

Do Visas Matter? Labor Market Outcomes of Immigrants in France by Visa Classes at Entry

Mehtap AKGÜÇ^{*,†}

This version: October 2013

Abstract: The quantity and the quality of the immigrants admitted constitute one of the top priorities in the immigration policy discussions in many OECD countries. Accordingly, host countries need to determine not only the appropriate level of immigration, but also decide on the composition of immigrants admitted (e.g. economic versus non-economic migrants). In this paper, using a recently collected household survey from France, we look at the socioeconomic characteristics of four groups of immigrants based on their visa categories at entry: family migrants, work migrants, refugees, and students. In particular, the paper provides evidence from information on visa categories to gain further insight when analyzing the labor market outcomes of immigrants. The descriptive analysis shows that the composition of visa categories varies greatly by country of origin and gender. The paper then provides an empirical analysis of labor force participation, employment, and wages distinguishing the different visa classes. The estimation results suggest that work and student migrants are more likely to participate in the labor force and be employed than family migrants for women. For men, student visa class is significantly associated with higher participation, but not so with employment. In terms of wages, migrants who came to France as workers or as students earn significantly more than the family migrants, but convergence in wages between these groups occurs over (long) time. Finally, the paper does not find any significant differences of refugees from family migrants in terms of their labor market performance.

JEL Classifications: J15, J61, J68

Keywords: Immigration, visa category, labor market outcomes, immigration policy

* IZA and Toulouse School of Economics. Contact: Akguec@iza.org

† I would like to thank Nuria Rodriguez-Planas to encourage me to write this paper. I am also grateful to Ana Ferrer and the participants of the IZA Brown Bag seminar for their comments. All remaining errors are my own.

1. Introduction

Many developed countries are under the threat of a declining working population, which is directly related to the low rates of fertility and longer life expectancy. Coupled with this, knowledge economies demand an increasing set of skills to sustain economic prosperity. In this context, the quantity and the quality of the immigrants admitted constitutes one of the top priorities in labor market and immigration policy discussions in many OECD countries, as the host countries need to determine not only the appropriate level of immigration, but also decide on the composition of immigrants admitted (e.g. economic versus non-economic migrants). According to the Green Paper by the European Commission (2005), “while immigration in itself is not a solution to the demographic ageing, more sustained immigration flows could increasingly be required to meet the needs of the European labor markets and ensure Europe’s prosperity.” Recognizing the future challenges in ageing European countries, the Green Paper further suggests that “the admission of economic migrants is the cornerstone of any immigration policy.” In similar vein, Gill, Koettl, and Packard (2013) recommends that “to attract the right types of immigrants in the future, European policies will need to be more proactive in selecting immigrants and preferably will rest on strong, demand-driven mechanisms that respond quickly to shifting economic and labor market needs.” Despite such open willingness of the host countries to accept more immigrants to further economic growth, inferior labor market outcomes of the immigrants with respect to the natives are widely documented in many OECD countries (Causa and Jean, 2007).

At the same time, it is essential to note that among immigrants there can still be large heterogeneities, which are not accounted for by the standard human capital and socioeconomic characteristics, and these can have important implications for their performance in the host country labor markets. One such aspect of heterogeneity is related to the legal status of the immigrants when entering the host country. By the legal status, we refer to the types of visa given to immigrants when they first become resident in the host country. In broad terms, immigrants can be admitted to a host country under visa categories based on economic (work-based or study), familial (family reunification), or humanitarian grounds (refugee). Depending on the institutional factors and individual characteristics, the legal status at entry can influence the performance of the immigrants in the host country.

Economic intuition leads one to expect that economic immigrants are likely to perform better in the labor markets than the non-economic migrants, for the former are usually equipped with

more skills and motivation. For example, Chiswick (1999) asserts that “the favorable self-selectivity for labor-market success would be expected to be less intense among those for whom migration is based primarily on factors other than their own labor-market success.” Indeed, in countries where immigrants are selected based on their skills and qualifications, such as in Australia, Canada, and New Zealand, this presumption mostly holds since the immigrants go through the points test, where they are screened on their observed characteristics and their applications are evaluated based on the needs of the host country labor markets. This skill-based immigration selection program usually implies higher quality and better labor market performance of immigrants admitted. On the other hand, the family-based immigrants or refugees are exempt from such screening and their admission is not based on their human capital characteristics, but rather it depends on the presence of a close relative in the host country or it depends on political circumstances at the origin. Nevertheless, one cannot rule out the possibility that the latter groups might also have skills, aspirations similar to economic migrants or different networks to allow them good economic performance.

Therefore, from an empirical point of view, it is not clear, a priori, which group of immigrants by visa class (family-based, work-based, student, or refugee) performs better in the host country labor markets for various reasons. First, these outcomes depend not only on the observed (and unobserved) individual characteristics, but also on the host country’s labor market and its immigration policy. For example, despite having more skills than the other groups (at least in general this is the case), work-based migrants usually experience a downgrading in the labor markets in terms of wages and/or occupation because their skills are not perfectly transferable to the host labor markets. Second, family-based migrants might have access to safety nets and local network through their family members, which might help them to find jobs better matched to their qualifications. Lastly, the usual impression that refugees perform very poorly might be misleading if we take into account the possibility that, as return migration is not really an option for them, refugees might behave differently and invest more in the host country specific human capital compared to the other groups (Cortes, 2004). This might, in turn, imply better—or not necessarily worse—labor market outcomes for refugees compared to the other migrants. Hence, all these arguments call for an empirical analysis to assess the role of visa classes on the immigrant performance. Therefore, in this paper, our goal is to provide evidence on the implications, if any, of the visa classes for the labor market outcomes of the foreign-born using a recent survey from France.

Unfortunately, information on the visa categories under which immigrants are admitted to reside in the host country is usually not provided in the common datasets. This lack of data prevents migration researchers to evaluate the role of the visa types on the labor market outcomes. Even when such studies exist, most of them focus on countries with a longer tradition of migration, such as Australia, Canada, and the United States, and only a few of them look at European countries. The main contribution of this paper is to exploit a recently collected rich household survey data on immigrants in a European country with relatively non-flexible labor markets. While doing this, we recognize the limitation that the admission category into the host country may not fully reflect the true motivation of immigrants, which might then influence their labor market outcomes. Yet, by controlling for a rich set of covariates, we argue that adding the visa category dimension to the analysis still gives additional insights related to the outcomes of the immigrants. Furthermore, including entry visa category aspect in the analysis of labor market assimilation of immigrants has a direct relevance for the policy makers, as our results are informative in terms of evaluating the economic performance of immigrants based on their visa categories.

We conduct our analysis using a recently collected household survey for individuals living in metropolitan France. We first provide detailed information regarding the characteristics of the immigrants by the type of their residency card at admission to the country distinguishing four major groups: family-based, work-based, student, and refugee.¹ To our knowledge, our study is to first one to include so many different visa categories in a European country context. Especially, the inclusion of student category is rather rare,² yet very important we believe, given the fact that international students at host countries are seen more and more as future labor migrants (Aydemir, 2013). We always run separate analyses for men and women since there are large differences in observed characteristics by gender and this way we allow for another dimension of heterogeneity across immigrants. Our descriptive analysis shows that there are large differences in the demographic and socioeconomic characteristics of the immigrants when grouped by their entry visa to France. In particular, we find that work-based and study-based migrants are positively selected in terms of their human capital and employment. They also have higher current monthly earnings than the other migrant groups (unconditional comparisons). Then we proceed to a regression analysis, whereby we analyze

¹ In the analysis, we use the type of residency card and visa classes of immigrants interchangeably.

² One exception to this is Hunt (2011). She looks at the immigrants entering the United States as student/trainee or as temporary worker and shows that such immigrants have a large advantage over natives in wages, patenting, and publishing, while the other permanent immigrants do not outperform natives.

the key labor market indicators like labor force participation, employment, and monthly wages among immigrants by considering the impacts of the visa categories on these outcomes. After netting out the differences in human capital characteristics and socioeconomic background, we get that the immigrants who came to France with a work or student visa perform better in the labor markets than the immigrants who arrived under family reunification scheme. Our results remain stable to various specifications and controls such as educational attainment, country of origin effects, selection correction in wage regressions, employment prior to migration, and full-time employment status. However, only when we control for occupation of the immigrants, the wage gaps among immigrants with different entry visa categories disappear. This might point to the existence of an occupational segregation among immigrants of different entry visa categories, which seems to explain their wage differentials. However, we remain cautious about this interpretation because of selection into occupation.

