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What drives Senegalese migration to Europe? The role of economic restructuring, labor demand and the multiplier effect of networks

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Abstract

International migration from Sub-Saharan Africa to Europe is poorly understood. Furthermore, existing studies pay insufficient attention to the links between the micro-level factors and political, social and economic processes in both origin and destination areas. Here we integrate insights from institutional approaches in migration and development research with perspectives that highlight the role of labor market and social capital.

We analyze the contextual and individual level determinants of migration from Senegal to France, Italy and Spain since the mid-1970s. We examine the following hypotheses: (a) In Senegal, the deterioration of living conditions, heightened economic insecurity and the widening of social inequalities, have created the conditions for increasing out-migration propensities. (b) In Europe, labor market restructuring has increased job opportunities in particular places and job niches. (c) In facilitating access of Senegalese migrants to jobs in Europe, social networks have linked these two processes.

We use event history models to analyze life course data from the Migrations between Africa and Europe survey (2008).

Our results support institutional perspectives emphasizing the role of migration as a household strategy to diversify resources and counter downward social mobility. Furthermore, our analyses show that the availability of personal networks in Europe creates a boosting effect on individual migration probabilities during periods of strong labor demand. The initiation and expansion of migration between Senegal and Europe stem from the interplay between historically changing social and political factors at origin and destination, as well as the mutually reinforcing process of social capital formation and changing labor market conditions.

Keywords

International migration, migrant networks, labor market, Senegal, migration determinants.

Acknowledgements

1. Introduction

Although the literature on migration determinants in Sub-Saharan Africa is extensive, most focuses on internal migration (Lucas 2006). Compared to the theoretical and empirical literature of international migration elsewhere, relatively little is known about international African migration, especially that outside the continent (Adepoju 2004; Lucas 2006; Grillo and Mazzucato 2008; Hatton and Williamson 2003). Most existing studies have adopted a qualitative approach, and the few quantitative studies are based either on aggregate data or cross-sectional micro-data (*e.g.* Hatton and Williamson 2003; Schoorl *et al.* 2000; Van Dalen *et al.* 2005). As a result, there is a dearth of knowledge and quantitative empirical evidence about what drives migration from Sub-Saharan Africa, and whether this is similar to migration from other geographical regions.

Acknowledging the need for appropriate data to remedy this state of affairs, the Migrations between Africa and Europe (MAFE) project collected rich retrospective biographical data in several locations in Africa and Europe (Beauchemin 2012)[1]. Here we use MAFE data to examine the drivers of Senegalese migration to Europe between 1976 and 2008. This migration system is an example of migration from Sub-Saharan Africa to advanced societies. Although comparatively modest in absolute numbers, this migration stream has developed quickly since the 1980s.

In this study, we pay particular attention to the links between the micro-level factors that influence migration decisions and political, social and economic processes in both Senegal and Europe. Very few empirical studies examine how migration relates to historical social and economic transformations (Sassen 1988; Portes 1997; Castles and Miller 2008). Our perspective highlights the importance of institutions in regulating migration behavior and shaping migration dynamics[2]. Particularly useful for our purposes are several insights from institutional approaches in economics and development research that analyze how social institutions regulate migration behavior (Stark 1991; de Haan 1999; Ellis 2000). The specific characteristics of the origin and destination labor markets are central for understanding migration (Piore 1979; Portes and Bach 1985; Reyneri 2003; Villareal and Blanchard 2013). Social groups and relationships, including migration networks and families, greatly influence migration (Massey 1990; Stark 1991). Although different, the perspectives above share several conceptual parallels. They place individual behavior in a wider societal context, analyzing how social institutions function and their role in migration. By highlighting the role of families and social networks, they take into account (household) decision-making[3]. To some extent, these perspectives can be seen as complementary. For

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[1] MAFE investigates migration between Senegal and France, Italy and Spain; migration between Ghana and the United Kingdom and the Netherlands; and migration between the Democratic Republic of Congo and Belgium and the United Kingdom.

[2] For instance, Alejandro Portes (2010, p. 1543) defines institutions as "the symbolic blueprint for organizations; they are the set of rules, written or informal, governing relationships among role occupants in social organizations like the family, schools and other major areas of social life: polity, economy, religion, communications and information, leisure".

[3] An additional common trait is the critique of neoclassical economics and macro-structural perspectives, as several of the assumptions of these perspectives may be questionable, particularly in developing countries. They also have difficulties in explaining the historical and geographical patterns of migration (Portes and Borocz 1989; Stark 1991; Arango 2000).

instance, they deal either with institutions at destination or those at origin; they emphasize either economic or socio-cultural explanations. We argue that integrating these perspectives can enhance the understanding of migration processes, through a more complete consideration of how origin and destination factors interact.

In this paper, we adopt a life course framework, which is useful for analyzing how local institutions mediate the influence of global forces on individual life courses (Mayer 2001). Besides addressing how individual and social processes are related across time and space, a life course approach allows for the examination of specific hypotheses. This perspective focuses on actors and their active roles in migration decision-making, which allow us to interpret migration as a strategy. Central to the analysis are the interrelationships among different life domains, and especially the heterogeneity of resources available to individuals including financial, physical, human and social capitals. The framework's longitudinal perspective allows accounting for age specificity and the path-dependent nature of individual lives, with current and future opportunities and evaluations strongly related to the past.

The complexity of life course analysis can be handled using event history techniques, which are useful tools for exploring how well propositions fit patterns of observed behavior (Blossfeld *et al.* 2007). In particular, our analyses will focus mainly on the following hypotheses:
a) The long period of economic recession experienced in Senegal, and the associated reshaping of social and economic relationships, involved a general deterioration of living conditions, heightened economic insecurity and the widening of social inequalities, which created the conditions for increasing out-migration propensities.
b) Labor market restructuring in Europe provided job opportunities in particular niches and locations.
c) For Senegalese migrants, social networks link the above processes by channeling job access in Europe.
d) The conjunction of periods of strong labor demand and the availability of personal networks in Europe creates a boosting effect on migration probabilities of Senegalese to Europe.

2.1. The surge of Senegalese migration to Europe

During the last three decades, international migration from Senegal has reached a much higher level than what is usually associated with a country of very low development levels (Massey et al 1998; Martin and Widgren 1996; Hatton and Williamson 2003)[4]. According the 2002 Senegal Census, 479,515 Senegalese resided in another country, while the Ministry of Senegalese Living Abroad estimated approximately 648,600 individuals to be living abroad in 2003-2004, over a total population of about 10 million (Agence Nationale de la Statistique et de la Démographie 2006; Development Research Centre 2007). Substantial and increasing

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[4] Senegal ranked 166 out of 182 countries in the Human Development Index in 2006 (UNDP 2009).

shares of these migrants have settled in Europe (190,000) and, to a lesser extent, in North America (43,200). The main European destinations are, by far, France, Italy and Spain. At the same time, flows to other African countries have stagnated[5].

In many regions of the country, migration has become a social institution of its own, with its own logic and social norms that influence who is sent abroad, their remittance behavior and their transnational practices (Guilmoto 1998; Massey 1990). Families and individuals rely on migration as a legitimized strategy to increase resources and redistribute labor. This institutional patterning of migration, which has long governed internal as well as intra-Africa mobility, is also now well-established for migration to Europe. A large and increasing proportion of the population in Senegal is linked by personal networks to Europe (Agence Nationale de la Statistique et de la Démographie 2004). Different groups, located both in Senegal and at destination, participate in these processes, and include religious and migrant associations, trade unions, employers, solidarity associations and government agencies (Ambrosini 2001). Furthermore, in the last few decades, migration has become increasingly vital for the functioning of the Senegalese economy. Remittances are believed to represent about 12 per cent of the gross domestic product (World Bank 2008; Banque Centrale des Etats de l'Afrique de l'Ouest 2008).

