**A comparative event-history analysis of migration-investment linkages
among Sub-Saharan international migrants (DR Congo, Ghana, Senegal)**

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Short abstract

The objective of the paper is to examine the role of personal migration experience on investments in durable assets. More specifically, it investigates the impact of international migration on investments of three African migrant groups in real estate and business assets in their home country, using longitudinal and transnational data from the "Migration between Africa and Europe" survey. The results suggest that personal migration experience stimulates investment in assets, but that its role varies by the type of investment (business vs. real estate), the type of migration experience (still at destination vs. back home), by destination (Africa vs. Europe) and also by origin.

Introduction

Potential positive effects of migration on the origin country in the form of remittances, knowledge transfers, and investments by migrants and returnees have been highlighted by both policy-makers and researchers. Yet, periods of developmental optimism have been alternating with rather pessimistic views regarding the gains from migration, in particular with regard to migrants' capacity to invest and the choice of assets targeted by migrants or their families in the origin country (De Haas, 2010). Taking an optimistic stance, international migration can be regarded as a strategy to overcome constraints in terms of access to financial, human, and to some extent also social capital, especially in countries where credit markets are imperfect and access to formal or informal education limited (Taylor *et al*., 1996). Since the early 2000s, this has become the dominant view of international development agencies and governments who regard migrants' remittances and investments as potential factors of development.

The objective of this article is to provide some empirical evidence in this domain and to analyse to what extent the experience of international migration may impact behaviour in terms of investment in housing and business activities at origin. Its original contribution is to show that the role of migration strongly depends on the type of migratory experience. While most previous research only compared returnees with

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nonmigrants, this paper extends the comparison to current migrants, allowing for an analysis of the timing of investments over the migration cycle. It further shows that investment behaviour (timing and type of investment) depend largely on the migrants' destination. Finally, this paper examines migration-investment links in the context of migration from three different Sub-Saharan countries. It thus contributes in a comparative approach to the literature on Sub-Saharan Africa, which remains largely a *terra incognita* in quantitative analysis of the role of migration experience for investments. The paper applies event-history analysis methods to biographic data from the MAFE project (2008-2009). After a section dedicated to a review of the previous theoretical and empirical evidence on the links between migration and investment, the data and methods are presented. The following section discusses the empirical findings, and the final section concludes.

Theoretical background and empirical evidence

The discussion of the migration-investment link emerged in the economic literature within the framework of the New Economics of Labour Migration (NELM) (Stark and Bloom, 1985; Stark, 1991). The introduction of market imperfections and failures in the study of migration behaviour provides theoretical explanations why migration can induce investment. Empirical studies provide, however, mixed results, showing for instance that savings accumulated in migration may be insufficient to finance investments or that human capital acquired abroad may not be transferable in the origin country. We review below the existing literature on the migration-investment relationships.

Direct role of migration experience

In countries with absent or imperfect credit markets, migration may represent a strategy to obtain informal credit in the form of remittances or savings (Katz and Stark, 1986; Mesnard, 2004). The general consensus from descriptive and multivariate analyses is that return migrants have higher odds of starting a business than nonmigrants (Ilahi, 1999; Kilic *et al*., 2007; McCormick and Wahba, 2001; Mesnard, 2004; Wahba and Zenou, 2012). Less evidence exists for the case of migrants still abroad. Using data from the Mexican migration project (MMP) to estimate the hazard of business formation in Mexican communities, Massey and Parrado (1998) find that current migrants are less likely to become entrepreneurs than household heads back in Mexico. The authors conclude that migration tends to have a disruptive effect

and that business assets are difficult to manage from abroad. Qualitative studies on the case of Senegalese migrants share a rather pessimistic view concerning investments in businesses. Migrants appear to be unable to accumulate sufficient savings while abroad (Bruzzone *et al*., 2006; Fall *et al*., 2006). In the case of Senegalese in Italy, income levels abroad are generally too low to allow for savings in addition to remittance transfers. The literature also points to the potential role of migrants' investment in housing in the origin community in overcoming credit constraints. This is the case if housing ownership serves as a credible signalling device with regard to the wealth of the migrant (Osili, 2004). Osili's (2004) empirical analysis of housing investments of Nigerian migrants in the US provides some support for the signalling hypothesis. This quantitative result is supported by qualitative studies from Senegal that describe housing assets as a guarantee accepted by banks (Tall, 2002).

