

Introduction

In the context of population aging, international migration appears as a potent force in population dynamics in several countries (Castles, De Haas, and Miller 2014). But immigration has become a growing divisive policy issue in most receiving countries, where the magnitude of the incoming flows often heightens concerns about rapid growth of the foreign-born population. Yet, data on the inflow of immigrants need to be combined with those on out-migration of these same immigrants to provide an accurate picture of the dynamics of international migration flows and the composition and growth of the foreign-born population. Empirical evidence from many countries shows that the immigrant population experiences high rates of remigration. For example, the likelihood of remigration is thought in many receiving countries to be as high as 50 percent among the foreign born (McDonald 1969).

Understanding the patterns and timing of remigration of the foreign born out of their host country is important for both theoretical and policy reasons, as it is closely related to the ongoing debates about migrants' health, economic wellbeing, and contribution to the host country's economy. Shedding light on country-specific patterns of remigration may help test various theoretical predictions in migration studies. Long-run comparative analyses of immigrants with non-migrants requires a better understanding of how the immigrant stocks at different points in time relate to initial entry flows, because selective remigration can distort any comparison over time (Constant and Massey 2004, Flahaux 2016). Conceptually, there are two possible paths leading to remigration. First, remigration can stem from ex-ante calculations related to specific and predetermined goals in terms of savings or skill accumulation (Borjas 1994, Dustmann, Fadlon, and Weiss 2011,

Dustmann and Glitz 2011, Dustmann and Kirchkamp 2002, Dustmann and Weiss 2007, Massey et al. 1993). After achieving these goals some immigrants out-migrate. On the other hand, ex-post adverse shocks at the destination may push immigrants to leave their destination, as they fail to achieve economic success (Duleep 1994, Flahaux 2016) or face significant health challenges.

By its very nature, remigration entails the possibility of selection. But it is hard to predict the nature of selectivity that prevails among the foreign born who out-migrate, because this selectivity depends entirely on the mechanisms shaping the process of remigration. Several studies on remigration have found evidence of various forms of selectivity. While Jasso and Rosenzweig (1988), with cross-sectional data, find that migrants who re-migrate are positively selected (Jasso and Rosenzweig 1988); other researchers using longitudinal data find negative selection among such migrants (Borjas 1989, Lindstrom and Massey 1994, Massey 1987). Yet another group of studies found no evidence of selectivity whatsoever among them (Chiswick 1986, Reagan and Olsen 2000). These findings suggest that the nature of selectivity among return migrants varies highly across contexts of origin and destination. According to Borjas and Bratsberg (1994), remigration accentuates the type of selection characteristics of the immigrant population left in the United States (Borjas and Bratsberg 1994).

To date, because of data availability, there are three major gaps in our understanding of remigration among the foreign-born. First, past research on remigration has not adequately documented selectivity and the age pattern of remigration among immigrants to a single origin country. From the literature on international migration, it is not clear what is the relative importance of remigration after retirement compared to

remigration during active working life (Attias-Donfut, Wolff, and Dutreuilh 2005, Cobb-Clark and Stillman 2008, De Coulon and Wolff 2010, Dustmann and Görlach 2015, Van Hook and Zhang 2011, Yahirun 2014). Neither is it well known what socioeconomic characteristics differentiate immigrants who out-migrate from those who stay (Dustmann, Fadlon, and Weiss 2011, Dustmann and Görlach 2015, Dustmann and Weiss 2007, Van Hook and Zhang 2011). Second, the timing of remigration is not well understood (Dustmann, Fadlon, and Weiss 2011, Dustmann and Görlach 2016, Dustmann and Kirchkamp 2002). Evidence about timing of remigration is crucial to investigate how duration of stay intersects with labor market outcomes in receiving countries (Massey et al. 1993). Finally, the extent to which patterns of remigration differ systematically by origin country is unknown, despite theoretical predictions positing high rates of remigration among migrants from relatively developed countries compared to those from developing ones (Dustmann and Weiss 2007). In the United States, immigrants were shown to be more likely to return to countries neither too distant nor too poor (Borjas and Bratsberg 1994).