Senegalese migration to Europe has its roots in colonialism. The first migrations resulted from recruitment efforts by the French army and administration during colonial times. Starting in the 1950s, the rapidly expanding French industry actively recruited significant numbers of male workers from Senegal. This flow was complemented by a relatively high number of students, who became the elite of Senegal after independence in 1960. Migration mainly involved single men, who returned to Senegal after a few years abroad (Pison et al 1997; Robin et al 1999). By the mid 1970s, when the French government started to restrict labor immigration, a significant Senegalese community was established in France. As in many other European countries during this period, family reunification then became the main conduit of legal immigration.

Decreasing opportunities and increasing restrictions for migration to France during the 1980s fueled new migration flows to Italy; flows then spread to Spain by the end of the decade. In the last thirty years, Senegalese migration to European countries has steadily grown. Results from the MAFE survey estimate that the lifetime probability of adult migration from Senegal to Europe sharply increased from 6 per cent in 1975-1989, to 9 per cent in the 1990s, and to 12 per cent in 2000-07 (Sakho 2013). Meanwhile, migration to African destinations decreased from about 8 per cent in the first period, to about 6 per cent in the following periods (Sakho 2013). Migration to African countries, which often has a strong short-term and seasonal component, has been negatively affected by political and economic developments in destination countries. A focus on the precise circumstances and transformations occurring in the last thirty years at either end of the migratory flow is necessary to understand migration dynamics.

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[5] Senegal had a positive net migration until the end of the 1970s (ANSD 1995).

2.2. The changing context of migration decision-making

Social and economic structural transformations create powerful motivations for international migration and lead people to search actively for new ways to advance and achieve economic security (Portes 1997; Castles and Miller 2009). In the case of Senegal, the adoption of a new model of development in the mid 1980's and the shifting of migration patterns clearly coincided in time.

Post-independence economic policy was characterized by an import-substitution strategy and by intensive government regulation (Boone 1991). Economic development was based on the production of groundnut for export, while French-capital-funded enterprises and state enterprises continued to dominate the formal-sector industry, commerce, and banking. This model of economic development came to an end in the late 1970s, when the country suffered a deep economic crisis, aggravated by plummeting world groundnut prices and severe droughts between 1978 and 1981. As a response to the crisis, the government cooperated with the International Monetary Fund and the World Bank to implement several structural adjustment plans, culminating in the drastic devaluation of the currency in 1994 (Duruflé 1988; Collier and Gunnig 1999; Azam 2004; Thioub et al 1998).

The period since the early 1980s has been characterized by a drastic liberalization of the economy, including the privatization and downsizing of state enterprises, market deregulation and trade barrier reduction. These policies did not remedy recurrent agricultural crises, amplified by ecological conditions and policy decisions, that led to a severe deterioration of living conditions in rural areas. The government has progressively decreased its support of farmer's incomes by deregulating the markets, privatizing agricultural organizations and limiting government policies such as buying groundnut at a guaranteed price[6]. Rural income levels fell drastically, poverty became widespread, and food insecurity being a constant threat (Bruzzone 2006). Responding to deteriorating economic and ecological conditions, the population has adopted several livelihood strategies: the diversification of agricultural production (mostly to subsistence crops); the diversification of economic activities during the dry season, such as small trade and crafts; seasonal or permanent migration to the cities; and international migration[7].

In urban areas, the decline of the state sector and industry has motivated significant cuts in real wage rates and the spread of the informal sector (Antoine 1995; Azam 2004). Following the 1986 "New Industrial Policy", formal sector job loss was massive, and industrial production declined substantially. In particular, the capital city Dakar has experienced profound transformations in its local labor market, including a severe reduction of highly qualified jobs and substantial job creation from the mid-nineties in the informal sector (Bocquier 1996; Thioub et al 1998)[8].

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[6] Control of peanut trade also provided one of the most important sources of revenue for the state, as did taxation on imports; liberalization involved a reduction of these revenues, while increased dependence on foreign debt (Boone 1991).

[7] Often farmers are forced to go into debt (mostly to informal lenders, who charge high interest rates), or to sell their tools during the dry season (Bruzzone *et al* 2006).

[8] Different sources estimate that the informal sector represents between 80% and 90% of Senegal's total active population (International Labor Office 2002; Banque Mondiale 2007).
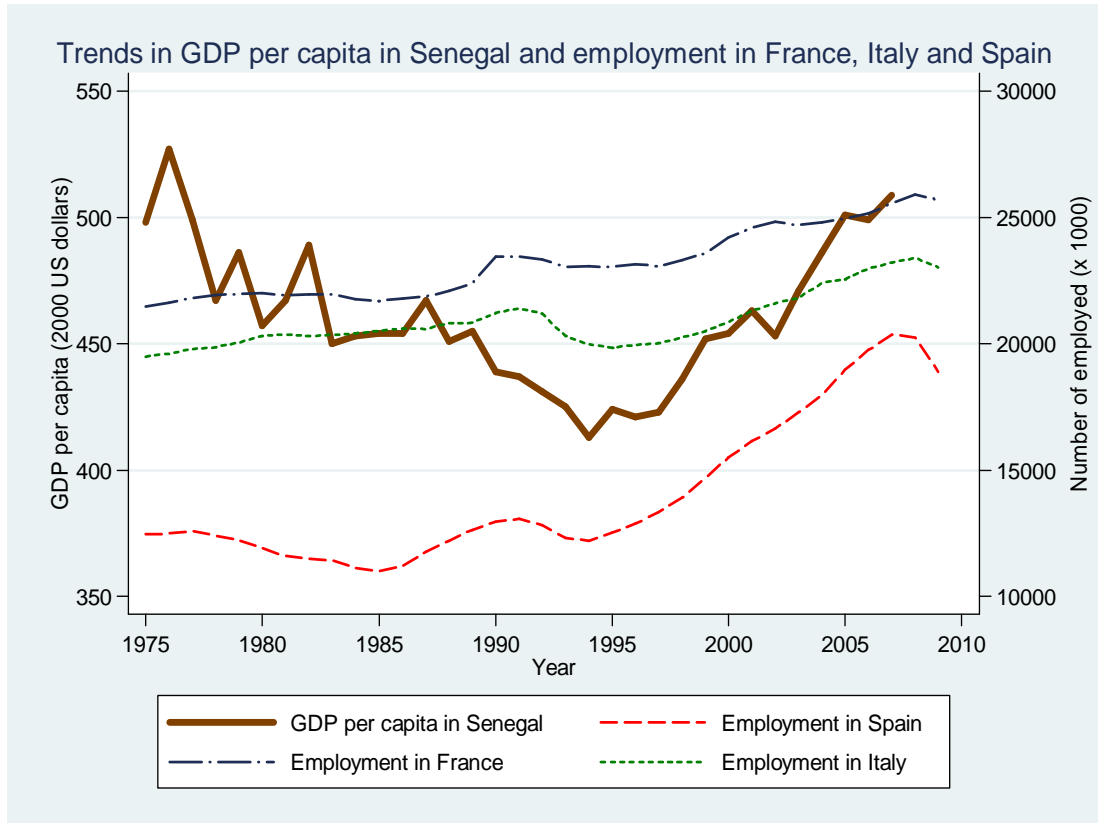
Figure 1.
Source: The World Bank 2012; OECD 2010. Note that the vertical axis range is displayed from value 350, not 0.

Overall, liberalization policies did not produce the expected economic growth and stabilization, although some irregular improvements have happened since the late 1990s (Figure 1). Well-functioning markets, the goal of these policies, are largely absent. Furthermore, economic development has been hampered by poor public services and infrastructure (Collier and Gunning 1999). Foreign investment has been minimal, discouraged by an unfriendly and risky business environment (Banque Mondiale 2007). In an economy where most of the population works in family agriculture, which is largely based on kin relationships, and where most of the economy remains informal, the strength of market relationships is limited.