Migration experience may also loosen human capital constraints through acquisition of new formal education or skills. However, human capital gains may be limited or even negative if the migrant's occupation at destination remains below the level of education, skills and capacity or if skills are not transferrable (e.g. Mattoo *et al*., 2008). Being away from home may also lead to a knowledge loss with regard to business practices and employment opportunities, especially if social capital maintained in the home country is weak (Muschkin, 1993; Wahba and Zenou, 2012). Furthermore, skills acquired during migration do not always match the type of business opportunities usually available to returnees, as observed, for instance, by Ilahi (1999) for case of Pakistan. Similarly, the qualitative evidence on Senegalese migrants collected by Tall (2002) indicates that even if migration leads to gains in know-how, the employment experience acquired abroad would not be easily transferrable. In contrast, a recent paper by Black and Castaldo (2009) on return migrants' involvement in entrepreneurship in Ghana and Ivory Coast finds that foreign work experience and hence know-how (human capital) has a positive effect on investing in businesses.

Finally, personal migration experience may affect social capital that is important in the context of investment in the origin country. Social capital may be weakened due to the prolonged distance to social networks during the stay abroad (Wahba and Zenou, 2012). The authors investigate this hypothesis in the Egyptian case and find that social networks at origin matter for nonmigrants, but not for returnees in starting a business activity. The potential loss of social capital seems to be compensated by financial and human capital gains from migration. On the other hand, migrants may be able to take advantage of ties

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maintained with the destination country. For instance, Ivorian returnees who became members of migrant associations while abroad have been found to be more prone to become entrepreneurs after their return (Black and Castaldo, 2009). With regard to housing investments, Senegalese migrants report that the house ownership is considered to be a sign of social status and success, which facilitates maintaining social ties while abroad and reintegration after return (Tall, 2009). Osili's (2004) quantitative findings on housing investments by Nigerian migrants provide support for this result.

The housing market and conditions for entrepreneurship in Sub-Saharan Africa[2]

The characteristics of the housing market and conditions for business activities represent important contextual elements for studying the role that migration experience can play for investments in the country of origin. While there is qualitative evidence that migrants have also been targeting other towns, such as Touba (Tall, 2009), we focus on the region of Dakar where assets analysed in this paper are predominantly located (74 per cent). Both sectors are characterised by high levels of informality.

While the state was the main actor on the formal housing market until the structural adjustment programmes in the 1980s, the involvement of private actors has progressively been stimulated, with the intention of reaching a larger share of the population and responding to an ever-increasing population (Diagne and Lessault, 2007). However, selection criteria established excluded a large part of the population from the formal housing market. As a result, houses are typically being constructed by the households themselves and are not protected through property titles. According to Tall (2009), only two per cent of property owners, mainly French and Lebanese as well as migrants, have an official property title. Data on dwellings that have been registered with the "Direction Générale des Impôts et des Domaines" reveal, moreover, a sharp increase in prices over the last decade (Diane and Fall, 2008). Access to housing thus appears increasingly difficult and costly. In the context of a deregulated housing market and a continuous rise in housing prices, international migrants and returnees with savings from migration are considered to be "new actors" on the housing market. According to the qualitative literature on this subject (Tall 1994, 2009), this is particularly the case since the devaluation of the Franc CFA in 1994, which had the potential to enhance migrants' purchasing power back in Senegal. While migrants

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[2] The current text is largely based on the Senegalese case study. It will be extended to DR Congo and Ghana in a future version.

seem to be filling the gap left after the withdrawal of the state from the housing market, they are also regarded as contributing to real estate speculation.

