Extended abstract submitted to PAA 2014

Title: Origin and destination social capital in international migration from DR Congo, Ghana and Senegal

Abstract: This paper explores how origin and destination social capital influence migration. In quantitative migration scholarship to date, studies of origin social capital (*e.g.* household structure, strategies) and destination social capital (*e.g.* migrant networks) are largely segregated. Yet, qualitative migration scholarship has shown that potential migrants are swayed by a complex and geographically-distributed web of kin and friends. Utilizing the recent longitudinal Migration between Africa and Europe project data (2012), this paper aims to unify these diverse research streams. Comparing different origin contexts (DR Congo, Ghana, Senegal), this study will also reveal how the social capital influences are mediated by gender, generation and familial culture.

Background

New Economics of Labor Migration Theory and Social Capital Theory

Both the new economics of labor migration theory and social capital theory explore how an individual's social ties can impact their likelihood of migration (see review of major migration theories in Massey *et al* 1993), yet their respective literatures have been strongly segregated between origin and destination. The first theory, new economics of labor migration, has an origin-looking approach in terms of social ties. Scholars propose that migration decisions are made by groups of people, usually family or household, to diversify risk *and* to maximize expected income (Stark and Bloom 1985). In doing so, families and households overcome the limitations of different markets (credit, unemployment insurance, futures, labor) by assigning some members to work locally and others to work abroad. The second theory, social capital theory (or migrant networks, as named by Massey et al 1987), has a destination-looking approach in terms of social ties. It proposes that an individual's links to migrants abroad directly affects one's likelihood to migrate, by providing information and resources. The network influence is expected to depend on the strength of the tie (Coleman 1988, Granovetter 1973, Burt 1995), and the quantity and quality of network resources (Lin 2000, Garip 2008, Liu 2013). Both negative and positive network effects are theoretically possible (Portes 1998).

Despite their importance for understanding migration flows, empirical scholarship has not yet explored whether these migration theories complement one another or work in competition. Most scholarship considers the theories to be complimentary (*e.g.* Massey et al 1993), and some work considers them competitive (*e.g.* Palloni *et al* 2001), but rare is the work that explores this at length. Indeed, even Espinosa and Massey's influential paper (1997) theorized the complementary nature of different migration theories, while its empirical section treated them as competitive explanations by assigning one or more indicators to each and running all the indicators in the models.

In any case, a wealth of literature has developed out of both new economics of labor migration and social capital theory. As related to the new economics of labor migration, quantitative scholarship has found that interest rates are the major macroeconomic determinant of migration and that home ownership dissuades migration (Massey and Espinosa 1997). Remittances also appear to increase economic development (for review, see Taylor 1999). Yet, exploration of how household make decisions about migration has been more limited. In terms of social capital theory, empirical studies have generally found that migrant networks facilitate migration by reducing the costs and risks of the migration trip (Donato et al 2008, Singer and

Massey 1986), while increasing its benefits through higher earnings and job quality at destination (Amuedo-Dorantes and Mundra 2007, Munshi 2003).

Origin and Destination Social Capital and Migration

If origin and destination social capital influences on migration behavior are interrelated, studying each in isolation hobbles our understanding of international migration. Qualitative migration literature offers us different examples of how migrant social capital and household (non-)migration strategies jointly influence individual migration behavior: sometimes reinforcing one another, sometimes counteracting one another. In her anthropological study on unauthorized Senegalese boat migrants to the Canary Islands, Poeze (2010) identifies two models of origin and destination social capital influence. The opportunistic model applies to individuals with large migrant networks and views friendship migrant networks as a key conduit for developing feelings of relative deprivation. Individuals then may decide to migrate, in spite of household opposition. The conformist model captures individuals without large migrant networks, nor feelings of relative deprivation, in a context where the family hierarchy decides to send them abroad, and individuals negotiate and strategize to deal with the costs and risks of migration and family disobedience. In her study of Cameroon migrants to Germany, Fleischer (2007) finds that migration is a family project: in this case, family authority figures at origin (parents, older siblings and sometimes extended family) decide who migrates. In his study of Pakistani migrants to Europe, Ahmad (2008) documents how unauthorized migrants are attracted by the romantic appeal of migration and migrate despite household and elder opposition. Quantitative literature should follow the lead of qualitative migration scholars in analyzing together origin and destination social capital.