Using panel data from the French pension system, the current study aims to bridge these gaps in our understanding of remigration among immigrants to France. We focus on France because it represents the third most important immigrant-receiving country in Europe, only behind Germany and the United Kingdom. In addition, we have access to French administrative longitudinal data on pensioners from several origin countries, with detailed information on their place of residence whether in France or abroad. These data provide us with the needed information to address the research questions presented above.

Data Source

We use longitudinal data from France's most important pension fund, which is named Caisse Nationale d'Assurance Vieillesse (CNAV) in French. The data provide information about career history, pension allowances, survival status, and residence for pensioners, whether born in France or abroad, who have ever been employed in the private sector in France. While residence information after retirement is directly provided in the dataset, residence history during pensioners' active life is reconstructed with data on contributions to pension systems and data on characteristics of employment. Our data further offer detailed information about pensioners' year of arrival to and departure from France, countries of birth, date of birth, and the amount of pension contribution to the CNAV during their years of presence in France as workers. The CNAV data cover a large fraction of the elderly male population in France, as approximately 95% of all male pensioners in France have worked at some point in their career in the private sector and receive some or all their pension allowance from the CNAV. Our analysis is based on a CNAV-provided randomly selected sample of males receiving a pension from the CNAV as of December 31st, 2008 and who are alive on that date. These individuals, who have all worked in France, reside either in France or abroad on December 31st, 2008. However, because we are interested in remigration, the analysis is restricted to the sample of the foreign-born population. Foreign-born male pensioners are sampled with a selection probability of 0.183, which helps to provide sufficiently large samples for analyses by country of origin. Our analysis sample consists of 188,066 foreign-born male pensioners, on whom we have the complete employment history and pension payments.

Preliminary Results

Age Patterns of Remigration

To investigate the research questions, nonparametric hazards based on Kaplan-Meier estimators are computed using age or years since immigration as the time variable in the event-history models. With our longitudinal data on place of residence, we are able to measure out-migration among the foreign born. Whether an immigrant out-migrates is captured by his place of residence as of December 31st, 2008 and the date of remigration is determined either by pensioners' last indication of presence in France based on the last contribution a pension system in France or by residence information provided in the pension data. Graph 1a illustrates age-specific rates of remigration among the foreign born in France. Transparent on the graph is a bi-modal distribution consistent with standard schedules representing the age pattern of migration (Castles, De Haas, and Miller 2014, Preston, Heuveline, and Guillot 2000, Rogers and Castro 1981), though with a delay in the first mode. Rates of remigration steadily increase to reach the first peak for immigrants averaging approximately thirty years of age. Then, the rates sharply decline to a dip when immigrants reach their early fifties. Thereafter, the rates of remigration rise to reach the second mode in the distribution, more sizable than the previous, around sixty years of age.

How groups of immigrants from the same origin country face the likelihood of remigration can help evaluate various migration theories, predicting possibly different experiences of remigration depending on the timing of remigration and the level of economic development in the origin country. Although the age pattern of remigration is bimodal for most origin countries, the relative importance of the modes varies greatly by country of origin. Graph 1b shows rates of remigration by country of origin. Immigrants

from Western Europe tend to out-migrate earlier than their counterparts from the rest of the world. The first peak in remigration occurs in the mid-twenties among Belgian and German immigrants, while it is delayed to the late thirties among Algerian immigrants. Similarly, the age at occurrence and the magnitude of the second peak in remigration varies by country of origin. Spaniards and Portuguese experience the highest rates of remigration around 65 years of age, and Italians have a slightly earlier peak in their rates of remigration; but these rates are significantly lower compared to those of most immigrant groups.

Timing of Remigration

Rates of remigration by duration since immigration are presented in Graph 2a. Most immigrants, who out-migrate, do so within 20 years of their arrival in the host country. The largest peak in remigration occurs around 15 years of stay in France. After 15 years of presence in France, immigrants experience steadily declining rates of remigration as the duration of their stay increases. These results shed new light that disproves the concerns whether immigration is “one-way” process, as large proportions of immigrants out-migrate. Indeed, they do so within a relatively short time window after arrival.