The rest of the paper is organized as follows: the next section provides a literature review focusing mainly on studies that use the visa types in the analysis of immigrants' labor market performance as well as some background information on the French migration policy; section 3 gives information about the data set used and some descriptive statistics of the sample; section 4 reports the estimation results from the regression analysis of the labor market indicators such as labor force participation, employment, and wages; section 5 concludes.

2. Previous research and background

Unlike the literature studying the immigrant assimilation in the receiving country labor markets, studies looking at the visa classes when analyzing the labor market outcomes of the immigrants are rather limited. A recent survey of the literature looking at the skill-based immigrant selection and labor market outcomes by visa category is given in Aydemir (2013). The few studies that exist usually suffer from the measurement problems as the information on the visa category under which immigrants are admitted to the host country is usually not given in the datasets. Despite the lack of entry information, researchers have tried several ways to deal with this issue. As Cobb-Clark (2000) puts it, one way to deal with this is to exploit the dissimilarities in immigration policy for countries with similar labor markets in order to assess the aggregate role of selection process in generating immigrant outcomes (e.g. Antecol et al., 2003). Duleep and Regets (1992) applies this to Canada and the United States by looking at immigrants originating from the same source regions and arriving in these two

countries. They find that immigrants in Canada were younger and more language proficient than those immigrants in the US. Parallel results are also found by Antecol et al. (2003) when comparing the skills of immigrants into Australia, Canada, and the United States.³ Nevertheless, these advantages did not translate into superior earnings (Duleep and Regets, 1992). The other way is to use aggregate measures to proxy the immigrant categories. For example, to proxy the work-based migrants in the US, Duleep and Regets (1996) use an aggregate measure like the percentage of immigrants admitted on the basis of work from the country of origin of immigrants for each cohort. To identify refugees from the economic migrants, Cortes (2004) uses yearly historical information based on the country of origin of immigrants. Accordingly, she provides a list of countries by year where certain countries are assigned to the refugee-sending list based on the historical flows of refugees from these regions to the United States in a particular year.

Apart from the scarcity and measurement issues of visa information in the datasets, the papers that take into account the entry visa dimension when analyzing the immigrant outcomes usually focus on the countries with a longer tradition of migration such as the United States, Canada, and Australia, while only few papers exist covering the European countries such as Denmark, Germany, and Spain. All in all, these countries differ largely in their migration policies with large variations in the composition of immigrants admitted. Therefore, it is important to note that these variations, in turn, have different implications for the success and assimilation of the immigrants.

Countries such as Canada and Australia put relatively more weight to economic motivations and apply a *points test* system (with differences in its application in these countries respectively), where immigrants (except for the immigrants admitted under humanitarian grounds such as family members or refugees) are generally screened based on their age, education, experience, and host country language skills. Given the needs of the host country labor markets and when a certain amount of point is reached by the applicants, they are admitted to the country. Aydemir (2013) reports that in Canada and Australia, about 20-30% of the migration is labor-based.

One of the earliest studies looking at the labor market performance of immigrants by their visa classes in Canada is De Silva (1997). Using the male cohort that landed in Canada between 1981 and 1984 in the longitudinal Immigration Database, De Silva (1997) studies the

³ In fact, Antecol et al. (2003) show that when Latin American immigrants are excluded from the analysis, the observable skills of the immigrants are similar in these three countries.

log earnings of three immigrants groups (independents, assisted relatives, and refugees). He finds convergence in the earnings between immigrant classes, more rapidly so for assisted relatives and refugees, and that there are heterogeneities of assimilation profiles depending on the origin of the immigrants. By a decomposition analysis of the earnings differentials, De Silva (1997) further shows that endowment differentials account only a small portion of this differential. In the Canadian context again, Aydemir (2011) uses the Longitudinal Survey of Immigrants (2000-2001) and evaluates the outcomes like labor force participation, employment, and earnings of principle applicants as well as the dependents. He finds evidence of a positive selection of migrants by skills, yet only moderate earnings advantages for skilled class migrants, and no positive effects on labor force participation or employment for the latter group compared to other migrant groups. These results are robust to adding human capital controls. Therefore, Aydemir (2011) concludes by referring to the important role of the unobserved characteristics in explaining the differences in labor market outcomes across visa types.

Miller (1999) and Cobb-Clark (2000) provide analyses of the labor market outcomes of the immigrants by visa classes in Australia. Miller (1999) uses the Labor Force Status and Other Characteristics of Migrants survey from 1987 and looks at the unemployment rates by various migration categories. The unadjusted comparisons of unemployment rates display major differences by visa categories; however, these differences mostly disappear as a large set of observable characteristics, which are also screened via the points test, is introduced. Thus, Miller (1999) concludes that points test screening is an effective mechanism in terms of the employability of the immigrants. Finally, using the Longitudinal Survey of Immigrants to Australia (1994-1995), Cobb-Clark (2000) estimates probit models of labor force participation and employment of immigrants entering Australia under different immigrant programs. She finds that male labor force participation does not differ much across visa categories, while that of females is lower for humanitarian and family-based migrants. In terms of employment, labor migrants outperform all the other migrants, but the gaps fade away over time spent in Australia.

In the US, at least historically, the majority of the immigrants have been kinship-based and labor migrants constitute only about 6% of all migrants. There have been several studies looking at visa class dimension in the labor market outcomes. Jasso and Rosenzweig (1995) assert that the expected differential in the labor market performances between work-migrants and family-migrants might be smaller than initially thought for at least two reasons: first,

kinship migrants have access to family networks; second, employers may screen for short-term productivity, while family members may screen for long term productivity. Using the 1977-1990 Immigrant-Naturalization cohort data for adult men, Jasso and Rosenzweig (1995) find a narrowing of the differential of the occupational outcomes due to both higher rates of occupational downgrading among employment immigrants and occupational upgrading among kinship immigrants.⁴ Duleep and Regets (1996) use the 1980 census of the United States and match it with Immigration and Naturalization Service information on admission criteria. They show that non-work male immigrants have lower entry earnings but higher earnings growth than work migrants. Duleep and Regets (1996) also reports that the convergence of earnings between the family- and work-based migrants occurs after 11-18 years in the host country. They explain their findings by the theoretical framework of Chiswick (1978) which is related to the less-than-perfect transferability of human capital and greater investment of the former group in the host-country specific skills. In line with this theoretical framework, Cortes (2004) focuses only on economic and refugee immigrants entering the United States between 1975 and 1980 and finds that refugees have on average lower annual earnings upon arrival, but their earnings grow faster over time than those of economic immigrants. She explains this result by referring to the implicit difference in time horizons between refugees and economic immigrants, which influences subsequent human capital investments and hence wage assimilation of these two groups.

In the European context, migration has been usually based on humanitarian grounds, such as family reunification and refugees. There are also considerable numbers of free migrants within the European Union (Aydemir, 2013).⁵ Accordingly, on average, the economic migrants constitute 10-15% of all migrants in continental European countries. Nevertheless, there is relatively little evidence based on the experiences of the European countries in looking at the performance of the immigrants by their entry visa category. Some of the exceptions are the papers by Constant and Zimmermann (2005a, 2005b) on Denmark and Germany and Rodriguez-Planas and Vegas (2011) on Spain.

Using the migration surveys collected by the Rockwool Foundation for Denmark (2001) and Germany (2002), Constant and Zimmermann (2005a) aim at understanding the role of the legal status (kinship, refugee, or work permit) of the migrant at the time of the entry in the host country on work participation and earnings. Using the same group of immigrants in two

⁴ Jasso and Rosenzweig (1995) do not have data on wages; instead they use the mean occupational earnings as a proxy.