Few studies have previously analyzed origin and destination social capital. In their clever study of brother pairs in Mexico-US migration, Palloni and colleagues (2001) found evidence for the importance of migrant network hypothesis (proxied by migrant brother), while controlling for household migration strategies (proxied by migrant father). In a previous paper about Senegal-Europe migration (Liu 2013), I utilized the MAFE project data to develop a time-varying control indicator for household migrant networks to help differentiate the migrant network hypothesis from the new economics of labor migration theory. However, since the paper was focused on migrant networks, there was no further exploration of origin social capital. In this current paper, I seek to explore origin and destination social capital, their composition, their influence and possible interactions as they influence international migration.

Data & Methods

Data

This paper utilizes recent longitudinal survey data from the Migration between Africa and Europe Project (2012), collected in three sub-Saharan African countries (Democratic Republic of Congo, Ghana and Senegal) and five countries in Europe (Belgium, France, Italy, the Netherlands, Spain, the UK). Beauchemin (2012) discusses the multi-site survey methodology. Based on retrospective individual questionnaires, the data contains full housing, partnership, children, work, and migration histories. Additional information about migrant networks, legal status, remittances and property ownership is also included. In terms of origin and destination social capital, there is time-varying information about household composition and year-by-year migration history for each migrant network member. 1,456 current Congolese, Ghanaian and Senegalese migrants in Europe and 3,943 residents in African capital regions (Accra and Kumasi in Ghana, Kinshasa in DR Congo and Dakar in Senegal) were interviewed between early 2008 and early 2010.

This paper uses discrete-time event history analysis to predict the likelihood of first migration to Europe and how they migrated. As detailed below, the predictors in the logistic regression models capture variation by origin social capital, destination social capital, economic context and a wealth of other individual indicators. Focusing on adult migration, I restrict the sample to adults aged 17 and older, with the first possible migration to Europe at age 18. All individuals in the sample were born in DR Congo, Ghana or Senegal.

Operational Measures

Dependent variable

The dependent variable *First–time migration to Europe* is a dichotomous indicator coded 1 the year the respondent first moves to Europe. Moves from the origin country to other destinations are censored at year of migration. For all previous years, the dependent variable is coded 0.

For the multinomial logistic regression models, there are three sets of dependent variables: *mode of migration decision-making, mode of migration funding*, and *mode of migration trip*. Defined in the year of first migration to Europe, these indicators represent respectively: how the migration decision was made, how it was funded and who actually traveled. The categories are identical for each indicator. For example, I identify three modes of migration decision-making: alone (the reference category), with origin network and with migrant network.

Independent variables: Measuring Origin networks and Destination migrant networks

Origin Networks

We use household migrant networks to proxy for origin social capital. This is justified since household migrant networks represent the household migration strategy, whether or not the respondent then obeys the strategy or not.

The household network indicator was constructed by matching time-varying information about household composition and the respondent's migrant network. For each housing spell, the survey includes information about the respondent's links to other household members (*e.g.,* father, mother, partner, brother/s, sister/s, other relative, friend/s, other), but not their exact identities (e.g. which sister, which friend). The household network indicator is very generous, if any brother is listed as a household member; *all* brothers in the migrant networks are considered household members for the entire housing spell. Figure 2 graphically shows the construction of the household migrant network.

Different household network composition indicators are then constructed and include household tie strength composition (nuclear family only, extended family only, nuclear and extended family, friend only), household gender composition (male only, female only, mixed).

Migrant Networks

The migrant network indicators are based on two survey questions. First, respondents were asked to name all parents, siblings, partners and children who had lived at least one year abroad. Second, respondents were asked to list other relatives and friends who had helped them migrate or could have helped them migrate *and* who had lived at least one year abroad. For both lists of individuals, the interviewer elicited a complete migration history (year, country) that included return migration, as well as gender, relationship with respondent, year met for friends and spouses and year of death where appropriate.

For precision's sake, I have made three restrictions to the network indicators. First, I restrict all network indicators to years lived in Europe. This is justified since my research focus is on migration to Europe, and I am interested in how migrant networks in Europe can transfer

information and resources that enable subsequent migration. Second, I follow previous work (Liu 2013) to exclude children and spouses from network measures in an attempt to separate out general network effects from the specific network effects and pathways involved in legal family reunification. Third, I also follow previous work (Liu 2013) to drastically restrict friendship networks in order to avoid problems of endogeneity.

