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# The employment conditions of native-born people with immigrant parents : a comparison between France and The United States

Charlotte Levionnois

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**Charlotte LEVIONNOIS**

Le 24 avril 2017

**THE EMPLOYMENT CONDITIONS OF NATIVE-BORN PEOPLE  
WITH IMMIGRANT PARENTS: A COMPARISON BETWEEN  
FRANCE AND THE UNITED STATES**

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*L'université Paris I Panthéon – Sorbonne n'entend donner aucune approbation, ni improbation, aux opinions émises dans les thèses ; ces opinions doivent être considérées comme propres à leurs auteurs.*



*A mes parents,*



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**THE EMPLOYMENT CONDITIONS OF NATIVE-  
BORN PEOPLE WITH IMMIGRANT PARENTS: A  
COMPARISON BETWEEN FRANCE AND THE  
UNITED STATES**



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# GENERAL INTRODUCTION

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In France, more than 7 million individuals are born to immigrants; in the United States, this number is over 36 million. Integrating this population, both economically and socially, is a significant challenge. The active participation of native-born persons with immigrant parents in the labour market is vital for ensuring social cohesion in the host country, as well as for their acceptance by the population of the host country (OECD, 2015a). Moreover, the entry of large cohorts of native-born people with immigrant parents in the labour market requires countries to properly analyse their economic and social integration, in order to implement appropriate public policies at the right moment.

Labour market integration is a key measure for integration as it provides workers both a social utility in society, as well as revenue to ensure their living expenses (OECD, 2015a). Yet, labour market integration is multidimensional, and should be investigated as such. With the aim to better understand patterns of inequalities, this dissertation empirically investigates the employment conditions of immigrants' offspring in France and the United States, adopting a comprehensive approach. By comparing and contrasting two countries, France and the United States, this dissertation sheds light on the different labour market inequalities in each country, which vary with the institutional framework.

Integration is a process of economic mobility and social inclusion. Integration into any society is considered successful, if immigrants and their offspring benefit from the same opportunities as native-born people; and, in the end, has to do with how quickly and completely immigrants or their offspring adapt to the local labour market (CADENA, *et al.*, 2014), becoming an integral part of society. Because immigrants have characteristics related to their foreign origin (*e.g.* qualifications and work experience obtained in the origin countries – especially when they come from poor countries – may not be considered equal in the labour markets), it has been argued that the success or failure of their children, raised and educated in the country of residence, is the benchmark of integration (CARD, 2005). Yet, and despite being born in the same country, immigrants' offspring suffer the consequences of having

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immigrant parents in the labour market. They tend to have lower employment rates, higher unemployment rates, and a poor integration once in their job (in terms of wages, overeducation or career progression for instance) (SANTELLI, 2016; OECD, 2015a).

France and the United States are historically two important immigration countries, with more than one tenth of the native-born population being immigrants' offspring. Yet, important economic, social, demographic, and immigration contrasts exist between the two countries. The composition of the group of descendants of immigrants is different in France and in the United States; immigrants come from different countries, have different education levels<sup>1</sup>, speak different languages, *etc.* The two countries also have different institutional frameworks. France and the United States did not only deal with immigration differently when immigration inflows were high, but their institutions related to integration still remain different. Besides, their labour markets depict some dissimilarity and their labour market institutions are radically different.

Moreover, the historical and cultural specificities of the two countries have strong consequences on the construction of the object studied in this dissertation. One salient difference relies on the prevailing categorization of immigrants in these two societies: individuals tend to be defined in France according to their immigrant parents, whereas in the United States, the most common underlined trait is ethnicity.<sup>2</sup> This difference is prominent because of historical developments - racial segregation in the United States and colonialism in France – and affects the individual characteristics generating inequalities.<sup>3</sup>

By adopting a comprehensive approach of employment conditions, this dissertation aims to enlarge the literature on labour market integration of immigrants' offspring, which traditionally focuses on employment, unemployment or wage. This broader view allows one to disentangle channels of inequalities on the labour market in each country. In addition, this thesis also extends the literature in labour economics on employment conditions, rarely addressing the issue of immigrants' offspring. In Europe, the importance of the national context in which these individuals are trying to move forward has received attention and is now considered as an important factor of integration (THOMSON and CRUL, 2007). However, the American theoretical debate about the integration<sup>4</sup> of immigrants'

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<sup>1</sup> In this dissertation, education is defined as level of schooling and does not include moral or behavioural education.

<sup>2</sup> Ethnicity is included in the American Census, for instance, and several University departments are named after ethnicity, such as "African American Studies" or "Hispanic Studies".

<sup>3</sup> This influences also the construction of the statistical apparatus (see CHASSONNERY-ZAÏGOUCHE, *et al.*, 2017).

<sup>4</sup> Two visions are generally opposed regarding immigrants who settle down in destination countries: integration or assimilation. Integration is often viewed as a social and political model for managing immigrants in a country. This model is based on the idea that immigrants are temporarily or definitively part of the national community, and that they benefit from the same rights (access to the system of social protection, education and health, etc.) and duties of the native population. Integration is understood as the search for a consensus between different cultures within the public space. However, since this process of integration is asymmetrical, it can be

offspring tends to set aside this framework. Building on the differences between France and the United States, this comparative analysis enhances the connection between an institutional framework and the employment conditions of immigrants' offspring.

This introduction provides the framework of the empirical comparative analysis conducted in the dissertation. The first section defines the population of interest and discusses its main characteristics, highlighting how the relatively low socioeconomic background and often low educational level can explain the difficulties experienced by the immigrants' offspring in the labour market. Next, it highlights different aspects of labour market inequalities and how these have been discussed in the literature. In the second section, I show why and how a global approach of labour market integration is necessary. To do so, I develop both the idea of a global approach to labour market integration, and the empirical and comparative methodology adopted in this dissertation. Finally, I present the remaining outline of the dissertation.

## SECTION 1. THE CHARACTERISTICS AND LABOUR MARKET INTEGRATION OF IMMIGRANTS' OFFSPRING: STATE OF THE ART

In order to improve the understanding of the mechanisms at the origins of potential socio-economic inequalities immigrants' offspring face in the labour market, this section characterises this population more precisely in France and the United States. It emphasizes their socioeconomic background, their demographic characteristics, as well as their educational levels. Next, it investigates their relatively difficult labour market integration, in terms of participation rates, employment and unemployment rates, as well as other job characteristics explored in the literature, such as wages. This section points out differences between the two countries and provides initial evidence of potential diverging effects between dimensions of labour market integration. This state of the art provides some hypotheses to explain observed inequalities on the labour market.

### 1.1. WHO ARE NATIVE-BORN PERSONS WITH IMMIGRANT PARENTS?

Native-born persons with immigrant parents are defined as individuals born in France or the United States and living in the respective country, with at least one parent being a first-generation immigrant,

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transformed into an assimilation order vis-a-vis immigrants. The term assimilation, inherited from the colonial period, refers to total adherence by immigrants to the norms of the host society. Expressions of their identity and their specific socio-cultural origin are strictly limited to the private sphere. In France, debates over the prohibition of religious symbols in schools, particularly the Islamic veil, illustrate the tension between the terms integration and assimilation. This dissertation adopts an integration approach, because of the dominance relationship implied by the assimilation concept (<http://www.ladocumentationfrancaise.fr/dossiers/d000073-immigration-et-politique-migratoire-en-france/assimilation-integration-multiculturalisme-quel-modele-d-accueil>).

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that is a foreign-born person with a foreign nationality at birth. This dissertation only considers native-born individuals, whether with native-born parents or immigrant parents, and not immigrants. This exclusion of immigrants from the analysis relies on the definition of a successful integration into society (CARD, 2005), which means equal opportunities with native-born people. Descendants of immigrants are compared to descendants of native-born persons to assess their integration.

There is a semantic as well as a political debate about the use of the expression “second generation immigrants” or “second generation” to qualify native-born individuals with immigrant parents, as second generation immigrants might recall too much of the migration experience of their parents and not enough of their own place of birth. Moreover, this term is often considered as an oxymoron, as these individuals have not migrated from one country to another, but were born and raised in the same country as native-born people with native-born parents. Although their integration patterns echo their parents’ difficulties to get integrated, calling them immigrants (in “second generation immigrants”) influences the debate in a way that might create an ambiguity and probably contribute to stigmatizing them (SCHNEIDER, 2016). Therefore, in this dissertation, this group is referred to as native-born people with immigrant parents, immigrants’ offspring, or children/descendants of immigrants – descendant is understood as direct descendant. Conversely, the population with no immigrant parents is referred to, alternatively, as descendants of native-born persons, or natives. Hence, this terminology (i.e. *natives*) does not refer to Native-Americans or Indigenous Americans in this thesis.

The interest in native-born persons with immigrant parents is the result of a basic demographic process. In France, as well as in the United States, immigration increased after World War II, mainly until the end of the 1970s in France (*Les Trente Glorieuses*). Hence, an increasingly large group of children in these countries were born and raised in their immigrant parents’ settlement countries (ALBA and HOLDAWAY, 2014). Consequently, the focus on this population is relatively new: one of the first publications in the United States dates back to the mid-1990s with *The New Second Generation: Segmented Assimilation and Its Variants* (PORTES and ZHOU, 1993) and *The New Second Generation* (PORTES, 1996). The interest emerged even more recently in France, notably because of an absence of statistics on immigrants’ offspring. In the 1990s, TRIBALAT attempted to count this population, but analysis of their labour market integration started around the early 2000s (SILBERMAN and FOURNIER, 1999; MEURS, PAILHÉ and SIMON, 2006). Because integration of immigrants’ offspring provides a benchmark of integration, the subject has become increasingly studied. The main theories on the process of integration assume that integration occurs through several generations. Therefore, expanding the analysis on descendants of immigrants provides information on the capacity of host societies to integrate these populations (MEURS, *et al.*, 2006).

This section highlights the reasons why native-born people with immigrant parents may face difficulties on the labour market. By detailing their most salient individual characteristics, this section

discusses their relatively unfavourable individual characteristics to integrate into the labour market. In both countries, a distinction based on the country of origin of the parents allows one to disentangle potential patterns, but this is not the only relevant characteristic. In addition to the parents' country of origin, immigrants' offspring also differ in terms of socioeconomic and sociodemographic background, which tend to be unfavourable. Among these characteristics, native-born persons with immigrant parents in France have lower educational levels compared to natives; whereas in the United States, native-born people with immigrant parents are, at the aggregate level, more educated than natives. Even if the two countries display heterogeneity in term of education when disaggregating immigrant parents' country of origin, educational outcomes of native-born people with immigrant parents are overall more favourable in the United States than in France.

The next section demonstrates that immigrants' offspring in the United States may have better outcomes on the labour market, contrary to France. First, I review the academic literature, assessing the labour market integration of this group, and argue, by pointing out the heterogeneity, that different patterns of labour market integration exist across immigrants' offspring according to parents' country of birth. In addition, I show the differences in inequality in the two countries, and justify the adoption of a comparative and global approach.

### *1.1.1. SOCIOECONOMIC AND DEMOGRAPHIC BACKGROUND OF NATIVE-BORN PEOPLE WITH IMMIGRANT PARENTS*

The proportion of native-born persons with immigrant parents in France is among the highest in Europe; in 2012<sup>5</sup> they were close to 7 million and represented 11% of the population (BOUVIER and BREEM, 2014; INSEE, 2015). In the United States, immigrants' offspring were 36 million in 2012, which represented 11,5% of the population (TAYLOR, *et al.*, 2013; CENSUS BUREAU, 2013). Even though they represent about the same proportion among the population, the two groups are very different. This heterogeneity is generally associated with the parents' country of birth. Immigrants' offspring often inherit from relatively disadvantaged socioeconomic backgrounds. However, this section shows their relatively better outcomes compared to their immigrant parents, at school but also on the labour market. Hence, this section intends to clarify the background of immigrants' offspring, illustrating the intergenerational progress of immigrant groups.

#### *Parents' countries of origin and migration inflows*

Several generations of immigrants' offspring compose the population of the two countries. From the oldest of immigrant families in the 1950s to the youngest, born in the 2000s, to recently settled

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<sup>5</sup> In 2015, they still represented 11% of the population, with 7.3 million individuals (BRUTEL, 2017).

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immigrant families, the diversity of age composition recalls the diversity of migration paths. In France, 66% of Algerian immigrants' offspring are between 18 and 35 years old whereas this figure reaches 92% for sub-Saharan African immigrants' offspring (LHOMMEAU and SIMON, 2010).

In the United States, the average age of immigrants' offspring is higher and so is the age dispersion. Immigrants' offspring are often separated into two waves: those of the *old second generation*, from the great wave of European immigration at the beginning of the twentieth century, and those who include the *new* post-1960 immigration, mainly from Hispanic or Asian countries (PORTES and RUMBAUT, 2006). In 2005, they were 7.8 million born in the United States before 1960, whose average age was 68 years old. In contrast, the *new second generation* born in the United States since 1960 was on average 16 years old at that time (PORTES and RUMBAUT, 2006). Overall the average age of immigrants' offspring in the United States in 2012 was above 36 years old, whereas natives were on average 6 years older (author's calculations on CPS in 2012).

Consequently, immigrants' children are at different stages of their life. Some of them are at school, others at work, while some of them have already retired. Moreover, they have been raised in different societies. French and US-American societies changed radically between the 1980s and the late-2000s, and entering the labour market in different points in time also implies different difficulties to cope with (SANTELLI, 2016). These gaps in terms of age recall the diversification of origins with the different migration inflows.

The French experience with immigration precedes the post-World War II period. With industrialisation and growing labour needs, France became a destination country for labour immigrants, especially from European countries such as Belgium and Italy, a process that started as early as the mid-1850s, and that continued after World War I. "In 1931, France had already 2.7 million immigrants accounting for 6.5% of its population" (OECD, 2008, p. 171). Nowadays, around half (48%) of the immigrants' offspring have European origins (BOUVIER and BREEM, 2014). Among them, two thirds have parents from southern Europe, namely from Portugal, Spain or Italy. 30% have North African origins, 9% have sub-Saharan African origins and 13% have other origins, among which Turkish immigrants' offspring represent a third (BOUVIER and BREEM, 2014).

Despite their similar population size, native-born persons with North African immigrant and southern European immigrants' offspring (each group representing more than 2 million people according to the French Labour Force Survey in 2012) have different migration histories. In addition, the first is often referred to as an ethnic minority, because they are "visible", whereas the others seem to have been "absorbed" in the native population, constituting invisible minorities (SANTELLI, 2016).

In the United States, around half of immigrants' offspring have European or Canadian immigrant parents (TAYLOR, *et al.*, 2013). Their share is nevertheless projected to decrease. Second, Hispanics

account for more than one third (35%) of immigrants' offspring (TAYLOR, *et al.*, 2013). Among them, the largest group of immigrants' offspring in the United States has Mexican immigrant parents, accounting for 20% of them. Their share is increasing, as Mexican migration inflows are more recent than the European ones. Other Hispanics compose 15% of immigrants' offspring. Asian immigrants' offspring represent around 12%, but this share is supposed to grow, as Asian immigrants entered the United States later than other major groups of immigrants. Finally, descendants of African immigrants represent a small share of native-born people with immigrant parents, around 4%.<sup>6</sup>

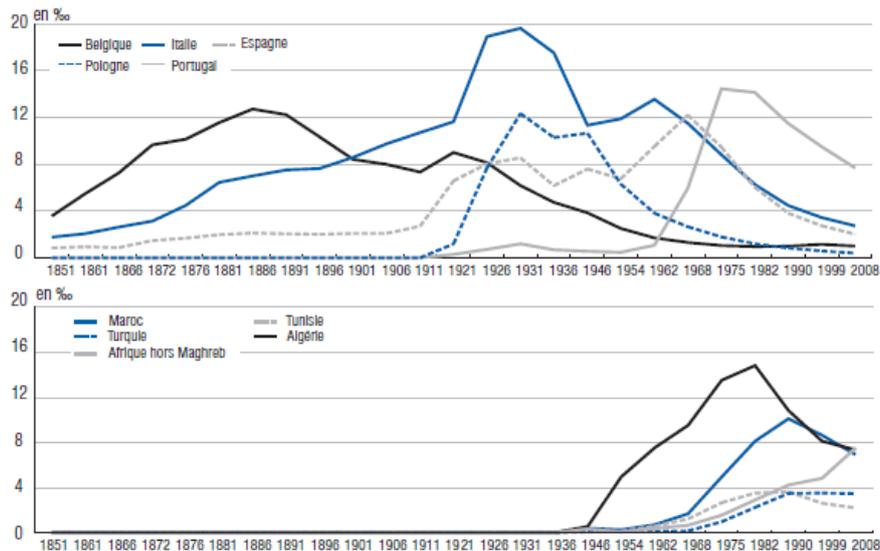
These different migration inflows also reflect different reasons to migrate for the parents. The reasons to migrate (*i.e.* categories of entry, such as labour migration, family migration, *etc.*) constitute an important feature for immigrants because it can determine labour market integration and is often correlated with educational level (BRATSBERG, *et al.*, 2017). These features are central for their offspring, as they determine socioeconomic background and greatly influence the conditions of their upbringing.

In both countries, a distinction is made between the older and more recent migration inflows. The European migration inflows, considered among the older ones in the two countries, are known to come for work. In France, the inflows from southern Europe occurred at the beginning of the 20<sup>th</sup> century (figure 0.1). Migration inflows from North Africa started after the World War II as a response to labour shortages in France, mainly in the manufacturing sector. Starting with this cohort, later migration inflows from the same countries followed, as these workers reunited with their families. Migration for family purposes is still nowadays one of the main reasons for migration to France. The case of Algeria, which constitutes today the main country of origin of immigrants' offspring, is specific, as it gained its independence from France only in 1962, and immigrants from Algeria were considered French. Moreover, the migration inflows from Algeria started since the end of the 19<sup>th</sup> century and were favoured by migration policies towards labour immigrants and their families in the 1970s.

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<sup>6</sup> See the discussion on race below in this general introduction for the specific place African-Americans have in the American society.

**Figure 0.1. Main migration inflows in France from 1851 to 2008, per thousand of the French population**



Source: Insee, 2014. Data from the French Census, in metropolitan France.

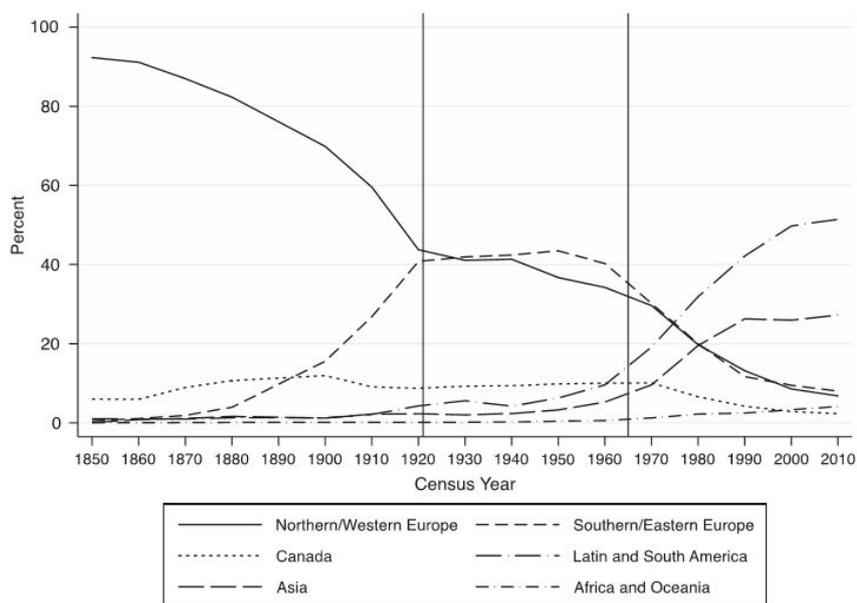
The United States is often referred to as a country of immigrants, with the first important migration inflows starting in the late 15<sup>th</sup> century from Europe (first from France, Spain, England and Netherlands and later on, from Ireland, Germany, Scandinavian and central European countries). These immigrants were encouraged to migrate both because of the poor conditions in Europe, and the attractive opportunities offered in the United States, in terms of employment or land for instance. After 1880, a third wave of immigration—known as “new immigration”—arrived with southern European immigrants, from Italy, Greece, Hungary or Poland. In parallel, a migration wave from Canada (mainly from Quebec) was observed. Figure 0.2 shows that this immigration constituted the majority of the US-American population in the 1850s.

After some restrictions – directed to particular immigrants, the country wished to exclude, for instance, Asian immigration<sup>7</sup> (CADENA, *et al.*, 2014) – starting in the late 19<sup>th</sup> century, immigration to the United States accelerated in the late 1960s and diversified. The *new* immigration wave began with the shifting away from quotas by country of origin, with the 1965 landmark legislation (*Immigration and Nationality Act*, also known as the Hart-Celler Act). Immigration accelerated again, with an increasing number of immigrants from Korea, China, India, the Philippines, Pakistan and African

<sup>7</sup> The first immigration laws in 1875 (the *Immigration Act*, commonly referred to as the *Asian Exclusion Act*) restricted the access to different groups, notably from Asia. The National Origins Formula of 1921 continued to restrict the number of immigrants who may enter the United States, and set quotas based on national origins, mainly to reduce the overall number of low-skilled immigrants and to prevent immigration from changing the ethnic distribution of the population. Until its abolition with the *Immigration and Nationality Act* of 1965, preference was given to immigrants from central, northern and western Europe, while those from Russia and southern Europe were severely limited and those from Asia considered unfit to enter the United States. These forty years marked the beginning of immigration from Latin America (Mexico, Caribbean, central and south America), as these countries were excluded from the quota system.

countries. “For the first time in the nation’s history, U.S. borders [were opened] on a roughly equal basis to non-Europeans as well as Europeans” (TAYLOR, *et al.*, 2013, p.14). Among the 44 million immigrants who have come since then, around half of them are from Latin America, about a quarter (27%) from Asia, and the remainder from other regions (TAYLOR, *et al.*, 2013). These inflows contrast with the two previous ones, during the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, when close to nine-in-ten new immigrants were Europeans.

**Figure 0.2. Main migration inflows in the United States from 1850 to 2010, in percentage of the US-American population**



Source: Cadena, et al., 2014. Data from decennial census PUMS and IPUMS data, from the American Community Survey sample for 2006 to 2010.

Note: “The vertical lines represent major policy changes: the 1920s-era quota system, and the 1965 Immigration and Nationality Act that remains current law” (Cadena et al., 2014, p.1200).

*Migrants’ levels of education, labour market and economic situations*

In France, the educational attainment of immigrants is far lower than the one of natives (SANTELLI, 2016). Close to two thirds of African or Turkish fathers and slightly more than half of South East Asian fathers with French-born children have no diploma. By contrast, 15% of fathers of native-born people have no diploma (SANTELLI, 2016). South East Asian fathers present another specificity: high shares of baccalaureate holders, as well as diplomas from higher education, which are higher than the ones observed in the native-born population (these shares are low and vary from 6 to 11% for the other groups) (SANTELLI, 2016). Parents’ educational level also decreases with their offspring’s age: the younger native-born people with immigrant parents are, the less educated their fathers are. The occupations of these immigrants also tend to be at the lower part of the social ladder: three out of four African immigrants’ offspring have fathers who are blue-collar workers, whereas this share reaches

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only 40% for natives (SANTELLI, 2016). Again, South East Asian immigrant fathers distinguish themselves by their high shares of white-collar workers, which concern 20% of them (SANTELLI, 2016). Immigrant mothers' inactivity rates are also high: 65% of North African immigrant mothers, 60% of Turkish immigrant mothers, 31% of sub-Saharan immigrant mothers and 23% of South East Asian immigrant mothers are not active in the labour market (SANTELLI, 2016). By comparison, this share is 13% among native-born mothers.

These characteristics explain the relatively lower levels of income in immigrant families, which is amplified by the fact that these families tend to have more children. This is particularly the case for sub-Saharan families, for instance, as 57% of native-born people with immigrant parents grew up with seven or more siblings (SANTELLI, 2016). Even if the fertility rate decreased in the past few decades, it remained higher in immigrant families.

In the United States, immigrants are also less educated than natives on average, but disparities exist. Most Hispanic immigrants have relatively low levels of education and work in low-skilled and low-paying jobs (TAYLOR, *et al.*, 2013). On the contrary, most Asian immigrants (in particular those who arrived in the past few decades) are relatively highly educated and highly-skilled, which allows them to work in higher-skilled occupations. Overall, in 2000, some immigrant groups were on average more educated than natives (Korean, Japanese, Chinese, Philippine but also Indian, Taiwanese, Iranian, Pakistanis or Nigerian immigrants), some were as educated as natives (British, Canadian, Brazilian, German, Irish, Peruvian, Polish, Colombian, Greek, Vietnamese, Cuban or Jamaican immigrants) and some had educational levels below natives (Italian, Haitian, Ecuadorian, Cambodian, Dominicans, Honduran, Portuguese, Laotian, Guatemalans and Mexican immigrants) (PORTES and RUMBAUT, 2006).

The largest group of immigrants, the Mexicans, are also the ones with the lowest level of schooling. It appears not to be due to a weak educational system. The growing middle class in Mexico has no desire to do low-paid jobs in the United States and risk their lives crossing the border. It is mainly peasants and low-skilled workers who come and look for work in the United States. They constitute much of Mexican immigrants in the United States nowadays, together with their families (PORTES and RUMBAUT, 2006).

Immigration policies and labour demand are important explanatory variables for immigrants' educational levels (PORTES and RUMBAUT, 2006). Before 1965, US-American immigration policy made it difficult for Asians and Africans to migrate, whereas the new immigration policy in 1965 eased migration on the basis of two criteria: family reunification and occupational qualifications. Contrary to European and some Latin American immigrants, Africans and Asians in the United States did not use the channel of family reunification extensively, but largely were selected based on their educational credentials (PORTES and RUMBAUT, 2006). For that reason, most Asian and African

immigrants tend to have on average relatively high levels of education. The strong demand for low-wage labour in agriculture and other industries also explains the relatively low level of education of some immigrant populations, coming mainly from less developed countries close to US-American borders (from Mexico, the Dominican Republic and most Central American countries) (PORTES and RUMBAUT, 2006).

Overall, migrant families have a lower median household income than native-born families: 45,800\$US and 60,600\$US per year, respectively (TAYLOR, *et al.*, 2013). Besides, average households are larger in immigrant families with an average of 3.1 persons, whereas the average is 2.4 persons in native-born households (TAYLOR, *et al.*, 2013). One in five (22%) immigrants' children live below the relative poverty line according to the MIGRATION POLICY INSTITUTE (2006), which is more than 5 percentage points higher than for native-born offspring. This share is even higher for Mexican immigrants' offspring for whom it reaches 34%. However, among adults, native-born people with immigrant parents are less in relative poverty than natives (11% versus 12%) (TAYLOR, *et al.*, 2013).

### *Parents' inter-ethnic marriages*

Having one parent immigrant or two influences largely the socialisation process as well. Having one native-born parent allows for a better immersion into the majority group, through several channels: social practices, transmitted values, native-sounding last names, etc. (SANTELLI, 2016). Being from a mixed<sup>8</sup> couple also prevents some of the stigmatisation native-born persons with immigrant parents can face. This characteristic has also later consequences and distinguishes native-born persons with immigrant parents in terms of unemployment rate for instance, which is higher for those with two immigrant parents (SANTELLI, 2016). In France, two thirds of immigrants' offspring have two immigrant parents and among them, 87% have parents coming from the same country (LHOMMEAU and SIMON, 2010). These percentages vary depending on countries of origin, as mixed couples are less found among Turkish or sub-Saharan African immigrants - 95% of immigrant couples from African countries are from the same countries as their partner (LHOMMEAU and SIMON, 2010).

In the United States, mixed couples are more common. 42% of native-born people with immigrant parents have a native-born parent. Among the 58% left, 55% have two foreign-born parents with birthplaces in the same region and only 3% have parents born in two different regions (MPI, 2006). Native-born persons with Mexican or Asian immigrant parents are the most likely to have two parents born in the same region, whereas those whose parents come from European countries or Canada are the most likely to have one native-born parent (MPI, 2006).

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<sup>8</sup> Mixed background refers to descendants of immigrants, who have only one parent immigrant and one parent native-born.

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It is also argued that the greater family cohesiveness (measured with single-parent versus two-parent households) among families with immigrant parents might contribute to explain the better educational outcomes of immigrants' offspring (PORTES and ZHOU, 1993).

## *Places of residence*

This subsection completes the characterisation of immigrants' offspring in terms of residential characteristics, strengthening their differentiation from other native-born people in both countries. Housing and neighbourhood both may play negatively on labour market integration.

BORJAS (1995) underlines that urban segregation is a determining factor of the acquisition of human capital, which comes at play in the intergenerational mobility process. The place of residence of immigrants' offspring differs from natives. Immigrant families tend to live in more disadvantaged areas in the two countries. In France, immigrants' offspring are overrepresented in Sensitive Urban Areas ("*Zone Urbaine Sensible*", abbreviated in ZUS<sup>9</sup>): one fourth of Turkish and North African immigrants' offspring live in these areas, whereas only less than 4% of natives live there (SANTELLI, 2016). In the United States, native-born people with immigrant parents are more likely to live in metropolitan areas. If they have two immigrant parents, 96% live in a metropolitan area, compared to 91% if they have only one immigrant parent, and 79% for natives (PORTES and RUMBAUT, 2006).

This high level of concentration in these areas has significant consequences. Both neighbourhood and network effects are important, notably in the acquisition of human capital (TOPA and ZENOU, 2015). For instance, job losses tend to be more important in urban areas because corporations are more likely to relocate to suburbs, with lower wages, lower taxes, and weaker unions (EITZEN *et al.*, 2014). If the housing situation improves when native-born persons with immigrant parents leave their parents' place, they remain less well housed than natives (PAN KÉ SHON, 2009). These housing characteristics most probably have a role in the socialisation of native-born people with immigrant parents.

### 1.1.2. A RISE IN EDUCATION LEVELS COMPARED TO THEIR PARENTS

The education level of immigrants' offspring is partly related to their parents' relatively low educational background, as well as with their relatively poor socioeconomic background, even though immigrants' offspring are more educated than immigrants.

This section illustrates the intergenerational progress of immigrants' offspring compared to their parents and sheds light into the variety of educational outcomes among immigrants' offspring

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<sup>9</sup> A Sensitive Urban Area (or ZUS) was a sub-urban area defined by the French government to be the primary target of the policy of the city between 1996 and 2014. More than 700 areas were concerned, and involved nearly 7% of the French population (4.4 million people) according to the National Institute of Statistics (Insee, 2010). They have been replaced in 2015 by the « quartiers prioritaires de la politique de la ville ».

according to their parents' region of origin, in France (1.2.1.) and in the United States (1.2.2.). LIEBIG and WIDMAIER (2009) show that the difference in educational levels between natives and immigrants is much higher in France (about 10%) than in the United States, where the gap is close to zero. However, the relatively lower educational level of immigrants' offspring in France compared to natives does not seem attributable to immigrant parents. In reality, once controlled for social and family background, immigrants' offspring perform better at school than natives. This major role of social and familial background is also important in the United States, but immigrants' offspring remain more educated than natives, even when these individual characteristics are taken into account.

### *The education levels of immigrants' offspring in France*

In France, immigrants' offspring have difficulties at school. SANTELLI (2016) shows that they have higher drop-out rates and are less likely to get a diploma from higher education. The survey of VALLET and CAILLE (1996) highlighted academic performances that are, on average, lower than the ones of natives. On average, they repeat a year more, are more oriented towards technical and professional curricula<sup>10</sup>, and have lower success in getting their diplomas (VALLET and CAILLE, 1996).

In 1982, BASTIDE observed an "integration into failure" (*"intégration dans l'échec"*) in France: descendants of immigrants did not have higher failure rates than natives from the same social classes, but faced the same school difficulties as any underprivileged social group. More recently, BRINBAUM and KIEFFER, (2009) even show that at comparable social and family origins, descendants of immigrants get better academic results compared to natives.

Descendants of immigrants find themselves more often without a diploma (other than the "*brevet des collèges*")<sup>11</sup> in comparison to natives. The absence of diploma is particularly high for descendants of North and Sub-Saharan African immigrants (around one third for the 18 to 35 years old). On the other hand, only 13% of South East Asian immigrants' offspring have no diploma, close to the 11% for natives (BRINBAUM, *et al.*, 2012).

Women, however, are more educated than men. They are less likely to be with no diploma, from 2 to 16 points of percentage lower, except for Turkish immigrants (BRINBAUM, MOGUÉROU and PRIMON, 2015). They are also more often highly educated than men, just like among natives, but the gender gap is here more pronounced (BRINBAUM, MOGUÉROU and PRIMON, 2015). However, they still tend to be less often highly educated than females born to native-born persons (BRINBAUM, MOGUÉROU and PRIMON, 2015), but for similar social backgrounds, they outperform females born to native-born

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<sup>10</sup> An apprenticeship (technical, professional education) is, in France, seen as depreciated training, contrary to what can be observed in Germany or Switzerland, for instance.

<sup>11</sup> Diploma attesting that individuals reach the academic level required to enter high-school. This diploma occurs at the end of college, which corresponds to the 9<sup>th</sup> grade.

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people (BRINBAUM, *et al.*, 2012). LORCERIE (2011) shows that males tend to be more negatively perceived at school, and that gender-based socialisation advantages females, because their parents are stricter and because they see school as a means of emancipation regarding their mother's situation.