⁵ Free migrants are about 20% of all migrants in the European Union member states (Aydemir, 2013).

countries they analyze the earnings with legal status and relative exposure to the host country controls in their Tobit model. Similar to the results obtained in the traditional migrant-receiving countries, their results indicate that family and refugee migrants both have lower earnings than work migrants. Moreover, while refugees are worse off than family migrants in Germany, visa type does not matter for employment in Denmark. In a companion paper using the same datasets, Constant and Zimmermann (2005b) further considered the role of legal status on entrepreneurship decisions of immigrants and find that in Germany work-migrants are more likely to engage in full-time paid-work and refugees are less likely to be self-employed. As in the previous paper, legal status at entry does not matter for Danish immigrants. Nevertheless, the authors find that economic migrants are typically doing better in the labor markets, but they are also often no entrepreneurs. Overall, they conclude that the legal status at entry in the host country has long-lasting effects on the employment pattern and earnings of the immigrants.

As a recent study from Europe, Rodriguez-Planas and Vegas (2011) look at the labor market performance and legal status of immigrants in the case of Spain using the recent National Immigration Survey (2007). In order to have a homogeneous group, the authors focus only on Moroccans who arrived to Spain either as a family or a labor migrant. Their data set does not have information on the visa type of the immigrants when they arrived to Spain, but rather gives information on the reason or motivation of arrival to Spain. Besides, they have information on the exact legal status (legal vs. illegal) of immigrants at arrival. Their joint estimation of employment and legal status shows that family migrants are less likely to work than labor migrants. Next, they analyze the wage assimilation of immigrants after correcting for selection into employment,⁶ and show that there is no wage differential by reason of arrival, which they describe as a consistent result given that it is a very homogenous group of immigrants.

Before proceeding to the empirical analysis of the labor market performance of immigrants in France by their visa categories, we first provide a brief historical background on the migration policy evolution.⁷ Immigration in France has actually a rather long history since late 19th century. The country consists of various immigrant groups with different motives and diverse origins. For example, immigrants in France originate not only from the neighboring

⁶ In this context, Rodriguez-Planas and Vegas (2011) is the only paper to our knowledge which corrects for selection into employment when studying wage assimilation of immigrants by their reason of arrival to the host country.

⁷ The historical background information on the French migration policy is borrowed from Constant (2003).

Mediterranean countries and the previous colonies in the African continent, but also from Asia (particularly from the previous territories in Indochina⁸) and more recently from Eastern Europe.

As summarized in Constant (2003), in the early years after the World War II, France heavily recruited immigrant workers to satisfy its labor shortage. During the decolonization phases—particularly from Algeria and Indochina—the admission of kinship migrants and asylum seekers increased in 1960s as well. This is not surprising as the country felt responsible to address the demand of entry by the immigrants from the previous colonies on humanitarian grounds. Later on in early 1970s, immigrant workers from Turkey arrived. However, with the economic downturn, labor migration is suspended in 1974 except for the EU nationals and only family migrants and refugees are allowed. According to Zimmermann (1996), family immigration and political immigration dominated the period after mid-1970s. Later decades saw further arrivals of family and refugee migrants and only in early 2000s, there has been an increase in the demand for skilled migrants, but this remained rather limited. In short, France has mainly not pursued a selective labor market oriented migration policy unlike the traditional immigrant receiving countries such as Australia and Canada. This particular immigration history stills generated an interesting composition of populations with variations in their observable characteristics (for example, the age groups, language skills, and education) as they arrive under different migration programs and with various aspirations.

3. Data and Descriptive Statistics

In this paper, we use the household survey data *Trajectoires et Origins: Enquête sur la diversité des populations de France* (hereafter, TeO) collected jointly by INED and INSEE in France. TeO is a survey on the diversity of populations in France (INED, 2010) and is conducted between 2008 and 2009. This nationally representative survey sample includes 21,761 individuals who reside in metropolitan France between the ages 18-60 in 2008.⁹ The main advantage of the TeO data set is to be the most recent survey with comprehensive information on all immigrant groups (as well as natives) ranging from detailed demographic and socioeconomic characteristics to migratory trajectories as well as health and religion related information of individuals and their family members (Akgüç and Ferrer, 2013). In particular, the data provides information on the type of the first residency card of the

⁸ The former French territories in Indochina are Cambodia, Laos, and Vietnam.

⁹ See Akgüç and Ferrer (2013) for further description on the data set.

immigrants when arrived to France. When analyzing the labor market outcomes of immigrants, we focus on the entry visa type rather than the current visa as argued in Hunt (2011) as well, for at least two reasons. First, we do not have information on the current visa type in the data set. Even if we had the information, this variable would have measurement errors since some of these migrants have obtained French nationality and no longer have a visa. Second, entry visa type is mostly an exogenous variable when looking at current labor market outcomes, while current visas are likely to be endogenous to them. Nevertheless, we recognize the limitation that the entry visa classes might not completely reflect the true motivations and aspirations of the individuals when they first migrate¹⁰; however, we believe that they still provide an interesting aspect when looking at their outcomes later on. Given the responses about the type of the residency card at entry in the survey, we are able to distinguish four categories of visas: family reunification, worker, students, and refugees.¹¹ Regarding the labor market outcomes, the data provides information on labor force participation, employment, and monthly wages of individuals.

As the focus of this paper is to study the impact of the visa types at entry on the labor market performance of the immigrants, we excluded natives from the analysis as they do not need a visa to reside in France.¹² Further we excluded individuals from EU-15 countries since they are subject to different visa rules compared to non-Europeans.¹³ We also excluded immigrants from North America and Oceania, since the sample sizes of these groups were too small.¹⁴ Finally, we dropped the individuals who are currently studying.¹⁵ Overall, this yields a sample with 4,486 immigrants of which 49.9% is males (2,238 observations) and 50.1% is females (2,248 observations). The data also provides sample weights and we use them in our overall analysis to scale up the numbers to have a nationally representative sample. In Table 1 displays the sample proportions of these immigrants by their origins and Table 2 gives the details on the regions of origins of the immigrants. Accordingly, the majority of immigrants in the sample come from Maghreb (45.4%), followed by Africa (17.3%), Asia (13%), and

¹⁰ For example, we do not have information on the order of the migration within the household in order to pin down tied-movers.

¹¹ There is also a fifth category “Others”; however, we dropped these individuals from the sample because most of them were on a temporary visa and/or they did not specify their visa type.

¹² See the recent paper by Akgüç and Ferrer (2013) for the labor market analysis of immigrants in France compared to the natives.

¹³ EU-15 countries are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom. The nationals of these countries do not need visa to travel and live in these countries.

¹⁴ The results are robust to including immigrants from North America and Oceania.

¹⁵ Initially, we also dropped the child migrants who arrived before 18 years old. The results did not change qualitatively; thus, we decided to keep them in the analysis to have a larger sample size.

Middle East (12.5%). Immigrants from Eastern Europe and Latin America constitute 8% and 4% of the sample, respectively.

In Table 3, we report the percentage distribution of the four visa classes for each origin and gender. The numbers indicate that half of the Maghrebien men arrive to France under a family visa and one third of them arrive under work visa. African men mainly arrive as students (39%) or workers (24%), whereas Asian and Eastern European men usually come under refugee status (58% and 39%, respectively). The distribution of the visa classes of men from Middle East and Latin America seems less skewed towards one particular visa type compared to other origins. Finally, averaging the shares of visa classes over the origins, male migrants still mainly come to France under family class (35.7%), followed by worker class (26.4%), student class (21.3%), and refugee class (16.6%). For women, the overall distribution of the visas is even more concentrated under family class for almost all origins. Particularly, more than half of the female immigrants from Maghreb, Africa, and Middle East arrive to France under family reunification scheme (82%, 51%, and 69%, respectively). After family reunification, an important chunk of female immigrants arrive under student visas, but the shares show variation by origins: 32% of Latin American versus 10% of Maghrebien women. Similar to male immigrants, Asian female immigrants have higher shares in refugee class (34%). Averaging the shares of visa classes of female immigrants over their origins, we see that female immigrants are almost twice more likely to arrive to France under family reunification scheme (63%) and much less likely to come as workers (10%) compared to male immigrants. All in all, there seems to be large variations in the arrival visa types of immigrants by origins and gender.