As in many Sub-Saharan Africa countries where state power and infrastructure are weak, economic and social relationships remain largely dependent on kinship and community bonds and values. Strong ties of reciprocity and patronage link agents of the state with local businesses and religious or communal organizations (Fatton 1986; Thioub et al 1998; Galvan 2001). Liberalization further decreased state power and, as the new development model created new constraints and opportunities, individuals mobilized these community-based forms of social capital. Indeed, the long period of economic recession resulted in a general decrease in real income, the widening of

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inequalities, and chronic economic insecurity, with a larger proportion of people affected by poverty (Duruflé 1988; Weissman 1990).

In such a context, migration can be interpreted as a strategy by individuals and households to cope with economic stress, as suggested by the New Economics of Labor Migration and the "sustainable livelihoods" literature (Stark 1991; Ellis 2000; Scoones 1998; Barrett et al 2001; Kothari 2002)[9]. It can thus be expected that negative economic growth increases migration propensities. Individual level indicators of insecurity, informality and unemployment are likely to lead to the same result.

The key role of families in Sub-Saharan African migration has been widely recognized (Findley 1997; de Haan 1999). For most of the population, formal insurance and financial markets are out of reach; in such circumstances, family links provide security by pooling risks (and rewards) and providing the resources to migrate. Migration by family members allows the household to diversify its income sources – they will be obtained in markets whose risks and upturns are lowly correlated. A "migration contract" regulates the reciprocal obligations of different family members (Stark 1991). Sending a family member to Europe may provide the means to afford consumer goods, investment in a business or, more often, a dwelling, thus enhancing the whole family social status and well-being. The importance of the family dimension in Senegalese migration has been demonstrated in such crucial issues as financing migration, transnational family practices, and remittances and investment behaviors (Mezger and Beauchemin 2010; Baizan, Beauchemin and Gonzalez-Ferrer 2014). Other individuals may be involved in a "migration contract", including more distant kin, members of the same ethnic or religious group, or even network members met during the migration process, even if their reciprocal obligations are unequal (Guilmoto 1998; Krissman 2005). Belonging to a Muslim brotherhood (religious order) can result in important support for migration to Europe. The particularly active role of the Mouride brotherhood in promoting migration is often stressed in the literature (Riccio 2001; Lalou and Ndione 2005). Mutual dependence and group affiliation do not seem to exclude the growing importance of individual motivations and decision-making, especially for the highly educated (Lalou and Ndione 2005).

Increased economic insecurity and lower incomes push individuals and families to look for alternative and diverse sources of income. Migration can thus be a strategy to protect income stability through both the diversification of income sources and also the accumulation of human and/or financial capital. Income obtained by migrants plays a key role in improving living standards, including food security, in different parts of Africa (Findlay and Sow 1998; Lindstrom et al 2012). Furthermore, the spread of the informal economy may encourage higher rates of migration (Krokfors 1995; Villareal and Blanchard 2013).

Increasing socio-economic inequality may be an additional incentive for migration. This is precisely the idea behind the hypothesis of relative deprivation developed by Stark (1991), but also in other studies that conceive migration as a strategy not only to increase income but more widely as a way to avoid downward social mobility, and more generally to enhance social status (Piore 1979; Reyneri 2003). While the first

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[9] Migration hikes have been observed in the wake of economic reforms in several countries (Martin 1993), although in Senegal, as in several other African countries, the "crises" has lasted several decades.

perspective (i.e. Stark 1991) predicts migration by the most deprived, the second perspective does not circumscribe status enhancement to any specific social group; however, in both perspectives, it is difficult to determine the relevant comparative social group, once the migration process has started.

The set of processes briefly referred in preceding paragraphs can be summarized in our first hypothesis:

The long period of economic recession experienced in Senegal, and the associated reshaping of social and economic relationships, involved a general deterioration of living conditions, heightened economic insecurity and the widening of social inequalities, which created the conditions for increasing out-migration propensities (Hypothesis a).

2.3. New opportunities in Europe

In the mid-1980s, migration to other African destinations became less attractive, since the economic and political conditions in most neighboring countries were as poor, or even worse, than in Senegal. Initial Senegalese migration to Europe was directed to France, soon Italy and later Spain became major destinations. The economic restructuring and labor market deregulation that started in the 1980s in Southern European economies, together with employer's practices, involved the creation of many temporary and low paid jobs (Polavieja 2003; Reyneri and Fullin 2011). Improvements in competitiveness were largely achieved through increased labor flexibility, sub-contracting, or by informal practices, in a context already dominated by small sized firms, an increasing dualization of the labor market and a sub-protective welfare regime (Gallie and Pugam 2000). Many of the most precarious and unskilled jobs created during this period became less and less attractive for natives, who were progressively better educated and could afford to wait for better job offers. Alongside a widely extended informal economy, these factors created the conditions for a strong demand for migrant labor and favored especially the hiring of irregular migrants (Reyneri 2003; Reyneri and Fullin 2011). *Labor market restructuring in Europe provided job opportunities in particular job niches and locations (Hypothesis b).*

In such a context, it is hardly surprising that Senegalese occupy jobs located nearly exclusively in the secondary labor market, with very low socio-economic status and poor working conditions (Castagnone *et al* 2013). Senegalese male migrants succeeded in gaining footholds as factory workers or low service workers in the industrial districts of Northern Italy and Eastern Spain (in fact, migration in sizeable numbers to these countries started in Lombardy and Catalonia, respectively, and is still largely concentrated in these regions). Intensive agriculture and peddling are also relevant niches (Bruzzone et al 2006; Castagnone et al 2013). It should be emphasized that family and personal networks, i.e. social capital, are by far the primary means to obtain jobs in Southern European labor markets, especially low-skilled occupations (Barbieri 1997). This explains the concentration of migrants in specific occupations and places, since social capital greatly improves job access and reduces the probability of unemployment. At the same time, this functioning of the labor market then limits both

a migrant's chances of getting jobs outside the migrant network and socio-economic mobility (Portes and Rumbaut 2001; Reyneri and Fullin 2011).

In France, both the development of the informal economy and the process of labor market deregulation have been slower and more limited (Gallie and Pugam 2000), which helps explain the more heterogeneous socioeconomic profile of the Senegalese community there, larger roles for education and family reunification as motives for migration, but also a decreasing importance of France as Senegalese main destination in Europe, at least in relative terms (Castagnone *et al* 2013).

Greater employment opportunities in European labor markets coexisted with increasingly restrictive admission policies. However, policy restrictions differed in their timing and intensity across countries and type of migration (see Mezger and González-Ferrer 2013 for a cross-country analysis). France, as an older country of immigration, had well-developed state structures for both integration and border control since almost the beginning of Senegalese flows; this was not, however, the case in Italy or Spain (Ambrosini 2001). For example, the late introduction of an entry visa requirement in Italy (1990), along with a large demand for cheap unskilled labor favored large inflows and irregular work for many migrants. Increasing entry restrictions have contributed to making migration more risky and costly but have not necessarily reduced entries. On the other hand, periodical regularizations in Italy and Spain contributed to consolidate Senegalese communities and provide access to regular and better jobs and legal options for family reunification.

2.4 Personal resources and the viability of migration as a strategy

To be used as a strategy to fight poverty, insecurity, or downward social mobility, migration is largely dependent on the resources available to the individual and her household. These resources are relevant not only to pay for the actual trip[10], but are important in a wider sense. Economic, social and human capital resources strongly influence the ability to migrate and explain migration's limited prevalence and its strong selectivity[11]. This links the capability to migrate to the individual's social position, including such attributes as age, gender, education, family status, occupational status and access to networks abroad. Social institutions and organizations facilitate/impede access to these resources and to migration in general (Findley 1997; Scoones 1998). In particular, the household economy context mediates the role of individual attributes. Here, we emphasize the role of education and social capital abroad as key resources for migration decisions.

Migration behavior is very much related to one's life stage. During young adulthood, individuals seek adult roles and status, for which migration is often an instrumental behavior (Mulder 1993). Most prominent in this respect are the work career and family

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[10] The United Nations Office on Drugs and Crime estimated the costs of irregular travel between Senegal and the Canary Islands to be between 480-1930 US dollars in 2006 (UNODC 2006). Funding is often covered with the help of family members or by social networks abroad, which are clearly related to the social status of the would-be migrant and her family.