BRINBAUM, MOGUÉROU and PRIMON (2012) show that males with Turkish or African immigrant parents are less likely to be highly educated. These results recall the conclusions of ICHOU (2013), who shows that descendants of African immigrants face difficulties at school as early as at primary school. He notably insists on the role of social characteristics of immigrants before they migrate to explain their children's school performances. Ichou argues that parents' social position cannot be reduced to their socioprofessional situation and that each family has specific stories and school aspirations for their children. If the comparison made with equal social and familial characteristics allows to put in perspective the difficulties immigrants' offspring face at school, the consideration of individual and familial aspirations explain why they succeed better at school than natives from the same social background (SANTELLI, 2016). The elder siblings seem to benefit the most from this, as they tend to succeed better at school (SANTELLI, 2016). ZEROULOU (1985) also sheds light on the role played by family support. Reasons to migrate, the links maintained with the country of origin, as well as aspirations in the country of destination, constitute central factors to explain parents' support capability to their children at school, and intergenerational transmission (SANTELLI, 2016).

In addition, descendants of immigrants in France are more likely to go into segregated schools, *i.e.* schools with high shares of pupils with immigrant parents, because of their relative residential segregation. These schools concentrate, on average, twice as much pupils from disadvantaged social backgrounds (FELOUZIS *et al.*, 2005). Some argue that these pupils with immigrant parents also face a form of school discrimination. They are more often gathered in certain classes that have lower levels, which prevents school to lift individuals upwards as much as it could. They are also more systematically oriented towards a professional curriculum, which limits labour market success (VAN ZANTEN, 2001; DHUME *et al.*, 2011). CUSSET *et al.* (2015) insist on the cumulative process of inequalities, which starts as early as preschool, and which could have repercussions on the later labour market integration.

## *The education levels of immigrants' offspring in the United States*

The situation concerning education is different in the United States: descendants of immigrants are more educated than natives, and they are more likely to finish college than natives: about 36% of immigrants' offspring (25 years old and older) have at least a bachelor's degree, compared to 31% of natives (TAYLOR, *et al.*, 2013). At the lower end of the educational spectrum, 10% of the immigrants' offspring have less than a high school education, which is inferior to the 12% observed for natives. Among the young, from 18 to 24 years old, the high school dropout rates are exactly the same for the

two groups - 7% have not completed high school and are not enrolled in school (TAYLOR, *et al.*, 2013).

However, the situation varies greatly depending on countries of origin and parents' educational level. The descendants of Asian and Latin American (other than Mexican) immigrants show high levels of education. Among the descendants of immigrants (25 years old and older), 47% of those with Asian parents and 39% of those with Latin American parents (excluding Mexico) hold a bachelor's degree or higher, whereas those with Mexican parents are only 13% to hold at least a bachelor's degree. These descendants of Mexican immigrants are also 29% to complete high school at most.

Parental schooling and father's occupational characteristics constitute important individual factors accounting for educational differences across groups in the United States as well (PORTES and RUMBAUT, 2006). The large disadvantages of Italian, eastern European or Mexican were divided by two once parental levels of education were controlled for. The Children of Immigrants Longitudinal Study (CILS), an US-American survey starting in 1992, also highlights the decisive role played by immigrant parents' education, the occupational status on their academic achievement, as well as the fact of being raised in a non-separated family (with both biological parents present). Also, the role of gender and educational aspirations in early adolescence has been advanced: female immigrants' offspring generally achieve "significantly higher grades and overall education, as [...] students with higher ambition early in life" (PORTES and RUMBAUT, 2006, p.76).

After controlling for these variables and others, the authors still observe significant gaps among origins in academic performance, dropout rates and completed years of education (PORTES and RUMBAUT, 2006). Thus, "Chinese, Korean, Vietnamese and Cuban students whose parents came in the early exile inflows had significantly higher academic performance and overall attainment," whereas Mexican Americans, and to a lesser extent native-born youths with Nicaraguan immigrant parents, did worse on average (PORTES and RUMBAUT, 2006).

In sum, in the two countries, descendants of immigrants' education levels greatly vary with their parents' country of birth. However, the global US-American picture in terms of education is better than in France. Nevertheless, in both countries, descendants of immigrants perform better at school than natives, once socioeconomic background is controlled for - and even without control in the United States. Hence, immigrants' offspring seem to depict particularly favouring unobservable individual characteristics (such as motivation, fluency in several languages, *etc.*) that might also help them in the labour market later on.

This first part showed that immigrants' offspring seem to cumulate unfavourable characteristics to succeed in the labour market, in terms of education level and of economic and social background. Yet,

the contrast with natives seems stronger in France. In light of these results, one would expect that immigrants' offspring in the United States have better results on the labour market than in France.

## 1.2. THE LABOUR MARKET INTEGRATION OF IMMIGRANTS' OFFSPRING

The following section discusses labour market integration, and provides insights on the different dimensions for which immigrants' offspring face either difficulties or successes. It first reviews the relative difficulties faced by immigrants' offspring on several basic labour market statistics (participation, employment and unemployment rates) and then considers their relatively better results on certain job characteristics. By providing key positive figures of certain aspects of employment, this section nuances the negative results of immigrants' offspring on the French labour market. It also illustrates the relatively good labour market integration of US-American immigrants' offspring.

Moreover, this section points out the major role played by individual characteristics (other than having immigrant parents) to explain some negative results in terms of wages in the labour market, particularly in France. These individual characteristics explain most of the wage gaps. In the United States, despite unadjusted positive gaps, these individual characteristics play an important role, too. In general, it seems that in France, individual characteristics of immigrants' offspring negatively impact their labour market integration, contrary to the United States.

This nuanced picture of their labour market integration argues for a comprehensive approach. Moreover, the relatively better labour market integration of immigrants' offspring in the United States confirms the benefits of comparing and contrasting the two countries.

### 1.2.1. PARTICIPATION RATES AND (UN)EMPLOYMENT RATES

The issue of labour market integration of immigrants' offspring has long been discussed through the prism of unemployment (SANTELLI, 2016). In France, SILBERMAN and FOURNIER (1999) have been the first to statistically attest the overrepresentation of men descendants of North African immigrants among the unemployed. This inequality in the labour market has long been an indicator of discriminations towards this population.

Among men in France, the unemployment rate for descendants of North African, Turkish or sub-Saharan immigrants is more than twice and a half higher than for natives (MEURS, *et al.*, 2015). These rates are even more important among the youngest (less than 25 years old), with no diploma and/or who live in Sensitive Urban Areas (CUSSET *et al.*, 2015). The comparison with natives with similar social origins (declaring a blue-collar worker father) does not change the results: unemployment rates of men descendants of North African immigrants remain twice as high (21% versus 10%) (SANTELLI, 2016).

Among the 25 to 54 years old, labour force participation rates in the United States are about the same for the children of immigrants as among the natives, at around 80% (MOSISA, 2006), but differ greatly depending on the parents' places of birth.<sup>12</sup> Descendants of Asian and African immigrants have participation rates of around 80%, while Hispanics and Latinos have slightly higher rates (83%), and so do White immigrants' offspring (85%) (MOSISA, 2006).

In March 2012, a few years after the economic crisis, 9.3% of immigrants' offspring in the United States were unemployed, compared to 8.3% for all adults (TAYLOR, *et al.*, 2013). Yet, this gap can be explained by differences in age structure, as descendants of immigrants tend to be younger and more exposed to unemployment.

Gender inequalities are reflected in employment and unemployment rates but also in the participation in the labour market. The unemployment rate varies by gender. Men descendants of immigrants have higher unemployment rates (7.3%) than women (5.3%) descendants of immigrants in 2005 (MOSISA, 2006). But women are also less likely to participate in the labour market in the United States than men, respectively 73% and 86% (AYDEMIR and SWEETMAN, 2006). The employment rate is also lower for females (70%) compared to males (83%) in the United States.

In France, while women natives are slightly more unemployed than native-born men (respectively 9% and 8%), women descendants of immigrants have a lower unemployment rate than their male counterparts. This unemployment rate remains higher than the one of native-born women, except for descendants of South East Asia immigrants (MEURS *et al.*, 2015). Compared to the situation of natives, immigrants' offspring depict lower gender gaps in terms of participation, employment and unemployment rates (MEURS and PAILHÉ, 2008; FRANCE STRATÉGIE, 2016).

Moreover, when taking into account compositional effects (related for instance to the age structure among groups), the risk of being unemployed for immigrants' offspring in France remains significantly higher than for natives (MEURS *et al.*, 2015). The ethnic penalty as discussed by SILBERMAN and FOURNIER (2006) seems to persist.

The place of residence is also of primary importance, as already noticed, not only for education but also for labour market integration. COUPPIÉ (2013) shows that young people living in Sensitive Urban Areas face increasing difficulties to integrate into the labour market, in particular men. In these areas, the young native-born men with North African, Turkish or sub-Saharan background are particularly affected. The unemployment rate is two to three times higher than in other territories, reaching up to

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<sup>12</sup> It is more difficult to find information on immigrants' offspring based on parents' country of birth in the United States because of the prevalence of racial and ethnical categorisation of individuals rather than their parents' place of birth. For that reason, numbers are most often presented for ethnic groups among immigrants' offspring, which corresponds roughly to a group of parents' countries of origin. Additional information is provided below (page 33) in the discussion on institutional differences among countries.

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50% for young men with low education level in some Sensitive Urban Areas (SANTELLI, 2016). The same is noticed in the United States, as metropolitan areas tend to lose jobs and experience rising levels of poverty. This is particularly the case for individuals with immigrant parents, who are affected by ethnic residential segregation (EITZEN *et al.*, 2014; ICELAND and SCOPILLITI, 2008).

Regardless of their educational level, several studies have shown that the greatest difficulties occur in the transition phase between the end of education and access to stable employment, in particular in France. BOUHMAHDI and GIRET (2005) show that immigrants' offspring have lower rates of employment, and yet earn higher wages, of about 5%. This result can be explained by the strong selection this group experiences, showing that among the immigrants' offspring' population, the more important barriers to overcome are at the entry of the labour market (MEURS *et al.*, 2006).

### *1.2.2. WAGES AND JOB CHARACTERISTICS*

Because inequalities on the labour market may affect different indicators in France and the United States, the comparative perspective calls for a comprehensive approach of labour market inequalities. This broader approach of labour market integration for immigrants' offspring includes employment characteristics. Despite some difficulties measured by certain indicators, this section nuances the assessment of barriers to labour market entry with some relatively positive results on other indicators. Hence, this section advocates for a broad consideration of employment conditions to fully understand the mechanisms of labour market inequalities according to parents' immigrant's status.

#### *Wage gaps*

Levels of wages of immigrants' offspring in France are lower than for natives (FRANCE STRATÉGIE, 2016), but the gaps greatly vary with the parents' region of birth. AEBERHARDT, FOUGÈRE and POUGET (2010) found an existing unadjusted wage gap of about 13% between native-born with North African immigrant parents and natives (with Labour Force Survey data). However, wage gaps disappear with the control of individual characteristics. All other things being equal, immigrants' offspring have consequently similar wages than natives.

The disaggregation of the parents' country of origin raises some wage gaps for certain groups, even after controlling for individual characteristics. ALGAN *et al.* (2010) document the existing wage gap for men descendants of North African, African and Turkish immigrants. These three groups earn less compared to natives, all other things being equal. For women, three groups of descendants of immigrants face more difficulties than natives: those with North African, sub-Saharan African and southern European immigrant parents. MEURS, LHOMMEAU and OKBA (2012) confirm with *Trajectoires et Origines* data that unadjusted hourly earnings are lower for native-born with non-

European immigrant parents. They suggest that an important part of wage differences can be explained by characteristics related to the individual and to the occupation, as the unexplained part decreases when they include these factors in the model. However, certain groups of immigrants' offspring display a remaining wage gap after controlling for individual characteristics, more for males than females. Male descendants of North African immigrants earn for instance 3.4% less than natives.

Overall, looking at unadjusted wage gap shows that immigrants' offspring in the United States tend to have higher earnings than natives (PICOT and HOU, 2011). PICOT and HOU (2011) argue that the positive wage gap between the children of immigrants and natives disappears when controlling for education and residential location, suggesting that these two features account for the original (unadjusted) positive gap between these groups. PORTES and RUMBAUT (2006) argue that differences in human capital and integration are partially reflected in monthly earnings, as well as in occupational status. Asian immigrants' offspring earned the most (at 47,000 \$US), followed by Whites, Blacks and Hispanic/Latinos individuals with immigrant parents (the latter at 33,000\$US), reflecting partly education and occupational differences (MOSISA, 2006). Using data from the early 2000s, AYDEMIR and SWEETMAN (2008) find earnings that are very similar between immigrants' offspring and natives, but after controlling for age, it appears that the former earn more than the latter. CARD (2005) finds that after controlling for age, immigrants' offspring have an 8% higher wages, in line with BORJAS' (2006) results.

But parents' country of birth is a significant determinant of these wage differentials. In 2000, immigrants' offspring from Mexico, Nicaragua, Haiti, El Salvador and the Dominican Republic have wage gaps between -4% and -19% (age adjusted, compared to natives), while those whose parents are from countries like Canada, Germany, Greece, India, Poland, and the UK have large positive gaps (from 17% to 27%) (BORJAS, 2006). BORJAS (2006) shows that the wage advantage of native-born males with immigrant parents over natives (with age adjusted) has declined over time: from 18% in 1940, to 15% in 1970, and just 6% in 2000. The changing composition of parents' countries of origin can explain part of this decline (notably through factors correlated with it, such as educational attainment, language, education quality or discrimination). BORJAS (2006) finds that controlling for both education and age cuts the gap from 6% to 3%. CARD (2005) controls for region of residence (the immigrants' offspring are more likely to live in large urban area, where wages are higher) and it reduces the gap to around 3% as well. Adding controls for education reduces the difference yet again, to around 1.5%. Hence, most of the positive wage gap between immigrants' offspring and natives can be accounted for their location of residence, age and higher educational level. Moreover, according to the theory of compensatory mechanisms, higher wages could reflect more difficult working conditions for some individuals.

### *Type of contract*

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Contrary to France, the type of contract is not an important discriminatory factor in the United States and studies on this topic are relatively scarce. In France, the time spent in stable jobs since the end of schooling is lower for North African immigrants' offspring than for any other group considered (OKBA, 2012). This insecurity is even more pronounced among young generations, due to the recent economic deterioration. FRICKEY and PRIMON (2010, p.184-186, I translate) show that, at the beginning of working life, young immigrants' offspring are particularly affected by precarious contracts (defined as non-permanent contracts). They report that "three years after ending their education, not less than 19% of highly educated North African descendants of immigrants work in subsidized employment (in proportion 2.6 times more than for natives), [...] [and] 69% of low educated native-born with North African immigrant parents work in precarious employment (versus 55% for natives)", given that low education levels increase the probability to work in unstable and insecure jobs. In France, descendants of African immigrants present poorer employment integration: in 2009, 61% have a stable position, versus 82% for young natives (JUGNOT, 2012).

Moreover, immigrants' offspring are less likely to be employed in public administration than natives. The OECD (2015a) shows that the difference is higher in France (1.8 percentage point) than in the United States (1 percentage point). No difference is found between natives and native-born people with mixed background in France. In the United States, immigrants' offspring are 0.6 percentage point more represented than natives.

### *Overeducation*

Overeducation is another indicator to assess the labour market integration of immigrants' offspring. The OECD (2015a) points out diverging trends in France and in the United States: immigrants' offspring are more overeducated (of 5 percentage points) than natives in France, while it is the contrary in the United States (immigrants' offspring are 2.1 percentage points less likely to be overeducated than natives). However, the gender composition depicts differences between the two countries. In France, women tend to be more overeducated than men, whereas it is the contrary in the United States (OECD, 2015a).

### *Occupational distribution*

In France, immigrants' offspring are less often blue-collar workers than their fathers and, when they are, they are more often more qualified. Their distribution into socioprofessional categories is strongly related to their parents' (SANTELLI, 2016). More than 70% of North African immigrants' offspring in France have a blue-collar father, versus only 39% for the native-born (MEURS *et al.*, 2015). These fathers are also more likely to be low-skilled than those of native-born. The blue-collar component remains important also among native-born men (aged between 35 and 50) with immigrant parents: for

42%, their last job was a blue-collar one, 45% for native-born with North African immigrant parents, versus 30% for native-born persons (OKBA, 2012). Also, leaving the working class happens for them more through white collar positions, which reflects less an upward mobility than restructuration effects towards services positions (SANTELLI, 2016).

At the other end of the socioprofessional scale, only 8% of North African immigrants' offspring have a position as an executive or manager, versus 20% for natives (OKBA, 2012). Considering comparable positions of fathers reduces the gap between the two populations, but the gap remains. 6% of the sons of North African blue-collar immigrants become executives or manager while it is 13% for natives (OKBA, 2012).

In France, women immigrants' offspring are more represented in white collar positions than natives (respectively 54% versus 46% for the 35 to 50 years old). Nevertheless, the gaps between descendants of immigrants and natives is lower for women than for men (OKBA, 2012). For equivalent social origins, women descendants of North African immigrants are blue-collar and employees in the same proportions as natives, are slightly less in technicians and associate professional occupations and are barely more executives and managers 8.5% versus 7%) (OKBA, 2012). This observation is linked with their higher levels of education (cf. the discussion above).

In the United States, the distribution of industries and occupations of immigrants' offspring is relatively similar to the one of natives, but the former are more likely to be employed in professional occupations (TAYLOR, *et al.*, 2013; PICOT and HOU, 2011). Nevertheless, the distinction by region of origin depicts large differences. Descendants of Hispanic immigrants seem to have less high-skilled occupations than descendants of Asian immigrants or natives. 27% of descendants of Hispanic immigrants are for instance in management, professional and related services occupations whereas this share reaches 41% for natives (TAYLOR, *et al.*, 2013). On the contrary, this share reaches 49% for Asian immigrants' offspring and this group have the highest proportion in professional occupations. African immigrants' offspring are also almost twice as likely to be in professional occupations as natives, mainly because their educational attainment is higher (37% of them hold higher education degrees) (MOSISA, 2006). Professional occupations are contrarily less common among descendants of Mexican, Laotian and Cambodian immigrants.

In sum, this section, thanks to different indicators and controls, nuances the poor labour market integration of immigrants' offspring. As underlined in this first part and documented in the literature, immigrants' offspring seem to portray specific characteristics that could favour difficulties on the labour market, such as education or place of residence for example. However, it does not necessarily leads to negative results, as seen in the United States, or in France for wages for instance. This state of the art consequently pleads for a broad consideration of employment conditions.

By adopting a comparative perspective and an empirical methodology for employment conditions, this dissertation attempts to disentangle channels through which inequalities might be favoured, enriching the information on the scope of these inequalities in each country. The contrast between the different inequalities on employment conditions in the two countries illustrates country-specific patterns of labour market inequalities.

## SECTION 2. METHODOLOGICAL ISSUES

The underlying objective of this dissertation is to improve the understanding of the mechanisms of potential socio-economic inequalities immigrants' offspring face in the labour market, both in France and the United States. The two countries display different levels of labour market integration of immigrants' offspring, with apparently better integrated US-American immigrants' offspring. Because the two countries correspond to different models, one can assume that different compensatory mechanisms may take place in each country. A multidimensional approach is therefore best suited to understand the labour market integration of descendants of immigrants in a comparative perspective.

This section begins with a discussion on the comparative framework, by shedding light on institutional country features (labour market, immigration and integration-related institutions). It then develops the empirical methodology, characterizes the global approach of employment conditions and specifies data used and methodological approaches adopted.

### 2.1. COMPARISON BETWEEN FRANCE AND THE UNITED STATES: THE ROLE OF INSTITUTIONS

Comparative approaches provide information on the relationship between institutional structure, public policies and outcomes. This thesis takes advantage of variations across these countries in the organization and functioning of labour markets, as well as of different compositions of population and policies targeting specifically immigrants and their offspring.

Despite similar shares of immigrants' offspring among their population, the composition of this group of immigrants' offspring differs between the two countries (as seen in the first section). In addition, the institutional contexts in which they integrate matters and requires to be specified to properly identify potential channels of inequalities.

In order to have a broader understanding of the mechanisms of labour market inequalities between immigrants' offspring and natives, two main sets of institutions can be disentangled. First, labour market institutions are crucial to think about economic integration of this group. The French labour

market is for instance more regulated than the US-American one, which is more liberal<sup>13</sup> (HALL and SOSKICE, 2001; AMABLE, 2003). Second, immigration policies and integration measures will be considered, as they differ between the French Republican model and the US-American multicultural society.

### 2.1.1. LABOUR MARKET AND EDUCATIONAL INSTITUTIONS

Considering labour market integration of immigrants' offspring requires to consider the institutional framework regulating the labour market. This sub-section aims at pointing out some salient dissimilarities between the two countries, separated into liberal market economies in the United States and coordinated market economies in France (GALLIE, 2007). The institutional diversity of capitalism's analytical framework helps distinguish key features of interest.

#### *Educational systems and the connection between qualification and employment*

Before even reaching the labour market, inequalities emerge at school. Due to the importance of human capital on the labour market and the globally lower level of human capital of immigrants, the role of educational systems in intergenerational progress is crucial.

Inequalities already emerge at preschool and first years of schooling in France. Immigrants' offspring face specific difficulties, as attest the more frequent grade repetition in primary school, among which half of them take place in the first grade (CAILLE and ROSENWALD, 2006). Immigrants' offspring are older when they go to *collège*<sup>14</sup>: 36% of native-born with North African immigrant parents and 32% of native-born with Portuguese immigrant parents fall behind of at least one year, whereas this number only reaches 15% for natives (BRINBAUM, KIEFFER, 2009).

Due to urban and social segregation, native-born with North African immigrant parents are five times more likely to live in ZEP<sup>15</sup> colleges than natives (37% versus 7%) and three times more than those with Portuguese immigrant parents (12%) (BRINBAUM and KIEFFER, 2009). These schools tend to be socially more homogeneous, concentrate more individuals with immigrant background, with lower competition and progression (BRINBAUM and KIEFFER, 2009).

The importance of peer social capital and the issue of school segregation has been also raised in the United States. BANKSTON and CALDAS (1996) and more recently RUMBERGER and PALARDY (2005)

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<sup>13</sup> Within this theoretical framework, liberal countries are characterized by a flexible labour market and highly valued general skills whereas coordinated market economies depict a more regulated labour market for instance.

<sup>14</sup> *Collège* corresponds to 4 grades, from the 6<sup>th</sup> to the 9<sup>th</sup> American grades.

<sup>15</sup> The priority education zones (commonly abbreviated as ZEP, acronym for "Zone d'Education Prioritaire") are, in the French education system, areas in which are located schools (schools and colleges) with additional resources and more autonomy to deal difficulties in school and social order, breaking with traditional egalitarianism of the French education system to mitigate social inequalities.

## *General Introduction*

showed that the degree of minority concentration has a negative influence on achievement test results, most probably because of socio-economic disadvantages. However, PORTES and HAO (2004) argue that the strong effect of parents' country of birth on grades is attenuated in schools with high proportions of co-ethnics. Nevertheless, descendants of Mexican immigrants display significant disadvantages in achievement, even after controlling for school segregation.

The phenomenon of segregation at school is also related to academic and apprenticeship system, particularly in France, where the orientation into different educational pathways offers more possibilities to select individuals. This selection process at an early age induces a more pronounced differentiation among individuals (AMABLE, 2003). The relatively<sup>16</sup> more important role of apprenticeship in France, especially for low levels of education, also ensures better labour market integration. CAILLE (2005) shows that, in France, descendants of immigrants tend to be less in apprenticeship programs than natives. In the United States, apprenticeship system is, on the contrary, not widespread.

Furthermore, it appears central to study skills and not only to pay attention to the gross outcome in terms of educational levels. In terms of knowledge and skills that children are supposed to possess, achievements of immigrants' offspring at 15 years old are lower than the ones of natives in France (OECD, 2015a). The Programme for International Student Assessment (PISA) reveals that immigrants' offspring have on average lower reading scores at 15 years old than natives in France, whereas their scores are similar to the ones of natives in the United States. In France, the reading score of natives is 520, the one of native-born with a mixed background is 508 and the one of immigrants' offspring is 464. With a 40 points gap equivalent to a year of schooling, the existing gap in reading score between immigrants' offspring and natives almost equals one year and a half of schooling. In the United States, the score of descendants of immigrants and of native-born people are exactly similar (502) and can even be slightly higher when the immigrant background is mixed (505). The ability of school systems to provide equal skills and knowledge to populations with different parents' countries of origin is thus higher in the United States than in France.

In the two countries, levels of intergenerational transmission of inequalities are relatively high, and social background is therefore of primary importance (D'ADDIO, 2007). The inequalities in terms of schooling that are observed in France seem to attest more of social inequalities than inequalities based on parents' countries of birth (BRINBAUM and KIEFFER, 2009). Immigrant families cumulate unfavourable characteristics for their children's success at school: low levels of earnings, poor schooling conditions due to urban segregation, low social and education capital. As a result, immigrant

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<sup>16</sup> Despite the more important role of apprenticeship in France than in the United States, other countries such as Germany or Switzerland display higher levels of apprenticeship (Amable, 2003).

families are often less able to provide the same level of support as native-born families to their children's schooling and choices regarding orientation (BRINBAUM and KIEFFER, 2009).

The issue of unequal access to capital resources, such as information and institutional supports, are themselves related to socio-residential environment and to schooling conditions (SANTELLI, 2016). Most immigrants' offspring had to study in education programs with far less knowledge on the hierarchy among programs and without resources to decode the machinery of academic orientation. Deskilling, precariousness, unemployment, part-time jobs become the reality of these young individuals, who are more prone to feel dissatisfaction. The feeling of discrimination on the labour market arises with this inadequacy between qualification and employment possibilities, in a context of economic recession (SANTELLI, 2016). Several inequalities on the labour market are therefore also reflecting the schooling path (BRINBAUM and GUÉGNARD, 2012; FRICKEY and PRIMON, 2004).

The issue of this transition between schooling and employment is crucial in a country like France, in which the correlation between educational level and labour market situation is stronger than in the United States (SANTELLI, 2016). In the United States, the literature on the transition from schooling to work for immigrants' offspring is rather scarce, in particular because of the relatively smaller role played by the diploma.

### *Employment protection and the issue of selection*

France tends to display higher workers' protection than the United States (HALL and SOSKICE, 2001; AMABLE, 2003). These high levels of workers' protection may ensure higher job quality, but they might contribute as well to different adjustments for the labour force, yielding higher unemployment rates in France for instance (AMABLE, 2003).

Several aspects are more flexible in the United States and the main difference concerns permanent contracts. In the United States, working in a permanent contract does not protect workers as much as in France. Besides, it can be easier to use temporary employment or fixed-term contracts, since the period of notice is lower, etc. Overall, either on regular contracts or on temporary ones, employment protection is higher in France (AMABLE, 2003).

One of the main potential consequences of differences between the two countries in terms of employment protection could be on workers' selection. When employment protection is higher, employers might be more likely to select more strictly their employees (CAHUC and KRAMARZ, 2004). Low qualified workers tend to be the first to face difficulties, with lower relative retribution in the United States and/or an increase in their relative unemployment in France (GAUTIÉ, 2002). Immigrants' offspring have lower education levels, in particular in France. This might be even more problematic if this higher employment protection is associated to discrimination. Consequently, the

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existence of discrimination, whether taste-based or statistical<sup>17</sup>, might hinder the benefits of high levels of employment protection for those targeted by it. As immigrants' offspring are more prone to face discrimination, in particular in France, their labour market performances could be significantly different from the ones of natives. In the United States, the low levels of discrimination towards immigrants' offspring (which is more racial-based and concerns more Blacks, *i.e.* African-Americans) combined with low levels of employment protection might lead to lower inequalities in labour market output, even if these outputs might, at the same time, be more precarious.

## *Industrial relations and employment policy*

The United States has lower levels of corporatism, coordination, and centralization of wage bargaining compared to France (AMABLE, 2003). Furthermore, employment policies are more limited in the United States than in France. Overall, the more active policy in France is theoretically more able to deal with inequalities. The higher and more systematic minimum wage in France could possibly contribute, for instance, to the compression of wage distribution. The impact on job quality is, however, rather complex to assess (GAUTIÉ and MARGOLIS, 2009). Besides, the more generous levels of French unemployment benefits - and of the overall social protection - can also potentially allow workers to be more demanding in their job search. Therefore, there might be a larger substitution between low wage work and unemployment in France. On the contrary, individuals might be more likely to accept low wage work in the United States. The French employment policy, which recently subsidized low wage work, questions the potential low wage work trap (GAUTIÉ and MARGOLIS, 2009). Despite having lower levels of low wage work, France subsidizes low wages work more than the United States.

More broadly, public policy - employment policy as well as social policy - might also influence the employment conditions in each country (GAUTIÉ and MARGOLIS, 2009). Unemployment benefits and basic income can, for instance, impact the return into employment of those who remain employable (the issue of a poverty trap is for example quite active in France). In this perspective, France tends to display more generous pension benefits than the United States, and the trade-off between employment and the fact of being out of the labour force can be thought differently in the two countries.

### *2.1.2. IMMIGRATION-RELATED INSTITUTIONS*

Focusing on immigrants' offspring requires paying attention to other sets of institutions, which are specific to this group of population. According to AYDEMIR and SWEETMAN (2006, p. 1), "immigration-related [...] labour market outcomes depend upon selection, settlement and related policy and practice over long stretches of time". Besides, SAFI (2007) argues that it is mainly

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<sup>17</sup> See BECKER (1957) and ARROW (1973) for the two theories of discrimination.

structural inequality-related mechanisms, which lead to systematic subordination of certain groups of immigrants. This subsection aims at detailing the main differences between the two countries' immigration-related institutions and how these institutions impact immigrants' offspring and their integration.

Before detailing immigration-related institutions, one must keep in mind that the two countries display two different ideologies: France explicitly relies on a "Republican model", whereas the United States has a multicultural model (SAFI, 2007). HOROWITZ (1992) disentangles three axes of differences between the two countries: first, the function of immigration and its relation to the domestic territory; second, the position of immigrants in the identity of the nation; and third, the relative roles of the State and civic society. These differences are reflected in immigration-related institutions. Indeed, in France, citizens, politicians and even some social scientists tend to consider the integration of immigrants as an individualized process, by which the community formed around the country of origin can participate in a negative way. This "is emblematic of a certain French tradition to think of the integration of the immigrants" (SAFI, 2007, p. 4, I translate). Integration is considered as "a process of convergence of the characteristics of immigrants towards those of the host society" (SAFI, 2007, p. 4, I translate). On the contrary, in the United States, immigration is a reality inherent in the very existence of the United States as a nation - contrary to France, whose existence was well-established before welcoming immigrants. Legal immigration occupied little space in the US-American public debate<sup>18</sup>, at least until recently. Multiculturalism is a fundamental civic principle and the different communities are recognized, respected and sometimes protected by public authorities. SIMON and LYNCH (1999) show that public opinion towards immigration in the United States is far more positive than in France. This "civic culture" might have further consequences on migration policies (SAFI, 2007).

### *Migration policies*

Migration policies play a large role in the determination of the immigrants selected in a given country. Migration policy constitutes the set of objectives and means deployed by the state to control and regulate the presence of immigrants and migration flows on its territory. Policies can either encourage immigration or seek to limit or even eliminate it. In that perspective, France and the United States are different. Before 1965, migration flows to the United States were relatively restricted, in particular for certain groups of immigrants (see the discussion in the first section). But after 1965, migration reopened to all and massive entries from Latin American and Asian countries were observed, mainly concerning low-skilled workers.

However, the two countries display some similarities. Labour migration has for instance played a major role in their immigration inflows, in particular since mid-20<sup>th</sup> century. In France, reconstruction

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<sup>18</sup> Illegal migration is, on the contrary central in the American public debate.

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after World War II led to massive flows of relatively low-skilled immigrants, (comparable to the phenomenon in the United States in the post-1965). However, while in the United States, immigration has been used also to occupy the territory, in France, these inflows have only been seen as labour force resources. Furthermore, the French government, after World War II, has wrongly considered labour immigration as a temporary one, contrary to the United States (NOIRIEL, 1988). Since then, family immigration has constituted in the two countries a growing share of immigration flows, compared to labour immigration. For instance, it represents roughly two thirds of the permanent immigration flows in the United States in 2008 and more than 40% in France, mainly due to reunification of immigrant workers' family, who have typically relatively low levels of education (OECD, 2016a).

## *Integration policy*

The access to citizenship constitutes a major trait to facilitate integration. Regarding citizenship, the rules are distinct for immigrants and their offspring, "since the socialization of the latter in the host society is presumed by legislators to facilitate the assumption of the obligations of citizenship" (ALBA, 2005). Immigrants get citizenship in host countries by naturalization, which requires important length of residence and supplementary 'proofs' of belonging, such as proficiency in the receiving society's official language and knowledge of its history. These requirements contribute to decrease the will of some immigrants to get the host country citizenship. Second, both in France and in the US, generations of immigrants benefit from birth right, or *jus soli*, elements in the law that determine citizenship.

Yet there remains variation in the citizenship situations of immigrants' offspring in the two societies considered in this dissertation. In the United States, the attribution of citizenship to individuals is the simplest, as they only need to be born on US-American soil. Native-born with Mexican immigrant parents, the biggest group of immigrants' offspring in the United States, hold the US-American citizenship.