Tie Strength

Following conventions found in migration literature, parents and siblings will be defined as strong ties, while extended family and friends will be defined as weak ties.

Covariates and Macro Indicators

The origin covariates are urban origin[1], religious affiliation (Muslim brotherhoods of Khadre, Layène, Mouride, Tidiane and a category for "other Muslim", Catholic and other Christian); father's education (no school, primary, secondary and above); if father was deceased or unknown; if Ego was the firstborn; number of siblings; and Ego's highest level of education (pre-school or lower, primary, lower secondary, and higher secondary or higher). The time-varying covariates are marital status; polygamous union, number of children; occupational status (working, unemployed, studying, working at home, inactive); and property ownership (whether Ego owned land, housing or a business).

To capture some macro-level effects, I include a series of period indicators[2] and two time-varying macro-economic indicators for Senegal: GDP % growth per capita and urban population growth (% of total). The macro-economic indicators were collected by the World Bank's World Development Indicators, and are available from 1961 through the time of the survey. Other potentially important indicators at destination, such as Senegalese foreign stock, rates of inflation and unemployment, were not available for the entire time frame in the wide range of data sources investigated (European Migration Network, Eurostat, IMF International Financial Statistics, OECD, UNPD, WDI), nor from individual country sources.

Working Hypotheses

Complementary or Competitive Theories of Migration

H1 – Following Massey and colleagues (1998), I expect that the new economics of labor migration theory and social capital theory are complementary explanations of migration. I expect to find evidence that origin-based and destination-based social capital complement one another.

Poeze Opportunistic and Conformist Models of Migration

H2- We test Poeze's opportunistic and conformist models (2010) that predict that the use of origin networks depending on an individual's access to large weak-tied migrant networks. I expect that large weak migrant networks will be more important for individuals without strongly-tied origin networks. On the other hand, I expect that large weak migrant networks will not influence individuals who already have strongly-tied origin networks.

Strength of Ties of Origin Networks

[1] The urban origin indicator is based on the most recent comprehensive data available, the 2002 Senegal census, and specifically the 2002 ANSD urban/rural classification.

[2] The periods are before 1985, 1985-1993, 1994-1998, 1999-2003, after 2004. In 1985, France introduced a compulsory visa policy for Senegalese. In 1994, Senegal experienced a grave economic crisis when its currency, the CFA franc, was unlinked from the French franc and devalued by half. The rest of the periods were made to be of approximately equal length.

H3 – Since potential migrants are more likely to draw pre-migration resources from origin-based networks than destination-based networks and more strongly-tied networks are more dependable, I expect that strongly-tied origin networks will have a larger influence than weakly-tied origin networks on migration.

Modes of Migration Decision

H4 – In the sub-Saharan context, extended families and households play a strong traditional role. As a result, migration decisions are often a family or household-level decision. Given this context, I expect that origin family networks will have a negative influence on migrations decided alone, but will positively influence migrations decided with others.

Modes of Migration Funding

H4 – In the sub-Saharan context, individuals planning a secret migration project will sometimes fundraise their migration through their friends and family under other pretexts (Fleischer 2007, Poeze 2010). As a result, migration decisions are often a family or household-level decision. Given this context, I expect that origin family networks will have a positive influence on migrations funded with others and a null influence on migrations funded alone.

Modes of Migration Trip

H4 –In the sub-Saharan context, origin family and households' approval of higher risk (unauthorized) smuggled migration is variable, while they tend to support other kinds of less risky (authorized) migration (*e.g.* Fleischer 2007, Poeze 2010). Given this context, I expect that origin family networks will have a null influence on migration trips accompanied by a *passeur* or smuggler and positive influences on other kinds of migration.