Business activities are also primarily located in the informal sector[3] and the level of informality has been intensifying (World Bank 2007). The average business in the informal sector in Dakar employs only 1.7 workers (DPS 2004), indicating that self-employment is dominating (72 per cent). The findings of the World Bank investment climate survey targeting formal firms, as well as a survey with informal firms carried out in the context of the World Development Report 2004 (World Bank, 2005) provide insights into the main constraints to starting and running businesses in Senegal as perceived by the business owners. Access to finance is ranks first in a list of constraints for both formal and informal firms. Infrastructure is another major obstacle for both formal and informal sectors, in particular the recurrent power outages and lack of transport infrastructure. High taxes and an opaque tax system are a constraint highlighted by formal firms. Other obstacles emphasised by informal firms are problems in acquiring land on which to carry out the business as well as lack of market access.

Business conditions are thus unfavourable both in the formal and the informal markets. Under the condition that sufficient financial capital is available, for instance in the form of savings from migration, setting up a business in the informal sector appears to be more accessible due to lower barriers in terms of taxes and regulations. However, for the larger part of the informal sector, the value of informal business activities concerns their role in providing incomes to individuals rather than in creating sustainable enterprises.

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[3] The informal sector is defined as units of production that have no NINEA (National enterprise and association identification number) or a taxpayer number, or, in the case of employers and of self-employed, workers, who do not keep their accounts (World Bank 2007, p.26).

Data and methods

The MAFE survey

The analyses performed in this paper use biographic survey data collected in 2008-2009 in the framework of the MAFE project (Migration between Africa and Europe).[4] Data were collected both at origin among nonmigrants and return migrants and in the main European destination countries (Fig. 1). For cost reasons, the probabilistic samples in African countries were limited to the regions of Dakar in Senegal, Kinshasa in DR Congo, and Accra and Kumaso in Ghana. Multi-staged stratification was the technique used to ensure an overrepresentation of households with returnees or migrants abroad. The household surveys provided sampling frames to select individuals.

Respondents in Europe were sampled through non-probabilistic methods (e.g. contacts provided by households, snowballing, intercept points, contacts obtained from migrant associations) in order to fill pre-established quotas. The municipal register in Spain (padrón) offered a national sampling frame from which documented and undocumented migrants could be randomly sampled. In all countries, the eligibility criteria established that individuals had to be between 25 and 75 years of age, born in Senegal and of present or past Senegalese nationality. In Europe, another criterion was added to exclude 1.5 generation migrants who are often "passive" migrants: migrants had to have emigrated out of Africa at age 18 or later, for a stay of at least one year (Beauchemin, 2012; Beauchemin and González Ferrer, 2011)(Schoumaker, Mezger et al. 2013)[5]. Biographic questionnaires consisting of a biographic calendar as well as in-depth modules were used to collect very rich annual retrospective information on a broad range of life histories (family formation, education and employment, housing, migration, investments etc.), covering the time from the respondent's birth till the survey date.

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[4] The MAFE project is coordinated by INED (C. Beauchemin) and its other participants are the Université catholique de Louvain (B. Schoumaker), Maastricht University (V. Mazzucato), the Université Cheikh Anta Diop (P. Sakho), the Université de Kinshasa (J. Mangalu), the University of Ghana (P. Quartey), the Universitat Pompeu Fabra (P. Baizan), the Consejo Superior de Investigaciones Científicas (A. González-Ferrer), the Forum Internazionale ed Europeo di Ricerche sull'Immigrazione (E. Castagnone), and the University of Sussex (R. Black). The MAFE project received funding from the European Community's Seventh Framework Programme under grant agreement 217206. The MAFE-Senegal survey was conducted with the financial support of INED, the Agence Nationale de la Recherche (France), the Région Ile de France and the FSP programme 'International Migrations, territorial reorganizations and development of the countries of the South'. For more details, see: http://www.mafeproject.com/

[5] All sampling details are provided in appendix.

Construction of variables

One module of the biographic questionnaire is specifically dedicated to the respondent's past and present ownership of land, housing and business assets and provides detailed information about characteristics of assets. Since investments in construction land and investment in housings are closely linked, we group them in our analyses and define investment in real estate as acquisition of construction land, or a dwelling, or both, whatever happens first. Given our research questions, assets declared as inheritance or located abroad are not considered as outcomes of interest.