The French form of birth right citizenship for immigrants' offspring is more specific. It is for instance complicated for native-born with Algerian immigrant parents, because of the so-called 'double droit de sol', i.e. double *jus soli*. This corresponds to a legal principle that grants the nationality of the country of birth to any person born in this country with at least one parent also born there, and which consequently is the automatic citizenship at birth of the third generation (WEIL, 2002). The French-born children of foreign-born, non-citizen parents typically gain citizenship by their majority under conditions that depend on their year of birth. Before 1993 and since 1998, citizenship was acquired passively and was automatically granted at age 18 unless the person rejected it. Between those years, however, the more restrictive "*loi Pasqua*"<sup>19</sup> set different rules: citizenship for immigrants' offspring

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<sup>19</sup> Pasqua used to be the French Minister of Interior from 1986 to 1988, under President Mitterrand.

required a declaration of the intent to acquire it. This declaration required to fill a statement between the ages of 16 and 21 and was close to a naturalization procedure.<sup>20</sup>

Anti-discrimination remains one area that distinguishes France and the United States because the two countries do not deal with it the same way. In France, affirmative action measures remain scarce, because of the republican way of thinking equality (see FASSIN (2002) for a discussion on the French invention of discrimination). Contrary to France, the United States is characterized by a long tradition of affirmative action policies<sup>21</sup> implemented by the government to manage migration flows, welcome immigrants and fight against discrimination. These affirmative action policies have also been motivated by discrimination of African-Americans and to address the legacy of slavery. Thus, a certain trust prevails in the capacity of US-American institutions to manage immigration issues (SAFI, 2007). Moreover, the statistical system takes into account the ethnic identity of individuals, which is reported subjectively, to fight against discrimination. This practice is considered discriminatory in France and the statistical system only recognizes the distinction of nationality and place of birth, and only recently (in 2005 in the Labour Force Survey) parents' place of birth in some surveys (JUGNOT, 2016). Integration policies also include education-related policies for immigrants' offspring. Several measures can be implemented at school to foster integration of immigrants or of their children, such as language support in school or incentives for parents to put their children in pre-school. One can assume that the free preschool in France, in making it easier for immigrant families to put their children at school, can ease their integration. However, the literature is relatively scarce on this issue.

### *Other institutionalized patterns*

ALBA (2005) studies the institutionalization of social boundaries in some key domains such as religion, language, and race. He compares several countries, among which France and the United States. In his work, he underlines the importance of social boundaries with the majority group in the integration process and proposes to look at other normative patterns that shape the way immigrants' offspring can integrate society.

#### - Religion

The religious mainstream in the two countries “reflects historic settlements after long periods of religious conflicts” (ALBA, 2005, p. 32). In France, the conflicts resulted in the institutionalization of

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<sup>20</sup> Yet other immigrants' offspring have acquired citizenship at a younger age if their parents get naturalized. For some children of Algerian immigrants, there is an additional obstacle. Under the *double droit de sol*, the French-born child of French-born parents is French at birth, regardless of parents' citizenship. As Algeria was part of France before its independence (in 1962), this part of the law applies to French-born children of parents who were themselves born in Algeria before independence. As a result of the easy access to citizenship, the majority of them are legally French by the time of adulthood (WEIL, 2002).

<sup>21</sup> This tradition is nevertheless not linear over time, and have been recently debated, see SABBAGH (2011a) and some similarities between the two countries might emerge (SABBAGH, 2011b).

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one faith as the mainstream religion, Roman Catholicism. Judaism remains an accepted religion, acting as a “junior partner” (ALBA, 2005). The role of religion in France is paradoxical: on the one hand, the society is overtly secular and levels of practice and belief are much lower than in the United States (CASANOVA, 1994). It even tried to open up to Islam by establishing the *Conseil français du culte musulman* to ease communication between the State on religious matters that could concern Muslims (ALBA, 2005). But on the other hand, the institutionalisation of Catholicism has established customs and habits that are hardly undoable, and makes it difficult for other religions as Islam to be equally considered.<sup>22</sup> Consequently and despite the claim of secularity from the state, Islam is usually seen as a secondary religion (ALBA, 2005), experiencing difficulties to be respected as much as Catholicism. Indeed, it might appear subtle, but the supposed neutrality with respect to religion of the French state (which is a fundamental principle in France) is contradicted by the recognition of major Christian holidays for instance, whereas no equivalent exists for Muslim holidays. Other examples can be seen in the *foulard* controversy (versus the accepted wearing of crosses) or the difficulties for Muslims to build places of worship (see ALBA, 2005 for a deeper discussion on how France manages its supposed *laïcité*).

The United States has, over time, accepted more religions into the US-American mainstream. Despite having theoretically no State religion, the role played by beliefs and religion is considerable, and is reflected in national institutions<sup>23</sup>.

### - Language

The language draws a glaring boundary for immigrants’ offspring in France compared to the United States (ALBA, 2005). Despite the importance of a single national language in the United States, immigrant languages are still represented in school systems, unlike immigrant religions. Foreign language is indeed a required element of study for all students but notable differences are remarkable. In the United States, Spanish is, by far, the most studied language and is offered in all public-school systems (DRAPER and HICKS, 2002). Due to the large number of Spanish-speaking immigrant families, but also to the fact that native-born also frequently learn Spanish, the boundary associated to language tends to be blurred. On the contrary, in France, English and Spanish predominate in the study of foreign language and Arabic, for example, is not widely available in schools, nor is it frequently studied (ALBA, 2005). Overall, the more widespread knowledge of immigrant language in the United States facilitates the penetration of immigrant culture in host society more than it is the case in France.

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<sup>22</sup> The French law of 1905, for instance, stipulates that the State is distinct from any religion. It states that religious edifices are not subsidized by the State. However, those built before 1905 are subsidized by the State, and among them, there is only one mosque, the Grand Mosque of Paris.

<sup>23</sup> The presidents of the United States, for instance, take their oaths of office during Inauguration Day and finish with “So help me God”. The First Amendment of the Constitution illustrates the religious tolerance at the origin of the construction of the State.

- Race and ethnicity

In the United States, race and ethnicity can be seen as determinant of an important boundary between immigrants' offspring and the US-American majority group. Although racial features might appear to be a trait of individuals, in reality, they are a contextual feature of the host society according to PORTES and RUMBAUT (2006). Indeed, prejudice is encountered only in countries of destination, and discrimination faced by individuals based on physical differences might hinder integration. The discrimination faced by African-Americans can affect as well African immigrants and their descendants, because they present the same physical features.

WEIL (2003) underlines the mechanisms through which immigration regulations are implemented: the "egalitarian" or "universalistic" selection based on individual qualifications or the "racialist" approach. The United States adopted the latter following the end of the Civil War in 1870. Consequently, African-Americans have long been discriminated in the United States and the racial barrier remains a crucial one to understand US-American stratification. Yet, African-Americans are three times less represented in the population of immigrants' offspring than in the one of natives—it concerns 12% versus 4% of individuals (TAYLOR, *et al.*, 2013).

Over time, in the United States, the immigrant category lost importance in the political and social discourse (HOROWITZ, 1992). Instead, the role of ethnicity has emerged, and the public discourse discusses about ethnic groups and minorities with no taboo (SAFI, 2007). TAYLOR and his co-authors (2013), for instance, in one report on immigrants' offspring deals more with ethnicity than with the parents' country of birth.

The significance of racial distinction is more difficult to assess in France, also because of the "egalitarian" approach. Indeed, the Republican model of integration rejects the concept of race, despite being in the first article of the French Constitution (TODD, 1994). Debates are recurring; some researchers argue racism is a social problem in France (see ALBA, 2005 for examples), but because race has no room in official thinking, no data as rich as the US-American census are available in France. Despite not being measurable, racism is an issue in France: the National Consultative Human Rights Commission highlights that in 2006, one out of three French citizens think they might be racist (COMMISSION NATIONALE CONSULTATIVE DES DROITS DE L'HOMME, 2005).

Overall, the institutional context in which immigrants' offspring grow up, socialize and integrate themselves greatly differs between the two countries. Studying their labour market integration can benefit from considering these institutional differences. The next section describes the empirical approach adopted to study their employment conditions.

## 2.2. AN EMPIRICAL APPROACH TO EMPLOYMENT CONDITIONS

Employment conditions are multidimensional. SMITH, in 1776, is the first to theorise compensatory mechanisms. Two centuries later, ROSEN (1974, 1986) formalised it. This theory argues that poorer working or employment conditions can be compensated by higher wages. One can henceforth assume that inequalities on the labour market can happen on the access to employment, on wage or on other qualitative dimensions. The literature on the labour market integration of immigrants' offspring has shown (see Section 1) that they do not face the same level of difficulties on all dimensions. For that reason, understanding the hardships they face on the labour market requires to explore employment conditions too. Our approach falls within the work on quality of employment, insisting on the promotion of equality between social groups and the limitation of discrimination in employment (RALLE, 2006).

This section develops the dimensions of employment conditions studied in this dissertation. The matching between education and job is first explored, as inequalities in overeducation may result from stronger difficulties for one group to access employment. Three other dimensions of job quality are then investigated: wages, working time and job security. This section also presents the empirical methodologies adopted to address the specific issues raised by labour market inequalities between natives and of immigrants, *i.e.* selection models and distributional approaches.

### *2.2.1. THE COMPREHENSIVE APPROACH*

The comprehensive approach adopted provides in-depth information on the labour market integration of immigrants' offspring compared to natives. The inequalities in terms of employment, unemployment and participation rates have been extensively studied. They raised some difficulties for the immigrants' offspring, albeit not systematic. Some countries may have stronger inequalities on unemployment rates and others on employment conditions. The focus of this dissertation on employment conditions may therefore complete the characterisation of labour market inequalities according to parents' immigrant status. Besides, this global perspective associated with the comparison and contrast between the two countries shed light on differentiated mechanisms in France and in the United States.

Employment conditions are parts of the broader working conditions. Working conditions are “at the core of paid work and employment relationships”<sup>24</sup>. Working conditions cover a broad range of issues, from “working time (hours of work, rest periods, and work schedules) to remuneration, as well as the physical conditions and mental demands that exist in the workplace”<sup>25</sup>. Within this framework, employment conditions deal with the part of working conditions that has to do with conditions related

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<sup>24</sup> <http://www.ilo.org/global/topics/working-conditions/lang--en/index.htm> (consulted on August 20th, 2016)

<sup>25</sup> *Ibid.*

to the labour contract, rather than with work organisation and quality of work. In other words, this dissertation insists on job rather than work.

This examination adopts a global perspective of penalty into employment. It falls within a broad range of work that considers job quality as more fit to study potential penalty into employment (DAVOINE and ERHEL, 2007; ILO, 1999). The definitions of job quality and employment conditions are multidimensional. This dissertation falls within these multidimensional definitions. Those are particularly relevant for comparative analysis, given the complementarities and substitutions among dimensions of employment conditions, which may differ between countries. This dissertation explores three main aspects of employment conditions: the matching of the job between qualifications and job requirements in terms of skills and qualifications; employment quality, as presented in the employment contract; and finally, within employment quality indicators, this thesis adopts an innovative approach and addresses the distribution of wage gaps.

This analysis does not cover working conditions, as understood as the physical and mental conditions. The main reason is related to data. Comparative datasets that identify working conditions and immigrants' offspring at national levels are rare. If they exist, no meticulous comparison is possible as they do not cover the same features in the two countries.

### *Overeducation*

As part of the appreciation of an individual's occupation stands the adequacy between what he/she was trained to be and what he really does in its job. FREEMAN first identified this phenomenon in the United States in the early 1970s, which led to his seminal work *The Overeducated American* (1976). He defines overeducation as an imbalance between a worker's job-market qualifications and the position of employment he or she currently holds. If one's job does not fully draw upon the skills acquired through education and experience, one may be considered "overeducated". The measure of overeducation is more debated, as several measures are used to quantify overeducation, whether normative, statistical or subjective (see Chapter 1 for more details).

Job satisfaction greatly varies depending on the feeling of being overeducated; several studies addressed this relationship and found a negative relationship between overeducation and job satisfaction (VERHAEST and VERHFSTADT, 2016; FLEMING and KLER, 2014; PEIRÓ *et al.*, 2010; BAUDELOT *et al.*, 2002). Moreover, certain labour market analyses quantify overeducation as a sign of "bad job quality" (CAS, 2009). Overall, the mismatching aspect of overeducation and its consequences on job satisfaction justifies including overeducation as an important indicator of employment conditions.

### *Employment quality and socioeconomic security*

## *General Introduction*

Job quality is defined in the economic literature and for international organizations as a multidimensional concept (DAVOINE and ERHEL, 2007; ILO, 1999). The interest on job quality emerged in early 2000s, in particular within the framework of the European Employment Strategy in Europe and of “decent work” at the international level (DAVOINE, *et al.*, 2008; ILO, 1999). Job quality has been introduced following some work on job satisfaction, in which workers are asked about the salient important dimensions that increase their job satisfaction. Consequently, job quality covers a large set of dimensions, going from wage to career prospects or independence at work. Yet, analyses and studies on the topic show that there are some central dimensions that are found in most definitions and which correspond to employment conditions. This dissertation focuses on three of them related to socioeconomic security selected in academic work and in the definitions proposed by international organizations (UNECE, 2010; ILO, 2012): wage, job security and working time.

Wage constitutes the most apparent component included in employment quality measures as it might allow workers to have a decent standard of living. A great amount of research has focused on low-wage work (APPELBAUM and SCHMITT, 2009; CAROLI and GAUTIÉ, 2009; GAUTIÉ and SCHMITT, 2010), in particular in the United States, where income and wealth inequalities have dramatically increased in the 20<sup>th</sup> century (PIKETTY and SAEZ, 2003). Due to the “more inclusive” labour market institutions and for instance to the existence and to the level of the minimum wage, the share of poor workers in France tends to be lower than in the United States (APPELBAUM and SCHMITT, 2009).

A second span of literature distinguishes ‘good jobs’ and ‘bad jobs’ depending on the levels of job security. In addition to wage, these analyses consider the type of employment contract and disentangle temporary jobs from permanent contracts. In France, this distinction is particularly relevant given job security differences between the two types of contracts. In the United States, job security discrepancies do not really depend on the job contract that can be easily broken but rather on the access to health assurance. As in the United States - and contrary to France - access to health assurance is not (yet) universal; access to these benefits represents a crucial criterion of job security for workers (KALLEBERG *et al.*, 2000; SCHMITT and JONES, 2012).

Wage and job security are closely related to the third dimension of employment quality: working time. A part-time job entails generally a low wage, due to the lower number of hours worked and offers generally a lower job security in terms of access to benefits. Part-time jobs are nevertheless increasingly used by firms to extend flexibility (ILO, 2008). These jobs often constitute precarious jobs, sometimes chosen by workers (mainly due to personal reasons), but workers for whom full-time jobs opportunities are non-existent can also have to take them. The criterion of choice in matters of working time is essential to understand one’s employment quality, and the distinction of involuntary part-time jobs can hence inform on lower employment quality.

## *Wage inequalities: beyond the average*

Wage has a unique position among employment conditions, particularly because it is often seen as the major determinant of someone's living conditions. For that reason, an in-depth analysis is devoted to this key element of employment conditions. In France, unadjusted (or gross) wage differences seem relatively important whereas rather inexistent at the aggregated level in the United States.

The issue of wage gap<sup>26</sup> and inequalities can be studied with monthly or hourly wage. While the hourly wage is generally preferred to measure inequalities, this variable is less robust than monthly wage in the French Labour Force survey. Using the monthly wage necessitates to take into account the potential structural effect if the composition of the labour force differs in terms of working time.

The measure of wage gap (or unadjusted wage differences) is insufficient to interpret the causes of inequality. Statistics on wage differences between two groups are most often based on comparison of the average hourly wages, without taking into account structural effects, with the exception of the differences in working time (L'HORTY and MEURS, 2016). Yet, part of inequality comes from the fact that the two groups differ in terms of age, education level but also in terms of sector of activity.

Unadjusted wage differences between natives and of immigrants appear to be largely explained by individual characteristics. In other words, wage gaps may not be the result of inequalities, but of composition effects. Yet, surveys in France, addressed to immigrants' offspring, record perceived discrimination, including on wage (SAFI and SIMON, 2013). Perceived discrimination might go hand in hand with wage differences faced by some immigrants' offspring at the disaggregated level. In this context, looking at the distributional composition of wage inequalities can provide information on whether particular groups of immigrants' offspring face wage inequalities and on which kind of native-born workers with immigrant parents are the most affected by wage inequalities. Are they more part of low-wage earners or rather at the top of the wage distribution? FRANCE STRATÉGIE (2016) pointed out that immigrants' offspring have more difficulties to reach the top 10% wages. Are wage differences the same all along the wage distribution?

Based on the perceptions of labour market discrimination of immigrants' offspring and to provide a comprehensive picture of mechanisms of inequalities, an exploration of the role played by unobservable variables can be done. The importance of unobservable variables varies across populations but also across countries. Analysing the role of unobservable variables across countries for immigrants' offspring might henceforth provide insights on the inequalities at various levels of the distribution.

## *2.2.2. THE EMPIRICAL METHODOLOGY*

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<sup>26</sup> The wage gap is considered positive when natives earn more than immigrants' offspring and negative when immigrants' offspring earn more than natives.

## *General Introduction*

This dissertation calls for empirical methodologies adapted to the issue of labour market integration of immigrants' offspring. Two main features of labour market integration of this group in France is the stronger selection they face to get a position and inequalities that exist among the group, referring to other sociodemographic characteristics. In the United States, no selection bias is noticed in the access to employment on the basis of parents' immigrant status. The empirical methodology consequently needs to be adapted and it also needs to address these issues. Hence, this empirical analysis is based on selection models and on a specific consideration of heterogeneity, through decomposition methods.

## *The selection models*

Selection models were developed in the late 1970s to respond to the inherent issue in applied econometric issues: selection bias. Statistical analyses based on non-randomly selected samples can lead to inaccurate conclusions and potentially to wrong policies. Labour economics and labour market issues represent the ideal context to study this empirical issue and that is why HECKMAN (1979) developed a model that takes into account this bias, which can basically arise either from self-selection or from a selection from data analysts.

Selection models, as developed by Heckman, rely on a two-stage estimation method to correct the bias. The first step consists in correcting the bias by using a control function, relatively simple to implement, as it involves a normality assumption and provides a test for sample selection bias. Let's suppose, as Heckman did, that a researcher wants to estimate the determinants of wage offers, but can only have wage observations for those who work. Since individuals who work are non-randomly selected from the entire population, estimating the determinants of wages from the subpopulation who work may introduce some bias. In a first step, the model consequently consists in an estimation of the probability of working, based on economic theory and controlling for several parameters. Second, once this correction of selection has been incorporated as an additional explanatory variable, the wage equation can be estimated as usual, with this predicted individual probability.

These models are particularly relevant in immigrant-related literature, as the penalty associated to country of birth or parents' country of birth is evident (OECD, 2015a). Besides, these characteristics appear to influence both the access to job and employment conditions. However, the impact on these two levels of labour market characteristics varies from one output to the other (AEBERHARDT, *et al.*, 2010). This selection bias occurs through several channels, from unobservable differences (language, personality, physical characteristics, *etc.*) to discrimination based on immigrant parents' country of origin. The addition of channels supports the correction of selection bias.

Two kinds of linear models are used in this dissertation to deal with selection bias, depending on the type of variable of interest studied, either discrete or continuous. In the case where the variable of interest is continuous, the model used is the one of Heckman. However, when the variable of interest

is discrete, the model used is a bivariate probit with selection. This second model fits the type of variable considered here (*i.e.* discrete), but remains relatively similar to the one developed by Heckman. The main difference is that the second step is also discrete and relies consequently on a probit. These two kinds of selection models are explored and used in chapters 1 and 2.

### *The decomposition method and the use of non-parametric models*

To what extent wage inequalities are attributed to traits that are specific to migrants' or to other unobserved variables, is a question that can be answered by decomposition methods. The seminal papers of OAXACA (1973) and BLINDER (1973) introduced decomposition methods in labour economics, which have been extensively used ever since. Oaxaca wage decomposition is a statistical method that explains the difference in the means of a dependent variable between two groups by decomposing the gap into two parts. One part that is due to differences in the mean values of the independent variable within the groups, and a second part to group differences in the effects of the independent variable.

Some inequalities in the wage distribution tend to be invisible in models which study the average distribution. Two kinds of models are generally implemented to identify distributional effects: non-parametric or parametric models (FORTIN, et al., 2011). Parametric models—linear and nonlinear models—rely on the hypothesis of the existence of a function, which describes the relationship between the explained variables and explanatory variables. For some populations, that relationship is not known and thus requires to be estimated differently. Nonparametric estimation differs from parametric regression because the shape of the functional relationships between the dependent and the independent variables are not predetermined, but can be adjusted to capture specific features of the data. When the relationship is unknown and nonlinear, nonparametric regression models should be used.

### *The comparative perspective and its implications on variables and databases*

As previously detailed, this dissertation adopts a comparative perspective between France and the United States. By comparing two major countries of immigration, this dissertation helps identify some patterns and elements of national context that can have an impact on inequalities between natives and of immigrants. Among the obstacles to international comparisons is the right empirical consideration of national contexts, which has consequences on the variables used in econometric models. For instance, the analysis of working conditions is made difficult because of the lack of comparable data on this topic. Moreover, when data are provided, the identification of variables can be relatively different. This challenge will be discussed extensively in the first chapter. The analysis of overeducation in a normative perspective can for instance be difficult to conduct similarly in the two

countries because industries and sometimes even education and diploma do not depict the same phenomenon. Moreover, the job security associated to a permanent contract, compared to the lower one for short-term contracts, has no justification in the United States. On the contrary, a job is thought more secure in the United States when benefits, such as health insurance, are associated to it (even if this a short-term contract). Therefore, the issue of measure is among the main challenges of this dissertation.

A second challenge resides in the data used. No database considering the labour market integration of immigrants' offspring neither in France nor in the United States exists. Instead, several databases capture, at the national level, other indicators of labour market integration. In the United States, two national databases record labour market integration for the population with immigrant parents: the Current Population Survey and the American Community Survey. I chose to use in this dissertation the Current Population Survey (CPS) because its primary purpose is precisely to collect information on the labour force (KROMER and HOWARD, 2010). It presents therefore more precise information and more variables. Moreover, this survey has included a question on parents' place of birth in 1994, and is consequently appropriate to focus on immigrants' offspring.

In France, two databases are alternatively used in this dissertation. In the first chapter, which deals with overeducation, the *Trajectoires et Origines* survey is used. This survey, run in 2008 by two national institutes (Insee: *Institut national de la statistique et des études économiques* and Ined: *Institut national d'études démographiques*), aims at specifically identifying the impact of origins on several outputs (living conditions, social trajectories), while taking into account other sociodemographic characteristics, such as social environment, neighbourhood, age, cohort, sex or educational level. This survey is rich and allows analyses to be controlled for a large set of variables, particularly fit to the population of interest. In the second and third chapters, the French Labour Force Survey (*Enquête Emploi en Continu*) is used. This survey, which, as the CPS, aims at providing key information on the labour force, has introduced a question on parents' place of birth in 2005 (AEBERHARDT *et al.*, 2010). Since then, it has become possible to gather information on several labour market statistics, among which the ones of chapter 2 and 3.

### SECTION 3. OUTLINE OF THE DISSERTATION

The comparative and empirical analysis of employment conditions inequalities according to parents' immigrant status will shed new light on the labour market integration of immigrants' offspring. This broader analysis of employment conditions inequalities is addressed in this dissertation in three empirical analyses. The first chapter considers the matching between education and the education requirements of the job. This analysis of overeducation inequalities is followed in the second chapter

by an exploration of employment quality inequalities. Following the results on wage of chapter 2, the last chapter addresses the distributional composition of wage gaps, as well as the distribution of their drivers.

### 3.1. OVEREDUCATION

Chapter 1 studies the differences in overeducation between native-born and immigrants' offspring. The starting point is to consider that successful labour market integration can also be measured in terms of matching between qualifications and employment. Although immigrants are more likely to face overeducation because they often graduate with foreign qualifications, their offspring graduate with similar qualifications than other native-born, and have no apparent reason to face more frequent overeducation than others.

The analysis is based on an empirical methodology which takes into account the selection bias to access employment. A bivariate probit with selection allows to determine the most important characteristics that are related to overeducation, once the selection has been taken into account. In accordance with the predictions from the literature on labour market integration of descendants of immigrants, I find that, in France, immigrants' offspring are more frequently overeducated. Despite higher levels of overeducation among the population in the United States, my results show that the difference between natives and of immigrant is rather small. The results of the econometric estimations however suggest that being descendants of immigrants does not significantly affect overeducation in both countries, even though immigrants' offspring face a stronger selection to get a job in France. The chapter finishes with a discussion on the potential mechanisms leading to these results.

### 3.2. EMPLOYMENT QUALITY

Chapter 2 investigates the quality of employment based on three main characteristics of the employment contract: wage, working time and job security. Using a comprehensive definition of employment quality, this analysis aims at determining on which dimensions of employment quality, inequalities between natives and of immigrants are to be found in the two countries.

The descriptive statistics show lower employment quality for descendants of immigrants in both countries. To investigate whether these lower levels are attributable to having immigrant parents and because of the selection bias, selection models are run, separately for each dimension, in each country. Bivariate probit with selection are used for discrete variables (job security and working time), while Heckman selection models are used for the continuous variable (wage). In line with the analytical framework, the empirical results indicate divergent results depending on the dimensions of

employment quality considered. In both countries, a positive effect of having immigrant parents is associated to wage whereas a negative effect is found on job security in France and on the working time in the United States. These findings consequently emphasize major differences on the dimensions of inequalities between descendants of immigrants and of native-born people in the two countries. A discussion on the potential mechanisms leading to these results concludes this chapter.

### 3.3. WAGE GAPS DISTRIBUTION AND DECOMPOSITION

Chapter 3 stems from the results of the previous chapter, which indicate that the wage gap between natives or immigrant is partially explained by individual and job-related characteristics, but having immigrant parents remains still, positively associated with wage in both countries. Yet, the perceived inequalities from immigrants' offspring tend to acknowledge wage inequalities. In this context, a deeper knowledge of the mechanisms of wage inequalities is desirable. This chapter aims at providing information on the distribution of these wage gaps and at studying the distribution of the contribution of the unobservable component.

The methodology used for the decomposition relies on a non-parametric technique proposed by ÑOPO in 2008. This chapter shows that, working on monthly wage, wage gaps between natives and of immigrants are more pronounced at the bottom of the distribution in the two countries, but more important in the United States. Moreover, this analysis shows that the unobservable component is contributing to reduce the wage gap in the United States – especially at the top of the distribution – but to increase it in France. This chapter indicates that in France, the unobservable component is nevertheless relatively small when only full-time workers are considered. These results are discussed in a last section.

# CHAPTER 1: OVEREDUCATION AMONG DESCENDANTS OF IMMIGRANTS IN FRANCE AND THE UNITED STATES

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## INTRODUCTION

In times of economic crisis, fewer jobs are available. Those competing for employment adjust their expectations accordingly, often applying for, and accepting, positions well below their qualifications. Although the most recent global recession has provided researchers with abundant evidence, Richard Freeman first identified this phenomenon in the United States in the early 1970s, which led to his seminal work *The Overeducated American* (1976). Much of his terminology regarding overeducation remains in use. Overeducation refers to an imbalance between a worker's qualifications and the position of employment he or she currently holds. If one's job does not fully draw upon the skills acquired through education and experience, one may be considered "overeducated." The frequency of this imbalance increases along with a rise in unemployment (FONDEUR, 2001), *ergo* the increased attention paid to such matters by academic researchers as well as public policy actors. This renewed interest is not merely in overeducation, but in the broader category of labour market asymmetries understood as representing overproduction of human capital. Furthermore, certain labour market analyses quantify overeducation as a sign of poor "job quality" (CAS, 2009). Considered as a symptom of low job quality, overeducation can be a measure of labour market integration, which is of concern to a wide range of economists.

The concept of overeducation has often been explored with reference to the integration of new workers into the labour market but rarely as a means to compare the experiences of two populations whose parents have different countries of birth. This chapter is the first work to empirically compare and analyse overeducation in the native-born population, in relation to parents' immigrant status in France and the United States. However, it does not intend to look at the development of this phenomenon.

Overeducation comparisons between populations of the same country often contrast immigrants and native-born persons. For example, some authors have looked at the increased likelihood of immigrant populations to experience diploma underappreciation (CHISWICK, MILLER, 2008; BUTCHER, 1994; DUMONT, MONSO, 2007)). Yet, overeducation among descendants of immigrants has rarely been addressed by researchers, even though it represents a clear loss for the countries who invested in their education.

An exception was made by the OECD: it revealed in France significantly higher shares of overeducated people among the descendants of immigrants compared to natives, contrary to the United States. As OECD studies rely on comparable data across countries, the control variables are somewhat restricted, and no distinction can be made by parents' country of birth (OECD, 2015b). At a national level, MESSINIS (2008) measured overeducation and overskilling in Australia and identifies Greek descendants of immigrants' overeducation. His article also sheds light on the determinant factors of language and parent occupation. BATTU and SLOANE (2002) suggest that in the United Kingdom, ethnic minorities, particularly descendants of Indian immigrants, are more likely to be affected by overeducation than whites. In France, STEICHEN (2013) stresses with the Generation 98 survey that native-born with North African immigrant parents are not more overeducated than natives. Contrarily to the OECD studies, her focus is on access to the first job, for which rates of overeducation are also high for natives.

This chapter is an attempt to extend the analysis of immigrants' offspring's experience, who, despite a common nationality with other native-born, still face significant labour market inequalities. They tend, for instance, to face more discrimination in the labour market than natives and they also have - on average - a lower knowledge of labour market functioning (OECD, 2014a). Research has also confirmed inequalities in the hiring processes experienced by descendants of immigrants (OECD, 2009). One may conclude from such evidence (*e.g.* poor anticipation of labour market needs in terms of qualification and skills for instance) that descendants of immigrants might systematically lower their expectations and seek positions for which they would be overeducated. This chapter intends to examine whether overeducation is more prevalent in immigrants' offspring populations. If so, why? Is it more the case in France?

This chapter is organized as follows. The first section proposes a review of the literature dealing with the definition and the measurement of overeducation, as well as its theoretical justification. It then explores the determinants of overeducation. Section two will follow the hypotheses the literature has raised, exploring the differences in overeducation by way of data. In this section, disparities in both levels and gaps of education between natives and descendants of immigrants are seen. Initial descriptive statistics concerning the existing differential in overeducation between descendants of immigrants and of native-born are also presented. The third section is devoted to an empirical analysis of the determinants of overeducation for natives and descendants of immigrants in France. This section

relies on *Trajectoires et Origines*, a French database offering precise occupational variables as well as a large data sample of descendants of immigrants. The econometric analysis of this section assesses the selection process occurring at the entry into the labour market. The third section of the chapter compares descendants of immigrants' overeducation relative to natives in France and the United States. This section first explains the (necessarily) different methodology used to compare overeducation in the two countries. The same model as in the previous section is run with this new way of measuring overeducation, but only with comparable explanatory variables for France and the United States. Following this, the analysis highlights the relative absence of origin-based disparity in the United States (where racial disparity seems to prevail), yet reveals higher levels of overeducation there than in France. A final section discusses the potential mechanisms explaining the results.

## SECTION 1. DEFINITION AND DETERMINANTS OF OVEREDUCATION

This section is a review of the literature discussing the concept of overeducation and its corollaries. Specific attention is paid to both theoretical definition and empirical measurement. Next, this section explores the potential sources of overeducation, whether relative to individual characteristics or to the labour market structure and composition.

### 1.1. DEFINITION OF OVEREDUCATION<sup>27</sup>

As noted above, the term overeducation was introduced by Richard Freeman in his 1976 work *The Overeducated American*. In this book, Freeman analysed the labour market downturn of the 1970s, particularly for the college educated workforce, and argued that institutions of education were generating overeducation. Forty years later, this concept seems even more relevant in an environment of increasing investment in educational qualification (BAUDELLOT, GLAUDE, 1989; DI PAOLA, MOULLET, 2012; LEMISTRE, 2014; KUCCEL, 2011). In fact, overeducation in western societies concerns more or less a third to a fifth of workers, depending on countries and populations (OECD, 2013; KUCCEL, 2011).

It is therefore crucial to understand how economic theories attempt to account for overeducation. Although several theories have been used to explain the phenomenon, all consider either the individual or firm as the central agent to be analysed and focus on those conditions affecting the supply of, and demand for, educated workers.

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<sup>27</sup> The French translation of overeducation, *déclassement*, is ambiguous. It covers two different phenomena: overeducation, as studied in this chapter, and downgrading, which means the gaps between parents and their children once adult in terms of social status (see ECKERT (2014) for a discussion on the two concepts). This dissertation focuses only on overeducation.

*1.1.1. THE CONCEPTUAL DEFINITION*

*The Human Capital Theory and the neoclassical impossibility of overeducation*

The concept of overeducation, as first defined by FREEMAN (1976), results from a difference between the worker's level of education and the employment's required qualifications. Hence, this concept is incompatible with standard Human Capital theory, in which no distinction is made between workers and jobs. The Human Capital theory, as conceived, does not allow studying the issue of discrepancy between the education level of individuals and the level of qualification required by their job. SICHERMAN argues that the existence of overeducated workers "challenge[s] the validity of human capital theory (BECKER, 1964; MINCER, 1974) in explaining the relations between wages and education" (SICHERMAN, 1991, p.102).

The starting point of neoclassical economists is that firms make production and input decisions based on given technology and relative prices. Flexible production techniques allow firms to adjust their production processes to reduce the use of either capital or labour, or subsets among each category, when relative supply and prices of inputs change. Under the hypothesis of zero information cost, the labour market is able to adapt rapidly to a new equilibrium set of relative prices (*i.e.* wages) in case of a change in relative labour supplies. As a result, a growth of the relative supply of university graduates would, *ceteris paribus*, reduce their relative wages and not generate overeducation.

Even though the Human Capital Theory does not associate qualification to a given employment and consequently does not allow the analysis of overeducation, the empirical literature documents the persistence of overeducation over time (CLARK, JOUBERT, MAUREL, 2014; TSANG, LEVIN, 1985) and tends to refute predictions derived from the neoclassical model. Other theoretical approaches acknowledge the possibility of overeducation.

*The approach of Lester THUROW: the job-competition model*

The job-competition model of THUROW (1975) provides some explanation to overeducation. Contrary to the Human Capital theory, the job-competition model associates an individual's education level to jobs' level of qualification. Hence, the concept of overeducation finds a place in this theory.