Results (to be completed)

Table 1: Descriptive Information of Non-migrants and Migrants in the MAFE-Senegal data (at time of interview)

		Non-migrants		Migrants		
		Mean	SE	Mean	SE	
CONTROLS						
	Age	39.20	(0.614)	40.18	(0.528)	
	Gender (male=1)	0.449	(0.0234)	0.710	(0.0242)	*
Family of Origin						
	Urban origin	0.712	(0.0205)	0.750	(0.0251)	
	Firstborn	0.241	(0.0203)	0.262	(0.0220)	
	Number of Siblings	8.463	(0.261)	7.634	(0.290)	
	Father unknown or deceased	0.0969	(0.0145)	0.0683	(0.0119)	
Father's Education						
	No formal schooling	0.517	(0.0234)	0.440	(0.0263)	
	Primary school	0.166	(0.0178)	0.203	(0.0224)	
	Secondary and above	0.225	(0.0199)	0.289	(0.0264)	
Religious affiliation						
Muslim	Layene	0.0294	(0.00746)	0.0337	(0.0218)	
	Khadre	0.0305	(0.00727)	0.0239	(0.00803)	
	Mouride	0.303	(0.0213)	0.351	(0.0258)	
	Tidiane	0.478	(0.0234)	0.297	(0.0232)	
	Other Muslim	0.0776	(0.0131)	0.158	(0.0179)	
Christian	Catholic	0.0768	(0.0132)	0.0598	(0.0106)	
	Other Christian	0.000773	(0.000555)	0.00309	(0.00273)	
Individual Status (at time of interview)						
Current Household Structure						
	Married	0.740	(0.0206)	0.799	(0.0193)	
	Has children	0.694	(0.0219)	0.738	(0.0222)	
	Number of Children	2.968	(0.155)	2.342	(0.122)	*
Education	No formal schooling	0.308	(0.0217)	0.170	(0.0189)	*
	Primary school	0.372	(0.0231)	0.198	(0.0192)	*
	Lower secondary	0.160	(0.0161)	0.251	(0.0280)	*

	Baccalaureate & above	0.160	(0.0167)	0.380	(0.0252)	*
Property	Land	0.0879	(0.0128)	0.287	(0.0266)	*
	House	0.104	(0.0140)	0.381	(0.0285)	*
	Business	0.0819	(0.0120)	0.0959	(0.0236)	
Current Occupational Status						
	Working	0.619	(0.0228)	0.805	(0.0233)	*
	Studying	0.0375	(0.00834)	0.0465	(0.0177)	
	Unemployed	0.0546	(0.0113)	0.0616	(0.0124)	
	At Home	0.230	(0.0195)	0.0481	(0.0104)	*
	Retired	0.0352	(0.00896)	0.0307	(0.00834)	
	Other Inactive	0.0245	(0.00791)	7.72e-3	(0.00466)	
DESTINATION-BASED MIGRANT NETWORK						
	No Ties	0.509	(0.0233)	0.288	(0.0222)	*
	Only Strong Tie	0.157	(0.0169)	0.302	(0.0257)	*
	Only Weak Tie	0.259	(0.0211)	0.201	(0.0189)	
	Both Ties	0.0755	(0.0116)	0.208	(0.0249)	*
ORIGIN-BASED MIGRANT NETWORK						
	Having a Network	0.169	(0.0175)	0.313	(0.0259)	*
SPOUSAL MIGRANT NETWORK						
	Having a Network	0.021	(0.0039)	0.092	(0.0141)	*
	Individuals	1011		659		

Note: * Differences significant at p<0.01. Individual weights included.
Source: MAFE-Senegal 2008.

Table 2 Logistic estimation of the odds of being a first-time migrant in a year: origin and destination social capital

	B	SE
No social capital	0.515***	0.061
Origin social capital only (ref)		
Destination social capital only	1.281†	0.175
Both origin and destination social capital	1.228	0.243
Control for Migrant Spouse	1.783***	0.262
N (person-years)	28,379	

Notes: Results are presented in odds ratios. Controls include age, ln(age), *urban origin*, *religious affiliation*, *father's education*, *father unknown/deceased at respondent's age 15*, *firstborn*, *siblings*, *own highest level of education*, marital status, polygynous, number of children, occupational status, landownership, homeownership, business ownership, period effects, % urban population growth, and % GDP per capita growth. All indicators other than those listed in italics are time-varying, year by year.
Source: MAFE-Senegal 2008.
†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Table 3 Logistic estimation of the relative risk of being a first-time migrant in a year, by who decided to migrate and who financed the trip: Origin and Destination social capital