Our main explanatory variable of interest is related to personal migration experience. This information is collected through retrospective housing and migration histories that enable us to identify individuals as nonmigrants, current migrants and return migrants in a given year. To be classified as migration, the stay abroad or the return spell must have lasted for at least one year. We further distinguish between migration experiences in Africa and outside of Africa, based on the location in any given year for current migrants and on the fact of having spent at least one year outside of Africa for return spells.

Control variables comprise a variable that captures time, individual socio-demographic characteristics, family factors, information about previous asset ownership, and a period variable. Variables are in general constructed as varying over time (e.g. migrant status, networks, occupation, income stability etc.). Variables which are time-invariant are either fixed individual characteristics, such as sex and place of birth, or are considered to be fixed at age 18, such as education.

Event-history analyses

We study the event of investing for the first time in an asset in the origin country. Given the discrete data structure, we estimate the discrete-time hazard for interval t as the probability of investing during interval t, given that no investment has occurred up to interval t. As this corresponds to the response probability for a binary dependent variable, a straightforward estimation approach is to estimate logit models on datasets that are transformed from person into person-year observations (Allison, 1982; Jenkins, 1995). Individuals are followed from age 18 to the date of their first investment or the survey date, whatever occurs first. As noted above, the definition of the dependent variable accounts only for personal investments in Senegal and excludes thus inherited assets and assets abroad. However, all individuals are considered to be "at risk of a first investment" and their person-years are included in the analysis, even if

they already own an inherited asset or an asset abroad. The time-varying variables, including migrant status, are lagged by one year to ensure that characteristics are measured prior to the investment event. If two events occur in the same year, the sequencing is not observable in the data, since information is collected at yearly frequencies.

For each migrant group, separate models for investment in first real estate (construction land and/or housing) and first business are estimated. The analysis of the role of migration experience may be subject to biases due to endogeneity and self-selection. However, the nature of the data and the econometric approach may reduce the biases. The rich time-varying data may capture individual heterogeneity which remains unobserved in cross-section data. Moreover, while lagging explanatory variables cannot avoid reverse causality in case of decisions taken in anticipation of the outcome, it can diminish the problem when decisions are spaced in time.

Results[6]

The estimates from the discrete-time event-history models largely confirm the hypothesis that migration and investment are related (Table 2). They also show that this relationship is not straightforward and depends on the type of asset, as well as the migrants' origin and the nature of their migratory experience.

Having a migration experience in the North (mainly Europe) has a strong positive effect on first investment in real estate among Senegalese and Ghanaian migrants. As expected, migrants start to invest in this domain while there are still abroad (with Ghanaians and Senegalese migrants outside Africa who are 2.8 and 3.5 times more likely to invest than non-migrants) and also after return (with respectively OR values of 2.1 and 2.8 among returnees from outside Africa). Such an effect is not observed among Congolese migrants, who are even less likely to invest in real estate than non-migrants when they are living in Europe (no significant effect after return). This result is not unexpected considering the economic and policy context in DR Congo since the early 1990s. On the one hand the context of insecurity is adverse to investments. On the other hand, after the war started, Congolese migrants tended to settle in Europe more than their Ghanaian and Senegalese counterparts(Schoumaker, Flahaux et al.

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[6] We comment below the results related to our main variable of interest (migratory experience). A future version will also comment the other explanatory variables and will explain variations across groups.

2013). In any case, whatever the migrants' origin, migration in Africa has no effect on the probability to invest in land or housing. Actually, it seems that migrants who remained in Africa are more business-oriented.