The model proposes two queues: a job queue and a worker queue. Each job in the job queue requires a particular skill, has particular productivity features and a clear pay scale. Workers learn the necessary knowledge once in the job. Employers then choose from among the worker queue the candidate that will most rapidly meet the norms of productivity that the job needs. Another queue is formed by individuals competing for jobs. Their relative position in the queue is defined by a set of characteristics, such as education and experience, which give an indication to the employer on the cost of training them to get the skills required to perform a given job. "The higher a person is in the person

queue, the less is the cost of training and the more likely the person will be to get a job at the head of the job queue” (TSANG, LEVIN, 1985). Initial education plays the role of an entry-level for a job, not by signalling individual productivity but rather training costs. Education level (or the diploma) consequently signals adaptability to a job (this hypothesis has been well-received in France (LÉNÉ, 2002; STANKIEWICZ, 1998)) and employers will associate a desired level of education to each position. Individuals will therefore invest in education to “advance in the queue”, increasing their chances of getting a better job than others. In addition, THUROW (1975) supposes that productivity, and therefore wages, depend on the occupation for which the workers apply. Wages, in this theory, are determined via out-of-market administrative procedures.

### *The segmentation theory*

HARTOG (2001) has noted that skill levels do not differ much between developed countries but the dispersion of skills within populations differs widely. In this sense, the approach of a segmented labour market might illuminate the existence of such heterogeneity in terms of matching between schooling and occupation. The theory of labour market segmentation was introduced by DOERINGER and PIORE in early 1970s; it distinguishes internal labour market from external labour market (DOERINGER, PIORE, 1971). Internal labour markets concentrate better jobs, which allow for upward job mobility through internal promotion. This labour market is usually comprised of skilled and well-educated workers. In this internal labour market, career opportunities are substantial and internal promotion is common. The probability of being overeducated or over-skilled is relatively low in this labour market, both because it starts more favourably and because advancement is available. External labour markets, on the contrary, concentrate jobs that are competing with one another in free functioning markets. This labour market is comprised of competing workers, who are solicited by firms when they grow or when all other workers from the internal labour market are already working for them. This external labour market consequently tends to be unstable for workers; wages are also lower. The main difference between these two labour markets is the asymmetry in opportunity for mobility. In fact, one might consider external labour markets as an entrance to the internal one. However, mobility between the two segments is can be quite low. Recruiting workers to internal market jobs often makes use of internal promotion rather than recruitment channels open to external candidates. Workers on the external labour market consequently face more underemployment and unemployment. It is quite common to associate this external labour market to the secondary segment (DOERINGER, PIORE, 1971), which concentrates lower quality jobs, such as temporary employment or involuntary part-time jobs. Generally, these jobs tend to require lower levels of education or skills, for which highly educated workers would be overqualified.

Nowadays, when young workers enter the labour market, they are disfavoured for two reasons. On the one hand, there is an age effect. With limited professional experience, it is harder to integrate into the

internal labour market, especially for less educated workers. As ARROW (1962) suggested, professional experience can influence workers' productivity and therefore, might impact employers' hiring decisions. On the other hand, a generation effect might also disfavour the young. It is now harder to integrate the internal labour market, due to the large supply of educated workers and because of the contraction of firms' demand. Young educated workers are consequently falling back to the external labour markets, to jobs for which they are overeducated.

### 1.1.2. THE DEBATES AROUND MEASUREMENT

The debate over measures of overeducation remains controversial in economics and sociology. Three categories of measure are generally distinguished: the subjective approach, the normative approach and the statistical approach. In addition, a fourth approach measures overeducation based on wage data.

Overeducation can be first measured by workers' self-assessment regarding their job (subjective approach). Several questions can be asked to assess their over-/undereducation situation. In the American survey PSID, individuals are for instance asked "how much formal education is required to get a job like yours?". This approach is rich since subjective feelings of overeducation may have consequences on worker's motivation, job implication and on their way to handle their career (NAUZE-FICHET and TOMASINI, 2002). Moreover, DOLTON and VIGNOLES (2000) underline that this subjective measure brings a specific measure of overeducation for a determined context (firm, sector of activity, etc.) and that it can also adapt quickly to technological or organizational changes. This method faces limitations, namely the fact that the diversity of answers may depend on individuals' interpretations, which depend on unobservable characteristics. The main limit is that it can account for job dissatisfaction rather than proper overeducation (NAUZE-FICHET and TOMASINI, 2002).

The second measure is normative<sup>28</sup> and relies on the analysis of education required *a priori* to get a specific job and *vice versa*. This detailed analysis allows the construction of a correspondence table between education/diploma and occupations. This measure is then based on a comparison between workers' education with the "normally required" education to get their specific jobs. This approach is largely used in the United States and relies on the "Dictionary of Occupation Titles" (DOT)<sup>29</sup> but is very detailed and not very comprehensive. Despite its objectivity, the measure is also subject to criticism. Estimates are provided for occupations and may not be task- or job-specific. Many occupations contain a wide variety of tasks and thus may have a variety of educational requirements. The DOT measure of required schooling can classify someone as overeducated when the person has a very good job within an occupation "family". In France, it has been used and implemented by

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<sup>28</sup> Only a few jobs stand as an exception to this absence of normativity in terms of diploma. For instance, being a doctor or a certified accountant requires specific certifications or diplomas.

<sup>29</sup> The construction of this dictionary is based on a statistical analysis.

AFFICHARD (1981) with the creation of the “code DPJ” which disentangles 9 occupational groups. As this normative approach seems natural and objective, it is also used by sociologists. It nevertheless requires a significant amount of work regarding occupation/job content and the redefinition of job contents for each job (HARTOG, 2000). Furthermore, matching between diplomas and occupations rapidly evolves. In France, the existing correspondence table is old (it dates back to 1981) and no longer reflects reality. As a result, this method is increasingly less used<sup>30</sup>, notably for cross-country studies since the assumption of homogeneity of matching pairs is particularly unlikely to hold in different countries.

The third measure is statistical<sup>31</sup>; this approach defines more simply common (“normal”) correspondences based on the most frequent situations. This method is commonly used as a substitute for the previous method when the correspondence table does not exist or fit (NAUZE-FICHET and TOMASINI, 2002). In France, FORGEOT and GAUTIÉ (1997) propose an innovative statistical approach that relies on an empirical analysis of contingency tables that match diploma and occupations (which correspond to French socio-professional categories (CSP)). With the help of the French Labour Force Survey of March 1986, for 18-29 year olds that are in a non-subsidized job, they constructed a diploma-occupation correspondence table based on the relative shares of each socio-professional category at a given diploma/education level and vice-versa. The “normal” diploma-socio-professional situations are the ones for which a specific diploma frequently leads to a specific socio-professional category and, conversely, situations for which this specific socio-professional category is frequently chosen by workers that have this specific diploma. This last approach is the most frequently adopted in French publications on overeducation, and also the one adopted in this dissertation.

A fourth way to quantify overeducation is with income data, suggesting more “under-earning” than overeducation. Since the late 1990s, economists have started to measure overeducation as being the relative wage gap between individuals at one level of qualification apart. Following this approach, an individual is overeducated if more than half of individuals who have the immediately inferior diploma earn more than this individual. This measure is consequently more relative than absolute and is also very sensitive to threshold effects (NAUZE FICHET and TOMASINI, 2002). Apart from these technical limitations, the main issue remains that the focus on wages requires assumptions about “all other things being equal”. Within the framework of compensating wage differentials, a lot of variables may explain wage differentials, even at equal levels of human capital (*e.g.* level of education), without attributing them to overeducation. It is the case for the type of occupation for instance. Each occupation presents a particular internal wage dispersion. This also occurs for the same occupations only differing from each other by their field of activity. Besides, two similar occupations might have

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<sup>30</sup> An exception can be found in LEMISTRE (2014) in which he compares overeducation measured with the three measures mentioned. The author updates the AFFICHARD’s 1981 classification.

<sup>31</sup> This measure is also normative in a way, as it considers normal the most frequent situation. However, the literature on overeducation calls it statistical rather than normative.

identical wages at the beginning of the career, but they most often differ in terms of possibilities of wage evolution (BIGARD, GUILLOTIN, 1996). Theoretically, such an approach is based solely on the Human Capital theory (LEMISTRE, 2007). Indeed, in this definition, wage and employment are dissociated precisely to avoid the reference to employment. Moreover, and this is the essential point, an individual can take a job which requires the level of skills acquired in his education but be “poorly paid”. Several reasons can explain this low level of earnings without being considered as overeducation *per se*, either unfavourable labour market outcomes (decline in employment, high unemployment) or a social construction of unfavourable qualifications. In that sense, this approach is far from the perspective adopted in this analysis and will not be studied in this chapter.

This chapter intends to measure overeducation first statistically then normatively. The subjective measure does not fully lend itself to comparisons and is not used. In addition to examine occupations to determine situations of overeducation, the scale of overeducation will consider, as a sensitivity analysis, unemployment as a potential situation of overeducation (see section 5). According to LEMISTRE (2014), the basic assumption that unemployment reflects a form of mismatch between diplomas and occupations relies on both theoretical and empirical justifications. Theoretically<sup>32</sup>, the examination of unemployment as a form of overeducation fits into the Keynesian involuntary unemployment perspective and into the subsequent theory of Thurow of a jobs queue. Jobs queues build up in the light of national level of unemployment and on the “structural” mismatch between education and occupation that characterizes each country (BUHEL, GRIPP, MERTENS, 2003). Overeducation also reflects individuals’ expectations and opportunities on the labour market. Individuals expect not only to find a job but rather to find a job that matches their qualifications. A comparison between France and the United States is simplified by the consideration of unemployment as a potential result of overeducation, as the trade-off between employment and unemployment significantly differs from a country to the other. Indeed, labour market institutions such as unemployment benefits (length and levels of the benefits) might influence the probability of accepting jobs for which individuals would be overeducated (see also chapter 2), as do other social benefits that can allow them to defer employment. In short, individuals may choose to hold out for a better job opportunity not primarily as a result of individual choice, but as a function of labour market conditions, as well as labour and social institutions that may be more or less generous or accessible.

Empirically, the consideration of unemployment also fits the jobs queue logic. Long unemployment periods strongly favour overeducation. Overeducation may consequently be considered as a last resort for some workers. Moreover, empirical examinations in France found that overeducation decreased after the last economic crisis for low qualified workers (LEMISTRE, 2014). The relevance of this result and its interpretations can be questioned. If the crisis improves the matching of education and

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<sup>32</sup> SALAIS (1980) is the first, in France, to systematically analyse unemployment as a “waiting queue” phenomenon.

occupations, is it not at cost of a growing proportion of individuals left out of the labour market? In this respect, the inclusion of unemployment can reconnect with national specificities and appreciates the deterioration of low-skilled workers' labour market situation. Estimations like these are consequently run (results are in appendix), to discuss and compare with the results of the previous sections.

## 1.2. POTENTIAL MECHANISMS AND DETERMINANTS OF OVEREDUCATION

### 1.2.1. INSTITUTIONAL FEATURES

An accurate comparison between two countries necessitates the consideration of different institutions. France and the United States are broadly comparable, but have important differences in social and labour market institutions, as well as different institutions related to immigration. US-American and French descendants of immigrants consequently do not face overeducation the same way.

#### *The role of labour market institutions*

Given the heterogeneity between labour market segments within a country, labour market institutions might play an extensive role in the existence of dual labour markets and in the propensity for overeducation (see also the discussion in chapter 2). Theories of production regimen suppose that “different employment dynamics can be found between capitalist societies depending on the way that firms try to solve their coordination problems with respect to industrial relations, vocational training, corporate governance, inter-firm relations, and the cooperation of their employees” (GALLIE, 2007, p.13). The theory distinguishes liberal market economies (LMEs) as the United States, which coordinate their activities mainly in terms of hierarchies and competitive market arrangements, from economies as France, which depend more on non-market arrangements that are classified either as coordinated market economies (CMEs) or as mixed or Mediterranean market economies (HALL and SOSKICE, 2001). It appears that more coordinated market economies such as France are producing fewer overeducated workers, which goes together with a better use of the workforce (ESTEVEZ-ABE, IVERSEN and SOSKICE, 2001).

Among the institutional patterns and cultural norms that play a role in overeducation, unemployment benefits may determine the substitution between unemployment and overeducated jobs for potential new workers. The higher unemployment benefits or other social benefits are, the less potential new workers are financially forced to accept jobs for which they are overeducated. In the United States, lower level and greater barriers to access unemployment benefits and other social transfers may encourage unemployed individuals to more readily accept jobs for which they are overeducated instead of being unemployed. On the contrary, the relatively higher French unemployment benefits might increase unemployed individuals' expectations in terms of matching with their qualifications.

Differences across countries also appear in terms of their structure of employment. Employment characteristics vary across countries, as well as levels of qualifications required for jobs. If developed countries have seen a general increase of qualification levels required for their jobs, the United States tend to have more jobs that need high qualifications than France.

### *Educational systems and policies*

In addition to labour market institutions, other institutional patterns, such as the educational system and policy, may influence the propensity of economies to sustain overeducation. The existing inequalities between immigrants' offspring and natives in terms of academic success (see the general introduction) are coupled with inequalities in employment access, at a given level of education.

Theoretically, most educational systems allow the possibility of social mobility for those raised by parents from disadvantaged backgrounds and provide equal employment opportunities. However, it seems that the French school system is not able to provide equal opportunities, rather it reproduces inequalities through opportunities (CNESCO, 2016)<sup>33</sup> and that discrimination at school is more important in France than in the United States. Students are, as a result, segregated into schools according to their social background, resulting, roughly, on the one hand, in schools gathering individuals with a poorer and less privileged social background, and on the other hand, in schools gathering individuals with a privileged social background. Hence, the networks acquired through schoolmates may strongly differ with the educational segregation by social background, thus favouring inequalities of opportunity in the labour market. This social reproduction at school may limit the number of individuals from less privileged social backgrounds reaching positions for which they would not be overeducated, compared to those from more privileged social backgrounds. In France, the social inequalities at school happen relatively early.<sup>34</sup> In the United States, until graduating high school, no other path can be chosen, whereas several different options exist in France, and they are subjectively hierarchically ranked in the French society. Immigrants and their children are not only on average less educated but they are foremost more likely to graduate with low selective diplomas, which are also the ones leading to fewer job opportunities.

The level of skills guaranteed by a given level of education may also influence the probability of being overeducated. LEUVEN, OOSTERBEEK and VAN OPHEM (2004) claim that a low education level in the United States is associated with much lower levels of skills than the same schooling level in Europe.

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<sup>33</sup> See the theory of maximally maintained inequalities: in front of State efforts to diminish socioeconomic inequalities at school, socioeconomic-advantaged parents develop strategies to avoid obligations to melt their children with disfavored ones (ALBA and HOLDAWAY, 2014).

<sup>34</sup> High school system in France is separated into general, technical and professional high school. After the "Brevet des Collèges", individuals are oriented to one of the three mentioned. Access to higher education at university is considered easier with a general baccalaureate (from general high-school), which tends to rank general high school higher than the two others in people's mind.

This might partly explain the deeper wage disparity in the United States, as a given difference in schooling results in a larger disparity in skills. GALLIE (2007) also underlines the highly-polarized structure of skills in countries such as the United States. He argues that, on the one hand, the lack of a strong vocational training system at post-compulsory secondary education level translates into the persistence of weak developed skills for lower-level workers. He also emphasizes, on the other hand, the importance of high-skilled jobs in these countries, mainly due to the high share of high tech in the economy. The United States consequently have a high number of both low-skilled jobs, for which high school graduates would be overeducated, and of high-skilled jobs. Compared to France, the difference in skills is higher in the United States, which allows more potentially overeducated workers into the low-skilled jobs.

Finally, the national average level of education may influence not the propensity of overeducation but its frequency. The average education level tends to be higher in the United States, despite the higher costs of higher education in this country (OECD, 2014c). As a consequence, the pool of highly-qualified workers is larger in the United States, which necessarily increases the potential pool of overeducated workers (OECD, 2016).

### *Immigration and integration-related institutions*

Immigration related policies and institutions also play a role on the incidence of overeducation. Countries selecting immigrants in accordance with their labour market needs tend to increase the probability for immigrants to get a job and to decrease their probability of being overeducated (OECD, 2015b). Consequently, their children will be less likely to grow up in potentially underprivileged families and in familial environments that value education as a worthy investment. This can increase their probability of being more educated, improve their network and their labour market integration. The role played by affirmative action measures at school contributes to lower inequalities in education across immigrant groups (whether immigrants or their offspring). These types of measures can help immigrants and their offspring to reach better diplomas (granting more skills and better network). Integration policies also include education-related policies. Several measures may be implemented at school to foster integration of immigrants or of their children, such as language support in school or incentives for parents to put their children in pre-school.

### *1.2.2. INDIVIDUAL CHARACTERISTICS*

Overeducation is not a homogeneous and uniform phenomenon; individuals of the same country are not affected in the same way: its intensity varies across age, education specialties, sex or social background. Multiple crossed-effects can be noticed between these supply side characteristics. It is consequently crucial to isolate the effects of the different factors regarding the probability of being overeducated, all other things being equal. Demand side frameworks may also be related to the

probability of being overeducated. Industries in which individuals work after their graduation, geographical characteristics, labour market composition appear to play a significant role as well. This section aims at presenting the potential determinants of overeducation raised in the literature both on the supply and demand side.

### *Age*

Overeducation is a phenomenon that affects young workers more than their older counterparts (GIRET, *et al.*, 2006; FORGEOT and GAUTIÉ, 1997; SICHERMAN, 1991). To begin with, FONDEUR and MINNI (2004) claim that young workers' labour market situation overreacts to the economic conditions. This strong sensibility to the economic situation is explained by the fact that, as new labour market participants, they are overrepresented among job applicants. This also places them in the midst of employment norms' structural transformation, as employers apply them primarily through the new hiring. Young workers' employment market has faced numerous transformations over the past decades (strong decrease of activity rates, durable increase of the mean education level, lower hiring rates of beginners, rise of requirements in terms of qualifications and skills) (FORGEOT and GAUTIÉ, 1997), since adjustments between demand and supply is not automatic, young workers are the first to bear these changes. Moreover, some endogenous factors do not play the rebalancing role they should play. For instance, employment shortages favour the "race to graduate" ("*course aux diplômés*"), which itself could lead to perverse effects such as increasing overeducation (FORGEOT and GAUTIÉ, 1997). As concerns the subjective measure of overeducation, GIRET and LEMISTRE (2004) argue that although young workers tend to be more overeducated, they feel less overeducated than older workers. The reason they cite is the internalization of the norm's evolution, as they compare themselves to the other members of their cohort; this hypothesis joins the filter theory (GIRET and LEMISTRE, 2004).

### *Fields of studies*

The probability of overeducating strongly differs between individuals depending on their diploma (LEMISTRE, 2014). In fact, individuals with lower diplomas seem more affected by overeducation, even if individuals with higher diplomas are not spared from overeducation, either (GIRET, *et al.*, 2006). The choice of diploma and the following labour market integration also strongly depends on parents' occupations and social status. GIRET *et al.* (2006) show that the children of blue collar parents are less likely to hold an occupation that matches their diploma. The authors suggest they might have a weaker knowledge of wage bargaining rules, or lack the benefits of a wider social network. In addition, the children of white-collar workers frequently choose more selective and more promising higher education diplomas in terms of labour market opportunities, while they can also more easily prolong or widen their job search as they face fewer financial constraints.

The fields of study raise two fundamental questions. The first deals with levels of skills granted by the educational system, which occurs before overeducation. The fact that some diplomas may grant fewer skills can skew the measure of overeducation, with the risk of implying overeducation rather than lower quality of certain diplomas. It is unclear whether a masters in economics at a state university or an engineering degree from an elite institution like a *Grande École* are truly comparable and grant the same levels of skills. Professional diplomas tend for instance to lead to greater overeducation compared to academic studies diplomas (GIRET *et al.*, 2006), contrarily to an associate degree level, industrial DUT (*Diplôme d'Université Technique*) and tertiary diplomas, which are associated with less overeducation, in part because students selected in these diplomas are among the best performing (LEMISTRE, 2014). In fact, the degree of selectivity is sometimes thought as a proxy of students' skill-level at the end of the degree. Working during studies also increases professional skills, provides a better knowledge of workplace's functioning or better *curriculum vitae* (BÉDUWÉ and GIRET, 1999). However, the challenge lies not only on the level of skills acquired during the studies, but also on the adequacy between these skills and labour market needs. LEMISTRE argues that graduates of the health and social work degree at the *bac+2* level (equivalent to a 2-year associates degree) are less likely to face overeducation because of the existing quotas for their regulated employment sectors (LEMISTRE, 2014).

The second fundamental question directly deals with overeducation. The field of study and the type of diploma partly determine the richness of the social network acquired at school. One might assume that social network has a negative impact on the probability of being overeducated. In addition to grant more skills, selective diplomas offer a better social network. In France, the *Grandes Écoles*<sup>35</sup> gather individuals from privileged social backgrounds, with richer social networks. Studies show that these more prestigious schools ensure better labour market outcomes than universities, such as higher wages (GURGAND and MAURIN, 2006)<sup>36</sup>. In the United States the same can also be noticed with Ivy League universities. JUDGE and his co-authors' conclude on better career prospects for Ivy League students (JUDGE *et al.*, 1994). Working during studies also improves social network, as students have direct access to workers and potential future employers. As social network seems to guarantee better labour market integration, one may assume it can also decrease the probability of being overeducated.

## Gender

The empirical literature points out the existing inequalities between genders - disfavoring women -, under a phenomenon called the "family income-maximization decision rule" (FRANK, 1978). Family mobility or family choices are joint decisions in which the primary earner of the family is the one who

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<sup>35</sup> The French *Grandes Ecoles* are considered as the French Ivy League. The admission into one of them requires a highly selective process (BOURDIEU, 1989).

<sup>36</sup> This result is on average. Yet, an important heterogeneity of levels exists among *Grandes Ecoles*.

will see the highest career benefits, leaving the secondary earner with a constrained job search (MCGOLDRICK and ROBST, 1996). Using the Panel Survey of Income Dynamics (PSID), studies in the United States indicate that women are more likely to be overeducated (MCGOLDRICK and ROBST, 1996). The same is true in France (GIRET *et al.*, 2006). In the United States QUINN and RUBB (2011) noted that families with an overeducated husband are more likely to move. This move can lead to higher levels of overeducation among wives and lower levels of overeducation among husbands, especially if jobs are less plentiful in a new market. In the same vein, FRANK, (1978) argues that women have a greater probability of being overeducated, due to their limited geographic mobility once married. It suggests that the overeducation of wives is a result of household moves (tied-mover) or the result of an inability to move (tied-stayer), which aggravate the existing wage gaps that led to household-income maximizing decisions in the first place. The choice between career and family remains quite relevant (PAILHÉ and SOLAZ, 2007). This logic often leads to more important impacts in women's careers than men's, such that women bear the burden of work-life balance more than men (PAILHÉ and SOLAZ, 2007).

Obviously, having children is also an event in front of which men and women are not equal. The fact that women take maternity leave disfavours their labour market integration in some cases, especially in lower qualified jobs (PÉRIVIER, 2004). PAILHÉ and SOLAZ (2007) insist on the fact that women's professional trajectories are more affected by having children than men's. By slowing more their career, the access to high skilled jobs can be more difficult. Moreover, PÉRIVIER (2004) asserts that French maternity leave rules particularly disfavour women's careers. MÉDA and PÉRIVIER (2007) show that women are also more likely to take part-time jobs to reconcile their familial and professional lives compared to men. They also argue that different worker's queues, similar to the internal and external labour markets facing other works, exist for men and women, resulting in the latter facing more frequent overeducation than men.

Studies in France have underlined an interesting trend for self-declarations of overeducation, relative to other measures. DI PAOLA and MOULLET (2009) show that despite being more overeducated than men when measured by objective measures, women tend to feel less overeducated. They suggest that women may have a higher "willingness to pay" and more easily accept being overeducated. This highlights the challenges of using a subjective measure of overeducation without taking into account these kinds of biases. Besides being more disposed to accept a job that requires a lower level of education, women may also tend to self-select jobs in which they are overeducated. Several reasons can explain this self-selection, including discrimination (BIELBY and BARON, 1986; ALTONJI and BLANK, 1999).

### *The parents' country of birth*

The OECD (2015b) points out several barriers for the full labour market integration of immigrants' children that can also foster overeducation. These difficulties include a lack of networks and contacts with employers. Although immigrants' offspring face less difficulties than their parents, they still inherit their parents' less developed networks. As OECD stated, the "discrepancies in outcomes between immigrants and the native-born sometimes spring directly from the migration process itself. The very fact of being born abroad may constitute an obstacle in that, for example, the immigrant may lack the native-born in-depth knowledge of the host society" (OECD, 2015b, page 22). GRANOVETTER (1995) shows that people get better jobs thanks to personal contacts. He argues that, not only social network is of primary importance to connect individuals to jobs, but they also help individuals access better jobs. In addition, he states that "the best jobs, the ones with the highest pay and prestige and affording the greatest satisfaction to those in them, are most apt to be filled in this way" (GRANOVETTER, 1995, p.22). He argues that those who do not get their jobs through personal contact but would have liked to do so are generally "prevented by "structural" factors" (GRANOVETTER, 1995, p.22), that he defines as "the properties of one's social situation that shape his contact network; one typically has little control over these factors" (GRANOVETTER, 1995, p.22). One can assume that having immigrant parents can be understood as a structural factor, which may be a negative impact if parents migrate relatively old and if they are low educated. Hence, having immigrant parents, *via* this network effect, might increase the probability of being overeducated, relatively to having locally-born parents.

Furthermore, the OECD stated that descendants of immigrants' relatively lower understanding of how the labour market works might also decrease their probability of having a job that requires their qualifications. For instance, they might face more difficulties correctly phrasing cover letters, resumes, etc. (OECD, 2015b). Finally, immigrants' offspring might also inherit from their parents' lower familiarity with public services or skills in the local language, which can make their entry into the labour market more difficult.

### *Sectors of activity*

Individuals also enter economic sectors that are generating more or less overeducation. Public sector is a great example of substantial movement towards overeducation in France (DI PAOLA and MOULLET, 2012). The competitive exam that exists to enter public administration underscores this trend. In 2010, the successful candidates on the competitive exam to enter the French public administration with at least a bachelor's degree accounted for 55% of the newly recruited in "*catégorie B*", whereas the theoretical required education level is a high school degree, as well as for 27% of the newly recruited in the "*catégorie C*" for which the "*Brevet des collèges*" (9<sup>th</sup> grade) is statutorily the only required diploma (Rapport annuel sur l'état de la fonction publique, 2012).

More broadly, public administration in France presents some advantages to which women in particular are sensitive (DI PAOLA and MOULLET, 2009). The public sector, compared to the private sector has better working conditions, less discrimination in the hiring process, less wage discrimination, and a vast choice of occupations. The fact that it also facilitates the balance between personal and professional life – *e.g.* by improving the organization of working time (ODENA, 2005; GARNER *et al.*, 2005) and reducing the costs of child care – makes this sector a “rational sector to be overeducated in”.

The sector of activity is also important due to the types of contracts offered. Overeducation concerns more individuals who have precarious types of contracts such as short-term contracts than those working in permanent contracts (FORGEOT and GAUTIÉ, 1997; GIRET *et al.*, 2006). Some sectors of activity have more short-term contracts and therefore might favour overeducation. It is for instance the case in retail, sales, transport industry or in construction (GIRET *et al.*, 2006).

### *Geographical patterns*

Job opportunities can obviously vary by geography. Territorial inequalities are notable in France, as well as residential segregation (RATHELOT, 2010). Two main distinguishing characteristics are most prominent in France: first, residing in “sensitive urban areas” (ZUS), which tend to concentrate poverty, and second, living in the Paris region. In France, a strong spatial separation exists with a concentration of certain nationalities in suburban areas (RATHELOT, 2010; GOBILLON *et al.*, 2011). Similarly, in the United States, opportunities and resources are unequally distributed within the territory (MASSEY, 2001). MASSEY (2001) highlights the existence of “enclaves located close to an urban core, in areas of mixed land use, old housing, poor services, and low or decreasing socioeconomic status”. He also points out that, as socioeconomic status improves, inhabitants move out of these enclaves and go to areas that give more facilities and improved environments. CUTLER, GLAESER, and VIGDOR (2008) argue that residential segregation affects negatively those who are not highly educated.

The issue of geographic mobility is also relevant. This mobility seems historically lower in France while higher in the United States (MOLLOY, *et al.*, 2011). Nevertheless, this geographic internal mobility has declined overtime in the United States.

## SECTION 2: MORE FREQUENT OVEREDUCATION FOR DESCENDANTS OF IMMIGRANTS IN FRANCE

This section aims at describing the population of interest. It also addresses the issue of the incidence of overeducation, considering the characteristics of descendants of immigrants and of native-born

persons. The first sub-section details the methodology and the scope of the study. The descriptive statistics on education and occupational distribution are then displayed. Finally, the last sub-section describes the probability of being overeducated for these two groups.

## 2.1. THE DATABASE AND THE SCOPE OF THE STUDY

The empirical analysis is based on the data from the French survey *Trajectoires et Origines* implemented in 2008. This survey aims to “identify the impact of origins on living conditions and social trajectories while taking account of other sociodemographic characteristics, *i.e.* social environment, neighbourhood, age, cohort, sex and educational level”<sup>37</sup>. *Trajectoires et Origines* is unique in France and innovative. Until this survey came out, France lacked national statistics to study the question of integration despite the issue being at the centre of public debate for more than 30 years. The survey “covers all populations living in metropolitan France (mainland and Corsica), their current living conditions and their trajectories”<sup>38</sup> and distinguishes populations whose life course might be negatively affected by characteristics linked to their physical appearance (*i.e.* immigrants, descendants of immigrants, persons from the French overseas territories and their descendants). *Trajectoires et Origines* encompasses 8,300 immigrants, 8,200 descendants of immigrants, 700 « *domiens* »<sup>39</sup> and 700 second generation « *domiens* ».

Immigrants are excluded from the sample in this analysis to better capture the integration process.<sup>40</sup> Natives or individuals from « *Départements d’Outre-Mer* » (DOM) or from « *Territoires d’Outre-Mer* » (TOM) are preserved in the sample, they represent 0.69 % of the total population.<sup>41</sup> The scope of analysis concerns descendants of immigrants and natives, from 20 to 35 years, as these individuals are in the early stages of labour market integration where the relationship between education and the qualifications required by a job are strongest. The longer individuals are on the labour market, the less their education is valued relative to factors like professional experience. Furthermore, generations cannot be compared as the probability of being overeducated decreases with age.

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<sup>37</sup> [http://teo\\_english.site.ined.fr/](http://teo_english.site.ined.fr/), consulted on August 20<sup>th</sup>, 2016.

<sup>38</sup> *Ibid.*

<sup>39</sup> Domiens are individuals coming from one of the five French Départements d’Outre-Mer (Guadeloupe, Guyane française, Martinique, Mayotte and La Réunion).

<sup>40</sup> The analysis of the correspondence between immigrants’ qualifications and their occupations is more complicated as immigrants can have diplomas from their country of residence, France, but also and most often from their place of birth. Since diplomas from different origin countries are difficult to compare to one another, as well as to those received in France, the exclusion of this population simplifies this analysis.

<sup>41</sup> At the time of the survey, these territories were known as DOM-TOM. Their names have now changed for DOM and ROM, in addition to COM and other territories with specific status.

**Table 1.1. Descriptive statistics on the sample**

		Natives	Descendants of immigrants	Total
Sex	Male	39.9	42.4	40.3
	Female	60.1	57.6	59.7
Age	Average age	27.9	27.4	27.9
Origin	North Africa	-	35.5	
	Sub-Saharan Africa	-	7.2	
	Asia	-	7.0	
	South Europe	-	35.9	
	North and Continental Europe	-	8.9	
	East Europe	-	2.2	
	Others	-	3.5	
Parents	One parent immigrant	-	46.6	-
	Two immigrant parents	-	53.4	-
Living	No Sensitive Urban Area, Paris region	17.2	35.0	19.9
	No Sensitive Urban Area, outside of Paris region	78.5	50.3	74.2
	Sensitive Urban Area, Paris region	1.7	6.2	2.4
	Sensitive Urban Area, outside of Paris region	2.6	8.5	3.5
Fathers' occupation	Executive or Manager	25.1	19.9	24.3
	Other	74.9	80.1	75.7
Mothers' occupation	Executive or Manager	30.7	21.0	29.4
	Other	69.4	79.0	70.6
Number of individuals		4,433,231	800,136	5,233,367

Note: all the differences, except for gender, are statistically significantly different, at least at the 10% threshold.  
Source: *Trajectoires et Origines*, 2008.

Descendants of immigrants represent 15.3% of our sample (table 1.1). Among them, women are 57.6% whereas they are more represented among natives (60.1%). Table 1.1 also depicts the split in terms of parents' nationalities of immigrants' offspring. The majority comes from northern Africa (35.5%) or southern Europe (35.9%). Then, 8.9% come from northern and Continental Europe, 7.2% from Sub-Saharan Africa, 7% from Asia, and only 2.2% from East Europe. More than half have two immigrant parents whereas the other 46.6% has one immigrant parent and one native. Immigrants' offspring tend to be younger than natives, their average age being 27.4 years old versus 27.9 years old for natives. They also are more likely to live in sensitive urban areas, in the Paris region (35% vs. 17.2% for natives) but also outside of Paris region (6.2% vs. 1.7% for natives). Looking at parents' occupation confirms the literature: immigrants' offspring seem to come from less privileged social backgrounds. They less frequently have executive or manager fathers (19.9%) compared to natives (25.1%), and the same is true for mothers (21% vs. 30.7% for natives).

## 2.1. DIPLOMAS' DISTRIBUTION: INITIAL INEQUALITIES

Overeducation must be understood in light of education, and therefore the understanding of the distribution of education and diplomas is of primary importance.

