4 Probability of remitting and amount of remittances  
Impact of subjective variables**

	Probability of remitting (Yes/No)	Amount of Remittances
Constant	<b>-2.06*** (0.62)</b>	
Democratic Republic of Congo	Reference	Reference
Somalia	<b>0.65** (0.25)</b>	<b>1.28*** (0.31)</b>
Mozambique	-0.16 (0.33)	<b>1.08*** (0.39)</b>
Monthly income of the migrant's household		
< 2000 Rand	Reference	Reference
2000 - 7999 Rand	<b>0.79*** (0.18)</b>	<b>0.80*** (0.30)</b>
≥ 7999 Rand	<b>1.04*** (0.21)</b>	<b>1.41*** (0.36)</b>
Household size in the host country	<b>-0.10** (0.05)</b>	<b>-0.15** (0.07)</b>
Male	<b>0.41** (0.17)</b>	<b>0.84*** (0.27)</b>
18 – 30 years old	Reference	Reference
31 – 40 years old	<b>0.60*** (0.17)</b>	0.39 (0.30)
> 40 years old	0.11 (0.26)	<b>1.46*** (0.56)</b>
Without or primary education	Reference	Reference
Secondary education	0.07 (0.19)	0.13 (0.24)
Tertiary education	0.15 (0.23)	-0.04 (0.31)
Family remain in the country of origin	<b>1.19*** (0.36)</b>	
Other migrant in the household of origin	<b>-0.30* (0.17)</b>	
Arrival in South Africa before 1995	Reference	Reference
Arrival in South Africa between 1995 and 2002	0.04 (0.32)	0.52 (0.50)
Arrival in South Africa between 2003 and 2004	0.05 (0.38)	0.58 (0.58)
Arrival in South Africa after 2004	-0.25 (0.42)	0.73 (0.65)
Departure conditions	<b>-0.40** (0.21)</b>	0.01 (0.35)
Subjective variables		
Attachment	<b>0.46*** (0.18)</b>	0.36 (0.22)
Perception of relative wealth	<b>0.40** (0.16)</b>	0.28 (0.23)
$\rho$		0.34 (0.52)
Number of observations	379	175

Source: MNAC survey and calculations of the authors.

Threshold of significance: \*\*\* 1%, \*\*5%, \* 10%. The standard errors are given into brackets.

The attachment variable attracts a positive coefficient but it is only significant for the probability of remitting. In other words, the more the migrant is attached to his/her country, the greater is his/her probability of remitting. On the contrary, once the decision to remit is taken, the attachment variable does not play a role anymore. These results are in line with those of Miotti et al. (2010). In the case of remittances made in favor of Southern and Eastern Mediterranean countries, they find a positive and significant relationship between the attachment and remittances only for the probability of remitting.

Regarding the attachment variable, one could think that this variable is endogenous with transfers, as transferring money can reinforce the attachment feeling to the country of origin. In that case, we should correct a potential endogenous bias with an instrument to avoid skewed results. However, the importance of the endogeneity bias depends on the order in which subjective questions appear in survey questionnaires. For example, placing two potentially endogenous questions next to each other can bias responses (Bertrand and Mullainathan 2001). In the MNAC survey, the question regarding remittances was asked at the middle of the questionnaire, whereas the question on attachment was left until the end of the questionnaire. As a consequence, the risk of having an endogeneity problem regarding the way that the agents answer the questions (cognitive dissonances) is very much limited<sup>27</sup>.

The second subjective variable introduced here is the perception of wealth of the migrant. With respect to migrant income, the objective variable attracts a positive and significant coefficient. The same result is found for the subjective variable of relative wealth. Controlling for income, the more migrants feel that they are richer now than before migration, the greater their probability to remit is. However, the results show that this variable does not influence the transferred amounts. The amounts of remittances are then only determined by the migrant's objective income. This result is not surprising as the real capacities of the migrant to send money depends on his/her real income and not on his/her perception of relative wealth.