Indeed, having migrated within Africa has a positive effect on the odds to invest in a business. However, the timing seems to differ according to the origin. On the one hand, as expected, Senegalese migrants tend to invest after return. This fits with the idea that investing in a business is practically difficult while being abroad (difficulty to monitor, moral hazards…). It also support the theory that migration is a way to overcome resources constraints at origin. However, it might also reflect a "survival strategy" when more profitable income sources are not available (Mezger and Flahaux, 2010). On the other hand, more surprisingly, Congolese and Ghanaians start to invest while they are still abroad. This results contradicts partly the existing literature on the preference of migrants for taking up business activities after their return (e.g. Ilahi, 1999; McCormick and Wahba, 2001; Mesnard, 2004). The type of business needs to be studied in more detail to better understand this positive association between entrepreneurship and migration within Africa. Further analysis could also look at how businesses are managed during the migrants' absence. Migration in Europe acts in all cases as a deterrent factor regarding investment in business. This is not surprising for migrants who are still living there. The absence of effect for those who return from Europe may indicate their preference for salaried jobs in the modern sector.

Conclusion

Overall, the empirical findings rather support the hypothesis of a direct role of international migration on investment in the Sub-Saharan context: more often than not, personal international migration experience stimulates asset acquisition in the origin country. Moreover, whether an investment is made in real estate assets or a business activity depends largely the destination region of the migration (Africa or Europe). To some extent, we observe a kind of specialisation. Migrants in or back from Europe have higher chances to invest in real estate than nonmigrants (except Congolese migrants), while they are less likely to invest in businesses (especially when they are still abroad). On the contrary, migrants in or back from Africa are more likely to invest in businesses, with a differential timing by origin: the likelihood to invest is higher

for Senegalese after return, while the Congolese and Ghanaians are more likely to start a business while still abroad.

The results call for further research on the role of the destination region on the propensity to invest in order to understand the relative importance of self-selection into a specific destination region and destination context during the stay abroad. However, given the variety of processes at play (into migration, into return, each by destination region, and the two types of assets), modelling selection effects jointly with the investment decision is not straightforward.
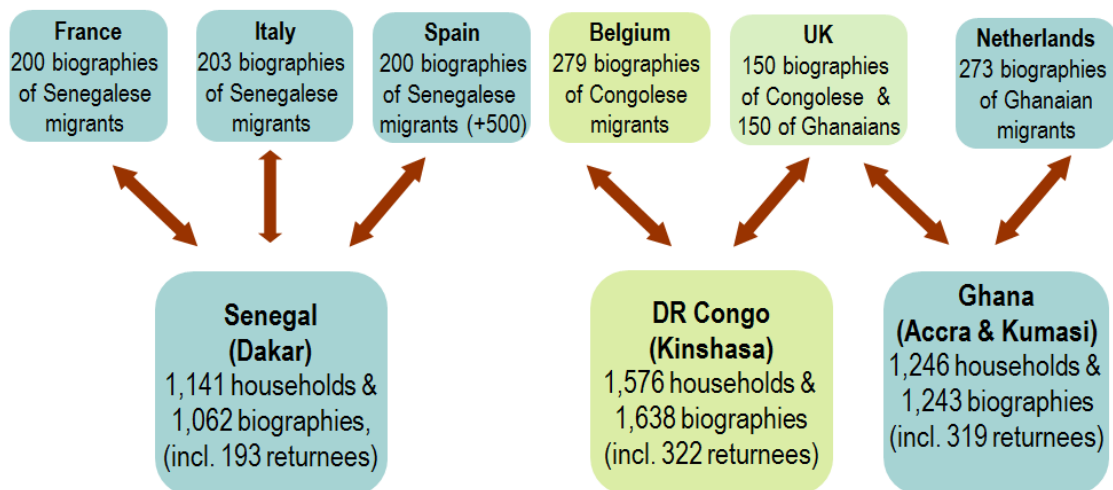
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Fig.1: The MAFE project countries and subsamples

France	Italy	Spain	Belgium	UK	Netherlands
200 biographies of Senegalese migrants	203 biographies of Senegalese migrants	200 biographies of Senegalese migrants (+500)	279 biographies of Congolese migrants	150 biographies of Congolese & 150 of Ghanaians	273 biographies of Ghanaian migrants

Senegal (Dakar) 1,141 households & 1,062 biographies, (incl. 193 returnees)

DR Congo (Kinshasa) 1,576 households & 1,638 biographies (incl. 322 returnees)

Ghana (Accra & Kumasi) 1,246 households & 1,243 biographies (incl. 319 returnees)