Graph 2b illustrates country-specific rates of remigration by years since arrival among the foreign born in France. For most countries, differences appear not so in the shape of the duration-specific rates, but in their magnitude. Overall, there is mostly a monotonic decline in these rates after 10 to 50 years of stay in France. Portuguese immigrants face a peak in their rates of remigration after 45 years of presence in France.

Spaniards experience the shortest duration of stay in France, marked by high rates of out-migration within the first ten years of their arrival.

Combining the results from Graph 1b and 2b, one may infer that immigrants from Western Europe tend to arrive earlier in France and leave only after a short stay, while immigrants from Northern Africa arrive relatively late in their adult life. This may reflect the relative recency of their immigration corridor to France. The results also suggest a compression in the age at arrival of immigrants from Western Europe compared to those from Northern Africa.

Next steps – Include calendar year in the analysis to account for potential period effects; and incorporate socioeconomic characteristics (pension amount and years of contribution to any pension systems) in the analytical models.

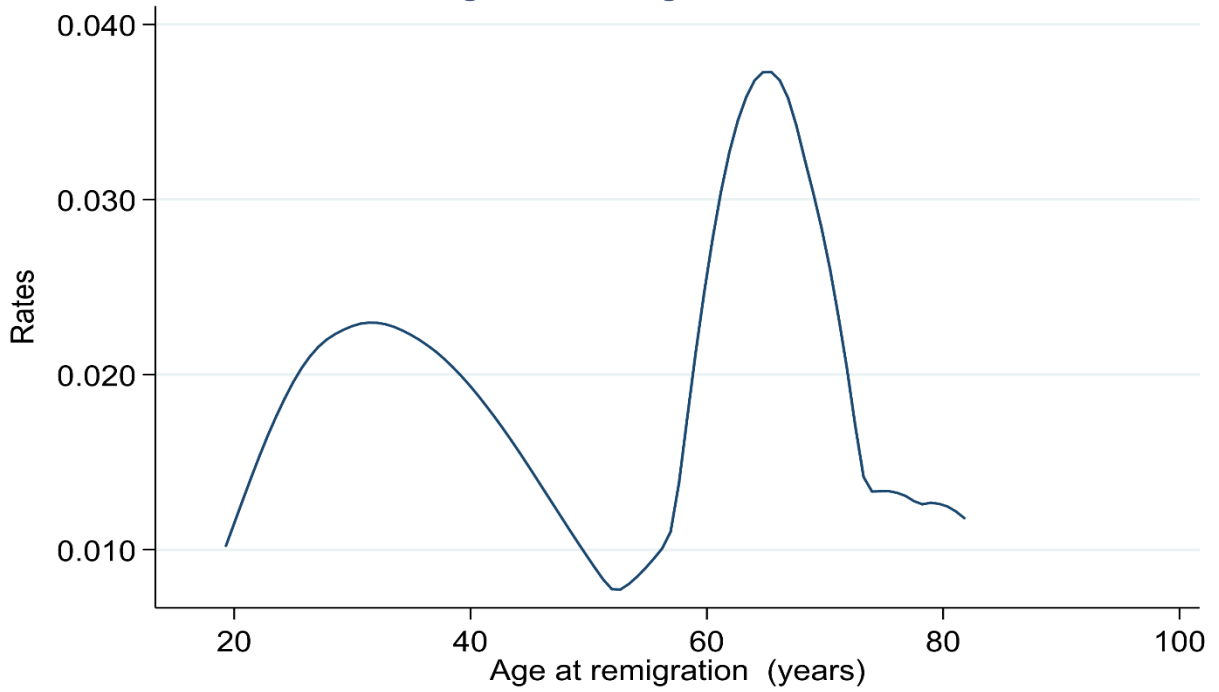
References

- Attias-Donfut, Claudine, François-Charles Wolff, and Catriona Dutreuilh. 2005. "The preferred burial location of persons born outside France." *Population* 60 (5):699-720.
- Bhaskar, Renuka, Belkinés Arenas-Germosén, and Christopher Dick. 2013. "Demographic analysis 2010: Sensitivity analysis of the foreign-born migration component." *US Census Bureau Population Division Working Paper* 98.
- Borjas, G. 1987. "Self-Selection and the Earnings of Immigrants." *American Economic Review* 77 (4):531-553.
- Borjas, G. 1994. "The Economics of Immigration." *Journal of Economic Literature* XXXII:pp. 1667–1717.
- Borjas, G. 2006. "Native Internal Migration and the Labor Market Impact of Immigration." *The Journal of Human Resources* XLI (2).
- Borjas, George J. 1989. "Immigrant and emigrant earnings: A longitudinal study." *Economic inquiry* 27 (1):21-37.
- Borjas, George J, and Bernt Bratsberg. 1994. Who leaves? The outmigration of the foreign-born. National Bureau of Economic Research.
- Brutel, Chantal. 2015. "L'analyse des flux migratoires entre la France et l'étranger entre 2006 et 2013. Un accroissement des mobilités."
- Castles, S., H. De Haas, and M. Miller. 2014. *The Age of Migration*. 5th Edition ed: The Guilford Press.
- Chiswick, Barry R. 1986. "Is the new immigration less skilled than the old?" *Journal of Labor Economics* 4 (2):168-192.