In Table 4, we report the main descriptive statistics of the observable characteristics of immigrants grouped by their entry visa category and gender. Looking at the demographic characteristics, we see some variation in the ages of the individuals by their visa classes for both sexes, whereby the family migrants tend to be younger at their mid-30s than work migrants or refugees who are at early 40s, on average. Regardless of their visa type and sex, immigrants mainly arrive to France in their early 20s and they have been in France for about 16-20 years, on average, at the time of the survey. For both sexes, work-based migrants have been in the country the longest time and family immigrants the shortest time. About two thirds of all immigrants are married and marriage is more common among male work migrants (78.8%) and female family migrants (74.7%). The average number of children is the lowest for immigrants who come to France with a student visa and it is the highest for male

worker migrants (2.8) and female refugee migrants (2.4). On average, study-based migrants live in smaller households than the other groups. As it is the case in general for migrants, immigrants of all visa classes and sexes tend to concentrate in big cities of France: more than two thirds of individuals within each visa type reside in large urban areas.¹⁶

The next set of summary statistics in Table 4 is related to the human capital characteristics such as education and language proficiency. For education, we report both the years of education and levels of education completed.¹⁷ The latter has three levels: low education (up to primary school); middle education (up to high school); and high education (university or more). In terms of years, immigrants who entered France with student visa have the highest level of education with respect to the other visa classes: 15 years for men and 14.2 years for women. Refugee class migrants also have high levels of education with about 9-10 years respectively for men and women. Interestingly, the work-based migrants, together with family-based migrants for females, have the lowest number of years of education (around 8 years). In terms of levels, more than two thirds of the student class immigrants have completed high levels of education, while less than 20% of the family or work immigrants achieve this level of education. The fact that work-based migrants are not much more educated than family-based migrants in France is different from the case in Spain as found by Rodriguez-Planas and Vegas (2011) for Moroccans. However, it is possible that the average numbers we report hide the variation of educational attainment by area of origin of the migrants. Moreover, male refugee immigrants have a rather high level of educational attainment compared to family or work immigrants, while female immigrants show similar attainment levels across visa categories. This is similar to the case in Canada as reported in Aydemir (2011), where refugees are slightly more educated than family migrants. In terms of language, the data has several self-reported French language ability indicators.¹⁸ We use the overall language capacity indicator, which summarizes the abilities in comprehension, reading, writing, and speaking in French. Accordingly, male and female immigrants display slightly different average proficiency levels by visa classes: for men, family migrants have the highest proficiency share with almost 39%, followed by student and refugee migrants with about 31%. For women, student migrants have the highest proficiency share with 37%, while about 28-30% of the other visa class migrants have reported proficiency in French.

¹⁶ Big cities have more than 200,000 inhabitants.

¹⁷ We dropped the individuals with missing education information from the sample (286 observations).

¹⁸ There are many unreported/missing values of the language question in the data (about one third of the sample).

Finally, Table 4 gives the summary statistics of several labor market indicators such as labor force participation, employment (both before migration and the current one), and monthly wages expressed in euros. The employment before migration displays large variation by visa classes with the work migrants being more likely to be employed prior to migration for both men (57%) and women (47%), which also shows evidence of self-selection of this group.¹⁹ Rodriguez-Planas and Vegas (2011) also find that work-based migrants are more likely to be employed before migration compared to family-based migrants. In the sample, similar to the work migrants, refugees display higher shares of employment prior to migration as well (42.8% for men and 34% for women). For that reason, in order to account for the selection, we will introduce the employment prior to migration variable in our multivariate regression analysis in the next section. Next, labor force participation is rather high for male immigrants for each visa class and ranges from 87% for work class to 98% for student class. Participation rates for women are generally lower than those of men, where the lowest participation is of family migrants with 60% and the highest is for student migrants with 90%. Similar to participation rates, employment of male migrants displays a rather equal distribution by visa classes, while for women the lowest rate are observed for family migrants (49%) and the highest rate is observed for student migrants (79%). Female worker migrants are also more likely to be employed compared to family migrants (67.3% versus 49%). Lastly, the monthly wages of male immigrants arrived with a student visa surpass all other categories on average (2,194 euros), while the parallel situation is true for female immigrants arrived as students (1,684 euros). In general, female migrants earn less than their male counterparts. Moreover, we also observe that the wages of family migrants are the lowest compared to other visa classes and the wage differential between the work migrants and refugee migrants are not very large for both genders. Overall, these descriptive statistics of the observable characteristics of the immigrants display interesting variation and the next section addresses to what extent the performance in the labor markets is explained by these differences.

4. Estimation Results

4.1. Methodology

This section provides the estimation results of the key labor market outcome indicators as a function of the visa types at entry of the immigrants and various other controls. Before

¹⁹ The variable “employed before migration” has many unreported/missing values since the status of being employed prior to migration is not relevant for all migrants (e.g. young migrants).

discussing the empirical results, we first describe the estimation methodology and the variables used.

For the binary outcome variables such as labor force participation and employment, we use the following equation:

$$P(Y_i = 1|X_i) = \Phi(X_i\beta), \quad (1)$$

where Y_i is an indicator of labor force participation or employment status of individual i ; Φ is the standard normal cumulative distribution function; and X_i is a set of dummy variables for visa classes (family is the omitted class), years since migration (and the interactions of the latter with the visa classes), human capital (education, age, age squared, language fluency, and an indicator of employment before migration); family related controls (marital status, children) as well as country of origin variables and cohort effects. Using a probit model to estimate equation (1) for labor force participation and employment, we report the marginal effects of the coefficients calculated at the means of the explanatory variables in the tables.

For the continuous outcome variable, i.e. wage of the immigrant, we use the following log-linear specification:

$$\log Y_i = \beta_0 + \beta_1 X_i^1 + \beta_2 X_i^2 + \beta_3 X_i^3 + \varepsilon_i, \quad (2)$$

where Y_i is the monthly wage for immigrant i ; X_i^1 is a set of dummy variables for visa classes (family is the omitted class), years since migration, and the interactions of the latter with the visa classes; X_i^2 is set of covariates such as age, age squared, marital status, children, education, language fluency, employment before migration, and country of origin; X_i^3 is a set of variables which includes cohort effects using dummy variables for the period of arrival to France by 10-year intervals as well as controls for region of residence capturing geographical heterogeneity, and ε_i is the error term. For the wage regressions, a log-linear specification is used, which is estimated by OLS and Heckman two-step method correcting for the selection into employment.²⁰

The visa categories are interacted with the years since migration to France in all specifications in order to see whether there is a convergence over time in the labor market outcomes among the immigrants with different visas at entry. Given the omitted visa category (family), the

²⁰ See Section 4.2 for the details on the Heckman selection correction method.

coefficients of the interactions of years since migration and respective visa classes also allow us to calculate the time it takes for an immigrant with a family visa to catch up the outcomes of an immigrant with the respective visa category.

4.2. Labor Force Participation and Employment

The estimation results of the labor force participation rates are given in Table 5. Columns 1-3 are the results for men and columns 4-6 are those for women. In columns 1 and 4, only the visa categories (worker, student, refugee, and family as the reference category), years since migration (YSM), and its interactions with the visa categories are introduced. Estimates yield that immigrant men who arrive to France with a student visa have about 21.3 percentage points higher participation rates than family migrants and that work migrants and refugees do not have significantly different rates from family migrants without additional controls. In column 4, both female migrants who arrived as students or workers are estimated to have about 39 percentage points higher participation rates compared to family migrants, while refugee migrants have statistically the same participation as family migrants. The results are slightly different from Aydemir (2011) who finds that skilled class participation rates of males (but not for women) are not different and refugee class has significantly low rates than the family counterparts. Moreover, the YSM profiles in columns 1 and 4 are rather flat for everyone suggesting very slow participation gains over time.