[11] Of course, these types of resources are interrelated, and poor people often lack of marketable skills, networks abroad, or suffer poorer health.

formation. The economic and normative context of extended families, characteristic of Senegal's major ethnic groups, involves strong age and gender hierarchies that impinge upon individual decision-making, although this sometimes leads to youth migrating to escape family control (Findley 1997). Young people are favored for migration for several reasons. First, job opportunities in destination countries strongly favor the young (Heath and Cheung 2007). Second, young adults generally have lower opportunity costs of leaving jobs at origin. Third, young people have a longer time span to reap the benefits of migration. However, a substantial part of Senegalese migration to Europe appears to reflect a "target earning" strategy, with stays lasting five years or less (González-Ferrer *et al.*, forthcoming).

Gender is another decisive factor, and gendered social and family hierarchies severely restrict Senegalese women's capability to migrate abroad independently. Family values and norms stress that household and care work are the main obligations of women (Davis 1995). For instance, married women have the obligation to take care of their mother-in-law, restricting mobility (Diop 1985; Poiret 1996). In this context, household allocation of labor discourages migration for women, as the cost of staying abroad are higher than at home, and as it lowers the amount of remittances received by the household. Although Southern European labor markets offer a wealth of "female-specific" (often informal) jobs in the secondary labor market in agriculture, domestic service, dependent care and other services, Senegalese women seldom take these opportunities, even when they already reside in Europe (Castagnone 2013). At the same time, due to the dominance of family lineage over conjugal relations, migration decisions tend to be made in a wider household or clan context, which then facilitates the separation of couples (Baizan, Beauchemin and Gonzalez-Ferrer 2014). In addition, polygamy increases costs by multiplying the bride price and by raising living costs with larger families, and thus heightens men's migration (Findley 1997). Finally, in Senegal, strong gender inequalities in educational enrolment and attainment remain, while educational opportunities abroad are also likely to be quite limited. In sum, we expect that labor migrants to be predominantly male, while female migration to be more commonly related to either couple formation or family reunification.

Migration propensities are expected to differ by occupational status, since employment can fund migration, but it also entails different opportunity costs. Individuals with a low socio-economic status generally lack the resources to migrate, while high social class individuals have both less economic incentives to migrate[12] and higher opportunity costs of quitting good jobs. Accordingly, the relationship between migration and socio-economic status is expected to follow an inverted U-shape. Migration also often implies downward social mobility, at least initially, making it less attractive for individuals holding high-status jobs (Obucina 2013). The migration propensities of the unemployed (relative to the employed) are ambiguous. While lacking financial resources, the unemployed also have low opportunity costs, and this

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[12] Economics literature on selection of migrants does not generally focus on the occupation of the individual, but on skills, which are often considered equivalent (Orrenius and Zavodny 2005). Neo-classic migration theory generally favors a reasoning based on wage distributions and the relative earnings differentials between locations, while some empirical applications suggest that absolute earnings differentials are relevant (Borjas 1987; Borjas and Freeman 1992; Chiquiar and Hanson 2005).

is even true of the well-educated in a context of widespread unemployment and sub-employment, like Senegal. However, if migration is based on a household allocation of labor and the financial means to migrate are also household-based, the unemployed should show a higher propensity to migrate, due to their lower opportunity cost as compared to employed household members.

Positive selection with regards to human capital characterizes migration from developing to developed countries (Hatton and Williamson 2003). Although often attributed to the greater financial resources of individuals with higher education and skills, we emphasize here their advantage in European labor market job searches. First, a higher level of education facilitates access to a wider range of jobs, and second, it permits access to jobs with a higher socioeconomic status (and thus increases the incentives to migrate). In addition to the skills needed for the higher productivity requirements in advanced economies, education improves access to information, European languages skills, and social skills. Nevertheless, more crucial for migration may be the generally higher probability of finding employment of the better educated in highly competitive European labor markets, where employment probabilities are largely based on education, and where unemployment has been consistently high during the last few decades (Gallie and Paugam 2000). Lowly educated individuals (especially the illiterate) experience much longer periods of unemployment, leading to unaffordable costs of staying in Europe, thus effectively hampering migration for them[13]. Lastly, education may increase migration aspirations (de Haas 2009). All in all, we expect a strong positive selection according to education in our empirical analyses.

2.5 The interaction between social capital and labor demand

The role of migrant networks in facilitating the migration process has been extensively highlighted in the literature, although less attention has been paid to the conditions under which this form of location-specific social capital leads to migration (Massey et al. 1998; Garip 2008). Migrant networks can facilitate potential migrants' access to migration-related resources, including information, financing, housing, marriage partners, and crucially, access to job opportunities. As mentioned previously, jobs at destination are generally not filled through a bureaucratic open-market job search that sorts prospective workers among available slots, but rather through the personal networks of current employees. The mediating effect of the migrant network is expressed through providing job opening information to potential migrants, and in providing referrals to employers. Employers also favor this type of recruitment because it helps solve information asymmetry problems (Munshi 2003; Granovetter 2005). Additionally, Rosenfeld and Tienda (1999) write that "network hiring lowers employer's cost of recruiting and provides employers with some insurance that the new employees will not shirk their duties, because a current worker has vouched for them." When new personnel are needed, networks are mobilized, and this can explain

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[13] In terms of labor market competition, the Senegalese as a group are in a relatively unfavorable situation compared to other migrant groups, given the Senegalese population's low level of education which limits the expansion of migration. Destination countries' preferential treatment of other nationality groups, such as those from the European Union or Latin America, also weakens the relative position of the Senegalese.

the expansion of migrant streams according to personal networks. "*Social networks link livelihood strategies by individuals and households in Senegal with labor demand in Europe, by channeling access to jobs for Senegalese migrants*" (*Hypothesis c*).

At the same time, potential migrants without networks cannot migrate to take advantage of specific increases in labor demand because they lack access to the new jobs[14]; but the availability of social capital abroad may not be enough to trigger migration. Therefore, we hypothesize that the simultaneous presence of labor demand at destination *and* social migrant networks is needed to trigger labor migration. "*The conjunction of periods of strong labor demand and the availability of personal networks in Europe creates a boosting effect on migration probabilities from Senegal to Europe*" (*Hypothesis d*).

Networks tend to develop among individuals belonging to the same groups, particular those based on kinship, religious affiliation, social class and ethnic group. In heavily-segmented societies, as is the case of Senegal, non-group members may see themselves excluded from migration, leading to sharp contrasts in migration propensities between individuals with and without networks abroad. Furthermore, not all network members are equally useful for finding jobs in Europe and to migrate. As discussed previously, destination labor markets provide different opportunities according to age, sex, and especially education, likely resulting in differential opportunities of migration among the network members. For the Senegalese, both strongly-tied and weakly-tied personal networks are important (Liu 2013), and network composition is gendered (Toma and Vause 2011).

Networks have a random component, since they depend heavily on initial conditions and the path dependent way through which they develop. For instance, the ability and luck of pioneer migrants to find jobs in particular occupational niches and geographical locations in Italy and Spain have distinctly shaped the characteristics and size of the respective Senegalese communities[15]. The expansion of networks in these countries has been related and limited to the expansion of job opportunities in these particular occupational niches and locations. Migrations opportunities in Senegal have expanded among individuals connected to former migrants in a path-dependent way.

Finally, network development continuously alters the conditions under which subsequent migration take place (Massey 1990; de Haas 2010). The selectivity and path dependence dynamics of networks influences that "[…] when mobility results from network connections, it changes network structure that then feeds back into future mobility patterns" (Granovetter 2005, p. 37)[16]. Feedback effects in the destination society include the creation of migrant-origin-specific job niches, new migrant associations, and the increased availability of smugglers (Krissman 2005). In the origin society, the development of the migration system results in the increasing diffusion and strength of networks in the population, and also greater income inequalities between migrant and non-migrant households and the economic

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[14] By the same token, labor demand may not lead to immigration (by the Senegalese), if networks are unavailable.