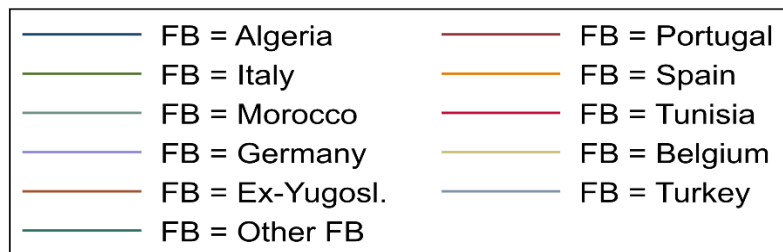
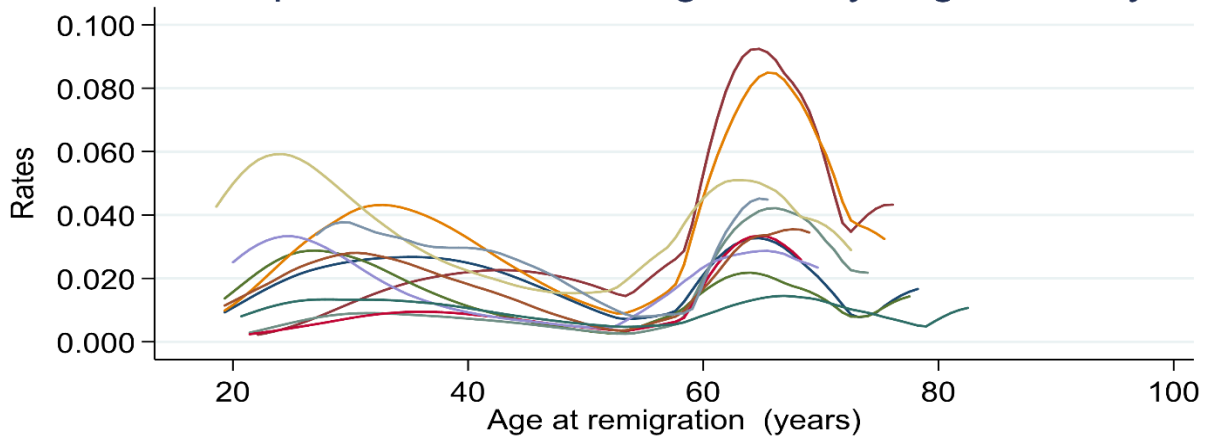
- Cobb-Clark, Deborah A, and Steven Stillman. 2008. "Emigration and the age profile of retirement among immigrants."
- Constant, Amelie F, and Klaus F Zimmermann. 2003. "The dynamics of repeat migration: a Markov chain analysis."
- Constant, Amelie, and Douglas S Massey. 2004. "Self-selection, earnings, and out-migration: A longitudinal study of immigrants to Germany." In *How Labor Migrants Fare*, 73-95. Springer.
- De Coulon, Augustin, and Matloob Piracha. 2005. "Self-selection and the performance of return migrants: the source country perspective." *Journal of Population Economics* 18 (4):779-807.
- De Coulon, Augustin, and François-Charles Wolff. 2010. "Location intentions of immigrants at retirement: stay/return or go 'back and forth'?" *Applied Economics* 42 (26):3319-3333.
- Duleep, Harriet Orcutt. 1994. "Social security and the emigration of immigrants." *Soc. Sec. Bull.* 57:37.
- Dustmann, Christian, Itzhak Fadlon, and Yoram Weiss. 2011. "Return migration, human capital accumulation and the brain drain." *Journal of Development Economics* 95 (1):58-67.
- Dustmann, Christian, and Albrecht Glitz. 2011. "Migration and education." *Handbook of the Economics of Education* 4:327-439.
- Dustmann, Christian, and Joseph-Simon Görlach. 2015. "Selective out-migration and the estimation of immigrants' earnings profiles." In *Handbook of the Economics of International Migration*, 489-533. Elsevier.
- Dustmann, Christian, and Joseph-Simon Görlach. 2016. "The economics of temporary migrations." *Journal of Economic Literature* 54 (1):98-136.
- Dustmann, Christian, and Oliver Kirchkamp. 2002. "The optimal migration duration and activity choice after re-migration." *Journal of development economics* 67 (2):351-372.
- Dustmann, Christian, and Yoram Weiss. 2007. "Return migration: theory and empirical evidence from the UK." *British Journal of Industrial Relations* 45 (2):236-256.