The distribution of education for 20-35 year olds reveals a large heterogeneity between natives and descendants of immigrants. Descendants of immigrants tend to be less educated than natives. Table 1.2 portrays 7.4 percentage points spread in the proportion of individuals without diploma between natives and descendants of immigrants. 23.5% of the native-born 20-35-year-old population has a professional or technological baccalaureate whereas individuals with foreign-born parents are almost 28.5% to be in the same situation. They also more frequently have a general baccalaureate (14.6% vs. 9.4% for natives). The same picture can be noticed when looking into the higher education distribution. Descendants of immigrants tend to be less represented in the “*Grande École*” category and in masters’ degree and PhD. The “*Grande École*” figure is striking: natives are almost twice more likely to enter a “*Grande École*” compared to descendants of immigrants (4.1% vs. 2.1% for descendants of immigrants). The literature has insisted on social inequalities in access to “*Grandes Écoles*” for a few decades (ALBOUY and WANECQ, 2003; BOURDIEU, 1989), this result seems consistent with this, as BOURDIEU highlighted that the less privileged students, especially descendants of immigrants, don’t hold all the key information to choose and access the most prestigious diplomas (BOURDIEU, 1989). In addition, resource constraints and risk aversion play a role. The competitive exams for many “*Grande École*” are costly in terms of time and resources for less advantages students of all backgrounds. Students from families that either see less value in the institutions, or which can less readily incur the costs associated with failed admissions that are common among the most selective institutions, may be notably reticent to attempt to enroll. In France, admission is essentially automatic for most high school graduates to their local university.

Others argue that school segregation for pupils with immigrant parents in France is particularly high (LORCERIE, 2003). THIBERT (2014) demonstrates that children of immigrant families are more segregated. According to him, this partly stems from collective history. In France, the history of colonization and immigration policies are major factors which explain segregation. As explained before, the OECD (2015b) also argues that the French education system fails to be a driver of integration for immigrants’ offspring. They argue that these children are often concentrated into specific geographic zones, where schools are poorly financed compared to others and lack teachers. They add that a great number of teachers have on average less seniority or belong to a less paid group. Overall this concentration is detrimental to their education and results in inequalities in education depending on origin. In addition to this potentially lower level of skills and network (*via* their schoolmates), this segregation in education exists at a finer level. BRINBAUM and GUÉNARD (2013) show that immigrants’ offspring tend to graduate with degrees that are less valued on the labour

market. A potential bias can consequently emerge and overestimate their relative penalty in terms of labour market outcomes (wages, overeducation, etc.).

**Table 1.2. Distribution of education levels by parents' origin for the 20 to 35 years old**

		Natives	Descendants of immigrants	Total
Diploma	Professional and technological baccalaureate	23.5	28.5	25.2
	General baccalaureate	9.4	14.6	10.2
	Bac + 2	31.9	27.9	31.3
	Bachelor's degree	19.9	16.7	19.4
	Grande École	6.3	3.6	5.9
	Master's degree/PhD	9.1	8.7	9
	Mathematics and sciences	4.4	3.7	4.3
	Human sciences and Law	8.8	14.3	9.6
Field of study	Arts and literature	5.6	8	5.9
	Production technological specializations	1.2	1.6	1.3
	Agriculture, hunt, forestry and fishing	1.9	0.3	1.7
	Transformations	3.3	2.6	3.2
	Civil engineering, construction and wood	1.8	1.8	1.8
	Flexible material	1	0.6	0.9
	Mechanics, electricity and electronics	10	8.4	9.7
	Trading and management	27.1	28.8	27.4
	Communication and information	10.6	13	10.9
	Services to individuals	19.3	15.1	15.1
	Services to the community	3.9	0.6	0.6
	Non-specified	1.2	1.4	1.4
Number of individuals		4,433,231	800,136	5,233,367

Note: all the differences are statistically significantly different, at least at the 10% threshold.

Source: *Trajectoires et Origines*, 2008.

Table A.1.1 in the appendix depicts diploma distributions for descendants of immigrants depending on their parents' countries of origin. It shows a large diversity in terms of education by parents' continent of origin. Some patterns can be disentangled: descendants of African or Asian immigrants tend to be less educated than native-born offspring. They are significantly more represented in baccalaureate categories, either professional, technical or general, compared to natives, or to other descendants of immigrants. They also tend to be less represented in higher education, especially in the "Grande École" category. However, descendants of sub-Saharan African immigrants are overrepresented in the Master's degree and PhD category. They are in fact characteristically overrepresented at both extremities of the distribution. Sociologists argued that immigrants are likely to integrate host society into different segments – in the underclass and the upper-class – rather than into one mainstream community (see the literature on the segmented assimilation, PORTES, 1995; SILBERMAN, 2002). Once again, this result might also refer to the reasons of migration of their parents, which would not lead to

similar intergenerational transmission of human capital (OECD, 2014a). Besides, this diversity of situations could be related to the medium income level of the countries considered. The income level of parents' place of birth might indeed influence parents' education and occupations and therefore, after some intergenerational transmission, those of descendants of immigrants.

Second, descendants of southern European immigrants, who represent almost half of immigrants' offspring, depict a portrait similar to that of natives in terms of education, except that they are less likely to have the highest education degrees (Master's degree, PhD, *Grande École*) and they tend to be overrepresented in the baccalaureate categories. This result recalls results found in the literature and more broadly to the role of social network in protecting from overeducation. More precisely southern European immigrants' offspring tend to have a strong network in jobs that do not require higher degrees. The most emblematic example is the one of Portuguese immigrants, who have a large network in the construction industry, which does not require higher degrees (DOS SANTOS, 2005). Because of the relatively old settlement of southern European immigrants in France and their large representation in the construction sector for instance, their children may benefit from their network in this specific sector when they enter the labour market. They may also be more inclined to choose to study construction (at different education levels) because of their parents' incentives and recommendation. The two network channels may thus help them to find jobs for which they are not overeducated.

The third pattern noticed is that eastern European descendants of immigrants as well as descendants of immigrants coming from other countries (mainly composed of OECD countries) tend to be more educated than the rest of descendants of immigrants. Once again, this result suggests that descendants of immigrants whose parents come from developed countries have a higher probability of being better educated (OECD, 2014a).

## 2.2. IS THERE AN OCCUPATIONAL SEGREGATION FOR DESCENDANTS OF IMMIGRANTS?

Given the distribution of diplomas detailed above, the occupations and economic sectors in which workers work are likely to be affected. FORGEOT and GAUTIÉ (1997) showed that the frequency of overeducation varies with the economic sectors. LEMISTRE and GIRET (2004) argue that technological developments may lead employers to change the job content so that the required skills increase without changing the job's name. However, little empirical work discusses the sectoral component of overeducation. This sub-section describes first the distribution of economic sectors and second the distribution of occupation by parents' origin to see whether immigrants' offspring tend to be segregated in occupations or sectors, in which overeducation is frequent.

Table 1.3. illustrates the higher share of descendants of immigrants to be inactive (5.2%) compared to natives (3.1%). Besides, they tend to be more unemployed than natives: their unemployment rate are respectively 10.6% and 8.6%.

**Table 1.3. Distribution of occupations and industries by parents' place of birth**

		Natives	Descendants of immigrants	Total
Labour market situation	Inactive population	3.11	5.23	4.56
	Unemployed	8.85	10.95	10.29
	Employed	88.04	83.82	85.16
Sector of activity	Agriculture, hunt, forestry	1.3	0.4	1.2
	Extractive industries	0.1	0.4	0.1
	Manufacturing industry	16.2	11.3	15.5
	Production and distribution of electricity, gas and water	0.9	0.9	0.9
	Construction	4.4	4.2	4.3
	Trade, motor vehicles, motorcycles and personal and household goods repairing	14.8	16.3	15.1
	Hotel and catering	2.9	3.6	3
	Transports and communication	4.6	8.8	5.3
	Financial activities	5.2	7.2	5.5
	Real estate, renting and enterprise services	8.9	8.5	8.8
	Public administration	9.8	9.9	9.8
	Education	9.5	10	10
	Health and social work	12	10.3	11.7
	Other community, social and personal service activities	7.8	6.5	7.6
	Activities of household	1.2	1.2	1.2
Extra-territorial activities	0.4	0.5	0.4	
Occupational group	Intellectual and scientific occupations	17.5	16.6	16.6
	Intermediary occupations	30	27.4	29.6
	Administrative employees	14.9	15.7	15
	Services staff and salesmen	15.3	15.3	15.3
	Plant and machine operators and assemblers	5.7	4.9	5.6
	Non-qualified workers and employees	3.8	4.6	3.9
Number of individuals		4,433,231	800,136	5,233,367

Note: all the differences, except for sector of activity, are statistically significantly different, at least at the 10% threshold.

Source: *Trajectoires et Origines*, 2008.

Migrants' offspring have a relatively similar distribution in terms of sectors of activity compared to natives (table 1.3). However, some figures shed light on several characteristics. Immigrants' offspring are for instance far less represented in the manufacturing industry but more represented in financial activities or in trade, motor vehicles, motorcycles and personal and household goods repairing activities. This last sector is associated with relatively high levels of overeducation in France (FORGEOT and GAUTIE, 1997). In terms of occupational specificities, immigrants' offspring are less

represented in intellectual and scientific occupations (16.6% *versus* 17.5% for natives). Similarly, they are 2.6 points of percentage less in intermediary occupations and 0.8 points of percentage less in plant and machine operators and assemblers' occupations. On the contrary, they are more likely to be in administrative employment and in non-qualified occupations.

The distinction of immigrants' offspring by their parents' countries of birth depicts large differences in the distribution of labour market situations (table A.1.2 in appendix). Descendants of North African immigrants for instance have an inactivity rate of 7.5%, whereas descendants of eastern European immigrants have a rate of only 2.3%. Moreover, descendants of North African, sub-Saharan African and Asian immigrants are more unemployed than other groups, with unemployment rates of respectively 16.2%, 11.1% and 15.8%. Conversely, only 4.7% of descendants of southern European immigrants are unemployed. This figure recalls the earlier settlement of this wave of immigration, at a time at which the French labour market needed them, which is not totally the case for the younger immigration waves. The relatively better labour market integration of southern European immigrants can favour their offspring as well, through social capital (and parents' network for instance) (DAGUET and THAVE, 1996).

Concerning occupations, descendants of northern African immigrants are less represented than natives in high-skilled occupations: descendants of sub-Saharan immigrants are for instance almost twice less represented in intellectual and scientific occupations. In the meantime, they are more represented than natives in low-skilled occupations: for instance, 9.4% of descendants of northern African immigrants are non-qualified workers or employees whereas 4.3% of natives are in these occupations. Contrarily, descendants of southern European immigrants are less represented than natives in these non-qualified occupations but also less in intellectual and scientific occupations. They also tend to work more in the construction sector than natives (6.4% *versus* 4%), and than all other immigrants' offspring.

Overall, the employment segregation seems relatively important. The differences in terms of labour market situation and occupations are significantly different between the two groups of native-born. In addition, this segregation seems to negatively affect immigrants' offspring (they are for instance more likely to be unemployed or to work in low-qualified occupations).

### 2.3. IMMIGRANTS' OFFSPRING ARE MORE FREQUENTLY OVEREDUCATED

This subsection aims at describing the construction of overeducation tables, the statistical one first and second the normative one<sup>42</sup>. Finally, some descriptive statistics on the distribution of overeducation with the two measures are presented.

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<sup>42</sup> Both tables are constructed with the entire population of native-born people, not only on the selected sample. Immigrants remain nevertheless excluded, due to the lack of comparability of their diploma with the ones of native-born.

### 2.3.1. CONSTRUCTION OF THE STATISTICAL TABLE

In order to statistically measure overeducation, I compare the theoretical frequency to those that are actually observed, as did FORGEOT and GAUTIÉ (1997). More precisely, I define X the education level and Y the occupation. X and Y can respectively take the modalities  $X_1, \dots, X_i, \dots, X_p$  and  $Y_1, \dots, Y_i, \dots, Y_p$ .

Let  $n$  denote the size of the global population,  $n_{ij}$  the size of the sub-population with modalities  $(X_i, Y_j)$ , and  $n_i$  (respectively  $n_j$ ) the marginal populations of the modalities  $X_i$  (respectively  $Y_j$ ). Under the hypothesis of independence between X and Y, the theoretical size of the sub-population with modalities  $(X_i, Y_j)$  is  $n_{ij}^* = (n_i n_j) / n$ . For each cell  $(i, j)$ , the diploma-occupation situation is first considered:

- “normal” if  $n_{ij} > n_{ij}^*$  as it corresponds to a frequent concordance between modalities  $X_i$  and  $Y_j$
- “atypical” if  $n_{ij} < n_{ij}^*$  as it corresponds to a rare concordance between modalities  $X_i$  and  $Y_j$

In the second case, I determine whether the “atypical” situation corresponds to “undereducation” or “overeducation”, by situating “hierarchically” the cell  $(i, j)$  with respect to the other cells  $(i, j')$  and  $(i', j)$  considered as normal (NAUZE-FICHET, TOMASINI, 2002).

The correspondence table consequently relies on a statistical criterion, in the sense that it takes into account not only the relative importance of each occupation (here as an occupational category) for each education level, but also symmetrically, the relative shares of the different diplomas in each occupation. Table 1.4 depicts the final statistical table on which the following analysis is based. The comparison between the observed and the theoretical situations allows this table to be computed, with the definition of “normal” cells for which the observed frequencies are higher than the theoretical ones. It is for instance considered as normal to have at least a bachelor’s degree to work in intellectual and scientific occupations. Under such a degree, the individual is considered undereducated. On the contrary, having a baccalaureate is considered as normal to be in intermediary occupations, whereas a bachelor’s degree in these occupations is synonym to being overeducated, according to this table.

**Table 1.4. Statistical table of correspondence of education and occupation**

Diplomas	Intellectual and scientific occupations	Intermediary occupations	Office and administrative support occupations	Service occupations	Transportation and material moving occupations	Non/low qualified occupations
"Baccalauréat professionnel"	U	<b>Norm</b>	<b>Norm</b>	<b>Norm</b>	<b>Norm</b>	O
"Baccalauréat général"	U	<b>Norm</b>	<b>Norm</b>	O	O	O
Bac+2	U	<b>Norm</b>	<b>Norm</b>	O	O	O
Bachelor's degree	<b>Norm</b>	<b>Norm</b>	O	O	O	O
"Grande Ecole"	<b>Norm</b>	O	O	O	O	O
Master's degree or PhD	<b>Norm</b>	O	O	O	O	O

Source: *Trajectoires et Origines*, 2008. Note: U stands for undereducation and O for overeducation.

### 2.3.2. CONSTRUCTION OF THE NORMATIVE TABLE

To assess the use of the statistical measure of overeducation, a normative measure is also constructed. This measure relies on the update of LEMISTRE (2014) of the normative measure proposed by AFFICHARD (1981) about the French situation in the 1970s. Affichard's table attempts to match job and education contents. Lemistre's update brings two main adjustments: those graduating from high school are not overeducated if they are in qualified blue-collar workers and second, those with a bachelor's degree are not overeducated if they are in intermediary occupations. These two updates are not only statistically relevant but also institutionally, because school systems and the educational ministry are steering those graduates to the mentioned occupations.

The construction of the normative table (table 1.5) shows that the two tables are relatively similar in France in the last decade. Exceptions remain for services occupations and transportation and material moving occupations. For these two groups, the statistical measure sets as the "normal diploma" professional baccalaureate, whereas the normative measure only considers diplomas below baccalaureate as "normal diplomas" to be in these occupations.

**Table 1.5. Normative table of correspondence of education and occupation**

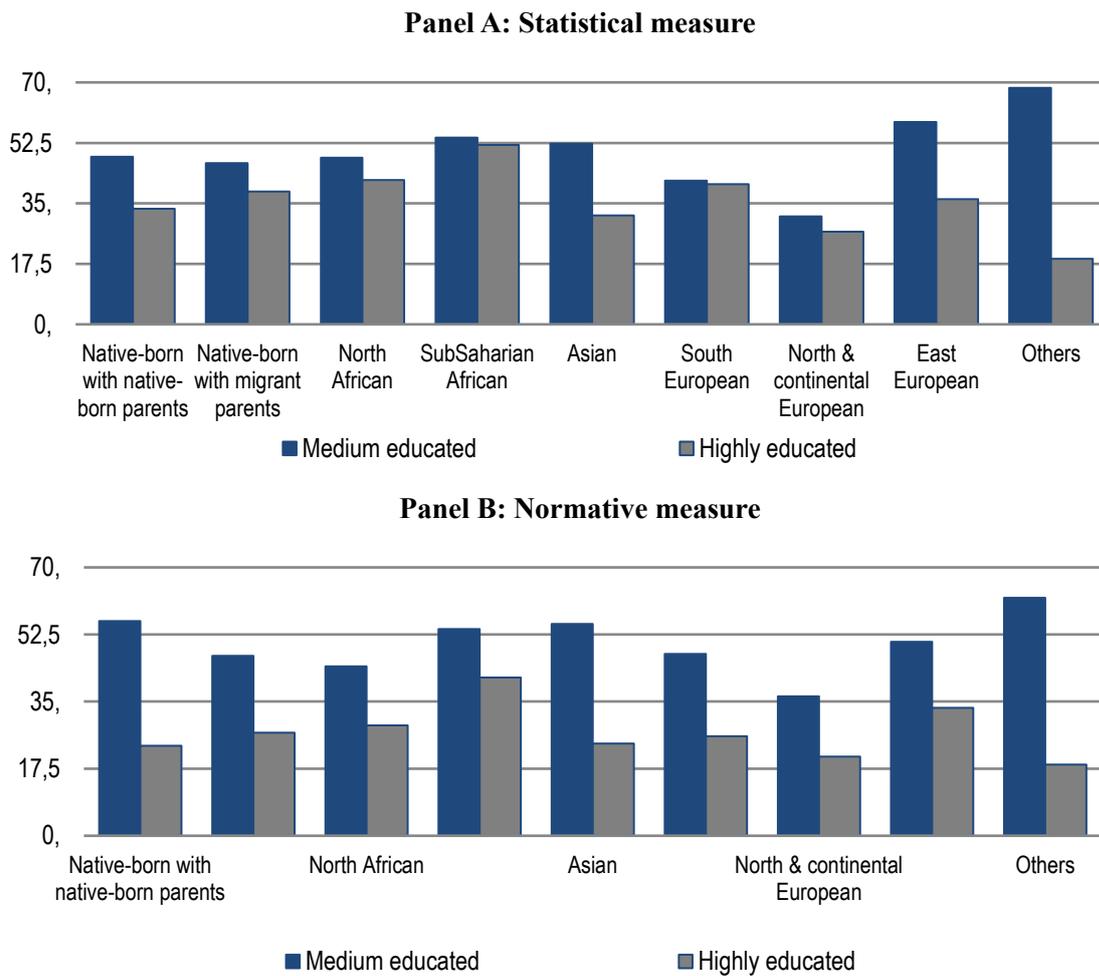
Diplomas	Intellectual and scientific occupations	Intermediary occupations	Office and administrative support occupations	Service occupations	Transportation and material moving occupations	Non/low qualified occupations
"Baccalauréat professionnel"	U	<b>Norm</b>	<b>Norm</b>	O	O	O
"Baccalauréat général"	U	<b>Norm</b>	<b>Norm</b>	O	O	O
Bac+2	U	<b>Norm</b>	<b>Norm</b>	O	O	O
Bachelor's degree	<b>Norm</b>	<b>Norm</b>	O	O	O	O
"Grande Ecole"	<b>Norm</b>	O	O	O	O	O
Master's degree or PhD	<b>Norm</b>	O	O	O	O	O

Source: *Trajectoires et Origines*, 2008. Note: U stands for undereducation and O for overeducation.

### 2.3.3. DESCRIPTIVE STATISTICS ON OVEREDUCATION

Using the two measures of overeducation described above, overeducation affects highly educated immigrants' offspring to a greater degree than highly educated natives (Figure 1.1). However medium educated natives are more overeducated than medium educated immigrants' offspring. For the two populations, overeducation affects the medium educated more than the highly educated: diplomas of higher education appear to remain protective against overeducation. In the sample, the statistical measure of overeducation reveals that 46.6% of medium educated immigrants' offspring are overeducated and 38.4% of the highly educated are overeducated. In comparison, respectively 48.5 and 33.5% of medium and highly educated natives are. The normative measure gives higher numbers: 46.9% of medium educated immigrants' offspring and 26.9% of highly educated of them are overeducated, whereas respectively 56 and 23.5% of medium and highly educated natives are.

**Figure 1.1. Distribution of overeducation by parents' place of birth**



Source: *Trajectoires et Origines*, 2008.

The variations of overeducation frequencies are more important across groups of different origins. Figure 1.1 displays the propensity of overeducation by parents' region of birth and depicts a 20 percentage point difference in overeducation frequency from one origin to another. Native-born from East European and sub-Saharan African immigrant parents tend to be the most affected by overeducation. They are on average 10 percentage points more likely to be overeducated than natives. Native-born from northern or continental European immigrant parents tend, on the contrary, to be less likely overeducated. Section 3 aims at identifying links between individual characteristics and propensity of being overeducated.

In sum, in France, descendants of immigrants exhibit lower education levels than natives. These differences are then carried over into the labour market: immigrants' offspring face more difficulties but are also, to a lesser extent, working in different industries and occupations. They work proportionally more in low-skilled occupations, and this is particularly pronounced for some groups of immigrants' children, such as those of Africans. If overeducation affects more individuals of the two

populations (descendants of immigrants and natives) with medium education level, those with high education level are also affected, irrespective of the measure used. Highly educated descendants of immigrants are more overeducated than their highly-educated peers with native-born parents. The contrary is observable for medium educated individuals; at this level of education, natives are more overeducated than descendants of immigrants. The picture is consequently relatively mixed. The following section aims at investigating the reasons of these mixed results.

## SECTION 3: WHAT EXPLAINS THE GREATER INCIDENCE OF OVEREDUCATION AMONG IMMIGRANTS' OFFSPRING? THE CASE OF FRANCE

This third section deals with an econometric analysis of overeducation in France by parents' immigrant status. After briefly presenting the database and the scope of the study, a first probit model for the occurrence of overeducation and its results are presented. In a second subsection, the different estimation results obtained with the same probit model, but completed with a selection process equation, are also presented. This underscores the importance of this selection process. Hence, this second model looks at the propensity of being overeducated, rather than its occurrence.

### 3.1. ECONOMETRIC SPECIFICATIONS AND RESULTS

#### *3.1.1. THE PROBIT MODEL*

To explain the occurrence of being overeducated, a dichotomous model is used as the explained variable, being overeducated at time  $t$ , is binary – either someone is overeducated or not.

I consider the sample of  $N$  individuals, indexed  $i = 1, \dots, N$ , where here  $N = 4,348$ . For each individual, I observe whether overeducation occurred and I note  $y_i$  the coded variable associated to the occurrence. I can then write,  $\forall i [1, N]$ :

$$y_i = \begin{cases} 1 & \text{if overeducation occurred for individual } i \\ 0 & \text{if overeducation did not occur for individual } i \end{cases}$$

The choice to code (0,1) for dichotomous models allows to define the probability of overeducation occurrence and the variable  $y_i$  expected value as:

$$E(y_i) = Prob(y_i = 1) * 1 + Prob(y_i = 0) * 0 = Prob(y_i = 1) = p_i$$

The goal of dichotomous models consists in explaining the occurrence of considered events, here of overeducation, depending on a certain number of individuals' observed characteristics. The use of this model allows to specify the probability of occurrence of overeducation. Hence, the following probit dichotomous model is considered:

$$p_i = \text{Prob}(y_i = 1|x_i) = F(x_i\beta) \quad \forall i = 1, \dots, N$$

Where  $F(\cdot)$  denotes the standard normal distribution repartition function, such as for all  $w \in \mathbb{R}$ :

$$F(w) = \int_{-\infty}^w \frac{1}{\sqrt{2\pi}} e^{-\frac{z^2}{2}} dz = \Phi(w)$$

Thus, for a given value of the exogenous vector and of the  $\beta$  parameters vector, we can specify the model that defines the probability associated to overeducation occurrence  $y_i = 1$  as the value of the repartition function  $N(0,1)$  considered at the point  $x_i\beta$ :

$$p_i = \Phi(x_i\beta) = \int_{-\infty}^{x_i\beta} \frac{1}{\sqrt{2\pi}} e^{-\frac{z^2}{2}} dz \quad \forall i = 1, \dots, N$$

This univariate dichotomous model can also be expressed as the following measurement equation<sup>43</sup> in order to make the underlying economic hypotheses more explicit. A latent variable is needed, and this latent variable constitutes an unobserved variable which completely determines the occurrence of overeducation, the dichotomous variable. In other words, the latent variable  $y_i^*$  describes a form of propensity of being overeducated. The model can be written like this:

$$y_i = \begin{cases} 1 & \text{if } y_i^* > \gamma \\ 0 & \text{otherwise} \end{cases}$$

Where  $\gamma \in \mathbb{R}$  and where the latent unobservable variable  $y_i^*$  is defined as dependent of observable characteristics  $x_i$  and of a perturbation  $\varepsilon_i$ . *i. d.*  $(0, \sigma_\varepsilon^2)$ :

$$y_i^* = x_i\beta + \varepsilon_i$$

To shed light on the different respective functions of the explanatory variables, I separate them into three vectors:

$$y_i^* = x_i\beta + w_i\delta + z_i\mu + \varepsilon_i$$

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<sup>43</sup> In probit models, the error variance is not identifiable: it is normalized to the unit. Consequently, the numerical value of estimated parameters has no interest *per se*, as they do correspond to parameters of the latent variable at only a multiplicative constant (CAMERON and TRIVEDI, 2010). Moreover, the threshold is not identifiable because it confounds itself to the constant term of the explanatory vector .

For each level of disaggregation of origin (by parents' immigrant status and by parents' region of birth), two models are investigated. The model is first run with all the control variables except employment-related variables and second, with all variables including these latter ones.

The vector  $x_i$  defines individuals' origin, the vector  $w_i$  gathers other individual explanatory control variables and the vector  $z_i$  the employment-related control variables. In models (1) and (2), the vector  $x_i$  of explanatory variables related to the origin is a variable of two modalities: natives, and descendants of immigrants. In models (3) and (4), the origin is disaggregated into eight modalities by parents' regions of origin<sup>44</sup>: first, the natives; second, the native-born with North African immigrant parents; third, the native-born with sub-Saharan African immigrant parents; fourth, the native-born with Asian immigrant parents; fifth, the native-born with southern European immigrant parents; sixth, the native-born with northern and Continental immigrant parents; seventh, the native-born with eastern European immigrant parents; and the eighth group gathers the native-born with other immigrant parents, mainly from developed OECD countries.

The vector  $w_i$  of control variables includes several other individual characteristics, such as education, sex, age and diploma specialisation. Due to the relatively low social mobility in France, a variable that captures parents' occupation is also introduced. The variable classifies their occupation into three groups of low, medium and highly skilled occupations. As the descriptive statistics have shown great differences on several outputs, a dummy variable capturing the fact to have one or two immigrant parents is introduced. It can therefore address the potential integrating role of having a native-born parent, which might lower the potentially negative effect of origin. Given the territorial inequalities (RATHELOT, 2010; BORJAS, 1995), a residential variable is introduced; it considers the fact to live in the Paris region and in a sensitive urban zone (ZUS). In France, a strong spatial segregation exists with a concentration of certain nationalities in suburban areas (RATHELOT, 2010). To finish with, a variable that considers the spouse's activity is introduced to control for the potential incitation to accept any job if the partner does not have any job.

In models (2) and (4), a last set of control variables gathers demand-side variables, to take into account labour market characteristics. Two variables are introduced: the industry in which the individual works and the type of contract, distinguishing temporary contracts from the permanent ones.<sup>45</sup> The following parts detail the results of the estimations for the two models specified above.

### *3.1.2. ESTIMATION AND RESULTS OF THE MODEL*

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<sup>44</sup> Following the French work, it is conventional to define origin as the father's one, if parents are not of the same origin (MINNI and OKBA, 2014).

<sup>45</sup> Economically, the type of contract might be endogenous. One may assume that some individuals may accept to work in a job in which they are overeducated, to get a permanent contract.

**Table 1.6. Estimation of the probability of being overeducated by immigrant parents**

	Variables	(1)	(2)
	Migrant parents	1.042 (0.119)	0.918 (0.126)
Diploma	<i>Baccalauréat professionnel et technologique</i>	0.330*** (0.0406)	0.242*** (0.0396)
	<i>Baccalauréat général</i>	0.726** (0.113)	0.503*** (0.0954)
	<i>Bac +2</i>	Ref.	Ref.
	Bachelor's degree	0.596*** (0.0765)	0.617*** (0.0950)
	<i>Grande Ecole</i>	0.874 (0.182)	0.849 (0.206)
	Master's degree or PhD	0.700** (0.113)	0.884 (0.175)
	Two immigrant parents	0.957 (0.112)	0.892 (0.127)
	Woman	1.693*** (0.175)	1.683*** (0.206)
	Age	0.977** (0.0113)	0.987 (0.0141)
Field of study	General education	Ref.	Ref.
	Technicoprofessional areas of production	0.626*** (0.104)	0.558*** (0.113)
	Technicoprofessional areas of services	0.844 (0.0938)	0.735** (0.0987)
	Partner in activity	1.215 (0.145)	1.198 (0.168)
Father's occupation	Low skilled occupations	Ref.	Ref.
	Medium skilled occupations	0.932 (0.181)	1.013 (0.243)
	High skilled occupations	0.921 (0.200)	0.996 (0.265)
Mother's occupation	Low skilled occupations	Ref.	Ref.
	Medium skilled occupations	0.766** (0.0904)	0.767* (0.110)
	High skilled occupations	0.722** (0.111)	0.716* (0.131)
Place of living	Living in Sensitive Urban Area	1.098 (0.184)	1.150 (0.222)
	Living in the Paris region	0.926 (0.0892)	0.900 (0.103)
Industry	Agriculture, hunt, forestry		0.853 (0.801)
	Manufacturing industry		0.711* (0.144)
	Production and distribution of electricity, gas and water		0.445 (0.260)
	Construction		0.453** (0.156)
	Trade, motor vehicles, motorcycles and personal and household goods repairing		Ref.
	Hotel and catering		1.588 (0.537)
	Transports and communication		1.298 (0.292)
	Financial activities		0.986

			(0.223)
	Real estate, renting and enterprise services		0.824 (0.171)
	Public administration		0.829 (0.168)
	Education		0.239*** (0.0615)
	Health and social work		0.386*** (0.0813)
	Other community, social and personal service activities		0.622* (0.173)
	Activities of household		2.473** (1.013)
	Extra-territorial activities		0.879 (0.549)
	Permanent contract		0.716** (0.112)
	Constant	1.767 (0.873)	2.615 (1.584)
	Observations	1,038	1,038
	McFadden's pseudo R2	0.123	0.209

Source: *Trajectoires et Origines*, 2008. Note: seEform in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 1.6 exhibits the results of the estimation of the probability of being overeducated, depending on being descendants of immigrants or natives. The comparison of the two models on the same data shows that the McFadden's  $R^2$  is higher for the second model, which is consequently with the greater likelihood. The addition of labour market variables increases the McFadden's  $R^2$  up to a "good" value (it is generally assumed that McFadden's  $R^2$  ranging between 0.2 and 0.4 are good), which assesses their relevance.

It first points out, in the first column, the non-significant role played by the fact to be descendants of immigrants on the probability of being overeducated. At the aggregated level, the main hypothesis is therefore not validated, only other characteristics than having immigrant parents are significantly related to overeducation. Results in appendix (Table A.1.3), for the same estimation with a disaggregation of immigrant parents in several categories of parents' region of birth, explain this surprising result. Indeed, the effect of parents' region of birth varies, which leads to an aggregated non-significant effect. Having North African immigrant parents is positively and significantly associated with overeducation.<sup>46</sup> Yet, if having North African immigrant parents increases the probability of being overeducated in model 4 (the second column of table A.1.3) the introduction of labour market variables wipes this significant relationship in favour of a significant relationship between both economic sectors and the type of contract and overeducation.<sup>47</sup> The more frequent situations of overeducation among immigrants' offspring appears to result from a combination of compositional effects in terms of human capital (educational segregation in low education levels) and

<sup>46</sup> Another way to present the results is to do the average interaction effects. Figure A.1.1. details the interactions between the parents' region of birth and education. The figure underlines the higher likelihood of overeducation for native-born with North African parents.

<sup>47</sup> The other control variables vary in the same directions as for the model presented in this subsection.

employment segregation, in occupations and sectors of activity in which overeducation is more frequent, and in more precarious employment.

Being a woman significantly increases the probability of being overeducated, in line with the results of the literature. Similarly, and as the literature suggested, older people are less likely to be overeducated. Compared to having a “Bac+2” (BTS, DUT, former “DEUG”)<sup>48</sup>, having a baccalaureate (whether general, technical or professional) or a bachelor’s degree significantly decreases the probability of being overeducated whereas graduating from a “*Grande École*” is not significantly related to the probability of being overeducated. Moreover, the field of study is also significantly associated to the probability of overeducation: compared to general education, technical/professional areas of production are significantly decreasing the probability of being overeducated. Parents’ occupation plays a role on the probability of being overeducated, yet, only the one of mothers does, and not the one of fathers. This result is in line with the sociology literature, the mother’s situation is a better indicator of social background than the father’s. The higher-skilled the mother is and the lower the probability of being overeducated is. On the contrary, partner’s activity and spatial variables do not play a significant role on the probability of being overeducated.