Table 1: Descriptive statistics (2008 or time of investment)

		Senegal	Congo	Ghana
Migrant status	Non migrant	55.2	70.9	61.7
	Migrant outside Africa	34.2	15.4	22.1
	Migrant In Africa	0.7	3.4	2.8
	Return migrant outside Africa	2.8	1.9	4.5
	Return migrant africa	7.0	8.4	8.8
Migrant network	No migrant	22.8	28.8	33.4
	Any migrant	77.2	71.2	66.5
	Children or siblings (at least)	52.2	49.2	44.2
	Other relationship (only)	24.9	21.9	22.3
	In origin country	24.6	24.6	36.2
	Other country	52.5	46.6	30.3
	At least one women	39.4	33.8	39.9
Gender	Male	47.8	44.2	43.5
	Women	52.2	55.8	56.8
Occupational status	No wage earner	32.8	41.0	23.8
	Manager/employer	4.9	6.5	7.5
	Skilled worker	16.3	14.9	21.1
	Unskilled worker	20.5	9.8	16.3
	Self-employed	25.5	27.7	31.3
Education	No education	25.8	2.0	6.3
	Primary	28.6	11.0	6.9
	Secondary	32.6	54.2	61.8
	Tertiary	13.0	32.8	24.9
Income stability	Sufficient ressource	76.4	80.9	68.1
	Unsufficient ressource	6.3	7.3	5.5
	Unstable	17.3	11.8	26.4
Children 0-16	Mean	1.5	1.7	1.2
Marital situation	Single	29.8	37.2	31.9
	Partner in the same country	51.9	56.9	56.6
	Partner different country	18.3	5.9	11.4
Previous wealth	No inherited asset	88.3	87.0	88.6
	Owns inherited assets	11.7	13.0	11.4
Place of birth	Elsewhere in origin country	70.0	63.1	73.2
	Capital of origin country	30.0	36.9	26.8

Table 2. Event history analysis of first investment in the home country (odds ratios)

		Model 1: Land & Housing			Model 2: Business		
		Senegal	Congo	Ghana	Senegal	Congo	Ghana
Time		1.101***	1.100***	1.090***	1.063	1.044**	1.062*
Time^2		0.998***	0.998***	0.999**	0.998	0.998***	0.998***
Migrant status	Non migrant	1	1	1	1	1	1
	Migrant outside Africa	3.5***	0.7**	2.8***	0.8	0.2***	0.5***
	Migrant in Africa	1.6	1.2	0.8	0.8	1.86***	2.7***
	Return migrant outside Africa	2.7***	0.8	2.1***	1.8	1.3	0.7
	Return migrant from Africa	1.3	1.1	0.9	1.9**	1.0	1.5
Migrant network	No migrant	1	1	1	1	1	1
	Any migrant	1.05	1.08	2.00***	1.0	0.9	1.2
Gender	Male	1	1	1	1	1	1
	Women	0.6***	0.5***	0.5***	0.4***	0.8**	1.4**
Occupational status	No wage earner	1	1	1	1	1	1
	Manager/employer	4.5***	3.4***	2.6***	0.6	0.4***	0.7
	Skilled worker	2.7***	2.4***	2.6***	0.7	0.6***	0.5***
	Unskilled worker	2.5***	1.8***	2.4***	0.8	0.4***	0.6**
	Self-employed	2.7***	1.2	1.3	1.3	0.6***	0.9***
Education	No education + primary		1			1	
	No education	1	-	1	1	-	1
	Primary	0.7	-	0.8	0.7	-	2.1*
	Secondary	1.3	1.0	0.8	1.3	0.9	2.1**
	Tertiary	2.1***	1.3	1.2	1.2	1.1	1.1
Income stability	Sufficient ressource	1	1	1	1	1	1
	Unsufficient ressource	0.6*	0.6**	0.6	0.2**	0.5**	1.0
	Unstable	0.6***	0.8	0.5***	0.7	0.9	0.8
Children 0-16 (number of -)		1.065	1.057*	1.124***	1.120**	0.979	1.055
Marital situation	Single	1	1	1	1	1	1
	Partner in the same country	1.5**	1.5***	1.3	0.9	0.9	1.4**
	Partner different country	1.6**	1.7**	1.4*	1.2	1.2	1.4
Previous wealth	No land or dwelling owned				1	1	1
	Land or dwelling owned				1.4	1.9***	2.3***
	No business owned	1	1	1			
	Business owned	1.6*	1.0	1.3			
Place of birth	Elsewhere in origin country	1	1	1	1	1	1
	Capital of origin country	0.8	0.6***	1.0	0.6**	1.3*	0.9
Period	Before 1980	1	1	1	1	1	1
	1980-1994	0.5**	0.6***	2.1**	2.5*	1.8**	2.5***
	1995-1999	0.6*	0.5***	2.9***	3.1**	2.1***	4.2***
	After 2000	0.6*	0.6**	5.3***	4.6***	3.2***	7.1***
Intercept		0.001	0.004***	0.000***	0.001***	0.005***	0.001***
N		34928	41858	35855	37467	43678	35881
Sd(u)		0.9	0.0	0.9	0.0	0.0	1.3
Rho		0.2**	0.0	0.2***	0.0	0.0	0.3**