In columns 2 and 5, we introduce further controls such as age, marital status, fertility, education, language ability, and previous employment experience. Male student migrants continue to show significantly high (although smaller) participation relative to the other visa categories, around 14%. Similarly for women, the inclusion of controls reduces the participation coefficients of work and student visa immigrants by two-thirds in column 5. The coefficient estimates of the other controls are usually of expected sign for both genders: age has a decreasing positive effect on participation and a higher level of education—compared to the low level of education, which is the omitted category—has positive effect on the participation rates. Not surprisingly, being married has opposing effects for men (positive) and women (negative) and presence of children has a negative effect on female participation rates. The YSM profiles are usually not significantly estimated except for student class males and worker class women. Finally in columns 3 and 6, we additionally introduce controls for the six regions of origins of the immigrants, where Maghreb is the reference group, and the results almost remain the same for both genders. The coefficients of the origins are not

significantly estimated for men. For women, while being from Africa or Eastern Europe is associated with higher participation rates, being from Middle East implies lower rates compared to Maghrebian immigrants. Overall, the estimates from Table 5 imply that student (for both sexes) or worker visa class (only for female) immigrants have higher participation rates on average after keeping the observable characteristics constant.

Table 6 displays the parallel set of estimations for the employment. Similar to the labor force participation estimations, in columns 1 and 4, we see that arriving under student visa implies higher employment compared to arriving under a family visa: 14.7 and 38.3 percentage points higher employment rates for men and women, respectively. For women, worker visa is also associated with more employment rates than family visa (36.1 percentage points). However, introducing demographic and human capital as well as country of origin controls eliminates the differences in the effects of various visa types on employment of men (see columns 2 and 3). For women immigrants, the advantage of coming under student or worker visa in terms of employment remains stable and significantly positive to adding further controls. Accordingly, after holding the human capital characteristics and country of origin constant, the work and student female migrants are about 25 percentage points more likely to be employed compared to the family migrants. As in the participation estimates, origin variables are not significantly estimated for men, while for women African origin has positive and Middle Eastern origin has a negative impact on employment with respect to the Maghrebian women counterparts. The YSM profiles of the women are steeper than men and the results yield that refugee women gain in terms of employment over time. The coefficient estimates of the remaining controls are very similar to the results from the previous table and have usually expected sign. Surprisingly, being employed before migration does not have any significant impact on current employment.

Overall, our estimates yield that female immigrants who arrived under student or worker visa have higher labor force participation and employment rates compared to the family immigrants, while the refugee women do not differ in these outcomes from the family migrant counterparts. For men the participation rates are higher for student male immigrants with respect to the family migrants, while employment rates do not differ by their visa categories. The latter result differs from Cobb-Clark (2000) where male labor migrants are more likely to be employed than other migrants. In our case, one interpretation of this finding is that perhaps migrant men who come under student visa might have actually come to look for a job in France, which can correspond to their high labor force participation and lower employment

rate. All results remain robust and qualitatively the same to the addition of further personal characteristics. Finally, the finding about refugee migrants is different from the results found in Canada by Aydemir (2011) or in Denmark by Constant and Zimmermann (2005a), where being from the refugee category has negative association with employment.

4.3. Wages

This last section reports the estimation results of the impact of the visa types of the immigrants on their current labor market earnings as given in Table 7. Before proceeding to the results, several points regarding the earnings measure are necessary. As there is not enough information on the hours of work (either missing or unreported) of individuals in the data, we are forced to use the logarithm of the monthly wages instead of hourly wages in our estimations. Nevertheless we believe that using monthly wages instead of hourly wages should not pose a big issue for at least two reasons. First, the hours of work of a wage worker is largely regulated and is 35 hours per week for full-time workers in the French labor markets. Second, a large part of individuals in our sample has a full-time job (94% of the men and 70% of the women) so that the hours of work are around 35 for most individuals.²¹

As before, the wage analysis is run separately for men (columns 1-6) and women (columns 7-12) in Table 7. In columns 1 and 7, only the visa categories, years since migration, and the interaction of the latter with the visa categories are included. The estimation results yield that both male and female immigrants who arrive with a worker or student visa have significantly higher earnings than family-based immigrants. In particular, having a student visa at entry implies 38% and 61% more earnings for men and women, respectively. The labor-based migration is also associated with higher earnings for both genders (15.9% for men and 36.6% for women) compared to family-based migrants, but the magnitude of the coefficients are lower than those of student category (almost half). There seems to be a slow convergence over time ($0.159/0.008=19.9$ years) in the wages of work-based and family-based migrant men as the sign of the coefficients of years since migration and its interaction with worker class suggest. For women, the family-based migrants also catch up the work-based and student migrants in wages, but in much longer time (26.1 years and 43.7 years, respectively). Even though these catch-up periods are rather rough as no additional individual background

²¹ We checked the robustness of our results to including a dummy variable for part-time job status as well as running the analysis only for full-time wage workers (see columns 5 and 11 in Table 7 for the results only with full-time wage workers). The results remain almost unchanged.

characteristics are introduced yet, they are still quite long compared to the catch-up periods estimated by Duleep and Regets (1996) for the immigrants in the United States (11-18 years).

In columns 2 and 8, individual controls such as age, marital status, education, and language abilities are introduced. For men, the coefficient of the work visa category is no longer significant which means that once the individual characteristics are held constant having a work visa does not imply earnings advantages for male migrants with respect to the family visa. The coefficient of the student visa is no longer significant in this specification. Regarding women, the results in column 8 do not change qualitatively from column 7, but the coefficient estimate of the student visa class decreases by almost half to 29.9%, once we control for educational attainment, while work visa class is still slightly above 30%. We still find a marginally significant (at 10%) convergence pattern for women, as the interaction terms are negative and significantly estimated, but this is not the case for men. Regarding the remaining explanatory variables, age has a decreasing positive effect on earnings. As expected, having higher education level is associated with more earnings. Language fluency is not significantly estimated for men, but it has a positive and significant impact on wages of women.

As the historical immigration patterns in France includes important inflows of migrants from particular regions, we check in columns 3 and 9 whether the impact of the visa classes on the earnings is affected by the country of origin of the immigrants.²² For migrant men, we estimate that student visa category is associated with 14.4% higher wages compared to family visa category and this coefficient is significant at 10%. The coefficients of the other visa classes are not significantly different from each other when we control for the country of origin. For women, the same pattern as in columns 7 and 8 follows: the worker and student visa classes are associated with 26.6% and 27.7% higher earnings when compared to the family visa class in column 9. We again estimate a significant (at 10%) convergence pattern in wages between family class migrants and student class migrants. In terms of the effects of the country of origin, we obtain that having an African origin is negatively associated with earnings with respect to Maghrebian origin (the reference group) for both men and women. Moreover, Middle Eastern and Eastern European migrants have higher wages than Maghrebian men, on average. Finally, we also checked the robustness of our results to

²² We have also run the analysis separately for each region of origin estimating the impact of the various visa categories on the wages of immigrants from a particular origin (results not reported here). The results show parallelism in terms of the differential effects of the visa classes on the earnings of immigrants. However, we remain cautious about these estimates as the sample sizes get rather small limiting the power.

including an indicator whether the immigrant comes from a previous colony of France as well as its interaction with the visa categories. The finding that student or worker visa categories (as opposed to family visa category) are associated with better wages does not change.²³

In columns 4 and 10, we explore the issue of selection and check whether the estimates are robust to correcting the selection into employment by keeping the maximum explanatory variables in the specifications (as in columns 3 and 9). To do that, the Heckman two-step procedure is followed, where in the first stage we use explanatory variables such as age, education, country of origin, and whether employed before migration to estimate a selection equation. We also use marital status, presence of children between ages 2-17 in the household, house ownership status, and residence in a rural area (with less than 5,000 inhabitants) as exclusion restrictions. The predicted probabilities are then integrated in the wage equations. Overall, we opt to utilize a rather standard selection correction method using rather standard selection variables and instruments similar to the specification in Rodriguez-Planas and Vegas (2011). It is out of the scope of this paper to develop a more sophisticated selection correction method; the main objective is to see whether the differing effects of various visa types on labor market performance of immigrants hold when selection into employment is taken into account. The selection corrected estimates in column 4 yield that a student entry visa implies 15.6% higher wages compared to the family visa for men, while the other visa classes do not differ from the family visa in terms of wages. For women, as before, worker and student visa categories are associated with significantly higher wages (20.4% and 30.6%, respectively) compared to family visa categories in column 10. We also get a significant convergence pattern, whereby the female family migrants catch up the earnings of student migrants in 34 years ($0.306/0.009$). The coefficient estimates of all the other explanatory variables on wages remain almost unchanged compared to earlier columns once selection into employment is accounted for. The finding that correcting the selection into employment in the wage equations does not change the results in terms of the effect of visa categories is quite different from results of Rodriguez-Planas and Vegas (2011), who find that selection matters in the wage assimilation of the Moroccans.