The introduction of demand-side variables in the second column adds some elements of explanation in the model.<sup>49</sup> The role played by sectors of activity turns out to be major. Compared to trade, motor vehicles, motorcycles and personal and household goods repairing sectors,<sup>50</sup> the sector of hotel and catering is for instance associated with more overeducation, all other things being equal. On the contrary, the education sector or the real estate, renting and enterprise services are generating less overeducation. Regarding the education sector, it may result from the high requirements in terms of diplomas to access the competitive entry exam. It is also the case of several sectors in which occupations tend to be mainly low-skilled, such as in construction or in manufacturing activities. Besides, working in a permanent employment significantly decreases the probability of overeducation, compared to short-term ones. As mentioned above, the importance of these labour market variables even changes the significance of the only origin variable significant at the disaggregated level (which becomes non-significant), as well as of one field of study (the field of technic and professional areas of services becomes significant, which seems to indicate a correlation between this field and sectors of activity) (see Table A.1.3).

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<sup>48</sup> Bac +2 is the reference because it is the educational level that most individuals have.

<sup>49</sup> The introduction of these variables does not change the other results described above, thus limiting the risk of multicollinearity between diploma and industry.

<sup>50</sup> This sector is the biggest economic sector in terms of working population.

### 3.2. THE SELECTION MODEL AND RESULTS

#### 3.2.1. DEFINITION OF THE SELECTION MODEL

The results found in the previous section only focus on the occurrence of overeducation. However, another interesting thing to look at is its propensity. A selection bias can be suspected, as unemployment affects differently the two populations of native-born. The descriptive statistics have for instance raised significant higher levels of unemployment for immigrants' offspring. Therefore, estimating the propensity of being overeducated may differ from estimating the occurrence of overeducation. Because immigrants' offspring are more affected by unemployment, they may be "more selected" in employment, thus being less likely to be overeducated once the selection bias is controlled for. This assumption can yet be mitigated by other potential biases such as diplomas' unobserved heterogeneity for instance.

The two types of estimations (of the occurrence of overeducation and its propensity) refer to different conceptual frameworks. On the one hand, the probability of being overeducated only concerns individuals who are working, *i.e.* 88% of our sample. Yet, these individuals might have some characteristics that differentiate them from those who are not working. Consequently, the results of the simple probit model that estimates the probability of being overeducated can produce some biased results if one does not acknowledge that the observations of the model concern a specific subsample of the population.

On the other hand, a selection model looks at the propensity of being overeducated, if the individual is employed. This propensity is unobservable; it requires to estimate a latent variable. For that reason, bivariate probit with selection is used (VAN DE VEN and VAN PRAAG, 1981). This model consists in explaining the propensity of overeducation, the dependent variable  $y_i$  knowing that  $y_i$  is observed only for a certain value of  $y_i^*$ . In the probit equation,  $y_i^*$  is the latent variable that cannot be observed and that measures the probability of being overeducated, as before.

$$y_i = \begin{cases} 1 & \text{if } y_i^* > \gamma \\ 0 & \text{otherwise} \end{cases}$$

With

$$y_i^* = x_i\beta + \varepsilon_{1i}$$

The dependent variable is however not always observed. Rather, the dependent variable for observation  $i$  is observed if (HECKMAN, 1977; VAN DE VEN and VAN PRAAG, 1981):

$$y_i^{select} = (z_i\gamma + \varepsilon_{2i} > 0)$$

Where

$$\varepsilon_{1i} \sim N(0,1)$$

$$\varepsilon_{2i} \sim N(0,1)$$

And

$$\text{corr}(\varepsilon_{1i}, \varepsilon_{2i}) = \rho$$

When  $\rho \neq 0$ , VAN DE VEN and VAN PRAAG (1981) specify that using standard probit techniques to the first equation yield biased results. The authors also state that the selection equation requires at least one variable that is not in the probit equation to well identify the model. In the case of overeducation, the research devoted to estimate labour market participation models defines the exclusion variables as household characteristics, such as the matrimonial situation and the number of children (MROZ (1987); HYSLOP (1999); BUCHINSKY *et al.* (2010)). This exclusion variable (built from these two variables) is empirically tested with a Hausman test, which assesses the validity of the selection model. These exclusion variables are also significantly related to job access but not to the propensity of being overeducated. Except from these exclusion variables that are added in the selection equation, the two equations (the selection equation and the probit one) include the same explanatory variables.

Besides, marginal effects are also estimated, to more accurately interpret the results of the bivariate probit with selection. Marginal effects of diplomas on the propensity of experiencing overeducation (probit equation) are estimated for each group of descendants of immigrants, depending on their parents' place of birth. Specifically, the marginal effect of diplomas on the propensity of being overeducated is the measurement of a change of this factor alone, when other factors are assumed to be constant. Results are presented in appendix.

### 3.2.2. ESTIMATION AND RESULTS OF THE MODEL

**Table 1.7. Estimation of the probability of being overeducated by parents' place of birth with a control of selection**

	Variables	(7)		(8)	
		Selection	Overeducation	Selection	Overeducation
Parents' place of birth	North Africa	0.501*** (0.0829)	0.842 (0.142)	0.495*** (0.0896)	1.048 (0.211)
	SubSaharan Africa	0.713 (0.156)	0.717 (0.166)	0.734 (0.189)	0.882 (0.232)
	Asia	0.737 (0.137)	0.871 (0.166)	0.847 (0.190)	1.175 (0.249)
	South Europe	0.958 (0.146)	0.986 (0.139)	1.094 (0.186)	0.945 (0.148)
	North and Continental Europe	0.807 (0.220)	0.884 (0.222)	0.886 (0.270)	0.975 (0.268)
	East Europe	1.961 (1.209)	0.969 (0.385)	2.210 (1.898)	0.835 (0.370)
	Others	0.775 (0.366)	0.946 (0.433)	0.924 (0.461)	0.997 (0.494)
Diploma	<i>Baccalauréat professionnel et technologique</i>	0.627*** (0.0789)	0.305*** (0.0424)	0.714** (0.101)	0.277*** (0.0519)
	<i>Baccalauréat général</i>	0.667** (0.124)	0.674** (0.114)	0.839 (0.175)	0.590*** (0.113)
	<i>Bac +2</i>	Ref.	Ref.	Ref.	Ref.
	Bachelor's degree	0.944 (0.150)	0.610*** (0.0836)	0.882 (0.156)	0.671*** (0.102)
	<i>Grande Ecole</i>	1.021 (0.269)	0.798 (0.183)	0.759 (0.217)	0.869 (0.216)
	Master's degree or PhD	0.947 (0.198)	0.770 (0.139)	0.942 (0.216)	0.868 (0.174)
	Two immigrant parents	0.742** (0.0987)	0.861 (0.112)	0.760* (0.119)	0.900 (0.135)
	Female	0.738** (0.0875)	1.394*** (0.154)	0.731** (0.0991)	1.751*** (0.213)
	Age	1.014 (0.0140)	0.987 (0.0126)	1.038** (0.0175)	0.982 (0.0142)
Field of study	General education	Ref.	Ref.	Ref.	Ref.
	Technicoprofessional areas of production	0.833 (0.152)	0.580*** (0.107)	0.762 (0.155)	0.601** (0.124)
	Technicoprofessional areas of services	0.984 (0.133)	0.862 (0.104)	1.089 (0.164)	0.762** (0.103)
	Partner in activity		1.165 (0.144)		1.164 (0.160)
Father's occupation	Low skilled occupations	Ref.	Ref.	Ref.	Ref.
	Medium skilled occupations	1.022 (0.222)	1.033 (0.219)	1.003 (0.246)	0.989 (0.234)
	High skilled occupations	0.947 (0.232)	0.997 (0.236)	1.049 (0.291)	0.950 (0.250)
Mother's occupation	Low skilled occupations	Ref.	Ref.	Ref.	Ref.
	Medium skilled occupations	1.138 (0.153)	0.744** (0.0947)	0.979 (0.148)	0.734** (0.107)
	High skilled occupations	0.973 (0.169)	0.706** (0.115)	0.846 (0.165)	0.705* (0.130)
Place of living	Living in Sensitive Urban Area	1.168 (0.223)	1.387* (0.238)	1.211 (0.263)	1.146 (0.222)
	Living in the Paris region	1.068 (0.121)	0.921 (0.0966)	1.131 (0.141)	0.849 (0.0989)

Industry	Agriculture, hunt, forestry				0.898 (0.813)
	Extractive industry				0.00449 (169.1)
	Manufacturing industry				0.759 (0.150)
	Production and distribution of electricity, gas and water				0.499 (0.279)
	Construction				0.410** (0.149)
	Trade, motor vehicles, motorcycles and personal and household goods repairing				Ref.
	Hotel and catering				1.609 (0.523)
	Transports and communication				1.347 (0.301)
	Financial activities				1.091 (0.240)
	Real estate, renting and enterprise services				0.905 (0.184)
	Public administration				0.850 (0.171)
	Education				0.271*** (0.0712)
	Health and social work				0.417*** (0.0874)
	Other community, social and personal service activities				0.658 (0.178)
	Activities of household				2.859** (1.189)
	Extra-territorial activities				0.953 (0.571)
	Permanent contract				0.745* (0.114)
	Family features	2.442*** (0.178)		0.217*** (0.0230)	
	Constant	0.393* (0.193)	1.197 (0.638)	15.18*** (9.840)	2.954* (1.804)
	Observations	1,078	1,078	1,078	1,078
	Rho	0.99	0.99	0.99	0.99

Note: Rho are not significant. seEform in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Source: *Trajectoires et Origines*, 2008.

Table 1.7 displays the results of the estimation of the propensity of being overeducated by parents' region of birth with a control for selection. The likelihood-ratio test<sup>51</sup> (after estimation) validates the use of the selection model. Indeed, the null hypothesis that the two equations are independent can be rejected at the 0.05 threshold.

The results depict the significant role that some region of origin can play on job access (columns 1 and 3), but not on the propensity of being overeducated (columns 2 and 4). More precisely, having North

<sup>51</sup> Stata provides the results of the likelihood ratio test against  $H_0: \rho=0$ . This ratio test compares "the joint likelihood of an independent probit model for the selection equation and a regression model on the observed data against the treatment effect model likelihood." (GUO and FRASER, 2014, p.103).

African immigrants' parents significantly lowers the chances of getting a job.<sup>52</sup> This result recalls the conclusions found in the literature concerning their problematic labour market integration (SILBERMAN, *et al.*, 2007) or the discrimination they suffer from (SAFI and SIMON, 2013; CEDIEY, *et al.*, 2008)).<sup>53</sup> Table A.1.4 in appendix exhibits the results of the estimation of the probability of being overeducated depending on being second generation immigrant with a control of selection. It also depicts a significant role that immigrant background plays on job access, but not on the propensity of being overeducated. Being descendants of immigrants does not involve an increased propensity of being overeducated, all other things being equal.

Being a woman also decreases the probability of getting a job, confirming here the literature on gender labour market issues (MEURS and PAILHÉ, 2010; MARUANI, 2011) and increases the propensity of being overeducated. Moreover, the older individuals get, the higher the probability to get a job is. Concerning the influence of diplomas, compared to the "Bac+2", general, technical and professional baccalaureates significantly reduce the probability to get a job, but at the same time reduce the propensity of being overeducated. The bachelor's degree also decreases the propensity of being overeducated compared to the "Bac +2". However, degrees higher than the bachelor's degree are not significantly related to overeducation. The place of residence appears to be significantly related to overeducation. The fact to live in the Paris region significantly increases the probability to get a job. Besides, the fact to live in sensitive urban areas is significantly related to overeducation in model (8). Also, the field of study remains significantly associated to the propensity of overeducation: compared to general education, technical/professional areas of production are significantly decreasing the propensity of being overeducated, but have no impact on the probability to get a job. All sectors of activity are significantly related to overeducation, except that financial activities are not significantly related to overeducation anymore (this sector was previously negatively and significantly related to overeducation), after considering the selection bias. The exclusion variables are also significant, being in couple increases the probability to get a job whereas the more children one has and the less likely he is to get a job.

In sum, after controlling for individual and employment-related variables, having immigrant parents does not increase the propensity of being overeducated neither (even though the selection model takes into account the significant barrier to enter employment faced by immigrants' offspring). The more frequent situations of overeducation raised in the descriptive statistics seem to stem from composition effects, related to human capital (levels of education for instance) and to employment segregation by

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<sup>52</sup> Another way to present the results is to look at the average marginal effects. Figure A.1.1. depicts the average marginal effects of each diploma by parents' region of birth.

<sup>53</sup> The introduction of a variable of self-declared discrimination indicates a significant relationship between discrimination and overeducation when the selection bias is not controlled for. Yet, this relationship disappears when the selection bias is corrected. The significant relationship on overeducation therefore seems to be attributable to the selection.

sector and type of employment. Moreover, the significant and negative value of Rho (the correlation of the residuals in the two equations) in model (8) suggests that error terms in the two equations of the selection model vary in different direction. In other words, the unobserved characteristics that may hinder job access may favour overeducation. On the contrary, the relevance of the model without employment-related variables seems low, Rho being statistically not significant in model (7).

## SECTION 4: COMPARISON BETWEEN FRANCE AND THE UNITED STATES

This section aims at comparing the overeducation spread between natives and of immigrants in France and in the United States. One of the challenges of empirically comparing two countries on overeducation is the question of measurement. Previous attempts, mainly by some international organizations such as the OECD, revealed that overeducation is more pronounced in the United States than in France (OECD, 2015b). No research has however investigated the overeducation spread between natives and of immigrants comparing these two countries. In detailing some descriptive statistics, I show how the measurement of overeducation I used for France cannot be extended to the United States, and consequently how the comparison can be made through the measure used by the OECD (2007) (see also QUINTINI, 2011). This brief overview of the specificities of each classification will be followed by some comparative descriptive statistics. Next, the econometric specifications in both countries shed light on the absence of any correlation between origin and overeducation. And finally, I explore the issue of potential different role of explanatory variables on the probability of being overeducated for natives and of immigrants.

### 4.1. COMPARATIVE DESCRIPTIVE STATISTICS

The particularities of each classification will be displayed in the first part, before presenting the comparative framework in a second part, where the main figures in the two countries are also described.

#### *4.1.1. THE CHALLENGE TO REPLICATE THE FRENCH STATISTICAL TABLE OF OVEREDUCATION IN THE UNITED STATES*

##### *The “Catégorie Socio-Professionnelle”: A French specificity*

The “*Professions et Catégories Socioprofessionnelles*” (PCS) classification has been used in France for over half a century to study social environments and describe occupations. Created in 1954 by the French statistical administration, *Insee*, this classification combines status, occupation and qualification (DESROSIÈRES, THEVENOT, 1988). Because of this multidimensionality, the table used in

France for occupations appears richer but more complex to use than those of other countries. While the status and the occupation dimensions go back to the 19<sup>th</sup> century, the last dimension, qualification, was more recent at the time. The status distinguishes wage earners from self-employed. Occupation, “*métier*” in French, refers to the inherited corporative vocabulary and correspond to a time when activities were characterized by specific skills and knowledge. The qualifications are more related to the hierarchy introduced in the 1940s and 1950s following negotiated collective agreements.<sup>54</sup>

According to CHAUVEL *et al.* (2002), socioprofessional classes have been progressively becoming staples<sup>55</sup>, they are used in public statistics, in private statistics and then in civil society because they properly depict the collective representations of professional inequalities.

Moreover, the authors state that this classification can be put in perspective with the US-American classification of races: there exist in each society some social reading grids which depend on country-specific cultures and history. US-American social demand seems to more strongly polarize around ethnic differences whereas in France, the vision of inequalities is more class-based (CHAUVEL *et al.*, 2002).<sup>56</sup> In the United States, as in many other countries, occupations are classified into 23 groups (picture A.1.1. in appendix), which rely only on a sectorial classification.<sup>57</sup> Compared to the US-American classification, the French one is not one-dimensional.<sup>58</sup> These described specificities of the French classification complicate its utilization in a comparative framework. The next section details the US-American database used to compare the situation of overeducation differentials between natives and descendants of immigrants, and how occupations are described in this database.

### *Presentation of the Current Population Survey*

The Current Population Survey<sup>59</sup> (CPS) is a monthly statistical survey supported jointly by the U.S. Census Bureau and the U.S. Bureau of Labour Statistics (BLS). It is the primary source of labour force statistics for the population of the United States (CPS, 2002). The BLS uses these data to provide a

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<sup>54</sup> The classification is consequently seen as resulting from a constructivism process (CHAUVEL *et al.*, 2002). This tool is not only decided by statisticians for statisticians but is foremost the result of a collective bargaining between statisticians and social partners in order to properly describe working population as it feel for them. The classification therefore includes some social content (CHAUVEL *et al.*, 2002).

<sup>55</sup> The relative stability over the decades demonstrates the accuracy of the social classes’ concept (DESROSIÈRES, 2008). The originality of the French classification is to gather in one tool two classifications: the one dealing with social environments, mainly used by sociologists or by marketing employees, and considers individuals as well as households, and the second that takes into account only individuals who have an occupation (DESROSIÈRES, 2008).

<sup>56</sup> See box A.1.1. for a brief discussion about the debate on this issue.

<sup>57</sup> See the remark under picture A.1.1. in appendix.

<sup>58</sup> Pierre Bourdieu studied this multidimensionality in his book “*La distinction*” (BOURDIEU, 1979). He more precisely distinguished two factorial axes: the first, that looks like the most to the unidimensional American one, opposes the most favored categories to the popular ones; but the second one, transversal to the first, opposes categories that are granted with school-based and cultural resources to those granted to economic resources.

<sup>59</sup> Box A.1.2. provides additional information on the Current Population Survey.

monthly report on the employment situation (number of employed and unemployed people for instance). The CPS is the source of several major economic statistics, including the national employment and unemployment rates, and “provides data on a wide range of issues relating to employment and earnings. The CPS also collects extensive demographic data that complement and enhance our understanding of labour market conditions in the nation overall, among many different population groups, in the states and in sub state areas”.<sup>60</sup>

The Annual Social and Economic Supplement (ASEC) is part of the CPS and is conducted from February to April – it was formerly called the March Supplement. This supplement includes questions about work activity, educational attainment, numerous socioeconomic and demographic characteristics and several labour market related questions such as occupations. Due to the large existing differences between the French PCS classification of occupation and the US-American one, it is difficult to compare properly occupations and therefore, to construct a comparative measure of overeducation. The following section details the methodology I use to mitigate this issue.

#### *4.1.2. THE NEED TO WORK DIFFERENTLY: THE OECD MEASURE*

Due to the differences in occupational classifications, comparing France and the United States requires another methodology than the one used in the previous sections of this chapter. International comparisons relating to overeducation have been run by international organizations and they rely on an international classification of education – ISCED – (4.1.2.1) and an international classification of occupations – ISCO – (4.1.2.2). Given the inherent limitations of these classifications, the measure of overeducation can only concern highly educated workers (4.1.2.3).

##### *The distribution of highly educated workers (ISCED)*

- The ISCED classification and the application to the national databases

The International Standard Classification of Education (ISCED), a United Nation’s classification, is a statistical framework that sorts out information on education and is maintained by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

The ISCED was designed in the early 1970s by UNESCO “to serve as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally” (UNESCO, 2006). Not only the ISCED classification provides a statistical framework for the comprehensive statistical description of national education and learning systems, but it also offers a methodology that translates national educational programs into an internationally comparable set of categories for the levels of education and for the fields of education (UNESCO, 2006). Despite allowing cross-country comparisons, this classification has heterogeneous categories; at a given level

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<sup>60</sup> <http://www.census.gov/cps/> (consulted on October 29<sup>th</sup>, 2015)

of education, the quality of the degree can vary. This “quality bias” exists in the two countries. Unfortunately, for the purposes of the comparison, this bias is difficult to capture.

As national education systems vary over time in terms of structure and curricular content, the classification is regularly updated. After a first version of the classification in 1976 at its creation, a second one has been implemented in 1997 and a latest in 2011. As “*Trajectoires et Origines*” dates back to 2008, the classification of education used is the one of 1997, known as ISCED97 (the same is used for the 2008 US-American data as well). Seven levels of education are distinguished by UNESCO (picture A.1.2 in appendix) from pre-primary education to advanced research qualification. Designers of the “*Trajectoires et Origines*” database coded themselves French diplomas into ISCED97 categories, with the help of the table in appendix (Picture A.1.3).

The United States do not use the ISCED classification in their national surveys. Yet, the ISCED classification is easily transposable to their diploma distribution. Following the methodology used by OECD (2007; 2015b) and QUINTINI (2011), the subsequent equivalence table is defined (see table 1.8).

**Table 1.8. Table of equivalence between diplomas in Current Population Survey and the 1997 ISCED classification**

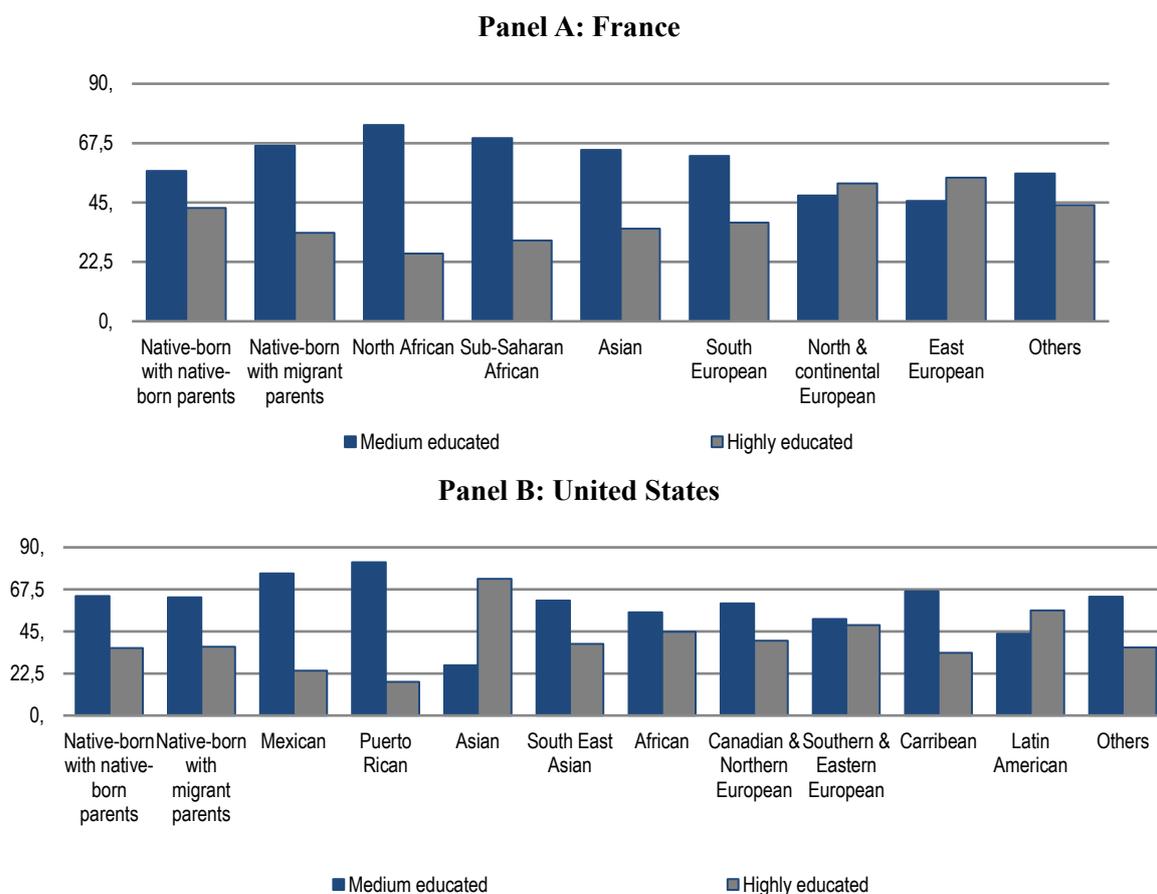
ISCED0/1	Less than 9th grade
ISCED2	9th grade to 12th grade with no diploma
ISCED3	High school diploma or equivalent + some college but no degree
ISCED5	Associate (whether academic or vocational), bachelor, master’s and professional school degree
ISCED6	Doctorate degree

Source: OECD (2007; 2015b), QUINTINI (2011) and author’s computation.

- The distribution of education following ISCED criteria

Figure 1.2 displays the percentage of high educated workers among all workers in each country either they are natives or descendants of immigrants. The distribution of education in the United States depicts no comparable inequalities than those found in France. The figure illustrates the absence of large inequalities in the United States in terms of education between natives and descendants of immigrants. In this country, compared to natives, descendants of immigrants are even 0.7 percentage points more frequently highly educated. In France, on the contrary, a 9 percentage points’ gap exists between the two populations, negatively affecting descendants of immigrants.

**Figure 1.2. Distribution of medium and high education levels of native-born by their parents' place of birth in France and in the United States**



Sources: *Trajectoires et Origines*, 2008 (for France) and Current Population Survey, 2008 (for the United States).

Figure 1.2 also reveals heterogeneity by parents' place of birth. The spread between the different groups of origin is higher in the United States. In this country, 73% of children of Asian immigrants are highly educated whereas only 18% of those of Puerto Rican descent are. Children of Mexican immigrants tend to have relatively low levels of education as well (23.9% are highly educated). In France, being highly educated varies by a factor of two, but no group reaches the level of education of the children of Asian immigrants in the United States. The children of North African immigrants are the least educated group of origin: only a quarter (25.7%) of them is highly educated. Conversely, children of eastern and northern and continental European immigrants are the highest educated group of origin, with respectively 54.4% and 52.3% of them being highly educated.

### *The distribution of occupations (ISCO)*

- The ISCO classification and the application to the national databases

The International Standard Classification of Occupations (ISCO) is a classification that organizes information on labour and occupations, which has been implemented by the International Labour Organization (ILO). This classification is, as the ISCED is, part of the United Nations economic and

social classifications. According to ILO, “ISCO is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. Its main aims are to provide: a basis for the international reporting, comparison and exchange of statistical and administrative data about occupations; a model for the development of national and regional classifications of occupations; and a system that can be used directly in countries that have not developed their own national classifications” (ILO, 2015<sup>61</sup>). This classification aims at statistical works as well as being a tool for public policies (matching of job seekers with job vacancies, management of migration of workers between countries and guidance for the development of vocational training programs) (ILO, 2015). According to the ILO, ISCO “groups jobs together in occupations [...] mainly on the basis of the similarity of skills required to fulfil the tasks and duties of the jobs”. To define the skill concept of ISCO and form groups, two dimensions are considered: (1) skill level and (2) skill specialization. Skill level is “a function of the range and complexity of the tasks involved, where the complexity of tasks has the priority over the range”. Skill specialization reflects the “type of knowledge applied, tools and equipment used, materials worked on, or with, and the nature of the goods and services produced”. ISCO’s focus is not whether a worker in a specific occupation is more or less skilled than another one in the same occupation but rather on the skills required to execute the tasks and obligations of an occupation.

As for the ISCED classification, the ISCO classification is also directly implemented in some national databases. In France, picture A.1.4 in appendix illustrates the adequacy between occupations and the ISCO classification provided by the Insee and Ined, in charge of *Trajectoires et Origines*. The United States do not use either ISCO (or ISCED) and their classification is hardly connected to ISCO, especially because it is impossible to distinguish low-skilled and medium-skilled occupations (from ISCO4 to ISCO9). To deal with this deficiency, the OECD computes a classification in which only high skilled occupations (ISCO1 to ISCO3) are distinguished from the other occupations; it allows a focus on highly skilled. Table A.1.5 in appendix provides details about which categories of occupations are included in the high skilled occupations and which are not.

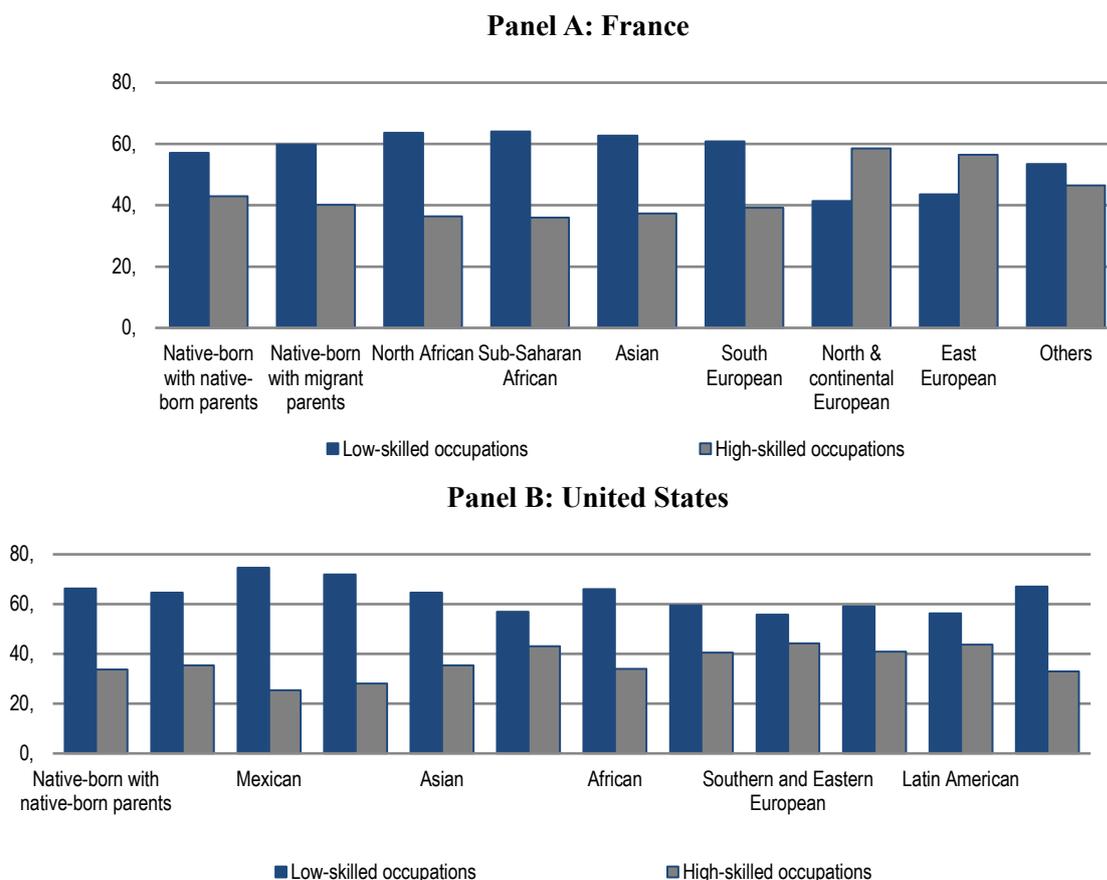
- The distribution of high skilled occupations

Figure 1.3 portrays the same picture as for education for high skilled. In the United States, immigrants’ offspring are slightly more in high skilled jobs than natives, whereas it is the contrary in France. Descendants of immigrants are 1.7 percentage points more in high skilled jobs in the United States (respectively 35.4% and 33.7%) while they are 2.7 percentage points less in high skilled jobs in France (respectively 40.2% and 42.9%).

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<sup>61</sup> International Labour Organization. International Standard Classification of Occupations, retrieved 29 October 2015 (<http://www.ilo.org/public/english/bureau/stat/isco/>).

**Figure 1.3. Distribution of high-skilled occupations (ISCO) in France and in the United States by parents' region of birth**



Sources: *Trajectoires et Origines*, 2008 (for France) and Current Population Survey, 2008 (for the United States).

The distribution of occupations by parents' place of birth (Figure 1.3) depicts similar patterns as the ones found for education; more heterogeneity can be found in the United States. In France, northern, continental and eastern European descendants of immigrants are more likely to work in high-skilled occupations than natives, with about a 15-percentage point differential. North and sub-Saharan African descendants of immigrants are more likely to work in low-skilled occupations, with a differential of about 6.5 to 7 percentage points relative to the natives. In the United States, a fourth of Mexican immigrants' offspring, a third of natives and close to half of southern and eastern European immigrants' offspring have a high-skilled occupation. The divergences are major and reflect those found in the distribution of education levels.

### *The construction of a measure for highly educated*

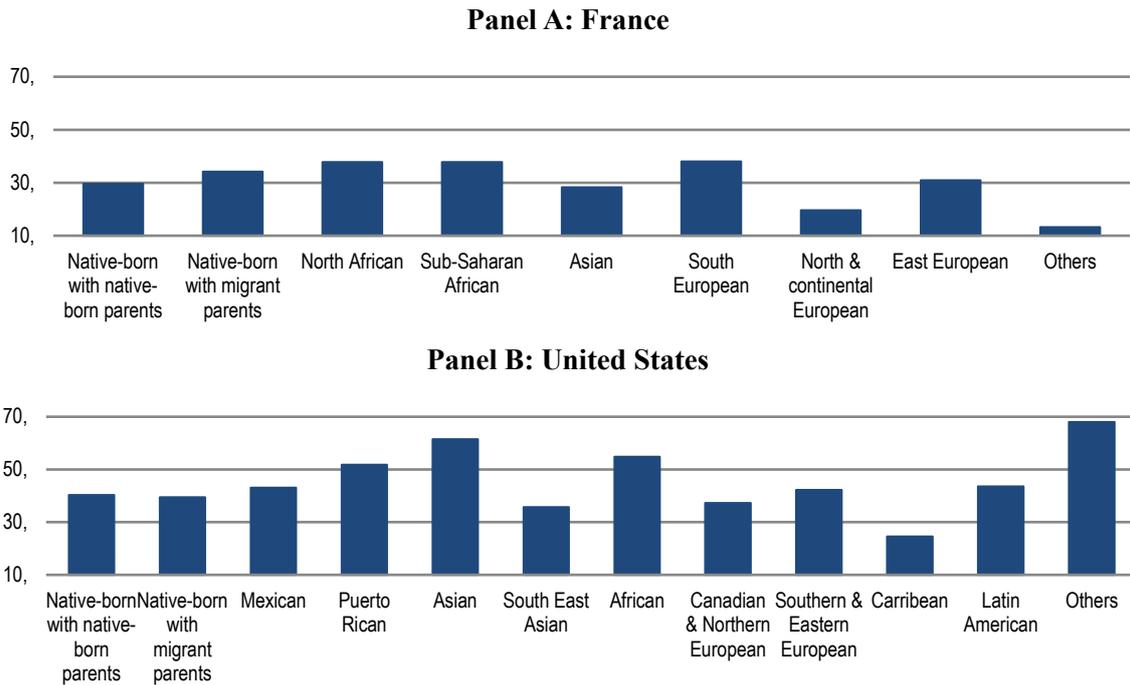
In order to correctly compare overeducation in the two countries, the methodology used by the QUINTINI (2011) and OECD (2007; 2015b) is adopted. The definition is rather simple: the overeducation rate measures the share of highly educated people having an occupation other than a highly skilled job. It corresponds more precisely to individuals who have an associate degree

(academic or vocational), a bachelor's degree, a master's and professional school Degree or a Doctorate degree and who don't have highly qualified jobs such as in Management, Business and financial operations, Computer and mathematical, Architecture and engineering, Life, physical and social science, Community and social service, Legal, Education, training and library, Arts, design, entertainment, sports and media, Healthcare practitioners and technical. Only individuals who graduate from higher education are consequently considered in this empirical work. Hence, the main limit of this classification lies in the loss of information due to the impossibility to calculate overeducation for those who are not highly educated. However, it provides information on the existing spread between natives and descendants of immigrants in terms of overeducation and allows a comparison of this spread between the two countries.