[15] Of course these factors have also been important in France. However, the initiation of migrant networks there is more complex and less clearly identifiable in time, since it has a longer history, in which colonialism and post colonial ties, as well as labor force recruitment, have had an important role.

[16] Here, Granovetter's words refers to job mobility, but we apply them to geographic mobility.

dependence of households on remittances. Once established, a "migration culture" legitimizes and normalizes the process. The development of these processes over the last thirty years has produced a multiplier effect on migration at the aggregate level, which likely drives the expansion of the migration system between Senegal and Europe.

3. Data and variables

We base the empirical analyses on the survey «Migrations between Africa and Europe» (MAFE-Senegal)[17]. This transnational dataset results from the use of identical questionnaires and similar survey methods in Europe and in Senegal: 603 Senegalese migrants were surveyed in Europe, irrespective of the Senegalese region of residence prior to migration (about 200 each in France, Italy and Spain[18]) and 1,067 persons were interviewed in the region of Dakar (including 197 returnees and 101 migrant's partners at the time of the survey in 2008). The MAFE Senegal survey's geographical strategy is astute for surveying Senegalese migrants. On one hand, France, Spain and Italy accounted for about 45 percent of the Senegalese diaspora, reported in the 2002 Senegal Census (Agence Nationale de la Statistique et de la Démographie 2006). On the other hand, the Dakar region is home to about a quarter of the national population and the origin of 31% of the international migrants reported by Senegalese households in the 2001-2002 ESAM-II survey (ANSD 2004 and 2006).

In all countries, the survey eligibility criteria was that individuals were between 25 and 75 years of age (for long-enough life histories), had been born in Senegal (to exclude second-generation in Europe), and had current or past Senegalese nationality (to exclude immigrants to Senegal). Additionally, for those living in Europe, their first international migration was at age 18 or older, in order to focus on adult migration. Therefore, we start our analyses at age 18.

Varied sampling methods were used to select the individuals. In Senegal, a stratified probabilistic sample was drawn, based on Census data. The municipal register in Spain ("Padrón") offered a national sampling frame from which documented and undocumented migrants could be randomly sampled. Respondents in France and Italy were sampled through varied non-probabilistic methods (e.g. snowballing, intercept points, contacts obtained from migrant associations) in order to fill pre-established quotas by sex and age[19].

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[17] The Senegalese part of the Migration between Africa and Europe (MAFE) project is coordinated by INED (C. Beauchemin), in association with the Université Cheikh Anta Diop (P. Sakho). The project also involves the Universitat Pompeu Fabra (P. Baizan), the Consejo Superior de Investigaciones Científicas (A. González-Ferrer), and the Forum Internazionale ed Europeo di Ricerche sull'Immigrazione (E. Castagnone). The survey was conducted with the financial support of INED, the Agence Nationale de la Recherche, the Région Ile de France and the FSP programme 'International Migrations, territorial reorganizations and development of the countries of the South'. The MAFE-Senegal project has now being enlarged to Ghanaian and Congolese migrations, thanks to a funding from the EU Seventh Framework Programme. For more information (including the questionnaires) see: http://www.mafeproject.com/

[18] For simplicity's sake, we will refer to "Europe" instead of mentioning the three different destination countries in the rest of the article.

[19] Additional information can be found in Beauchemin and González-Ferrer (2011) or on the website of the MAFE project: http://www.mafeproject.com/

Table 1. Descriptive statistics: from age 18 (or 1976) up to first migration or censoring.

	Proportion	St. error
First migration	0.008	0.000
First migration (labor)	0.005	0.004
First migration (other motives)	0.003	0.002
Age (mean)	32.104	0.128
Woman	0.561	0.005
Level of education		
No schooling	0.361	0.005
Primary or less	0.431	0.005
Secondary	0.168	0.004
University	0.040	0.002
Activity		
Student	0.099	0.003
Employed	0.563	0.005
Unemployed	0.030	0.001
Other inactive	0.308	0.005
Socio-economic status (for employed)		
Higher service	0.195	0.005
Routine non manual	0.223	0.005
Skilled manual	0.267	0.006
Unskilled manual	0.251	0.006
Agriculture	0.063	0.003
Family help (for employed)	0.189	0.006
Work experience (years)	9.603	0.116
Owns property in Senegal	0.131	0.003
Partnership status		
No partner (ref)	0.423	0.005
In partnership	0.577	0.005
Number of children	2.501	0.037
Network in F,I,S	0.275	0.005
% GDP per capita growth in Senegal	0.519	0.029
% Employment growth in F,I,S	1.090	0.014
Living in Dakar Region	0.885	0.003
Person years (unweighted)	23900	
No. individuals (unweighted)	1551	

Source: MAFE-Senegal 2008.
Note: Person-years distribution; weighted.

The data are time-varying by nature, since they result from individual life-histories collected in biographical questionnaires. The questionnaire was designed to collect retrospective information on a yearly basis from birth until the time of survey (2008), for each sampled individual, whatever his/her country of residence at the time of the survey. Information was collected about individuals' migration and work histories, as well as their family history (children, partnerships) and social networks. This type of data collection is susceptible to recall errors and omissions. Fortunately, omissions should be minimal for salient events, such as international migration or important family events (like births or marriage); but errors are likely to be more frequent for some categories of network members or in the case of complex job histories. Crucial

for event history analysis, the sequence of events is generally accurate in retrospective surveys (Auriat 1996). In Table 1, we present some descriptive statistics of the variables used in the models.

Our dependent variable, migration out of Senegal, is defined as a stay of at least 12 months outside Senegal. In the analyses, we include only direct first migrations from Senegal to either France, Italy, or Spain. Moves from Senegal to other destinations were censored at the year of migration.

In order to gain a more precise focus on labor-related migration, we distinguish labor migration from other migration types in some models. The distinction is based on labor force status at destination during the first year after migration. If the individual is employed or unemployed, the move is classified as "labor migration"; and if she/he is inactive, notably including housewives and students, the move is classified as "other". Here, we isolate labor migration from other motivations to better assess the role of independent variables included in the models. However, these migration types are generally not independent from each other. Family reunification and marriage migration are often related to a previous labor migration (Baizan, Beauchemin and González-Ferrer 2014). Students may eventually enter destination labor market (Castagnone *et al* 2013). The interrelation of migration motives also explains why we prefer to use an "objective" distinction rather than use the stated motives of migration given by migrants to the questionnaire. Additionally, subjective answers are often ambiguous (for instance, they may include a first motive related to economic reasons and a second motive related to family or "adventure").

Independent variables include age, gender, number of children, and partnership status (individuals married or in a consensual union versus not being in a partnership). A time-varying indicator of the educational level has been constructed, based on answers regarding the main occupation of individuals and their educational attainment. The data distinguish periods when the individual was employed, unemployed, studying, or in other type of economic inactivity. The questionnaire provides information on the individual's job during each activity period (each change in occupation or occupational category implies a separate activity period). Information on professional occupations was coded using the ISCO-08 International Labor Office classification, and was subsequently collapsed into a simplified version of the Erikson and Goldthorpe's class categories (1993). The "family help" variable includes periods when the individual is helping their own family's business or farm, or when the employer is a private household (domestic work). The "work experience" indicator was constructed using the logarithm of the number of years that an individual has held a job as main occupation (log +1; individuals who never worked have 0). An additional indicator of an individual's resources is whether she/he owns property in Senegal, including land, dwellings, and business.

The measurement of social networks is very detailed in MAFE data. Respondents were first asked to name all close family members (parents, siblings, partners and children) who had lived at least one year abroad, and construct a year-by-year itinerary of the countries where they had lived. Subsequently, they were asked to provide the itineraries of other relatives, friends and acquaintances on whom they could count on

(or could have counted on) to receive or help them to migrate out of Senegal, who had also lived at least one year abroad. In the analyses presented here, we restrict migrant network indicators to years lived in the three European countries studied. The network variable indicates whether the respondent has network members living in Europe, excluding their spouse.