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APPENDIX

Table 1. Sampling characteristics in African countries

	Senegal	Ghana	Congo
Target areas	Dakar Region (26% of the population of the country)	Accra and Kumasi (12% of the population of the country)	Kinshasa (17% of the population of the country)
Stratification	First stage: 10 strata based on the proportion of international migrants.	First stage: two cities (Accra and Kumasi).	First stage : 3 strata based on prevalence of migration
	Second stage: 2 strata households with and without migrants	Second stage: 3 strata: households with migrants abroad, with return migrants, without migrants	Second stage: 3 strata: households with migrants abroad, with return migrants, without migrants
	Third stage: 3 strata: returnees, partners left behind and other non-migrants	Third stage: 3 strata: returnees, partners left behind and other non-migrants	Third stage: 3 strata: returnees, partners left behind and other non-migrants
1st stage: selection of primary sampling units	Selection of 60 census enumeration areas. Sampling frame: 2002 Population and Housing Census	Selection of 60 census enumeration areas in Accra and 20 in Kumasi Sampling frame: 2000 Population and Housing Census	Selection of 29 neighbourhoods and 3 streets per neighbourhood (87 sampling units) Sampling frame: Sampling frame of the 2007 DHS
2nd stage: selection of households	Random selection of 22 households per enumeration area. 11households selected in each of the two strata. If less than 11 households available in one or several strata, the remaining households are selected in the other stratum.	Random selection of 24 households per enumeration area. 8 households selected in each of the 3 strata. If less than 8 households available in one or several strata, the remaining households are selected in the other stratum.	Random selection of 21 households per enumeration area. 87households selected in each of the 3 strata. If less than 7 households available in one or several strata, the remaining households are selected in the other stratum. In a few streets, there were less than 21 households; all of them were selected.
3rd stage: selection of individuals	People aged 25-75, born in Senegal and who have/had Senegalese citizenship. Up to two return migrants and partners of migrants, and one randomly selected other eligible person.	People aged 25-75, born in Ghana. All the return migrants and partners of migrants, and one randomly selected other eligible person.	People aged 25-75, born in Congo. All the return migrants and partners of migrants, and one randomly selected other eligible person.
Sample size (selected households)	1320 households	1920 households (1440 in Accra and 480 in Kumasi)	1773 households
Completed household questionnaires*	1141 households, including: Non-migrant HH: 458 HH with at least 1 returnee: 205 HH with at least 1 current migrant: 617 Household with returnee(s) and current migrant(s): 139	1246 households, including Non-migrant HH: 449 HH at least 1 returnee: 346 HH at least 1 current migrant:675 Household with returnee(s) and current migrant(s): 224	1576 households, including Non-migrant HH: 470 HH with at least 1 returnee: 351 HH at least 1 current migrant:1027 Household with returnee(s) and current migrant(s): 272
Sample size (selected individuals)	1387	1490	1946
Completed life event history questionnaires	1062 individuals, including: Returnees: 193 Partners left behind: 101 Other non-migrants: 768	1243 individuals, including: Returnees: 319 Partners left behind: 84 Other non-migrants: 840	1638 individuals, including: Returnees:322 Partners left behind: 77 Other non-migrants: 1239
Individual response rate	76.6 %	83.4 %	84.2 %
Overall response rate	66.1%	54.1 %	74.9 %

Source: This table is based on Schoumaker & Diagne (2010). Numbers are smaller than in the data collection report because some individuals were dropped to comply more strictly with the selection criteria.