The descriptive statistics presented in this section focus on individuals who graduated at least from higher education, and consequently those who can be overeducated. These statistics depict differences in terms of overeducation between natives and descendants of immigrants and by parents' place of birth. Overall the global levels of overeducation for the whole population confirm the hierarchy raised in the comparative literature that there is more overeducation in the United States compared to France. Figure 1.5 highlights dissimilarities between France and the United States: in France, among graduates of higher education, descendants of immigrants are more overeducated than natives. On the contrary, US-American descendants of immigrants are slightly less overeducated than natives, but to a lesser extent. In France, having one non-migrant parent decreases the probability of being overeducated for descendants of immigrants; it is not true in the United States.

Figure 1.4 portrays the discrepancies between individuals by their parents' region of birth. Results suggest that all the largest groups of descendants of immigrants depict higher probability of being overeducated. In France, North and sub-Saharan African, as well as southern European descendants of immigrants are 7 to 8 percentage points more overeducated than natives. Conversely, northern and continental European descendants of immigrants are 10 percentage points less overeducated than natives. In the United States, the spread is even higher. Native-born Chinese and Asian with immigrant parents are 1.5 times more likely to be overeducated than natives. This result can be at first surprising; however, MADAMBA and DE JONG (1997) find similar results for Asians (they look at Asians, irrespective of their immigrant status). Native-born with Puerto Rican immigrant parents are also quite affected by overeducation: one out of two graduates from higher education is overeducated. Native-born with northern African immigrant parents and from other non-specified countries are the most affected by overeducation. On the opposite end stand descendants of immigrants from northern and Continental Europe and from Asia.

**Figure 1.4. Distribution of overeducation of natives and descendants of immigrants in France and in the United States by parents' place of birth**



Sources: *Trajectoires et Origines*, 2008 (for France) and Current Population Survey, 2008 (for the United States).

Note: the population of reference is employed individuals, aged 20 to 35 years old, who graduated at least from higher education.

#### 4.2. ECONOMETRIC ANALYSIS OF OVEREDUCATION

This section deals with the econometric analysis of overeducation. As in section 3, regression analysis relies on probit models, on a first step without selection and on a second step with selection, as presented in section 3. The models here include fewer variables than in section 3, as the comparison reduces the potential of control variables. The models include origin (with the same two steps method), the diploma, the fact of having one native-born parent, age, gender, and place of residence (*i.e.* the fact to live in the Paris region in France and in a metropolis in the United States). The demand-side variables include economic sectors and an indicator of job quality: the fact of having a permanent contract in France and the fact of being covered by employer or union health plan in the United States. The variables characterizing job quality are different due to different labour market institutions in the two countries (see Chapter 2 for more details on those indicators).

Results for France are presented in the first subsection, for the United States in the second subsection and finally a discussion on what the comparison showed concludes this section.

#### 4.2.1. IN FRANCE

Table 1.9 shows that having immigrant parents significantly increases the probability of individuals of being overeducated, according to the measure of overeducation used in this section. However, the introduction of labour market characteristics (sector of activity, type of contract) makes the fact of having immigrant parents non-significant. It seems that the penalty associated with having immigrant parents can be partly attributable to their distribution across sectors and employment, which leads to greater probability of being overeducated. Moreover, table A.1.5 in the appendix reveals this similar positive and significant relationship between having North African or southern European immigrant parents and overeducation: indeed, it increases the probability of being overeducated. However, the penalty associated to North African parents disappears with the introduction of labour market characteristics. On the contrary, the coefficient remains positive and significant, and even increases for individuals with southern European immigrant parents. It seems that having North African immigrant parents is associated with occupations and sectors in which overeducation is higher, whereas children of southern European immigrant parents work to a greater extent in economic sectors and occupations that decrease their probability of being overeducated, as found in section 3. One may assume that the employment segregation of North African immigrants' offspring increases their propensity of being overeducated. On the contrary, the education level of southern European immigrants' offspring tends to match relatively well their employment, as their propensity of being overeducated decreases with the consideration of labour market characteristics. The difference between these two groups may consequently be related to employment segregation differentials.

Besides, significant coefficients are associated with control variables, in line with the relationships found in the previous section<sup>62</sup>. Significant coefficients are always found for sex, as being a woman always increases the probability of being overeducated. Moreover, age is always significant too, and decreases the probability of being overeducated. Diplomas, considered here as a dummy variable distinguishing bachelor's degree (and *bac*+2) from master's degree (and PhD), plays a role in French overeducation: graduating with a master's degree decreases the probability of being overeducated. Interestingly, when the diploma is not included in the second model, mother's occupation becomes significant: having a mother who is an executive or a manager decreases the probability of being overeducated, even after controlling for demand-side variables. This variable is not significantly related to overeducation after the introduction of education level, suggesting that education might be related to mother's occupation. Finally, demand-side variables are significant: economic sectors are also playing a major role in the probability of being overeducated, depending on the existing sectoral specificities in terms of qualification. For instance, working in the construction sector, education or in

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<sup>62</sup> Similar results are found for the coefficients of Table A.1.5.

health and social work decreases the probability of overeducation. Furthermore, working in a permanent contract also decreases the probability of overeducation.

Looking at the McFadden's  $R^2$  illustrates the strong role of employment-related variables in France. Including them in the model almost triples the McFadden's  $R^2$  value, hence raising the predictive power of the model. Employment-related variables are thus greatly related to overeducation.

**Table 1.9. Estimation of the probability of being overeducated in France by parents' place of birth**

Variables	(1)	(2)
Migrant parents	1.146* (0.0861)	1.015 (0.0859)
High level of education	0.630*** (0.0503)	0.499*** (0.0483)
Two immigrant parents	1.116 (0.0872)	1.062 (0.0941)
Woman	1.351*** (0.0866)	1.692*** (0.127)
Age	0.949*** (0.00740)	0.972*** (0.00921)
Paris region	0.913 (0.0600)	0.926 (0.0684)
Trade		Ref.
Teching and health		0.229*** (0.0287)
Administration		0.420*** (0.0586)
Industry		0.374*** (0.0484)
Services		0.561*** (0.0618)
Permanent contract		0.731*** (0.0662)
Constant	2.723*** (0.668)	3.297*** (0.937)
Observations	1,564	1,564
McFadden's pseudo R2	0.059	0.153

Source: *Trajectoires et Origines*, 2008. Note: . seEform in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

In order to take into account the selection process that occurs before getting a job, a selection model is also run (Table 1.10 and Table A.1.6 in appendix). Table A.1.6 in appendix indicates, as before, that having immigrant parents does play a role on the probability of getting a job, but not on the propensity of being overeducated, similarly to the result in section 3.<sup>63</sup> Yet, at a finer level, some parents' region

<sup>63</sup> However, the likelihood-ratio test does not reject the null hypothesis of independence between the two equations in this specific case. Results are therefore to take with caution. On the contrary, the likelihood-ratio

of birth do play a significant role on overeducation. More precisely, having northern African immigrant parents not only significantly reduces the probability of being employed but also significantly increases the propensity of being overeducated. This result differs from the one of section 3, where no significant relationship was found between this and parents' region of origin. Besides, Table 1.10 points out the significant relationship between having southern European immigrant parents and the propensity of being overeducated in model 7. However, the introduction of labour market control variables makes this significant relationship disappear. The economic sectors and types of contract held by children of southern European immigrant parents seem to explain overeducation among this group. The other control variables have comparable coefficient as in previous probit without selection.

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test does not reject the null hypothesis of independence between the two equations when estimating the same models with the disaggregated variable of parents' region of origin.

**Table 1.60. Estimation of the probability of being overeducated in France by parents' place of birth with a control of selection**

Variables	(7)		(8)	
	Selection	Overeducation	Selection	Overeducation
Natives	Ref.	Ref.	Ref.	Ref.
North Africa	0.631*** (0.0717)	1.335*** (0.124)	0.657*** (0.0758)	1.246** (0.123)
SubSaharan Africa	0.773 (0.126)	1.169 (0.150)	0.802 (0.130)	1.036 (0.139)
Asia	0.705*** (0.0949)	1.133 (0.126)	0.726** (0.0980)	1.065 (0.125)
South Europe	1.063 (0.143)	1.209** (0.116)	1.084 (0.145)	1.164 (0.118)
North and Continental Europe	0.817 (0.167)	1.048 (0.169)	0.783 (0.159)	1.005 (0.173)
East Europe	0.911 (0.299)	1.141 (0.284)	0.969 (0.313)	0.979 (0.246)
Others	0.757 (0.231)	0.936 (0.236)	0.787 (0.238)	0.984 (0.266)
High level of education	0.932 (0.0886)	0.617*** (0.0498)	0.905 (0.0872)	0.627*** (0.0556)
Two immigrant parents	0.934 (0.101)	1.121 (0.0937)	0.912 (0.0984)	1.097 (0.0963)
Woman	0.924 (0.0762)	1.431*** (0.0914)	0.934 (0.0767)	1.566*** (0.107)
Age	1.024** (0.0107)	0.952*** (0.00749)	1.021** (0.0107)	0.969*** (0.00851)
Paris region	1.274*** (0.110)	0.875** (0.0569)	1.293*** (0.113)	0.891* (0.0612)
Trade	Ref.	Ref.	Ref.	Ref.
Teching and health				0.308*** (0.0329)
Administration				0.484*** (0.0593)
Industry				0.441*** (0.0506)
Services				0.615*** (0.0619)
Permanent contract				0.758*** (0.0563)
Familial features	0.946 (0.0326)		0.955 (0.0337)	
Constant	2.298*** (0.719)	2.369*** (0.582)	2.343*** (0.736)	3.519*** (0.935)
Observations	1,694	1,694	1,694	1,694
Rho	-0.983	-0.983	-0.978	-0.978

Note: Rho are statistically significant at the 10% threshold at least. The likelihood-ratio test validates the use of selection models, as the null hypothesis that the two equations are independent can be rejected, at the 0.1 threshold. seEform in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Source: *Trajectoires et Origines*, 2008.

#### *4.2.2. IN THE UNITED STATES*

In the United States, origin does not play any significant role in the probability of overeducation either, both at the aggregated or disaggregated level, all other things being equal (tables 1.11 and A.1.7 in appendix). The only exception concerns children of Latin American immigrant parents. For them, when introducing demand-side variables, their parents' country of birth is significantly related to the probability of overeducation but their origin decreases their probability of being overeducated. Having one native-born parent does not play any significant role. Diploma acts as a significant determinant to overeducation: compared to an associate or bachelor's degree, having a master's degree or a PhD decreases the probability of overeducation. In this country too, overeducation significantly decreases with age. But contrarily to what happens in France, being a woman decreases the probability of overeducation in model 1. However, the introduction of demand-side variables in model 2 makes the coefficient non-significant, indicating that women may work in sectors in which they would be more likely to be overeducated.

As found for France, economic sectors are significantly related with the probability of being overeducated. Compared to the trade sector, all others are significantly and negatively related to overeducation. The fact of having an occupation in which health insurance is covered by employer or union health plan decreases the probability of being overeducated. It suggests that the more secure a job is, the less likely an individual is overeducated.

Just like in France, looking at the McFadden's  $R^2$  consolidates the strong role of employment-related variables. Including them in the model almost triples the McFadden's  $R^2$  value, hence raising the predictive power of the model. These variables seem to play a strong explanative role in the probability of overeducation.

**Table 1.71. Estimation of the probability of being overeducated in the United States for being descendant of immigrants**

Variables	(7)	(8)
Migrant parents	0.935 (0.0496)	0.937 (0.0518)
High education level	0.339*** (0.0145)	0.377*** (0.0174)
Two immigrant parentss	0.918 (0.0706)	0.988 (0.0796)
Woman	0.842*** (0.0225)	1.045 (0.0310)
Age	0.982*** (0.00331)	0.983*** (0.00351)
Trade	Ref.	Ref.
Teaching and health		0.186*** (0.0101)
Public administration		0.528*** (0.0371)
Industry		0.492*** (0.0297)
Other services		0.395*** (0.0200)
Health insurance		0.695*** (0.0205)
Constant	1.895*** (0.244)	5.122*** (0.727)
Observations	9,737	9,737
McFadden's pseudo R2	0.069	0.174

Source: Current Population Survey, 2008. Note: seEform in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

The selection model, as previously, indicates no origin-based penalty at the broader level, neither on the probability of getting a job, nor on the propensity of being overeducated (table A.1.8). Besides, the likelihood-ratio test does not assess the necessity of selection models. However, the disaggregation of origins implies that Asian and Latin American descendants of immigrants have a negative and significant coefficient associated to their propensity of being overeducated in model 7 (table 1.12). Furthermore, the introduction of labour market control variables does not change those coefficients and having immigrant parents from Puerto Rico becomes significantly related to overeducation. Yet, contrary to the two other mentioned groups, children of Puerto Rican immigrants are more likely to be overeducated, all other things being equal.

Interestingly, contrarily to the results for France, women have no significant penalty on their probability to get a job in model 8 (and in model 6 in the appendix), with labour market control variables, whereas their propensity of being overeducated decreases before those controls, in model 7 (and in model 5 in the appendix). This result is in line with the higher employment rate of women in

the United States compared to France. All the economic sectors have a significant role, as before. Compared to the trade sector, all other economic sectors decrease the propensity of being overeducated. Besides, having an occupation in which health insurance is covered by the employer or a union health plan remains negatively and significantly related to the propensity of being overeducated in the United States.

**Table 1.12. Estimation of the probability of being overeducated in the United States for being descendants of immigrants with a control of selection**

Variables	(7)		(8)	
	Selection	Overeducation	Selection	Overeducation
Natives	Ref.	Ref.	Ref.	Ref.
Mexico	0.752 (0.247)	1.004 (0.181)	0.761 (0.253)	0.918 (0.176)
Puerto Rico	68.50 (191,257)	1.593 (0.510)	48.90 (56,362)	1.790* (0.611)
Asia	66.24 (220,808)	0.308** (0.169)	47.80 (59,822)	0.381* (0.192)
South East Asia	67.76 (158,472)	0.870 (0.225)	48.77 (45,059)	0.889 (0.235)
Africa and Middle East	67.97 (218,345)	0.808 (0.305)	49.16 (64,103)	0.665 (0.269)
Canada and North Europe	65.37 (80,907)	0.928 (0.140)	47.06 (22,867)	0.881 (0.140)
South and East Europe	67.25 (128,481)	1.021 (0.234)	48.43 (37,048)	1.014 (0.255)
Carribbean	63.15 (231,696)	0.733 (0.346)	45.58 (57,799)	0.694 (0.327)
Latin America	0.656 (0.321)	0.450** (0.160)	0.660 (0.324)	0.432** (0.160)
Other	56.91 (346,258)	397.9 (625,266)	42.78 (96,755)	439.5 (343,778)
High education level	1.131 (0.133)	0.330*** (0.0182)	1.131 (0.133)	0.368*** (0.0221)
Woman	0.870 (0.0772)	0.806*** (0.0292)	0.875 (0.0777)	1.026 (0.0428)
Age	1.016 (0.0128)	0.991* (0.00537)	1.016 (0.0128)	0.986** (0.00569)
Trade	Ref.	Ref.	Ref.	Ref.
Teaching and health				0.187*** (0.0147)
Public administration				0.579*** (0.0544)
Industry				0.507*** (0.0412)
Other services				0.407*** (0.0295)
Health insurance				0.727*** (0.0294)
Family features	1.144*** (0.0554)		1.149*** (0.0565)	
Constant	3.963*** (1.544)	1.310 (0.222)	3.902*** (1.518)	4.231*** (0.829)
Observations	5,453	5,453	5,453	5,453
Rho	0.924	0.924	0.702	0.702

Note: Rho are not statistically significant at the 10% threshold at least and the likelihood-ratio test indicates that the null hypothesis that the two equations are independent cannot be rejected, at the 0.1 threshold.

Source: Current Population Survey, 2008. Note: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## SECTION 5: DISCUSSION OF THE RESULTS

The empirical results painted two different pictures regarding the differentials in overeducation between descendants of immigrants and natives in the two countries. In France, descriptive statistics indicate that descendants of immigrants tend to be more overeducated than natives (as found in section 3 and 4). On the other hand, descendants of immigrants in the United States are slightly less overeducated than natives. However, econometric estimations point out that having immigrant parents does not appear to account for these differences, all other things being equal.

### 5.1. THE ROLE OF INDIVIDUAL CHARACTERISTICS AND BACKGROUND

First, in both countries, having immigrant parents does not play a statistically significant role in explaining overeducation, whether the selection bias is corrected for or not. In France, it appears that being born to immigrant parents substantially reduces access to any type of employment, whereas it does not appear significant in the United States. However, while in France, some discrimination might occur at entry into the labour market (in the employment access), among those already employed, there does not appear to be any penalty associated with having immigrant parents with regards to overeducation seems to be negligible among those in employment.

Nevertheless, the disaggregation of parents by region of birth highlights that having parents from specific regions significantly increases the probability of being overeducated. In France, being a child of North African immigrants is positively associated with overeducation (it only becomes non-significant in section 3 with the introduction of labour market control variables). In the United States, parents' region of birth also plays a role on the probability of being overeducated for three groups of origin: it is linked to a significant increase in overeducation for children of Puerto Rican immigrants, while being born to foreign parents reduces overeducation for the children of (non-Puerto Rican and Mexican) Latin American and Asian immigrants. In the two countries, whether labour market variables are controlled for or not changes the significance of the coefficients associated to parents' region of birth. There seems to be an ethno-cultural factor (see the works in sociology from GLAZER and MOYNIHAN, 1975, in the United States).

This ethno-cultural factor refers to several mechanisms. First, immigrants' offspring are coming from less privileged social background, living in poorer families, with parents' education levels lower than average and they are living in households where divided linguistic practices prevail (ALBA and HOLDAWAY, 2014). Hence, the direct financial and opportunity costs associated with studying might be higher among those coming from a poorer economic background, as financial constraints are not evenly distributed in the population. Immigrants' offspring may, as a result, self-select into less expensive diplomas (in France, universities rather than *Grandes Écoles*; in the United States, in state colleges rather than prestigious private colleges), which lead to more overeducation.

OKBA (2010) indicates that in France, immigrants' offspring are more likely than natives to have fathers in work requiring low qualifications. One might think that it contributes to lowering their social and economic capital inherited from parents. This econometric analysis tends to confirm the relevance of this factor, as results in section 3 attest that mothers' professional backgrounds is significantly related to the probability of being overeducated.

Differences in social capital also refer to social network, as this latter can also ease the labour market integration. BRINBAUM and GUÉGNARD (2013) show that immigrants' offspring in France tend to graduate with diplomas that are less valued on the labour market. The descriptive statistics confirm this trend in France (cf. GIRET *et al.* (2006) and LEMISTRE (2014) for a discussion on diplomas). Because these diplomas may be associated to fewer and weaker networks, immigrants' offspring educational distribution may favour overeducation. Graduates from these schools may be directly impacted by the lower benefits conferred by their school network to get a job.

In addition, education choices cannot be considered exogenous. Investments in education are the result of a choice under constraints (GAUTIE and GURGAND, 2005). One can assume that parents' knowledge and network may influence their children's choice regarding education. If parents are highly educated, they may have better knowledge on diplomas and labour market outcomes; they may thus encourage their children to choose "better" diplomas, those less likely lead to overeducation. Therefore, information bias can come into play. Natives possess a better understanding of the educational strategies (BRINBAUM and KIEFFER, 2010). Immigrant parents generally know less about the national school system than native-born parents, as they have spent less time in France, typically often migrating after being educated in their own country. The OECD (2015b) insists on the role of the migration process itself on discrepancies in outcomes between immigrants and the native-born. For instance, immigrants may lack the in-depth knowledge of the host society, which remains hard to measure ("how the labour market functions, networks, familiarity with public services, skills in the host-country language, etc." (OECD, 2015b)) and some wrong anticipation might occur if parents do not know well about the different existing opportunities. Furthermore, some might withdraw into less selective fields and diplomas due to room shortage.

GAUTIE and GURGAND (2005) also suggest that educational choices have a social and identity building dimension, which transcend simple financial cost/benefits. They argue that, while education level and diplomas remain powerful ranking tools in society, descendants of North African immigrants in France have a different goal, which is to break with their social origins, *e.g.* to break out of the working-class. CAILLE (2005) shows that immigrants' offspring tend to reject their working-class origin more than natives. Pursuing education is one way to do this, even if it is in a specialization for which employment prospects are relatively poor, notably generalist fields of study for instance. These immigrants' offspring are more inclined to choose generalist and long education (they are for instance in France more in general studies than natives). In France, where specialized diplomas tend to be

preferred at low and high educational levels, this increases the probability of overeducation once employed.

This gap between individuals' expectations and their outcomes can be stronger when information on the optimum educational path is, on average, lower. The motivations of workers to study generally imply an anticipation of returns to education and a cold calculation of costs and benefits. Indeed, descendants of immigrants might also anticipate potential discrimination early in their education choices, based on the discrimination their parents might have been victims of. Therefore, they could underestimate their education returns and its benefits and end up in occupation in which they would be overeducated. This anticipation can be seen as an indirect effect of discrimination. GALLIE (2007) sheds light on the lower incentives to invest in specific skills in countries like France – in which the emphasis is put on specific skills – for groups who are victims of statistical discrimination.

Furthermore, DOS SANTOS (2005) highlights the dynamic role of parents' social network for native-born with Portuguese immigrant parents whereas it is quite the contrary for native-born with North African immigrant parents. Parents' social network may play a role in easing labour market integration in jobs for which individuals would not be overeducated. FONTAINE (2006) has highlighted the importance of networks, especially for young workers, often involving parents' relationships. The better-resourced family network of natives may decrease their probability of overeducation, all other things being equal. In addition, the fact that immigrants' offspring are more likely to face unemployment also contributes to lower the usefulness of their network density (FONTAINE, 2006) and to decrease its propensity of referring them, *i.e.* to provide employers information on the applicant. Yet, FONTAINE (2006) argues that this referencing procedure is frequently used for jobs for which matching between the worker and the occupation is a major barrier, which is often the case at the top of the hierarchy or in specialized occupations. This would contribute to favour overeducation of immigrants' offspring compared to other native-born due to weaker networks.

## 5.2. THE ROLE OF INSTITUTIONAL FEATURES AND POLICIES

Descriptive statistics demonstrate that educational inequalities are not as prevalent in the United States, which can be partly explained by its institutional features. In the United States, for instance, affirmative action initiatives are implemented at school, based on origin, which is not the case in France. Affirmative action can help the children of immigrants go to better schools, in which the average level of skills acquired is higher, as the network. These two elements combined can lead to better labour market outcomes and lower levels of overeducation for children of immigrants. In some countries however, despite the introduction of reforms intending to “ease the scholastic adaptation of the children from immigrant backgrounds, such changes rarely alter the main structures of the educational system” (ALBA and HOLDAWAY, 2014). In France, public policies have tried to improve opportunities for students from more humble origins – among which immigrants' offspring tend to be

overrepresented – to get to and succeed on the baccalaureate, the high school exit exam. However, the previous disparity of educational opportunity was rather rapidly re-established (ALBA and HOLDAWAY, 2014), without improving educational outcomes. Thus, the role of these French policies on inequalities regarding access to “better” education (in terms of skills or network) seems rather limited, as are their effect on the propensity of being overeducated for immigrants’ offspring.

Moreover, the efficiency of the sorting function can vary in the two countries. The disparities in terms of labour market positions between Master’s degrees in humanities and a diploma from a *Grande École* are for instance particularly high. The discrepancies in the United States between Master’s degrees from different universities may be even higher.

Regarding the capacity of the two countries to favour intergenerational mobility, the conclusions of LANDERSØ and HECKMAN (2017) regarding the social reproduction in Denmark and the United States can be extended. They compare the easiness to get access to education in Denmark thanks to the lower cost to study, with the higher incentives to study in the United States, due to higher returns to education. They argue that, despite more generous social policies in Denmark and their positive returns on cognitive test scores, “they do not translate into more favourable educational outcomes, partly because of disincentives to acquire education arising from the redistributive policies that increase income mobility” (LANDERSØ, HECKMAN, 2017, p.178). The comparison between France and the United States may illustrate the same mechanism. Hence, educational outcomes in France, as measured with the level of skills or network, may not be favoured by the easier access to overeducation, and consequently not result in individuals from relatively disadvantaged backgrounds graduating with “better” diplomas, thanks to which, they will less likely become overeducated.

Furthermore, HECKMAN (2008) insists that greater educational differences between natives and descendants of immigrants occur in systems where tracking is formal and begins at an early age. The early selection into high school for instance – with rising differentiation by prestige among fields of study –also leads to more pronounced inequalities in terms of education. Because immigrants’ offspring may speak another language at home and come from less privileged social backgrounds on average, they may face more difficulties during their first years of schooling. Therefore, beginning to track their performance early may discourage them from pursuing studies and it also may lead them to less valued schools and diplomas, in which the selection and the skills are lower and the future network less efficient. As a result, early tracking may favour overeducation, because of both the network and the skills effects. On the contrary, the United States does not select students by examination in most public secondary schools, with does not result in students being placed in programs of different quality early. Nevertheless, the quality of schools can vary considerably due to residential segregation, inequities in school funding or teacher quality, but this cannot be noticed in statistics (ALBA, HOLDAWAY, 2014). Yet, network effects exist, as individuals going to a school of lower quality, usually in poor neighbourhoods, may end up with less network for their integration on

the labour market. Hence, going to a school of relatively lower quality would favour overeducation, without being able to empirically link it to education.

Going further in the analysis in each country suggests that the French spatial differences contribute to inequalities in terms of overeducation. The inclusion of spatial variables such as living in a sensitive urban area in models of section 3 confirms the significant correlation with the probability of being overeducated, not significant anymore with employment-related controls. PAN KÉ SHON (2009) has shown that descendants of immigrants, and their parents, are overrepresented in these areas, in which the levels of education are lower and employment opportunities more limited. It might accordingly be a major explanatory factor of the disadvantaged labour market situation of immigrants' offspring compared to natives in France. BORJAS (1995) underlines the fact that urban segregation in the United States is major to explain human capital acquisition and intergenerational mobility for immigrant-related populations. In the United States, further analyses illustrate the crucial role of race. The inclusion of a control dummy variable for declaring being African-American significantly influences and increases the probability of being overeducated (See Table A.1.11 in appendix).

More severe employer discrimination might exist in some occupations. Natives and descendants of immigrants may select among different occupations, "because legal and institutional constraints may limit access to some occupations" (ALTONJI and BLANK, 1999). BUNEL *et al.* (2016) show that discrimination in the employment access in hospital or subnational public service exists. They also note that the recruitment by competitive exams, as utilized in public employment, does not guarantee an equal access to public employment, and can instead generate some discrimination. Immigrants' offspring also seem to be underrepresented in health and social work (see table 1.3). One can also assume that their relatively low representation in these occupations can result from discrimination.

The relative gaps in terms of overeducation in the two countries might also reflect some labour market specificities. Although the United States integrates better immigrants' offspring into jobs, levels of overeducation are higher on average. On the contrary, France seems to keep lower relative levels of overeducation, but together with a higher level of unemployment for immigrants' offspring, even for the most educated. Hence, considering unemployment as a potential situation of overeducation, as suggested by LEMISTRE (2014), may provide relevant information in the context of this comparison.

The estimations of overeducation that consider unemployment as a state of overeducation (tables A.1.9 and A.1.10 in appendix) indicate that levels of overeducation increase more in France than in the United States. This measure results in French levels of overeducation comparable to US-American ones. These results exemplify the different mechanisms of inequalities between the two countries, whether on access to employment or on its conditions. In both countries, the gap between descendants of immigrants and natives is also higher in these estimations. Overall, it appears that taking unemployment into account increases inequalities, notably so in France. This result is consistent with

greater inequalities based on immigrant parents' access to employment. In addition, having North African immigrant parents in France significantly increases the probability of overeducation, even after the correction of the selection bias and the introduction of employment characteristics, contrary to the results found in section 3 and 4. Having Latin American or Asian immigrant parents in the United States is significantly decreasing to the probability of overeducation as well. In the United States, parents' region of birth appears to have no measurably negative effect on overeducation or access to employment. On the contrary in France, the children of North African immigrants seem to bear an ethnic penalty in the form of overeducation and a barrier to employment, suggesting discrimination.

Overall, it seems that the differences in terms of overeducation do not perfectly reflect educational differences. Employment segregation appears to go together with the educational segregation, which tends to reinforce the differences. Employment segregation seems to be the result of a social construction and of some different matching mechanisms for immigrants' offspring and natives who have the same diploma. These mechanisms may result from workers themselves (with different preferences in terms of occupations, different representations on occupations, self-censorship to get some occupations, geographic constraints, etc.) or from employers (direct or indirect discrimination to be employed, etc.), or from both.

## CONCLUSION

This chapter provides new empirical evidence for a higher overall level of overeducation in the United States compared to France. However, the analysis also highlights higher levels of inequality in terms of overeducation between descendants of immigrants and natives in France than in the United States. Even though the levels of overeducation are comparable between the two groups in the United States, in France, immigrants' offspring are significantly more affected by overeducation than natives.

Yet, the results of econometric estimations fail to show a statistically significant relationship between having immigrant parents and overeducation among the employed. Instead, having immigrant parents tends to aggravate the difficulty of finding employment in France, while it does not appear to do so in the United States. Other individual characteristics influence the probability of being overeducated. Diplomas and social background, as well as the place of residence appear particularly important. Characteristics related to employment play a significant role (and often make the significance of the origin's role disappear at the disaggregated level), suggesting that the observable employment segregation is actively contributing to higher probability of being overeducated for descendants of immigrants in France and is significantly contributing to the likelihood of overeducation in the United States. The educational segregation seems to be combined with an occupational segregation.

Lastly, despite giving some interesting trends on the employment conditions of descendants of immigrants, overeducation itself as a concept, measured economically, has inherent limitations. For instance, abilities and skills vary from an individual to another and vary with experience too, even for a given diploma. In the same vein, the less disaggregated the classification of occupations is, and the less occupational segregation can be captured. Furthermore, overeducation tends to diminish with age and over the course of careers. The dynamics of a career therefore tend to erase the differences observable at the beginning of one's career. Hence, overeducation is an interesting indicator for gaps at the beginning of one's career, but other dimensions of employment conditions may provide other relevant information for different age groups, and give a more precise picture of the situation of descendants of immigrants in employment. The next chapter aims at studying employment quality, to complement the analysis of employment conditions.

## CHAPTER 2: EMPLOYMENT QUALITY OF IMMIGRANTS' OFFSPRING

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### INTRODUCTION<sup>64</sup>

Numerous comparative studies depict employment quality as multidimensional and heterogeneous across OECD countries (OECD, 2013a; SCHMITT, 2012). Besides, studies on this topic shed light on strong disparities between individuals within countries. Some individual characteristics are seen unfavourable in terms of employment quality; women and the less educated generally present lower employment quality in all OECD countries (OECD, 2013a). This heterogeneity is more visible in liberal countries, where labour market institutions are “less inclusive”<sup>65</sup> (APPELBAUM and SCHMITT, 2009).

Immigrant populations and their offspring have rarely been studied in the employment quality literature. Yet, the literature on gaps in terms of education or basic labour market indicators between natives and descendants of immigrants is rich. The labour market situation of immigrants' offspring is better than that of their parents. However, their position is still less favourable than the one of natives. As I developed in the general introduction and in the previous chapter, inequalities appear early, in the choices of diploma specialization and in the education level (ALBA and HOLDAWAY, 2014). These choices result in more difficulties for immigrants and their offspring to be employed, and, one may assume, on their employment quality too. These difficulties for immigrants' offspring might be increased by more deregulated labour market, which present less inclusive labour market institutions, in particular, in liberal countries such as the United States (OECD, 2013b; SCHMITT, 2012). However,

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<sup>64</sup> This chapter is an extended version of an article written in French and published in *Travail et Emploi* in 2016, entitled « Une lecture institutionnelle des différences de qualité du travail et de l'emploi entre la France et les États-Unis ».

<sup>65</sup> “‘Inclusive’ systems use collective bargaining, national law, and even social norms – voluntary mechanisms that govern the behavior of firms – to extend the individual and collective bargaining power of higher-wage workers to lower-wage workers, often allowing these lower-wage workers to earn wages that push them above the low-wage threshold.” (APPELBAUM, SCHMITT, 2009).

## *Chapter 2: Employment quality of immigrants' offspring*

studying origin-based inequalities requires a more comprehensive characterization of national models that take into account the whole set of institutions related to immigration, from immigration policies to measures devoted to integrate immigrant populations.