Abstracting from the selection issue, we rerun the analysis only for full-time wage workers in columns 5 and 11 to check the robustness of the results. Keeping only full-time workers implies a decrease in the sample sizes, but the results are very similar to the previous columns

²³ The estimation results with the previous colony variables are not reported in the paper, but are available from the author upon request.

for both genders. Male migrants with a student visa at entry perform better in terms of wages (18.9% higher earnings) compared to having a family visa, while female migrants with a worker or student visa at entry perform significantly better in earnings than family migrants (18.3% and 21.4% higher earnings for respective visa category).

Up to now, the models estimated has yielded rather stable results: study-based male immigrants and study- or work-based female immigrants have significantly higher earnings as opposed to family-based migrants. Refugee migrants do not differ from family migrants in their wages. Our finding of significant wage differential by visa category is different from Rodriguez-Planas and Vegas (2011), which might be due to the fact that they focus only on a homogenous group of immigrants in Spain and consider only family and worker migrants, but not student migrants, for example. This implies that, similar to the findings in Aydemir (2011), the positive selection of immigrants by their skills (especially for study-based migrants) is reflected in significantly higher earnings in the French labor markets.

As a final analysis, in order to explore the underlying reasons as to why the performance of immigrants differs by their visa category at entry, we include controls for occupation of the immigrants. This is a novel addition in the specifications compared to the papers in literature focusing on visa categories. The columns 6 and 12 report the estimations after the occupation variables provided in the dataset based on ISCO two-digit occupation codes are added. For men, the positive effect of the student visa category on the wages is lost once occupation is controlled for; in fact, it even becomes slightly negative and the coefficient estimate is significant only at 10% as seen in column 6. The worker and refugee visa classes are not significantly different from the family visa in terms of wages as before. In contrast, for women immigrants, the results change completely: once the occupation is held constant, there are no longer significant differences in wages by visa classes at entry for females. One interpretation of this finding points to an occupational segregation among immigrants of different visa classes at entry, which might be behind the differing wage outcomes by visa classes. This result is particularly true for female immigrants, where there seems to be large occupational differences in pay of immigrant women with different visa categories at entry in the host country. However, we remain cautious with this interpretation due to selection into occupation.

All in all, the wage regression analysis shows that having arrived with a student or worker visa implies better labor market performance in terms of wages for immigrant. This is in line

with the interpretation that the immigrants who arrive to the host country mainly on economic grounds are (or are willing to be) equipped with the necessary endowments and thus their labor market outcomes are generally better than those immigrants who arrive to the host country on non-economic grounds (such as family reunification).

5. Conclusion

The quantity and the quality of the immigrants admitted constitute one of the top priorities in the immigration policy discussions in many OECD countries. Accordingly, host countries need to determine not only the appropriate level of immigration, but also decide on the composition of immigrants admitted (e.g. economic versus non-economic migrants). This paper, using a recently collected survey data from France, provides an empirical analysis of the observable characteristics of the immigrants who arrived to France under four different visa programs: family, work, refugee, and student. Throughout the paper, the entry visa categories of the immigrants are used as proxy for their motivations at arrival, but we recognize the limitations of this measure, since immigrants might arrive under a certain visa category (say, family reunification) and have a different aspiration (say, to work). The unadjusted comparisons of the observable characteristics suggest that study-based and refugee immigrants have higher levels of education and the monthly wages of work-based and refugee immigrants are not far from each other. Next, the variation in these observables are used to explain their relative performance in the labor markets by visa classes within a regression analysis. The results of this paper generally point to better labor market outcomes in terms of labor force participation, employment, and wages of the immigrants who arrived to France mainly on economic grounds such as with worker or student entry visas compared to arriving with family reunification visa. The refugee migrants are found to perform as good as the family migrants. The results remain robust to various specifications; only accounting for occupation of the immigrants in the analysis seem to eliminate the differential effect of the visa types on earnings. This latter finding might point to a certain degree of occupational segregation among immigrants of different visa types, but we prefer to be careful to draw sharp conclusions on this point due to selection into occupation.

The fact that immigrants who arrive with economic goals such as to work or to study perform better in the labor markets is an interesting finding in a country like France where the migration policy—at least historically—has not particularly focused on attracting the skilled individuals in order to respond to the needs of its labor markets. This shows that even under

this scenario where immigrants are not selected for their skills such as in Australia or Canada to be admitted in the country, we find parallel results that those who have possibly more skills have better outcomes in the labor markets. Given these findings, this paper could be informative for the migration policy in France. For example, if the goal of the policy maker is to admit better performing immigrants in the labor markets, a shift in the migration policy that targets skilled migrants might be necessary. Our paper found particular evidence that the immigrants who arrived under student visa have superior labor market performance compared to other groups. This suggests that it might be important to attract international students and to realize their potential as future skilled labor force in the host country. At the same time, the humanitarian aspects of migration should not be neglected and admission of family and refugee migrants should continue together with skilled migrants, yet the distribution of the admission visas could be less skewed towards the non-economic migrants. Considering all these aspects, a well-designed demand driven migration policy would be a smart option as suggested by Gill, Koettl, and Packard (2013).

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Tables

Table 1 Sample Proportions of Immigrants by Origin

Region of Origin	Percentage
Maghreb	45.4
Africa	17.3
Asia	13
Middle East	12.5
Eastern Europe	8
Latin America	3.9
<hr/>	
Unweighted sample size	4486

Notes: These are the relative percentages of origins among immigrant population in France (excludes immigrants from North America and Oceania).

Source: TeO (INED, 2010).

Table 2 Regional Categories of Origin

Maghreb	Algeria, Morocco, Tunisia
Africa	Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Mali, Mauritania, Niger, Nigeria, Senegal, Togo
Asia	Cambodia, Laos, Vietnam, and the rest
Middle East	Middle East, Turkey
Eastern Europe	Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia, Slovakia
Latin America	Central America, South America

Source: TeO (INED, 2010).

Table 3 Visa Classes at Entry by Origin and Gender (%)

	<i>Men</i>			
	Family	Worker	Student	Refugee
Maghreb	49.44	30.42	18.77	1.36
Africa	18.95	23.77	39.37	17.90
Asia	14.74	14.87	12.36	58.04
Middle East	35.16	24.94	22.61	17.29
Eastern Europe	24.65	27.67	8.22	39.46
Latin America	23.06	29.58	17.95	29.42
<i>Total men</i>	35.69	26.41	21.34	16.56
	<i>Women</i>			
	Family	Worker	Student	Refugee
Maghreb	81.78	7.07	10.32	0.83
Africa	51.16	13.22	20.29	15.33
Asia	41.22	6.87	17.70	34.20
Middle East	68.84	9.49	13.44	8.23
Eastern Europe	36.49	19.51	26.67	17.33
Latin America	31.74	15.57	32.37	20.32
<i>Total women</i>	62.56	10.04	16.09	11.30
<i>Overall average</i>	48.94	18.34	18.75	13.97

Source: TeO (INED, 2010).