In order to take into account the numerous family reunifications and marriage-related migration, we use the indicator "partner's location", with three categories: not in union, partner lives in Europe (France, Italy or Spain), and partner is not in Europe (in nearly all cases of this final category, the partner lives in Senegal).

With the exception of age and "partner's location", all individual level time-varying co-variates are lagged one year with respect to migration decisions, to capture the ordering of life course transitions. Partner's location is not lagged in order to capture the simultaneity between union formation and migration.

We include two contextual variables in our analyses, based on the data presented in Figure 1. The first is the annual growth rate of the Gross Domestic Product. This data, expressed in constant 2000 US dollars, is obtained from the World Bank database (2012). The second variable, intended to proxy labor demand, is the annual employment growth rate in France, Italy and Spain, based on the Labor Force Surveys (OECD 2010)[20]. These contextual variables were available starting from 1976, resulting in a reduction of 47 individuals included in the statistical analyses. Additionally, 72 observations were dropped from the original 1670 valid interviews, because they migrated at age 18 to other destination outside the three countries studied, or because they had already made a first migration before age 18. There are 1551 individuals in the sample (1306 in the analyses including migrants from the Dakar region only).

4. Methods

Event history techniques are used to model first migration from Senegal to Europe. In their discrete-time event history version of these techniques, the hazard function is modeled as the probability of the event taking place in a given interval, conditional on the fact that the event did not occur before and on a set of covariates. A logistic specification is used, which can be viewed as a latent-response model (Rabe-Hesketh and Skrondal 2012)[21]. Underlying the observed dichotomous behavior y_{it} (whether or not an individual migrates in a given year), there is an unobserved or latent continuous response y_{it}^{*} representing the propensity to migrate. If the latent response is greater than 0, then the observed response is 1; otherwise is 0. A linear regression model is specified for the latent response y_{it}^{*}

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[20] Unfortunately, a reliable time varying indicator of income inequality covering the period analyzed is not available. The World Bank provides a Gini coefficient for 2011 (40) and 2005 (39), suggesting that it is a very unequal society. The income share held by the lowest 20 percent of the distribution was 6 per cent in 2011.

[21] This is equivalent to a generalized linear model formulation, but the random component here is more explicit. The relationship between the response and the covariates is not deterministic in the latent-response formulation.

$$y_{it}^* = \beta_0 + \beta'x_{it} + u_{it}$$

where x_{it} is a vector of covariates, including the baseline hazard function, with β denoting the value of the estimated coefficients of the model for each variable, and where the random term u_{it} is assumed to follow a logistic distribution[22]. A competing risk specification is used to model migration types. To facilitate interpretation, we present the logistic regression results in odds ratios. All data is weighted.

5. Results

We present the event history analysis results for first migration, distinguishing whether the migration originated in the Dakar region (Table 2, Model 1) or in all of Senegal (Models 2 and 3). As explained before, interviews in Senegal were only conducted in the region of Dakar, while interviews in Europe involved Senegalese of all origins and prior residence. The direction and magnitude of effects are remarkably similar in practically all variables, and suggest that the use of the larger sample does not bias our analyses[23]. However, the Dakar region model results sometimes show less statistical significance, most likely due to the smaller sample size. Consequently, we mainly refer to the results on the all-Senegal data. In Table 3, we present the results of the competing risk analysis for labor migration and other types of migration. Each migration type is very distinctive. In order to take advantage of the complementary nature of their explanations, we will integrate our explanation of all results, rather than presenting them successively.

Senegalese migration to Europe is strongly stratified by age and sex. The age profile of migrants follows the expected bell shape, peaking around age 28 for both men and women, and dropping to its lowest levels after age 40. This youthful profile of migrants can be even better appreciated in Figure 2's predicted probabilities of first migration by age and sex. The odds of male migration are about 60 per cent higher than those for females once all migration types are combined (Table 2, Model 2). The Dakar region results suggest that the gender migration gap is smaller in the urban capital context than in the whole of Senegal (Table 2, Model 1 and 2). Men and women migrate for different reasons. Men are about five times more likely than women to migrate as labor migrants, while for other migration types, mainly family-related as discussed below, women have twice the odds of men to migrate (Table 3). That age and sex effects persist even after many other covariates are included is consistent with life course explanations, as well as the age and gender hierarchies existing in the Senegalese society. The large gender differentials found for migration to Europe contrast with the much lower differentials prevailing in internal migration and migration within Africa, indicating that migration to Europe is highly selective and subject to a wider range of constraints (Delaunay 1994; Sakho 2013).

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[22] Probit or complementary log-log specifications give virtually the same results.
[23] This is also the case for a competing risk analysis of migration types (results not shown). The results of Table 3 refer to migration originating anywhere in Senegal.
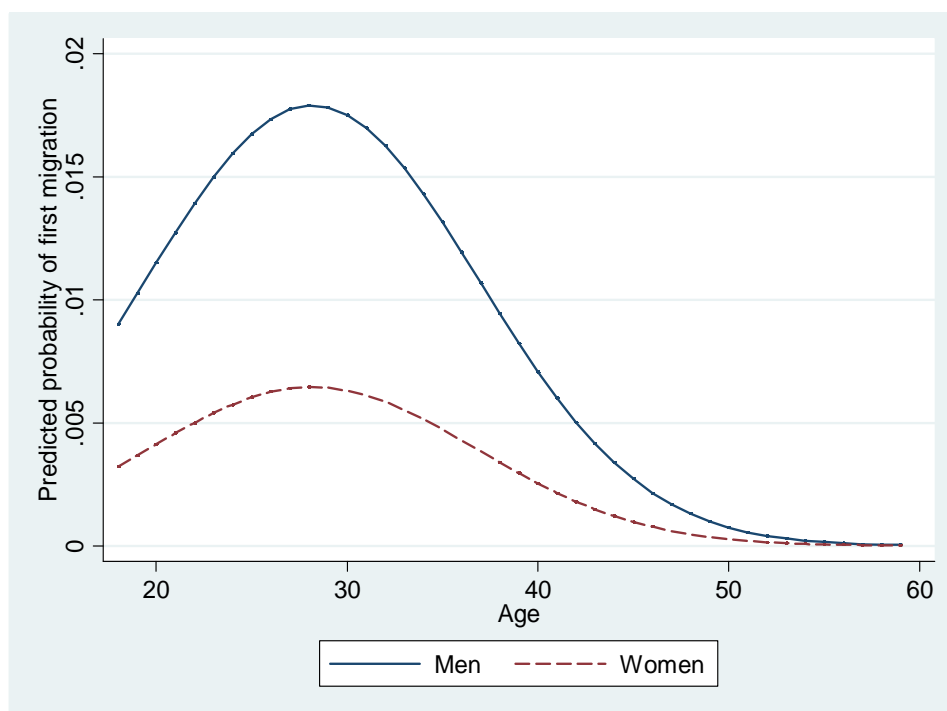
Figure 2. Predicted probabilities of first migration from Senegal to France, Italy and Spain, by Age and Sex.

The influence of union and family status depends on the migration type. Being in a union (married or unmarried) does not affect labor migration (Table 3) and is consistent with the well-accepted idea of geographical separation of couples in Senegalese society. In this strongly patriarchal family system, conjugal links are not as strong as vertical links (Findley 1997). These results stand in sharp contrast with other migration types, which show a highly significant odds ratio of 2.0 for individuals in a union (Table 3, p < 0.01), obviously related to couple's (re)unification after previous transnational living arrangements[24]. For all migration types, becoming a parent and the number of children significantly reduce the odds of migration. The extremely high odds ratio for having a partner living in Europe can be explained by marriage-related migration (Table 2, Model 3, p< 0.01). Bride import is a widespread practice among Senegalese migrants (Baizan, Beauchemin and González-Ferrer 2014).