- Engler, Marcus. 2013. "Focus migration. France." *Focus Migration*.
- Fihel, Agnieszka, Anna Janicka, and Weronika Kloc-Nowak. 2018. "The direct and indirect impact of international migration on the population ageing process: A formal analysis and its application to Poland." *Demographic Research* 38:1303-1338.
- Flahaux, Marie-Laurence. 2016. "The role of migration policy changes in Europe for return migration to Senegal." *International Migration Review*.
- Gheasi, Masood, and Peter Nijkamp. 2017. "A Brief Overview of International Migration Motives and Impacts, with Specific Reference to FDI." *Economies* 5 (3):31.
- Giner-Monfort, Jordi, Kelly Hall, and Charles Betty. 2016. "Back to Brit: retired British migrants returning from Spain." *Journal of Ethnic and Migration Studies* 42 (5):797-815.
- Jasso, Guillermina, Douglas S. Massey, Mark R. Rosenzweig, and James P. Smith. 2004. Immigrant health: selectivity and acculturation. IFS Working Papers, Institute for Fiscal Studies (IFS).
- Jasso, Guillermina, and Mark R Rosenzweig. 1988. "How well do US immigrants do? Vintage effects emigration selectivity and occupational mobility."
- Jennissen, Roel Peter Wilhelmina. 2004. *Macro-economic determinants of international migration in Europe*: Rozenberg Publishers.
- Lindstrom, David P, and Douglas S Massey. 1994. "Selective emigration, cohort quality, and models of immigrant assimilation." *Social Science Research* 23 (4):315-349.
- Massey, D. 1987. "Understanding Mexican Migration to the United States." *American Journal of Sociology* 92:1372-1402.
- Massey, D. 1999. "Why Does Immigration Occur? A Theoretical Synthesis." *Handbook of International Migration, The*.
- Massey, Douglas S, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J Edward Taylor. 1993. "Theories of international migration: A review and appraisal." *Population and development review*:431-466.