To sum up, migrants in their thirties, particularly Somalis, men, members of smaller households, with greater incomes and with family ties in their home country are more inclined to remit (extensive margin). Among those who transfer, the Somali and Mozambican migrants older than 40 years and whose income is relatively higher remit more important amounts. Moreover, violence or conflict in the home country before migration reduces the probability of the transfer but not the transferred amounts. Similar results are found for the attachment and perception variables. Migrants attached to their country of origin and thinking that they are richer in the host country than before migration are more likely to remit but do not remit higher amounts than other migrants. On the other hand, no significant impact is found for the political environment in the host country. These results can be considered as robust because most of the variables remain significant in both models. Furthermore, it should be emphasized that the determinants of South-South remittances seem very similar to those of North-South remittances (Miotti et al. 2010; Agarwal and Horowitz 2002; Osaki 2003). It then appears that since there are significant income differentials between countries, remittance behaviors of migrants converge to those underlined in the case of South-North migrations.

#### **4. Conclusion**

This paper has considered the impact of departure conditions and the political environment in the host country on remittances in the case of South-South migration. We use an original survey conducted in South Africa covering African migrants (from the Democratic Republic of Congo,

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<sup>27</sup> In the survey, respectively 27 and 32 questions separate the questions relative to the follow-up of political affairs of the country of origin and the feeling of pride to be a citizen of country of origin with those relative to remittances.

Somalia, and Mozambique) living in Johannesburg to highlight the impact of political instability in the home country and the political environment in the host country on remittances. The results show that the fact of having left the home country due to violence or conflict leads to lower remittances to the home country on the extensive margin. On the intensive margin however, the conditions of departure no longer have influence. Transferred amounts do not differ according to whether the migrant was forced to migrate or not. This can be explained by the fact that when the migrant has decided to remit, it is more his/her current conditions in the host country and the traditional objective factors (income, education, sex, etc.) that determine the transferred amounts. Furthermore, the results show that the political environment in the host country has no impact on remittances. The advent of democracy or the vote of laws more or less favorable to migrants in the destination country does not alter the behavior of the migrants.

The results also show that compared to Congolese migrants, Somalis have a higher probability to remit and both Somalis and Mozambicans remit more. The income of the migrants is positively correlated with remittances (both in extensive and intensive margins), whereas the perception of having greater wealth in the host country compared to that in the home country prior migration only positively impacts the probability of the transfer. Men between 31 and 40 years old with family left behind and who are attached to their home country are also more likely to remit. On the contrary, men in their forties and older transferred higher amounts. By and large it then appears that whereas the transferred amounts are only determined by objective variables, the probability of remitting depends on both objective and subjective variables. This result underlines the importance to take into account subjective variables when we want to analyze the determinants of remittances. The analysis of the determinants of remittances in the case of South-South remittances also emphasizes the fact that the conditions prevailing in the home country at the time of departure are essential. In future research, it would be of interest to deepen the analysis by comparing the behavior of migrants from a developing to another developing country to that of migrants from a developing to a developed country.

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## Appendix

**Table A.1 Migratory situation and remittances in South Africa, Democratic Republic of Congo, Mozambique and Somalia**

		<b>South Africa</b>	<b>DRC</b>	<b>Mozambique</b>	<b>Somalia</b>
Population	Million (2009)	49.3	66	22.9	9.1
PIB	Current USD (billion) (2009)	286	10.8	9.8	n.a
Stock of immigrants	Thousand (2010)	1,862.9	444.7	450	22.8
Population share	Percentage (2010)	3.7	0.7	1.9	0.2
Refugees	Percentage (2010)	1.9	43.4	0.6	3.4
Women	Percentage (2010)	42.7	53.1	52.1	45.9
Stock of emigrants	Thousand (2010)	878.1	913.9	1,178.5	812.7
Population share	Percentage (2010)	1.7	1.3	5	8.7
Inward remittance flows	Current USD (billion) (2011, estimate)	1.254	n.a	0.132	n.a
Outward remittance flows	Current USD (billion) (2010)	1.372	n.a	0.080	n.a

Source: World Bank, 2010.

Note: DRC = Democratic Republic of Congo. n.a = not available.

**Table A.2 Origin of the migrants living in South Africa and Johannesburg in 2001 (%)**

	<b>In South Africa</b>	<b>In Johannesburg</b>
Mozambique	26.3	18.2
Zimbabwe	12.9	19.8
Lesotho	11.2	6.4
Rest of Africa	20.8	20.9
Europe	22.3	26
Asia	4.0	5.7
North and Central America	2.1	2.3
Australia and New Zeland	0.3	0.6

Source: Statistic South Africa. Census 2001.