In all models, education is strongly and significantly influential, and its effects follow an inverted J shape[25]. As expected, individuals with no schooling have very low levels of migration, their odds are nearly 60 per cent lower than those with some secondary education, and individuals with some primary schooling have only slightly higher odds. Considering that the Senegalese population is characterized by very low levels of education (according to MAFE data, more than a third have never attended school) and

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[24] Children generally accompany their mothers in this type of migration (González-Ferrer, Baizan and Beauchemin 2012).

[25] An alternative specification of educational level as a continuous variable (years of schooling) yields a significant strong positive effect. However, the addition of a square term was not significant.

high illiteracy rates, education contributes powerfully to lower overall levels of migration. Low education curtails employment chances in the highly competitive European labor markets, where a minimum of education is expected, even for low-level jobs. Unexpectedly, the odds of university-educated individuals to migrate are somewhat lower than those of the secondary-educated, although this difference is not consistently significant. A likely explanation is that the highly educated enjoy better employment probabilities and possibilities in both Europe *and* Senegal, and confront steeper downward mobility in European labor markets.

Migration is also influenced by other human capital and socio-economic measures. Work experience is another measure of human capital. Despite the difficulties of transferring human capital internationally, work experience clearly increases the probability of labor migration, while having no effect for other migration types (Table 3). This variable could also be a proxy of the accumulation of financial resources needed to migrate. Also, socio-economic status is a rather direct indicator of financial resources. Measured only for the employed, socio-economic status follows the expected inverted U-shape. For labor migration (Table 3), individuals employed in routine non-manual occupations have a relative odds nearly 3 times higher than manual employees (no significant differences between skilled and unskilled workers were found), suggesting that migration may not be an option available to the poor. Higher service jobs have an odds 60 per cent higher than skilled manual jobs, but have much lower odds than "routine non-manual" jobs (Table 3). This finding is consistent with the idea that quitting higher service sector jobs (because of migration) involves a higher opportunity cost than quitting a routine non-manual job. In addition, higher service sector jobs are least likely to be affected by informality and insecurity.

The major exception to the expected pattern of migration by job status is agricultural workers, who have more than triple the odds of migration of skilled manual workers, for labor migration (and 5.5 times the odds in the case of non-labor migration). Profound agricultural crises and high levels of insecurity in the agricultural sector during the period of interest are likely to be responsible for encouraging agricultural workers to consider migration in order to diversify resources and earn income. At the same time, given the very low incomes of agricultural workers, this result questions that the poverty and the cost of migration largely restrict international migration. It is likely that family and community resources (including migrant networks) have contributed decisively to implement migration in such cases.

Owning property in Senegal also raises the likelihood of labor migration, but is not significant for other migration types (Table 3). Owning physical capital in the form of land, a dwelling or a business is likely to be related with reduced financial constraints to migrate. However, as emphasized by institutional economics, it can also indicate a higher demand for financial capital, which, given the difficulties in accessing credit in Senegal, can then be satisfied through international migration.

Table 2. Discrete-time event history model estimates of first migration to France, Italy or Spain, from the Dakar Region or all of Senegal

	Dakar Region Model 1		All of Senegal Model 2		All of Senegal Model 3	
	Odds ratio	Sig.	Odds ratio	Sig.	Odds ratio	Sig.
Age (centered)	1.029		1.028		1.029	***
Age squared	0.994	***	0.995	***	0.995	***
Female	0.594	**	0.406	***	0.407	***
Level of education: Secondary (ref.)						
No schooling	0.288	***	0.464	***	0.458	***
Primary or less	0.388	***	0.522	***	0.519	***
University	0.624	*	0.725		0.727	
Occupational Status: Employed (ref.)						
Student	4.223	***	3.915	***	4.039	***
Unemployed	2.196	**	3.240	***	3.230	***
Other inactive	2.084		2.166	**	2.209	**
Socio-economic status (for employed): Skilled manual (ref.)						
Higher service sector	1.549		1.719	**	1.722	**
Routine non manual	2.068	**	2.483	***	2.482	***
Unskilled manual	0.632		1.025		1.024	
Agriculture	2.829	***	3.863	***	3.919	***
Family help (for employed)	1.171		1.440	*	1.463	**
Work experience (log)	1.276	**	1.207	**	1.212	**
Owns property in Senegal	1.703	**	1.566	**	1.577	**
Partner's location: No partner (ref)						
Partner lives in F,I,S,	9.185	***	11.518	***	11.539	***
Partner in Senegal	0.900		0.962		0.955	
Number of children	0.881	*	0.870	***	0.870	***
Network in F,I,S	3.930	***	4.086	***	3.375	***
GDP per capita growth in Senegal	0.932	**	0.954	**	0.955	**
Employment growth in F,I,S	1.019		0.995		0.907	
Employment growth in F,I,S squared	1.071	**	1.070	***	1.067	***
*Network in F,I,S * Employment growth*					1.176	*
Person years (unweighted)	19477		23900		23900	
No. individuals (unweighted)	1306		1551		1551	

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Weighted estimates.

Other results regarding the individual's socio-economic position support perspectives that emphasize the role of economic insecurity and the need to diversify income sources. For labor migration, the unemployed have an odds of migration more than triple the migration odds of the employed. Unemployment status is not significant for other migration types. The distinction between unemployment and inactivity may not be clear cut in a developing country, also considering that only the "main" occupation is reported. The distinction between employment and inactivity can be especially vague for women, who may underreport economic activities performed in addition to

21

household work. Therefore, it is not surprising to find that the migration odds of the "other inactive" are twice as high as the employed (Table 2, Model 2; but in Table 3, results are not significant). Low opportunity cost can help explain migration decisions for the unemployed, or for individuals with low productivity activities and who can easily be substituted by other household members. This may also explain the high migration odds of family helpers (including domestic service), which tend to happen in the informal economy. Finally, signaling student migration, students have an extremely high odds ratio for other types of migration, as compared to the employed (Table 3).

Table 3. Multinomial logistical estimates of discrete-time event history models of first-time migration from Senegal to France, Italy or Spain, by migration type (Model 4)

	Labor migration		Other migrations	
	Odds ratio	Sig.	Odds ratio	Sig.
Age (centered)	1.015		1.056	
Age squared	0.995	***	0.996	*
Female	0.208	***	1.958	***
Level of education: Secondary (ref.)				
No schooling	0.396	***	0.324	***
Primary or less	0.448	***	0.543	*
University	0.590	*	0.915	
Activity: Employed (ref.)				
Student	1.415		9.469	***
Unemployed	3.301	***	1.947	
Other inactive	1.522		2.700	
Socio-economic status (for the employed): Skilled manual (ref.)				
Higher service sector	1.648	*	1.699	
Routine non manual	2.990	***	1.432	
Unskilled manual	1.210		0.814	
Agriculture	3.529	***	5.501	***
Family help (for employed)	1.497	*	1.294	
Work experience (log)	1.276	**	0.951	
Owns property in Senegal	1.715	**	1.089	
Partnership status: No partner (ref)				
In partnership	1.332		2.006	***
Number of children	0.844	***	0.790	***
Network in F,I,S	3.133	***	4.344	***
GDP per capita growth in Senegal	0.942	**	0.954	
Employment growth in F,I,S	0.862	*	1.060	
Employment growth in F,I,S squared	1.088	***	1.025	
*Network in F,I,S * Employment growth*	1.236	**	1.009	
Person years (unweighted)	23900		23900	
No. individuals (unweighted)	1551		1551	

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Weighted estimates.

Each percentage point increase in the per capita Gross Domestic Product lowers the odds of labor migration to Europe by about 6 per cent ($p<.05$), while having no significant effect on other migration types (Table 3). Considering that Senegal's GDP growth was negative during most of the 1980s and 1990s, this indicator provides

evidence that the deterioration of living conditions and increased economic risk leads to migration. The effect of GDP change is net of other individual variables that mediate the effects of economic crises, such as unemployment and job status. Furthermore, the expected effect of GDP change may be partially counterbalanced by parallel change in the resources available to individuals, influencing the capacity to pay for migration, in particular among the poorest.