	Model 1				Model 2			
	Decided alone		Decided with others		Paid oneself		Family and friends helped finance trip	
	B	SE	B	SE	B	SE	B	SE
Origin Social Capital	1.719***	0.251	1.544***	0.215	1.788***	0.322	1.580***	0.193
Destination Social Capital	1.835***	0.277	2.203***	0.323	1.502*	0.295	2.241***	0.283
Control for Migrant Spouse	0.386**	0.146	3.011***	0.525	0.206**	0.124	2.564***	0.419
N (person-years)	28,379		28,379		28,379		28,379	

Notes: Results are presented in relative risk. Controls include age, ln(age), *urban origin*, *religious affiliation*, *father's education*, *father unknown/deceased at respondent's age 15*, *firstborn*, *number of siblings*, *own highest level of education*, marital status, polygynous, number of children, occupational status, landownership, homeownership, business ownership, period effects, % urban population growth, and % GDP per capita growth. All indicators other than those listed in italics are time-varying, year by year.
Source: MAFE-Senegal 2008.
$^{\dagger}p < .10$; $*p < .05$; $**p < .01$; $***p < .001$

Table 4 Logistic estimation of the relative risk of being a first-time migrant in a year, by trip travel companions: Origin and Destination social capital

	Model 1			
	Traveled with *passeur*		Traveled alone or with others	
	B	SE	B	SE
Origin Social Capital	5.90e-7	0.012	1.615***	0.165
Destination Social Capital	0.000	0.453	1.994***	0.214
Control for Migrant Spouse	2.35e-8	0.000	1.828***	0.269
N (person-years)	28,379		28,379	

Notes: Results are presented in relative risk. Controls include age, ln(age), *urban origin*, *religious affiliation*, *father's education*, *father unknown/deceased at respondent's age 15*, *firstborn*, *number of siblings*, *own highest level of education*, marital status, polygynous, number of children, occupational status, landownership, homeownership, business ownership, period effects, % urban population growth, and % GDP per capita growth. All indicators other than those listed in italics are time-varying, year by year.
Source: MAFE-Senegal 2008.
$^{\dagger}p < .10$; $*p < .05$; $**p < .01$; $***p < .001$

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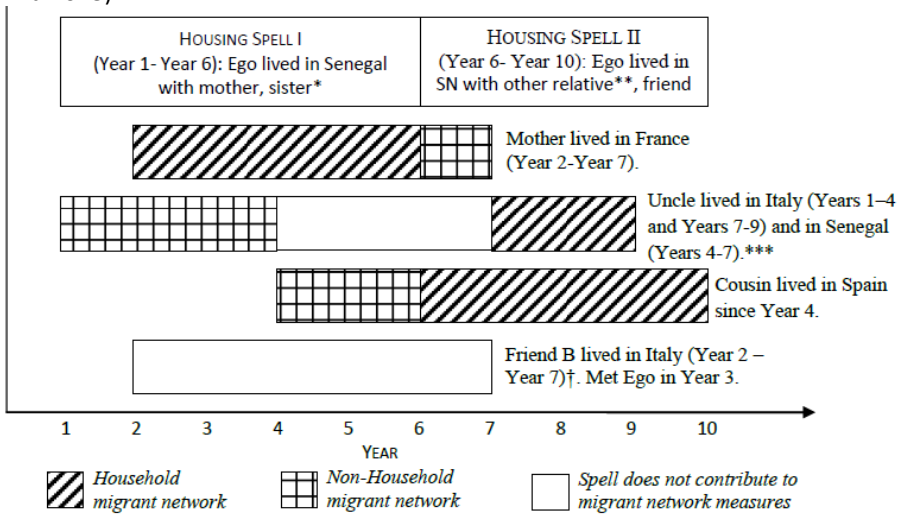
Figures

Figure 1: Construction of household migrant network & non-household migrant network indicators†† (Source: Liu 2013)



* Housing composition is only available for first year of housing spell (Year 1 for Spell I, Year 6 for Spell II)
** Cousins, uncles/aunts, nieces/nephews, grandparents are all recorded as "other relative" in housing module.
*** Only years lived in France, Italy and Spain qualify for migrant network measures.
† Friend B is excluded from migrant network measures because friendship with Ego started *after* Friend moved to Italy.
†† Not shown: network indicators are lagged by one year (to avoid capturing simultaneous migration with Ego)