- McDonald, James R. 1969. "Labor immigration in France, 1946–1965." *Annals of the Association of American Geographers* 59 (1):116-134.
- Pablos-Méndez, Ariel. 1994. "Mortality among Hispanics." *Jama* 271 (16):1237-1238.
- Piore, Michael J. 1979. "Birds of passage: Migrant labor and industrial societies."
- Preston, Samuel H, Christine Himes, and Mitchell Eggers. 1989. "Demographic conditions responsible for population aging." *Demography* 26 (4):691-704.
- Preston, Samuel, Patrick Heuveline, and Michel Guillot. 2000. "Demography: measuring and modeling population processes."
- Reagan, Patricia B, and Randall J Olsen. 2000. "You can go home again: Evidence from longitudinal data." *Demography* 37 (3):339-350.
- Rogers, Andrei, and Luis J Castro. 1981. "Age patterns of migration: cause-specific profiles." *Research Reports* (RR-81-6):125-159.
- Schroll, Sanne. 2008. "Return Migration \$ A Duration Analysis."
- United, Nations. 2001. *Replacement migration: is it a solution to declining and ageing populations?*: United Nations Publications.
- Van Hook, Jennifer, and Weiwei Zhang. 2011. "Who stays? Who goes? Selective emigration among the foreign-born." *Population research and policy review* 30 (1):1-24.
- Van Hook, Jennifer, Weiwei Zhang, Frank D Bean, and Jeffrey S Passel. 2006. "Foreign-born emigration: A new approach and estimates based on matched CPS files." *Demography* 43 (2):361-382.
- Waldorf, Brigitte. 1995. "Determinants of international return migration intentions." *The Professional Geographer* 47 (2):125-136.
- Yahirun, Jenjira J. 2014. "Take me "Home": Return migration among Germany's older immigrants." *International Migration* 52 (4):231-254.

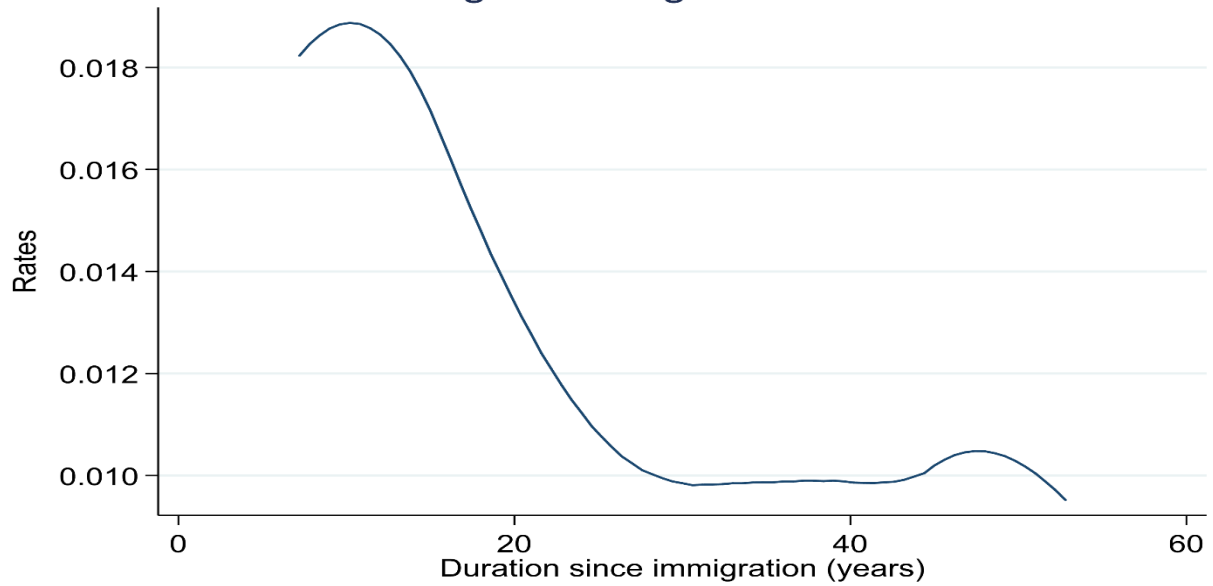
Graph 1a: Rates of remigration among the foreign born in France



Graph 1b: Rates of remigration by origin country



Graph 2a: Rates of remigration among the foreign born in France



Graph 2b: Rates of remigration by origin country