Table 4 Descriptive Statistics

	Men				Women			
	Family	Worker	Student	Refugee	Family	Worker	Student	Refugee
Age	35.99 (8.892)	46.26 (10.22)	40.75 (9.874)	42.09 (9.643)	38.31 (10.10)	43.55 (8.886)	38.00 (9.160)	42.71 (10.80)
Age at arrival	18.45 (10.89)	24.53 (7.729)	21.30 (6.650)	24.38 (9.731)	21.96 (10.28)	24.56 (8.396)	21.59 (8.303)	23.67 (10.32)
Years since migration	17.70 (11.85)	21.91 (12.09)	19.76 (10.74)	17.96 (9.386)	16.47 (11.31)	19.18 (11.17)	17.11 (10.70)	19.15 (10.35)
Married	0.688 (0.464)	0.788 (0.409)	0.657 (0.475)	0.659 (0.475)	0.747 (0.435)	0.560 (0.498)	0.550 (0.498)	0.593 (0.492)
Nb. of children	1.643 (1.525)	2.815 (1.997)	1.584 (1.450)	2.045 (1.676)	2.232 (1.695)	1.919 (1.448)	1.269 (1.335)	2.394 (1.736)
Nb. of children aged 2-17	1.287 (1.295)	1.212 (1.298)	1.085 (1.195)	1.292 (1.431)	1.401 (1.304)	0.979 (1.102)	0.868 (0.995)	1.032 (1.243)
Household size	3.616 (1.730)	3.673 (1.777)	3.254 (1.665)	3.665 (1.753)	3.900 (1.592)	3.165 (1.448)	2.899 (1.369)	3.556 (1.532)
Big city residence	0.597 (0.491)	0.696 (0.460)	0.788 (0.409)	0.742 (0.438)	0.654 (0.476)	0.731 (0.445)	0.800 (0.401)	0.722 (0.449)
Education (years)	9.080 (4.708)	7.891 (5.018)	14.96 (3.452)	9.863 (4.881)	8.326 (5.016)	8.375 (5.197)	14.23 (3.949)	8.690 (5.036)
Low education	0.320 (0.467)	0.469 (0.500)	0.038 (0.192)	0.289 (0.454)	0.419 (0.494)	0.419 (0.495)	0.061 (0.240)	0.394 (0.489)
Middle education	0.498 (0.500)	0.368 (0.483)	0.194 (0.396)	0.463 (0.499)	0.389 (0.488)	0.401 (0.491)	0.262 (0.440)	0.397 (0.490)
High education	0.182 (0.386)	0.163 (0.369)	0.768 (0.422)	0.248 (0.432)	0.192 (0.394)	0.180 (0.385)	0.677 (0.468)	0.209 (0.407)
Language proficiency	0.386 (0.487)	0.243 (0.429)	0.314 (0.464)	0.308 (0.462)	0.302 (0.459)	0.293 (0.456)	0.366 (0.483)	0.282 (0.451)
Employed before migration	0.332 (0.471)	0.568 (0.496)	0.146 (0.353)	0.428 (0.495)	0.273 (0.446)	0.472 (0.500)	0.265 (0.442)	0.340 (0.474)
Labor force participation	0.949 (0.221)	0.866 (0.341)	0.983 (0.128)	0.931 (0.253)	0.597 (0.491)	0.781 (0.415)	0.895 (0.307)	0.723 (0.448)
Employment	0.820 (0.385)	0.752 (0.432)	0.909 (0.289)	0.795 (0.404)	0.490 (0.500)	0.673 (0.470)	0.786 (0.411)	0.595 (0.492)
Monthly wage (€)	1484.6 (731.8)	1643.5 (1351.1)	2193.6 (1362.6)	1519.9 (657.5)	1075.0 (493.6)	1317.6 (778.7)	1683.9 (862.5)	1309.3 (832.6)

Notes: Age at arrival is the age at which the individual arrived to France. The educational attainment is measured in years and in three levels: low (up to primary school), middle (up to high school), and high (university or more) levels of education. Big city is defined as the city with more than 200,000 inhabitants. Marital status, big city residence, language fluency, LFP, and employment variables are all indicator variables (0-1) and show the share of individuals with the value 1. Sample weights provided in the data are used to scale up the numbers to have them representative at the national levels.

Table 5 Labor Force Participation

	Men			Women		
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Visa variables</u>						
Worker	-0.002 (0.019)	-0.006 (0.017)	-0.004 (0.016)	0.392*** (0.083)	0.249*** (0.084)	0.244*** (0.084)
Student	0.213*** (0.042)	0.139*** (0.032)	0.136*** (0.030)	0.391*** (0.073)	0.233*** (0.074)	0.208*** (0.076)
Refugee	0.003 (0.021)	0.007 (0.019)	0.006 (0.019)	0.059 (0.071)	0.032 (0.074)	0.008 (0.077)
YSM	-0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.007** (0.003)	0.005 (0.004)	0.005 (0.004)
Worker*YSM	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.013*** (0.004)	-0.010*** (0.004)	-0.010*** (0.004)
Student*YSM	-0.006*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.005 (0.003)	-0.003 (0.003)	-0.003 (0.003)
Refugee*YSM	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.003 (0.003)	0.003 (0.003)	0.003 (0.004)
<u>Human capital and family controls</u>						
Age		0.007*** (0.003)	0.007*** (0.002)		0.040*** (0.011)	0.038*** (0.011)
Age squared		-0.000*** (0.000)	-0.000*** (0.000)		-0.000*** (0.000)	-0.000*** (0.000)
Married		0.017** (0.007)	0.019*** (0.007)		-0.189*** (0.028)	-0.167*** (0.029)
Nb. of children		-0.001 (0.002)	-0.002 (0.002)		-0.075*** (0.009)	-0.076*** (0.009)
Middle education		0.010 (0.007)	0.010 (0.006)		0.092*** (0.029)	0.090*** (0.029)
High education		0.026*** (0.009)	0.025*** (0.009)		0.052 (0.037)	0.047 (0.039)
Language fluency		0.010 (0.007)	0.008 (0.007)		0.100*** (0.031)	0.074** (0.033)
Employed before migration		-0.005 (0.007)	-0.005 (0.007)		0.018 (0.030)	0.011 (0.031)
<u>Area of origin</u>						
Africa			0.013 (0.010)			0.107*** (0.037)
Asia			-0.008 (0.011)			0.016 (0.047)
Middle East			-0.004 (0.008)			-0.143*** (0.039)
Eastern Europe			0.002 (0.011)			0.085* (0.050)
Latin America			-0.018 (0.014)			0.098 (0.075)
Region effects	Yes	Yes	Yes	Yes	Yes	Yes
Cohort effects	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R squared	0.1763	0.2525	0.2583	0.1097	0.2221	0.2362
Observations	2,188	2,188	2,188	2,247	2,247	2,247

Notes: The dependent variable is the indicator of labor force participation. Marginal effects calculated at the means of covariates from probit estimates are reported. All specifications use sampling weights. Family-based visa is the omitted visa class in all models. The remaining reference groups for the categorical variables are low level for educational attainment and Maghreb for region of origin. Cohort effects are dummy variables of arrival period to France by 10-year intervals. Region effects are dummy variables to control for region of residence in France. Robust standard errors are in parentheses. Conventional significance level notation is used: *: p< 0.1; **: p<0.05; ***: p<0.01.

Table 6 Employment

	Men			Women		
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Visa variables</u>						
Worker	0.080 (0.050)	0.059 (0.052)	0.056 (0.053)	0.361*** (0.088)	0.236*** (0.091)	0.221** (0.092)
Student	0.147** (0.064)	0.070 (0.068)	0.064 (0.067)	0.383*** (0.077)	0.273*** (0.082)	0.252*** (0.084)
Refugee	-0.012 (0.053)	-0.005 (0.054)	-0.001 (0.056)	-0.075 (0.080)	-0.086 (0.081)	-0.118 (0.083)
YSM	0.001 (0.003)	0.004 (0.003)	0.004 (0.003)	0.011*** (0.004)	0.008* (0.004)	0.009** (0.004)
Worker*YSM	-0.007*** (0.002)	-0.004* (0.002)	-0.004 (0.002)	-0.013*** (0.004)	-0.009** (0.004)	-0.009** (0.004)
Student*YSM	-0.003 (0.003)	-0.001 (0.003)	-0.001 (0.003)	-0.006 (0.004)	-0.006 (0.004)	-0.005 (0.004)
Refugee*YSM	-0.001 (0.003)	-0.001 (0.003)	-0.002 (0.003)	0.008** (0.004)	0.008** (0.004)	0.009** (0.004)
<u>Human capital and family controls</u>						
Age		0.019** (0.008)	0.019** (0.008)		0.036*** (0.012)	0.035*** (0.012)
Age squared		-0.000*** (0.000)	-0.000*** (0.000)		-0.000*** (0.000)	-0.000*** (0.000)
Married		0.085*** (0.022)	0.087*** (0.023)		-0.083*** (0.032)	-0.058* (0.032)
Nb. of children		-0.011* (0.007)	-0.011* (0.007)		-0.068*** (0.010)	-0.071*** (0.010)
Middle education		0.033 (0.023)	0.034 (0.023)		0.074** (0.033)	0.073** (0.034)
High education		0.097*** (0.028)	0.095*** (0.027)		0.027 (0.042)	0.024 (0.044)
Language fluency		0.013 (0.025)	0.018 (0.025)		0.133*** (0.035)	0.103*** (0.037)
Employed before migration		0.003 (0.024)	0.004 (0.024)		0.029 (0.033)	0.024 (0.034)
<u>Area of origin</u>						
Africa			0.022 (0.030)			0.127*** (0.040)
Asia			0.043 (0.040)			0.002 (0.053)
Middle East			0.003 (0.027)			-0.140*** (0.044)
Eastern Europe			-0.026 (0.042)			0.086* (0.052)
Latin America			0.024 (0.060)			0.123 (0.078)
Region effects	Yes	Yes	Yes	Yes	Yes	Yes
Cohort effects	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R squared	0.0768	0.1080	0.1097	0.1018	0.1625	0.1746
Observations	2,234	2,234	2,234	2,247	2,247	2,247