As is the case for financial resources, individuals are more likely to migrate when they possess a certain level of social capital resources. Social capital substantially and significantly increases the odds of migration throughout the models (Table 2 and 3). Having friends or relatives in Europe (not including partners) more than triples one's likelihood to migrate for labor reasons than individuals without[26]. Of course, networks are even more essential in the case of family reunification and family formation; and the results confirm this (Table 3). When interpreting the results, one should consider that kin and friendship networks of Senegalese in Europe have greatly expanded since the early 1980s, in parallel with the expansion of Senegalese communities abroad, which then leads to a multiplier effect in migration rates.

Our indicator of labor demand, the rate of employment growth, suggests that Senegalese migration responds to employment opportunities in Europe. This effect does not follow a linear pattern. Instead, migration is boosted when labor demand is sufficiently strong (above 2 per cent), while it stagnates below that level. This suggests that migrant labor is attracted only once European labor markets have first mobilized their own pool of unemployed (to a certain extent, since substantial unemployment levels persist even in periods of economic expansion). Employment growth squared has a substantial effect for labor migration, as the odds indicate a 9 percent increase for each percentage point increase in employment ($p < 0.01$). As expected, no significant effects are found for other migration types (Table 3). These results support the key prediction of the segmented labor market theory, i.e. that labor demand is a crucial factor driving migration.

Earlier in this paper, we proposed that this labor demand could go largely unnoticed if social capital abroad is not available to link employment opportunities and potential migrants. In order to test this hypothesis, we have included an interaction term of employment growth and network availability. For labor migration, the interaction term is highly significant (Table 3, $p < .05$). Figure 3 (based on Table 2 Model 3) shows that the migration probabilities of individuals with and without networks differ significantly only once employment growth reaches at least negative 2 percent. Furthermore, in a context of employment growth of at least 2 percent, individuals with access to networks see substantial increases in their migration probabilities as compared to individuals without networks. This evidence supports the idea that social capital is key for accessing employment opportunities for Senegalese in Europe.

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[26] For the sake of simplicity, we model network availability as a dummy variable here. Alternative specifications of network availability, such as the logarithm of the number of network members or different network member dummies, also provide strong positive effects (results not shown, but available upon request).
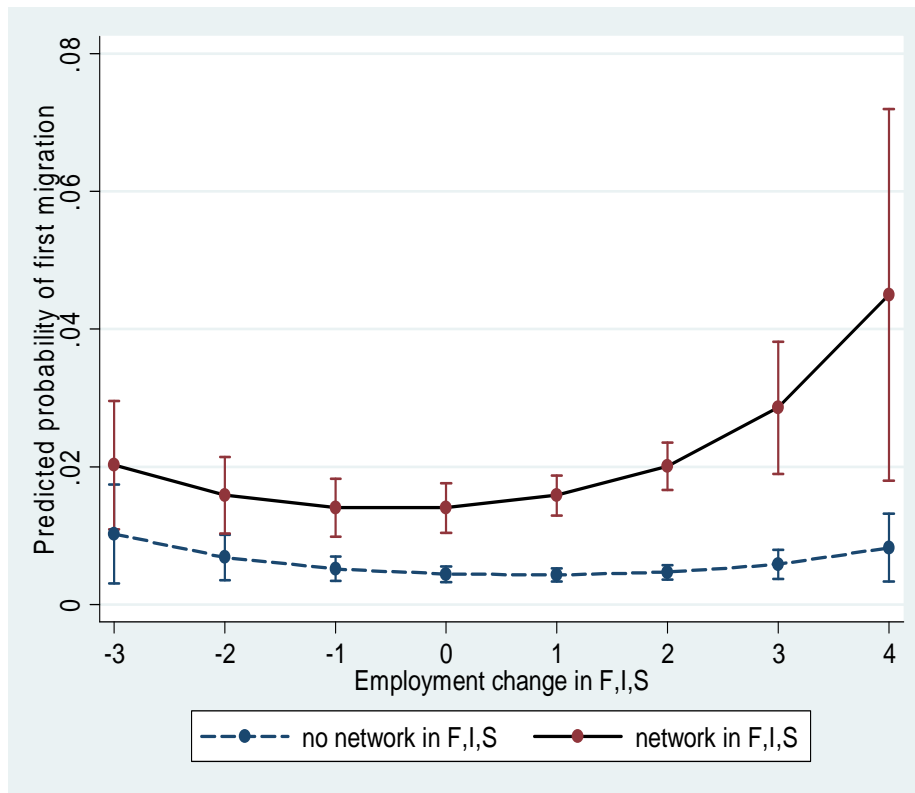
Figure 3. Predicted probability of first migration to France, Italy and Spain, by Employment Growth in France, Italy and Spain and Network Availability, with 95 per cent confidence intervals.

6. Conclusions

Despite the growing importance and potential of migration from Sub-Saharan Africa to Europe, few quantitative studies have examined its socioeconomic determinants. This paper contributes to the understanding of the migration movements from Senegal to France, Italy and Spain, by examining how social and historical factors influence individual migration behavior. Particular attention has been paid to the link between micro-level factors and contextual factors, both at origin and in Europe. From the 1980s to the mid 2000s, Senegalese society and economy experienced profound changes that have simultaneously incorporated and marginalized it from the rest of the World. The surge of international migration during this period is part of these changes. The results reported here concerning both individual socioeconomic indicators and macro economic growth are consistent with institutional perspectives emphasizing the role of economic uncertainty and the need to diversify resources. Individual financial resources show a complex relationship with migration, and generally support the idea that a minimum of resources are needed for migration. However, individuals working in the primary sector, where poverty is pervasive, also show very high levels of migration, which suggests a specific role of resources in the context of peasant households.

Education is particularly powerful in explaining Senegalese migration. Individuals with a primary education or less displayed very low levels of migration The expansion of education may increase individual migration capabilities. Education helps individuals overcome social and economic barriers to migration, increase social status and consumption aspirations, and facilitates access to employment opportunities at destination.

Since the mid-1970s, Senegal has experienced a long period in which economic and human development has stagnated or deteriorated. In such a context, families and individuals strategized to counter the deterioration of living conditions and avoid downward social mobility. One of these strategies, international migration, involved the mobilization of social capital resources of individuals to gain access to jobs abroad. This strategy was made feasible by the expansion of employment opportunities in particular sectors and places in Europe since the mid-1980s. This expansion resulted from the processes of labor market deregulation, the growth of the underground economy in the South of Europe, and firm strategies to increase competitiveness. Our results show strong effects of employment growth in Europe on the likelihood of migration, particularly during periods of rapid economic expansion. We have highlighted the specific functioning of the destination labor market in order to explain why the availability of social networks abroad is needed to access such labor demand. Having acquaintances or relatives in Europe more than triples the odds of labor migration (quadruples the odds for other migration types) with respect to individuals without such connections. These sharp differences in migration probabilities between individuals with and without networks abroad demonstrate how important social capital is in channeling and selecting candidates in a very socially segmented society. But the availability of social capital *per se* has a small impact on migration probability. Our analyses have shown that a simultaneous conjunction of periods of strong labor demand with the availability of personal networks in Europe is needed to create a boosting effect on migration probabilities from Senegal to Europe.

Although this paper contributes to exploring the connection among different levels and locations that explain Senegalese migration to Europe, it has certain limitations. First, there is limited availability of household and family level indicators, which prevents a more clear analysis of how the household economic situation and migration are linked. Particularly useful would be information concerning the household decision-making process. Also, the dearth of available macro variables, including policy-related variables, prevented a more nuanced analysis of contextual effects in both Senegal and Europe. Our results concerning the key importance of labor market conditions in destination countries, point to the need for more detailed analyses of the occupations, job conditions, and other labor market characteristics of each European destination.

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