**Table A.3 Variables and relative questions**

<b>Variable</b>	<b>Question</b>
Remittance probability	"Do you ever send money or goods to your family or friends outside of Johannesburg?"
Remittance amount	"When you send money or goods, approximately how much money do you send per year?"
Somalia Mozambique DRC	"In which country were you born?"
Size of the household in the host country	"Including yourself, how many people are part of your household? When I say household, I mean people with whom you live and regularly share resources"
Household's income in the host country	"Approximately how much money does your household earn per week from all sources of income combined?"
Level of education	"What is the highest level of formal education you have completed?"
Age	"How old are you?"
Household members still in country of origin	"Are there still members of your household from country of origin living in your country of origin?"
Arrival in South Africa	"What year did you first arrive in South Africa?"
Departure conditions	"Why did you ultimately decide to leave country/community of origin?"
Other migrant in the origin household	"Are there members of your household from country of origin living in a country other than country of origin or South Africa?"
Perception of relative wealth	"Before you came to Johannesburg, would you say you were worse off economically, about the same economically, better of economically?"
Attachment	"Please, tell me if you agree, disagree, or if you don't have an opinion about this statement: I am proud to identify as a citizen of my country of origin" and "How often do you follow political affairs of your country of origin? Would you say you follow them regularly, from time to time, or never? "

Source: MNAC survey.



**Table A.4 Presentation of the variables used in the models**

<b>Variable</b>	<b>Description</b>
Remittance probability	Variable equal to 1 if the migrant remits, and to 0 otherwise
Remittance amount	Variable equal to 1 if the migrant remits less than 800 Rand, 2 if remits between 800 and 1999 Rand and 3 if remits at least 2000 Rand
Somalia	Dummy equal to 1 if the migrant is Somali, and to 0 otherwise
Mozambique	Dummy equal to 1 if the migrant is Mozambican, and to 0 otherwise
DRC (reference)	Dummy equals to 1 if the migrant is Congolese, and to 0 otherwise
Size of the household in the host country	Dummy equal to 1 if the migrant lives with other people in his/her household in South Africa, and to 0 otherwise
Household's income in the host country	Three dummy variables for income less than 2000 Rand, between 2000 and 7999 Rand, and greater or equal to 7999 Rand.
Sex	Dummy equal to 1 if the migrant is male, and to 0 otherwise
No formal or primary Education (reference)	Dummy equal to 1 if the migrant does not have any formal education or has finished the primary level of education, and to 0 otherwise
Secondary education	Dummy equal to 1 if the migrant finished the secondary level of education, and to 0 otherwise
Tertiary education	Dummy equal to 1 if the migrant finished the tertiary level of education, and to 0 otherwise
18-30 years old (reference)	Dummy equal to 1 if the migrant is between 18 and 30 years old, and to 0 otherwise
31-40 years old	Dummy equal to 1 if the migrant is between 31 and 40 years old, and to 0 otherwise
More than 40 years old	Dummy equal to 1 if the migrant is more than 40 years old, and to 0 otherwise
Family members still in country of origin	Dummy equal to 1 if the migrant still has family in his/her country of origin, and to 0 otherwise
Arrival in South Africa before 1995 (reference)	Dummy equal to 1 if the migrant arrived in South Africa before 1995, and to 0 otherwise
Arrival between 1995 and 2002	Dummy equal to 1 if the migrant arrived in South Africa between 1995 and 2002, and to 0 otherwise
Arrival in 2003 or 2004	Dummy equal to 1 if the migrant arrived in South Africa in 2003 or 2004, and to 0 otherwise
Arrival after 2004	Dummy equal to 1 if the migrant arrived in South Africa after 2004, and to 0 otherwise

**Table A.4 (continue) Presentation of the variables used in the models**

<b>Variable</b>	<b>Description</b>
Departure conditions	Dummy equal to 1 if the migrant fled his/her country because of violence, war, conflict, etc.
Other migrant in the household of origin	Dummy equal to 1 if the migrant belongs to an origin household where there is at least another migrant.
Attachment	Dummy equal to 1 if the migrant follows the political affairs of his/her country of origin and if he/she is proud to identify as a citizen of country of origin, and to 0 otherwise
Perception of relative wealth	Dummy equal to 1 if the migrant thinks he/she is better off economically in the host country compared to before migration, and to 0 otherwise

Source: MNAC survey.