Notes: The dependent variable is the indicator of employment. Marginal effects calculated at the means of covariates from probit estimates are reported. All specifications use sampling weights. Family-based visa is the omitted visa class in all models. The remaining reference groups for the categorical variables are low level for educational attainment and Maghreb for region of origin. Cohort effects are dummy variables of arrival period to France by 10-year intervals. Region effects are dummy variables to control for region of residence in France. Robust standard errors are in parentheses. Conventional significance level notation is used: *: p< 0.1; **: p<0.05; ***: p<0.01.

Table 7 Wages

	Men						Women					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<u>Visa variables</u>												
Worker	0.159** (0.072)	0.065 (0.067)	0.061 (0.066)	0.092 (0.064)	0.078 (0.066)	0.005 (0.061)	0.366*** (0.109)	0.305*** (0.113)	0.266** (0.115)	0.204** (0.099)	0.183** (0.090)	0.153 (0.114)
Student	0.380*** (0.086)	0.134 (0.087)	0.144* (0.081)	0.156** (0.077)	0.189** (0.074)	-0.120* (0.072)	0.612*** (0.105)	0.299*** (0.107)	0.277*** (0.105)	0.306*** (0.081)	0.214*** (0.072)	0.049 (0.097)
Refugee	-0.104 (0.111)	-0.167 (0.109)	-0.174 (0.111)	-0.145 (0.095)	-0.079 (0.064)	-0.165 (0.115)	0.098 (0.108)	0.077 (0.108)	0.071 (0.111)	0.009 (0.080)	-0.036 (0.099)	0.035 (0.105)
YSM	0.010* (0.005)	0.008* (0.005)	0.007 (0.005)	0.008* (0.004)	0.007 (0.004)	0.003 (0.004)	0.014** (0.005)	0.013** (0.005)	0.012** (0.005)	0.010** (0.004)	0.008* (0.004)	0.010* (0.005)
Worker*YSM	-0.008*** (0.003)	-0.002 (0.003)	-0.001 (0.003)	-0.003 (0.003)	-0.002 (0.003)	0.001 (0.003)	-0.014*** (0.005)	-0.009* (0.005)	-0.008 (0.005)	-0.005 (0.003)	-0.005* (0.003)	-0.003 (0.005)
Student*YSM	-0.006 (0.004)	-0.001 (0.004)	-0.001 (0.003)	-0.002 (0.003)	-0.003 (0.003)	0.005* (0.003)	-0.014*** (0.005)	-0.008* (0.004)	-0.007* (0.004)	-0.009*** (0.003)	-0.005 (0.003)	-0.001 (0.004)
Refugee*YSM	0.005 (0.005)	0.008* (0.005)	0.011** (0.005)	0.009* (0.004)	0.006* (0.003)	0.008 (0.005)	0.002 (0.004)	0.002 (0.004)	0.002 (0.005)	0.002 (0.004)	0.002 (0.004)	0.002 (0.005)
<u>Human capital controls</u>												
Age		0.054*** (0.014)	0.058*** (0.014)	0.046*** (0.014)	0.040*** (0.013)	0.056*** (0.013)		0.019 (0.015)	0.023 (0.015)	-0.017 (0.018)	0.021* (0.013)	0.022 (0.015)
Age squared		-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)	-0.001*** (0.000)		-0.000* (0.000)	-0.000* (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Middle education		0.039 (0.029)	0.030 (0.030)	0.012 (0.034)	0.038 (0.028)	0.008 (0.027)		0.077* (0.044)	0.064 (0.047)	-0.096* (0.053)	0.062** (0.030)	0.028 (0.047)
High education		0.284*** (0.042)	0.280*** (0.042)	0.244*** (0.044)	0.301*** (0.039)	0.059 (0.040)		0.394*** (0.053)	0.362*** (0.059)	0.214*** (0.063)	0.352*** (0.037)	0.125** (0.062)
Language fluency		0.044 (0.037)	0.042 (0.037)	0.046 (0.036)	0.042 (0.036)	0.023 (0.031)		0.187*** (0.049)	0.196*** (0.052)	0.157*** (0.039)	0.134*** (0.036)	0.162*** (0.049)
<u>Area of origin</u>												
Africa			-0.103** (0.043)	-0.102** (0.044)	-0.083** (0.042)	-0.037 (0.035)			-0.044 (0.046)	-0.142** (0.055)	-0.074* (0.039)	-0.006 (0.049)
Asia			-0.089 (0.056)	-0.101* (0.057)	-0.012 (0.046)	-0.048 (0.054)			0.001 (0.080)	0.029 (0.083)	0.006 (0.057)	-0.024 (0.075)
Middle East			0.135*** (0.044)	0.209*** (0.047)	0.120*** (0.043)	0.092*** (0.035)			0.080 (0.078)	0.253*** (0.077)	0.021 (0.060)	0.035 (0.078)
Eastern Europe			0.141** (0.067)	0.187*** (0.069)	0.105* (0.056)	0.085 (0.059)			0.112 (0.082)	0.038 (0.088)	0.115** (0.056)	0.025 (0.077)
Latin America			0.013 (0.094)	0.068 (0.109)	-0.005 (0.092)	-0.009 (0.086)			0.047 (0.086)	-0.122 (0.102)	0.074 (0.063)	0.029 (0.081)
Constant	6.648*** (0.284)	5.766*** (0.327)	5.811*** (0.326)	6.136*** (0.334)	6.088*** (0.315)	6.152*** (0.306)	6.653*** (0.278)	6.319*** (0.364)	6.212*** (0.364)	7.386*** (0.399)	6.263*** (0.275)	6.621*** (0.407)

Cohort effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Selection correction	No	No	No	Yes	No (FT)	Yes	No	No	No	Yes	No (FT)	Yes
Occupation controls	No	No	No	No	No	Yes	No	No	No	No	No	Yes
Goodness of fit	0.135	0.209	0.231	60.34	0.247	0.429	0.164	0.265	0.267	266.48	0.371	0.358
Observations	1,551	1,551	1,551	1,551	1,461	1,551	1,141	1,141	1,141	1,141	808	1,141

Notes: The dependent variable is the logarithm of monthly wages. All specifications use sampling weights. Family-based visa is the omitted visa class in all models. The remaining reference groups for the categorical variables are low level for educational attainment and Maghreb for region of origin. Cohort effects are dummy variables of arrival period to France by 10-year intervals. Region effects are dummy variables to control for region of residence in France. First stage of the Heckman procedure uses age, age squared, education, marital status, number of children between ages 2-17, house ownership, and rural area residence to explain selection into employment. Columns 5 and 11 are specifications for full-time (FT) wage workers only. For Heckman specifications, Chi squared statistics is used as goodness of fit. Robust standard errors are in parentheses. Conventional significance level notation is used: *: $p < 0.1$; **: $p < 0.05$; ***: $p < 0.01$.