* The addition of non-migrant households with the households comprising returnees and partners left behind may be higher than the total number of surveyed households because a same household can belong to more than one category (e.g. a same household can contain both returnees and partners left behind).

Table 2. Sampling characteristics in European countries

MAFE-Senegal				
Country	**Target areas**	**Sample size**	**Quotas**	**Recruitment methods**
France	3 selected regions: Ile de France, around Paris; Rhône-Alpes, around Lyon; Provence-Alpes-Côte d'Azur, around Marseille.	201 (46% of females), including undocumented migrants - at the time of the survey: 12%[1] - in the past[2]: 29% 80 % have lived at least one year in the region of Dakar	By age, gender and socio-economic status	Selection from contacts obtained in Senegal, Public spaces, migrant associations, snowballing, interviewers' contacts
Italy	4 selected regions: Lombardia, Emilia Romagna, Toscana, Campania.	205 (39% of females), including undocumented migrants - at the time of the survey: 17% - in the past: 46% 54% have lived at least one year in the region of Dakar	By age and gender	Selection from contacts obtained in Senegal, Public spaces, migrant associations, snowballing, interviewers' contacts
Spain	12 provinces: Almería (Andalucía); Alicante & Valencia (Comunidad Valenciana); Barcelona, Lérida, Tarragona & Gerona (Cataluña) ; Madrid (Comunidad de Madrid); Zaragoza (Aragón); Las Palmas (Islas Canarias); Murcia (Comunidad Autónoma de Murcia) ; Baleares (Islas Baleares)	200 (51% of females), including undocumented migrants - at the time of the survey: 18% - in the past: 57% 61 % have lived at least one year in the region of Dakar. NB: an additional sample of around 400 people will be added, thanks to a new survey round carried out in 2010.	Random sample from Padron	Population register (Padron) & contacts obtained in Senegal
MAFE-Congo				
Belgium	Whole country	279 (45% of females), including undocumented migrants - at the time of the survey: 10% - in the past: 33% 87.5 % have lived at least one year in Kinshasa	By age, gender and place of residence	Public spaces, migrant associations, churches, snowballing, phonebook, centers for asylum seekers, interviewers' contacts
United Kingdom	Whole country	149 (50% of females), including undocumented migrants - at the time of the survey: 12% - in the past: 52% 93.3 % have lived at least one year in Kinshasa	By age, gender and place of residence	Public spaces, churches, snowballing, interviewers' contacts
MAFE-Ghana				
The Netherlands	3 cities (in 3 different provinces): Amsterdam(North Holland); The Hague (South Holland); Almere (Flevoland)	272 (47% of females), including undocumented migrants - at the time of the survey: 19% - in the past: 56% 72.5% have lived at least one year in Accra or Kumasi areas	By age and gender	Public spaces, churches, snowballing, interviewers' contacts
United Kingdom	Whole country	149 (48% of females), including undocumented migrants - at the time of the survey: 7% - in the past:14% 79.2% have lived at least one year in Accra or Kumasi areas	By age, gender and place of residence	Public spaces, churches, snowballing, interviewers' contacts

Source: This table is based on Schoumaker & Diagne (2010). Numbers are smaller than in the data collection report because some individuals were dropped to comply more strictly with the selection criteria.

[1] Non-weighted percentage of interviewees having declared that they did not hold a residence permit at the time of the survey.

[2] Non-weighted percentage of interviewees having declared that they did not hold a residence permit at some point in their migrant life for a period of at least one year (i.e. at the time of the survey or sometime in the past when they were living out of their origin country).