The empirical comparative analysis of immigrants' offspring' employment quality proposed in this chapter relies on the consideration of institutional differences between two countries: France and the United States. First, these countries portray two different sets of labour market institutions, characterised by more protective but also more dual institutions in France, and less protective in the United States (GALLIE, 2007). Second, the two countries also differ in their integration models, which consist on a Republican model in France and a multicultural model in the United States (WEIL, 2003), as well as in their immigration policies (OECD, 2015). Expected implications of these combinations of labour market and integration institutions in terms of immigrants' offspring' employment quality are complex. How can the protective effects of the French labour market institutions influence employment quality discrepancies? Do the strong anti-discrimination US-American laws and protections contribute to improve employment quality gaps between native-born with either native-born or immigrant parents?

This chapter aims at analysing employment quality inequalities between natives and immigrants' offspring. First, the existence of origin-based inequalities in terms of employment quality is empirically tested. Then, the relationship between those inequalities and institutions is discussed. Given the complexity of the institutional settings that influences the integration of immigrants' offspring in the labour market, this chapter does not intend to offer a causal analysis of the relationship between institutions and the employment quality of immigrants' offspring. Rather, this chapter proposes some interpretations of the empirical differences between relevant realities in the two countries.

The chapter is organized as follows: the first section recalls the employment quality concept and its components and presents the literature on labour market outcomes of immigrants' offspring. The second section is devoted to describing the two datasets and the empirical strategy used. This section explains in detail the selection model used to take sample selection into account. Finally, the third section proposes an econometric analysis of the effects of origin on employment quality in France and in the United States, after considering the barriers in job access. The chapter finishes with a discussion on the institutional and comparative framework that can potentially affect employment quality gaps between natives and descendants of immigrants.

## SECTION 1. EMPLOYMENT QUALITY IN FRANCE AND THE UNITED STATES: APPROACH AND STATE OF KNOWLEDGE

This first section begins with an exploration of the concept of employment quality. It revisits the multidimensionality of the concept, which is not similarly conceived in France and in the United States. It then delimits the main dimensions that will be considered in this chapter. A second subsection is devoted to raise the main patterns and characteristics of origin-based inequalities suggested by the literature. Thus, it allows to identify and ascertain the value added of the employment quality approach adopted in this chapter.

### 1.1. EMPLOYMENT QUALITY: A MULTIDIMENSIONAL CONCEPT

#### 1.1.1. JOB QUALITY AND ITS MULTIDIMENSIONALITY: A RECENT DEBATE

The academic study on job quality has increased since the early 2000s, in particular in economics and industrial relations (DAVOINE, *et al.*, 2008). The concern on job satisfaction data has sparked interest on the main factors of employment and work contributing to raise workers' self-assessment of their job satisfaction (CLARK, 2005). At the same time, studies observed a declining trend in job satisfaction, while wages were rising, questioning the predominance of wage to define the quality of employment (GREEN, 2006). Even though the debate regarding job quality exists in France and the United States, it refers to different aspects in each country.

Job quality has become an economic policy issue around the same period, with the consideration of decent work by the International Labour Organization (ILO) and with the construction of indicators of "quality in work" by the European Commission and the Laeken summit in 2001, which marked a milestone on job quality in Europe (DAVOINE, *et al.*, 2008; ILO, 1999; EUROPEAN COMMISSION, 2001). At both international and European levels, organizations assessed the necessity to consider dimensions different from wages to better capture the quality of workers' employment. These indicators that use other dimensions, however, are only rarely used in the academic literature.

The economic literature and international organizations define job quality as a multidimensional concept. Most recent academic research on job quality in the comparative literature uses multidimensional definitions of job quality (DAVOINE, *et al.*, 2008, GALLIE, 2007, GREEN, *et al.*, 2013, MUÑOZ DE BUSTILLO, *et al.*, 2011), considering mainly objective indicators (such as the employment contract, working conditions, job security, interest to the job, etc.) rather than job satisfaction indicators. Nevertheless, job quality refers to the features of the employment relation that have a potential influence on the well-being of workers (MUÑOZ DE BUSTILLO, *et al.*, 2011).

1.1.2. TWO COUNTRIES AND TWO APPROACHES OF JOB QUALITY

The definition of job quality varies across countries. MUÑOZ DE BUSTILLO, *et al.* (2011) raise the relative underrepresentation of job quality indicators specifically developed for the United States, compared to Europe.<sup>66</sup> There is no survey like the European Working Conditions Survey (EWCS) in the United States, that can measure job quality and inform on its evolution over time. The interest in the quality of employment seems to differ from one continent to another. Even though the debate exists on both sides of the Atlantic, at the European level, the focus since the late 1990s has been on dimensions centred on low wage jobs and access to social protection (or so-called benefits in the United States). The Russel Sage Foundation, a US-American research institution that contributes to the economic policy debate in the United States, has for instance devoted an entire span of research on low-wage work. In 2006, the book *Low Wage Work America* was the first of the series of national studies on low wage work (which has for instance continued with France, with the book *Low Wage Work in France*). By contrast, in France, the trend is more comprehensive, just like the European multidimensional approach (*e.g.* the Laeken indicators). In 2013, the sixth edition of the national survey *Conditions de Travail* (by the French national statistics office, INSEE) on working conditions for instance includes several dimensions of job quality. Moreover, several academic studies on job quality in France were published in the 2000s (*e.g.* FREMIGACCI and L'HORTY, 2005). This major difference in terms of approach to job quality is closely related to the different models of capitalism and of welfare between the two countries.

MUÑOZ DE BUSTILLO, *et al.* (2011) argue that the definition of job quality adopted in one country can be influenced by social institutions such as labour market, social policies, welfare programmes or family structures. The authors stress that “jobs do not exist in a vacuum, but in a social context in which there are public and private institutions like the welfare state and the family” (MUÑOZ DE BUSTILLO, *et al.*, 2011, p.457). As underlined by DAVOINE *et al.* (2008) and GALLIE (2007), one can hypothesize that job quality is influenced by production regimes, as analysed by the Variety of Capitalism approach (HALL, SOSKICE, 2001). Differences in job quality can be related to institutions and national policies. MUÑOZ DE BUSTILLO, *et al.* (2011) emphasize, for instance, that low wages might have different implications depending on the existence of public housing or of a system of income tax credit directly or indirectly supplementing one's wage.

The consequence of these different institutional contexts and subsequent definitions of employment quality is that adopting the exact same definition of employment quality to compare the two countries makes no sense from an economic perspective. In addition, these differences also lead to different data limitations, as the US-American data on employment quality are relatively scarce compared to the French ones.

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<sup>66</sup> With the exception of JENCKS *et al.* (1988) and TILLY (1996).

### 1.1.3. THE DIMENSIONS OF EMPLOYMENT QUALITY STUDIED

The three significant differences between the two countries (regarding institutional contexts, definitions adopted, and data provisions) justify the adoption of different measures of employment quality in the two countries. Considering these differences, I adopt a common definition that takes into account the national specificities, regarding job security for instance.

In line with the decomposition of job quality into two components (employment quality and work quality) proposed by MUÑOZ DE BUSTILLO, *et al.* (2011), this chapter focuses on employment quality and not on work quality. More specifically, three essential dimensions related to socioeconomic security selected in academic work and in the definitions proposed by international organizations are considered (UNECE, 2010; ILO, 2012): wage, job security, and working time. These three dimensions, all related to employment, are also major dimensions of job satisfaction, as underlined by MUÑOZ DE BUSTILLO, *et al.* (2011) through the study of the *International Social Survey Program 2005*.<sup>67</sup> In order to focus on the sole characteristics of the employment and because of data availability, aspects related to working conditions are not studied in this chapter.<sup>68</sup>

Wage constitutes the most obvious component of employment quality as it might allow workers to have a decent standard of living. Moreover, labour economics have long been considering wage as capturing the whole employment quality. The quality dimension is relatively inexistent in the neoclassical approach, where wages are only the compensation for working, which is seen as a disutility. Several analyses have focused on low-wage work (APPELBAUM and SCHMITT, 2009; CAROLI and GAUTIÉ, 2009; GAUTIÉ and SCHMITT, 2010). This is particularly the case in the United States, where income and wealth inequalities have exploded in the twentieth century (PIKETTY and SAEZ, 2003). In this country, more than 20% of workers earn wages that are lower than the poverty line (OSTERMAN and SHULMAN, 2011). This literature explains the lower share of poor workers in France by “more inclusive” labour market institutions, and, for instance, by the existence and the level of the minimum wage (APPELBAUM and SCHMITT, 2009). However, the recent literature on the “economics of happiness” (LAYARD, 2005) advocates for a larger consideration of employment characteristics to define employment quality.

A second span of the literature distinguishes ‘good’ and ‘bad jobs’ by the levels of job security. Besides wage levels, these analyses consider the type of labour contract and disentangle temporary from permanent contracts. According to ISSP data, the job security dimension is more essential for job satisfaction than high income (CLARK, 2005). In France, this distinction is particularly relevant given

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<sup>67</sup> The authors look at several job attributes that individuals declare as very important attributes.

<sup>68</sup> No database in the United States provides information on working conditions such as physical or psychological conditions at work for a population which would include natives and immigrants' offspring and which would be representative of the whole US-American population.

that job security differences are high between the two types of contracts. In the United States, job security discrepancies are not really based on the employment contract that may be easily ended but rather on the access to health insurance. As in the United States – and contrarily to France – access to health insurance is not universal, and it represents a crucial criterion of job security for workers (KALLEBERG *et al.*, 2000; SCHMITT and JONES, 2012).<sup>69</sup> In this country, workers get health insurance primarily through employment. Therefore, a job that does not offer this benefit is considered of lower quality, increasing difficulties for both workers and their families. KALLEBERG *et al.* (2000) show that 44% of jobs do not offer health insurance, and present notably important racial disparities. Another indicator of job security could have been tenure, as sometimes discussed in the employment protection literature (AMABLE, 2003). However, this information is not available in data, and information on benefits in the United States is traditionally admitted as an indicator of job security, as it is for the type of contract in France.

The two first employment quality dimensions (wage and job security) are closely related to the third dimension, working time. Part-time jobs are generally linked to low wage (despite part-time jobs diversity, cf. ULRICH, 2007 and the discussion below), offering lower job security in terms of access to benefits. In addition, access to continuous training is not always ensured for part-time workers in liberal countries, for instance. In the same vein, unemployment benefits are effective only from 610 hours worked on the last 28 months in France,<sup>70</sup> thus disfavours part-time workers. Part-time jobs are nevertheless increasingly used by firms to extend flexibility (ILO, 2008).

Although these jobs are often precarious, the issue of whether part-time jobs are chosen by workers is delicate. ULRICH (2007) underlines for France the distinction between several types of part-time jobs. She points out, for instance, the distinction between part-time employment chosen by workers, often women -who are overrepresented among part-time workers, to take care of children (often in relatively high quality jobs)-, from other types of part-time employment, primarily related to labour market functioning (work at nights or on weekends, few workdays on a long period of work, a low number of hours worked per day, irregular hours).<sup>71</sup> BOURREAU-DUBOIS *et al.*, (2001) also present other reasons that may explain this choice: “care for a dependent parent or spouse, gradually leave the labour market, take a training course, etc.”. These part-time jobs might also be the only way to be employed, for workers who have no full-time jobs opportunities.

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<sup>69</sup> The determination of the criterion for this dimension illustrates the common problem in comparative research of “how to maintain sufficient sensitivity to the national context without compromising comparability” (MUÑOZ DE BUSTILLO, *et al.*, 2011, p. 461). The authors stress that when the comparison has a scientific purpose, one can be more flexible with respect to the rigorous comparability of indicators, as long as these indicators are well established in the international literature on job quality.

<sup>70</sup> « Au cours des 28 mois qui précèdent la fin du contrat de travail (terme du préavis) pour les moins de 50 ans ou les 36 mois qui précèdent la fin du contrat de travail (terme du préavis) pour les 50 ans et plus ». *Pôle Emploi* website, consulted on 10/28/2014.

<sup>71</sup> Among this latter group, several can also be distinguished. See ULRICH (2007) for more details.

Other things being equal, the higher the wage, the lower the probability of choosing part-time for family reasons over full-time work (BOURREAU-DUBOIS *et al.*, 2001). In the United States, the relatively higher cost of child care may urge low-wage workers, especially women, to leave their job. The institutional framework surely influences the decision-making of individuals. Eventually, involuntary part-time workers match more precarious jobs, with lower working conditions and a more difficult access to training (GALTIER, 1999).

## 1.2. LITERATURE CONTRIBUTION ON INEQUALITIES BY PARENTS' PLACE OF BIRTH

In both countries, labour market integration for immigrants' offspring has drawn attention of numerous researchers, from employability to some specific job characteristics, though the main object remains wage (see the general introduction). These studies, which compare natives to descendants of immigrants, have pointed out to the existence of origin-based inequalities, particularly visible on wage differences. Building on these results, one can question whether these inequalities also hold on other employment conditions. In terms of employment quality, the literature on immigrants' offspring has remained relatively silent, even though some authors have called for further investigation into inequality at the micro-level (DAVOINE *et al.*, 2008).

Immigrants' offspring depict some individual characteristics that might decrease their employment quality. As shown in the general introduction and in the descriptive statistics in section II, the population of immigrants' offspring is younger on average. Yet, the literature documents the lower employment quality of young workers, which can be partly attributed to more frequent labour market transitions (ERHEL and GUERGOAT-LARIVIÈRE, 2013) and to a lack of professional experience. Nevertheless, immigrants' offspring distinguish themselves because of their lower level of education (see the discussion in the general introduction and in the previous chapter), contributing to decrease employment quality (DAVOINE *et al.*, 2008; KALLEBERG *et al.*, 2000).

Among immigrants' offspring, individual characteristics also differ depending on the parental region of birth. As suggested in the general introduction and in the previous chapter, some individuals with immigrant parents are less educated than others (*e.g.* the native-born with Mexican or Puerto Rican immigrant parents in the United States or those with North or sub-Saharan African immigrant parents in France). They can have jobs of lower quality, in addition to more difficulties to enter the labour market (see the general introduction). The importance of the parental region of birth has been highlighted in Chapter 1, as the offspring of African immigrants in France have a higher propensity of overeducation.

Besides, immigrants' offspring might come from a more disadvantaged background; some immigrants are particularly less educated than native-born and face more difficulties to integrate the labour market. Hence, these immigrants tend to have poorer knowledge of the functioning of the labour

market, a smaller network, and are therefore less able to help their children integrate the labour market, particularly in high quality jobs. This network effect is reinforced by its strong ethnic component: immigrants tend to have a social network with predominantly immigrants from the same country of origin (FRICKEY *et al.*, 2002; SAFI, 2006; MUNSHI, 2003). Immigrants' offspring also live in more disadvantaged residential locations (see General Introduction).

Studies on origin-based inequalities have underlined the role played by employment structure to explain inequalities between the two groups but also to explain inequalities among immigrants' offspring (BUTCHER and DiNARDO, 1998; AEBERHARDT and POUGET, 2007). AEBERHARDT and POUGET (2007) suggest that the wage gap in France is the result of professional segregation rather than of wage discrimination. MEURS *et al.* (2006), studying the *Etude de l'Histoire Familiale* survey, confirm this hypothesis of professional segregation in low paid jobs for some groups of origin. The importance of parents' origin may also be high when an immigrant specialization in industries exists. In France, Portuguese immigrants and their offspring specialize, for instance, in construction and in small industrial sectors, whereas young North African immigrants' offspring males specialize in services (LAINÉ and OKBA, 2005). These orientations may lead workers to have jobs in sectors with varying employment quality.

Altogether, employment quality studies have known major developments over the past decade. The definition of the very concept varies with the approach adopted, with the national institutions, and with the availability of data.

## SECTION 2. EMPLOYMENT QUALITY COMPONENTS THROUGH THE PRISM OF COMPARISON

Section 2 makes an empirical analysis of employment quality. First, data for the two countries are presented and the scope of the study is circumscribed. Second, some descriptive statistics are used to characterize the population studied. Third, the econometric strategy adopted is introduced, detailing the Heckman model used, and the variables included in the model.

### 2.1. DATA AND SCOPE OF THE STUDY

The empirical comparison relies on the exploitation of two databases. On the one hand, the French survey *Enquête Emploi en Continu* (EEC) is used from 2008 to 2012, and provides a large representative sample, adapted to origin-based comparisons. On the other hand, the US-American *Annual Social and Economic* (ASEC) from the *Current Population Survey* (CPS) is used also from

2008 to 2012. The CPS survey is conducted monthly by the *Census Bureau*, and provides more detailed information on household labour market characteristics in the ASEC supplement. In these two databases, immigrants' offspring can be precisely identified (details on the origin variable are given in box 2.1).

**Box 2.1: Immigrants' offspring in both *Enquête Emploi en Continu* and Current Population Survey.**

For the French case, immigrants' offspring recorded in the EEC are individuals who live in France and who were born in France with at least one immigrant parent. Similarly, in the United States, immigrants' offspring live in the United States, were born there, and have at least one immigrant parent. In France, and contrarily to most countries which establish nationalities on the birth country independently to the nationality at birth, a person, born abroad but French is not considered as an immigrant by the French law.<sup>72</sup> I choose to define the geographic origin of native-born person with the parent that immigrated. If the mother is the only immigrant, the geographic origin of the native-born person is defined by the mothers' birth country (MINNI and OKBA, 2014).

This analysis focuses on the working age population, *i.e.* individuals from 15 to 64 years old, excluding immigrants. In 2012, immigrants' offspring represent 12.1 % of the French (table 2.1<sup>73</sup>) and 9.3% of the US-American sample (table 2.2). Among them, in France, women represent 53.2 %, which is slightly higher than in the natives group (52 %). In the United States, women are almost as represented among natives and descendants of immigrants, slightly less than half of the population (table 2.2).

Table 2.1 also depicts the French distribution in terms of parental countries of birth. Most immigrant parents come from southern Europe (41.6 %) and northern Africa (32.7 %). Then, 10.5 % of them come from northern Europe, 8.3% from Sub-Saharan Africa, and 6.9% from eastern Europe. In the United States, 29.1% of immigrants' offspring have parents coming from Mexico, 12.8 % from northern Europe, 11.9% from Asia, 10.2% from southern Europe, 7% from Latin America, 6.3% from Puerto Rico, 5.7% from Canada, 4.9% from Caribbean and 3.9% from eastern Europe. Besides, 45.7% of immigrants' offspring have only one immigrant parent. In France, more than half of them have two immigrant parents, whereas the other 49.2 % have only one immigrant parent.

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<sup>72</sup> "There is a particular case when parents were born in Algeria before its independence (1962) but have decided to keep the Algerian nationality at the time. These parents must declare themselves Algerian-born [...], that is to say foreigners foreign-born. If they immigrated to France afterwards and gave birth to children, these latter were born French under the double territorial principle (parents and children were born in France, Algeria being a French region before)." (BREEM, 2010).

<sup>73</sup> The descriptive statistics are presented for 2012; the composition of the population and their characteristics are similar to the ones observed in 2008.

## *Chapter 2: Employment quality of immigrants' offspring*

Although immigrants' offspring are on average younger than natives in the two countries, the age gap between the two groups is higher in the United States. More precisely, they are – and quite massively in the United States – overrepresented in the 15-29 years old category and underrepresented in the 50-64 years old one. In France, they are also more likely to live in sensitive urban areas than natives, respectively five times more likely to live in these areas in the Paris region and twice more likely to live in disadvantaged areas outside of Paris region. In the United States, immigrants' offspring are more likely to live in metropolitan areas (94.8% *versus* 82.6% for natives).

In terms of education, Tables 2.1 and 2.2 depict a lower level of education for immigrants' offspring compared to natives in France. In the United States, this is not the case, however, for the young cohort studied. Table 2.1 shows a spread of 8 percentage points in the proportion of individuals without diploma between natives, and descendants of immigrants, for individuals aged 15 to 64 in France. They are also more likely to have a general baccalaureate (10.5% vs. 9.8% for natives). The picture is similar when considering the higher education distribution. Immigrants' offspring tend to be less represented in all the higher education categories. They are for instance only 2% to be in the “*Grande Ecole*” category whereas natives are 3.3%. This distribution recalls the conclusion made in the first chapter of large school inequalities. In the United States, the results are less straightforward, immigrants' offspring are on average more educated than natives but are also more represented at both ends of the distribution (in the no diploma category and to graduate with a bachelor's or master's degree or with a PhD). Overall, immigrants' offspring have lower educational attainment than natives in France, contrary to in the United States.

As seen in the previous chapter, and along with the education levels described above, labour market integration seems to be less easy for immigrants' offspring than for natives in France, whereas in the United States, it is broadly similar between the two groups. Table 2.1 depicts in France a 9.3 percentage point gap in terms of employment rate between natives and descendants of immigrants. In the same vein, immigrants' offspring in France represents a larger proportion of inactive population - 6.4 percentage points higher than natives. Finally, the unemployment rate of immigrants' offspring is also higher (2.9 percentage points) than the one of natives. Contrarily to the French case, the integration on the labour market is similar for both groups in the United States. They are slightly more inactive (6.2% *versus* 5.7% for natives), less employed (88.2% *versus* 89.4%), and marginally more unemployed (5.6% *versus* 5%). In line with the results of the first chapter, the situation of immigrants' offspring compared to natives appears, with these first indicators, better in the United States than in France.

In terms of sectors of activity, the distributions of the two groups differ in both countries, as studied in Chapter 1. In the two countries, among the working-age population, immigrants' offspring tend to work less in agriculture, in industry, and in the public sector. Also, immigrants' offspring are more likely to work in financial, information, professional and business services than natives, but the gap

between the two groups is more important in the United States. In both countries, they tend to work more frequently in wholesale, retail trade and in the leisure and hospitality sector.

**Table 2.1. Demographics of the sample in France in 2012**

		Natives	Migrants' offspring	Total
Sex	Men	48,0	46,8	47,9
	Women	52,0	53,2	52,1
Age	15-29	29,6	38,1	30,7
	30-49	41,3	39,1	41,0
	50-64	29,1	22,9	28,3
Origin	North Africa	-	32,7	-
	South Europe	-	41,6	-
	Sub-Saharan Africa	-	8,3	-
	East Europe	-	6,9	-
	North Europe	-	10,5	-
Diploma	No diploma	26,6	34,7	27,6
	BEP/CAP	23,3	21,7	23,1
	Professional and technologic "baccalauréat"	11,1	11,0	11,1
	General "baccalauréat"	9,8	10,5	9,9
	"Bac + 2"	13,4	10,7	13,1
	Bachelor's degree	7,6	5,5	7,4
	"Grande Ecole"	3,3	2,0	3,1
	Master's degree/PhD	4,9	4,0	4,8
Parents	One parent immigrant	-	50,3	-
	Two parents immigrant	-	49,7	-
Living	No Sensitive Urban Area, outside of Paris region	83,3	69,4	81,7
	No Sensitive Urban Area, Paris region	15,5	27,4	17,0
	Sensitive Urban Area, outside of Paris region	0,9	2,1	1,0
	Sensitive Urban Area, Paris region	0,2	1,1	0,3
Labor market situation	Inactive population	27,3	33,7	28,1
	Employed population	65,2	55,9	64,0
	Unemployed population	7,5	10,4	7,9
Sector of activity	Agriculture	1,3	0,3	1,2
	Industry	15,4	14,3	15,3
	Construction	5,5	5,7	5,5
	Wholesale and retail trade	12,2	13,5	12,4
	Transportation and utilities	5,4	5,9	5,4
	Financial, information, professional and business services	18,0	19,4	18,2
	Public sector	33,8	30,2	33,4
	Leisure and hospitality	2,9	4,4	3,1
	Other services	5,5	6,3	5,6
Number of individuals		38 813	5362	44 175

Source: Enquête Emploi en Continu, 2012.

**Table 2.2. Demographics of the sample in the United States in 2012**

		Natives	Migrants' offspring	Total
Sex	Men	50,1	49,8	50,1
	Women	49,9	50,2	50,0
Age	15-29	25,0	40,5	26,4
	30-49	43,8	41,4	43,5
	50-64	31,3	18,1	30,1
Origin	Mexico	-	29,1	-
	Puerto Rico	-	6,3	-
	Asia	-	11,9	-
	Canada	-	5,7	-
	North Europe	-	12,8	-
	South Europe	-	10,2	-
	East Europe	-	3,9	-
	Caribbean	-	4,9	-
	Latin America	-	7,0	-
	Other	-	8,2	-
Diploma	No diploma (8th grade)	0,6	1,1	0,6
	No diploma (high school without graduating)	5,8	7,7	6,0
	High school degree	48,7	46,5	48,5
	Associate degree	11,4	9,6	11,2
	Bachelor's degree	22,5	22,9	22,6
	Master's degree	8,3	8,6	8,4
	Professional school degree	1,4	2,1	1,5
	PhD	1,3	1,5	1,3
Parents	One parent immigrant	-	45,7	-
	Two parents immigrant	-	54,4	-
	Live in a metropolitan area	82,6	94,8	83,7
Labor market situation	Inactive population	5,7	6,2	5,7
	Employed population	89,4	88,2	89,3
	Unemployed population	5,0	5,6	5,0
Sector of activity	Agriculture	0,9	0,5	0,8
	Industry	11,6	8,4	11,3
	Construction	5,6	5,0	5,5
	Wholesale and retail trade	14,4	15,4	14,4
	Transportation and utilities	5,2	4,8	5,1
	Financial, information, professional and business services	19,9	23,2	20,2
	Public sector	30,2	28,8	30,1
	Leisure and hospitality	8,1	10,2	8,3
	Other services	4,2	3,8	4,1
Number of individuals		65 950	6 777	72 727

Source: Current Population Survey, 2012.

## 2.2. SOME EMPLOYMENT QUALITY CHARACTERISTICS

The empirical study of employment quality relies on the analysis of the three dimensions mentioned above (wage, job security and working time).<sup>74</sup> Working on disaggregated dimensions allows to keep the maximum of available information (GUERGOAT-LARIVIÈRE and MARCHAND, 2012; OSTERMAN, 2013).<sup>75</sup> These three dimensions correspond to employment characteristics but do not cover work related characteristics, such as physical working conditions, in part because of some availability issues.

The measures of these dimensions may differ from one country to another due to national institutional specificities, especially for job security and working time. Concerning remuneration, the monthly net wage is used in both countries. The monthly wage was preferred over the hourly, because the precise hourly wage is not a reliable variable to use in empirical analyses. Indeed, the precise number of hours is not well filled by individuals in the French labour force survey.

Next, the job security dimension in France relies on the nature of the employment contract, with two modalities, one with high security (permanent contracts) and one with low security (fixed-term jobs). Although, in principle, this criterion clearly distinguishes the two types of contract, permanent contracts can still be ended, either by the worker or by the employer, and this can be done even more easily during the first months in the job. Moreover, in France, permanent contracts have a trial period, which varies with the type of occupation. Trial periods are for instance longer for managers and executives, up to four months, whereas it is shorter for employees and blue collars, up to two months.<sup>76</sup> POCHIC (2001) argues fixed-term jobs (CDD in particular) are increasingly used as a trial period. The declining share of workers with a permanent contract among the employee in France also induces that individuals value more this criterion than before. The 2005 International Social Survey Programme illustrates that workers value job security more than wage and working time in the two countries.<sup>77</sup> In the United States, the job security dimension is measured through the benefits provision and more precisely on health care provision with the job.

Finally, the working time dimension includes two modalities: one including full-time jobs and voluntary part-time jobs, and the second involuntary part-time jobs. The literature illustrates the differences in terms of individual characteristics and labour market outcomes between individuals in voluntary part-time jobs and those in involuntary part-time jobs. As discussed above, even though the criterion of willingness can be debated and voluntary part-time jobs cover diverse realities (ULRICH, 2007), it remains a relevant discriminating factor for working time.

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<sup>74</sup> The analysis relies on workers' main job. Secondary jobs are not considered.

<sup>75</sup> The analysis has also been conducted on the aggregated indicator of job quality – aggregating those three dimensions. Results however do not bring prominent results and therefore, this chapter only considers disaggregated dimensions.

<sup>76</sup> These trial periods are extendible once under conditions (<https://www.service-public.fr/particuliers/vosdroits/F1643>)

<sup>77</sup> See Appendix A2.3 for an econometric exploration of the main determinants of job satisfaction in France and in the United States.

Table 2.3 displays the raw descriptive statistics. It exhibits inferior average wages for immigrants' offspring compared to natives in France where the monthly difference is of €167. It corresponds roughly to a wage gap of 10%, in line with the literature. In the United States, the gap is of \$228 (table 2.4), corresponding to 6% wage gap. A large heterogeneity among immigrants' offspring by parents' region of birth is noticeable in France. Appendix A.2.2. points out that native-born with North or sub-Saharan African immigrant parents have for instance lower monthly wage than natives. Only native-born with northern European immigrant parents have higher wages on average than natives. These inequalities across origins are sharper in the United States. Native-born with European immigrant parents have, as a matter of fact, higher average wages, almost twice as high as those with Hispanic immigrant parents (from Mexico, Puerto Rico or Latin America in general). These strong wage inequalities in the United States may be explained by age structure, by a more disparate diploma distribution across origin compared to France (see tables 2.1 and 2.2), and by stronger wage inequalities in the United States as a whole (PIKETTY and SAEZ, 2003).

In France, access to permanent jobs is strongly unequal. There is a difference of 3.3 percentage points between natives and descendants of immigrants in terms of types of contracts. Natives are more likely to have permanent jobs than immigrants' offspring (86.6% *versus* 83.4%). Table A.2.2. in appendix shows an overrepresentation of African (North African and sub-Saharan) immigrants' offspring in fixed-term jobs in France, whereas eastern and southern European immigrants' offspring are as much or even more frequently in permanent jobs than natives. Job security in the United States, measured by the health insurance provision by employer<sup>78</sup> is generally lower for immigrants' offspring than for natives – of 3 percentage points – and heterogeneity across origins is here again pronounced (table A.2.3. in appendix). Asian or European immigrants' offspring are the least affected as they have better job security than natives, contrarily to the Mexican, Puerto Rican or Latin American ones, for instance.

At the aggregated level, differences between natives and descendants of immigrants in terms of working time are relatively low in France (table 2.3). Nevertheless, immigrants' offspring tend to be more frequently in part-time jobs, whether they are voluntary or not. At the disaggregated level, immigrants' offspring of all origins remain more frequently in part-time jobs except for those with southern European immigrant parents, who are less often in involuntary part-time jobs. In the United States, voluntary and involuntary part-time jobs affect more immigrants' offspring (table 2.4). Native-born with Hispanic and African immigrant parents are among the most affected by involuntary part-time jobs while native-born with Asian immigrant parents tend to be more often in full-time jobs than natives on average (table A2.4 in appendix).

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<sup>78</sup> A question in the survey asks the worker if he/she is covered by a health plan provided through their employer or union.

**Table 2.3. Job characteristics of native-born in France in 2012**

	Natives	Migrants' offspring	Total
Average monthly wage (in Euros)	1 877	1 710	1 860
Type of contract (in %)			
<i>Fixed term contract</i>	13,5	16,6	13,8
<i>Permanent contract</i>	86,6	83,4	86,2
Working time (in %)			
<i>Unvoluntary part-time</i>	17,4	17,8	17,4
<i>Voluntary part-time</i>	1,1	1,4	1,1
<i>Full-time</i>	81,6	80,8	81,5
	24 984	2 866	27 850

Note: All differences are significant.

Source: *Enquête Emploi en Continu*, 2012.

**Table 2.4. Job characteristics of native-born in the United States in 2012**

	Natives	Migrants' offspring	Total
Average monthly wage (in Euros)	4 120	3 892	4 099
Type of contract (in %)			
<i>Fixed term contract</i>	13,5	16,6	13,8
<i>Permanent contract</i>	86,6	83,4	86,2
Working time (in %)			
<i>Unvoluntary part-time</i>	9,4	11,3	9,6
<i>Voluntary part-time</i>	19,2	19,7	19,2
<i>Full-time</i>	71,4	69,1	71,2
	58 778	6 087	64 865

Note: All differences are significant.

Source: Current Population Survey, 2012.

Overall, descriptive statistics portray an inferior employment quality for immigrants' offspring, along the three dimensions considered, with great heterogeneity by parents' region of birth. However, this can result from differences in observed or but also from unobservable individual characteristics. The econometric strategy presented in the next section aims at investigating this issue.

### 2.3. ECONOMETRIC STRATEGY

The descriptive statistics suggest that the employed immigrants' offspring are, on average, in jobs of lower quality both in France and in the United States. The first hypothesis that has to be tested consists in determining whether those differences are the result of parents' origin, of observable individual characteristics (demographic, related to their employment situation) or of other unobserved components.

Three dimensions of employment quality are explored. Monthly wage is a continuous variable whereas working time and job security are discrete ones.<sup>79</sup> Empirically, two kinds of estimation have therefore to be used. For the continuous dependent variable, a linear estimation is required (OLS) whereas the discrete dependent variables require binomial estimations, and in that case, the use of binomial probit estimations.

Origin-based differences in job access have been highlighted in the literature (AEBERHARDT *et al.*, 2010b; MINNI and OKBA, 2014) and demonstrated and assessed on the population of interest in Chapter 1. Empirically, considering this selection bias improves the specification and the results. Economically, considering the selection bias allows to take into account self-selection and differences in selection due to employers for instance.

Empirically, the assumption of selection bias can be checked by estimating the coefficient of the Inverse Mill Ratio. If the t-value is inferior to the critic value, the null assumption, stating the absence of correlation between the error terms of the selection equation and the interest equation, is accepted. In this case, there is no significant selection bias in the model and the OLS method can be used to directly estimate coefficients associated to the explanative variables. On the contrary, if the selection effect is significant, the job output measured is, under these hypotheses, endogenous to the probability to have a job. The two-step method would then give non-biased estimations of the coefficients associated to explanatory variables.

The estimation of the Inverse Mill Ratio ( $\rho \neq 0$ ) for the three dimensions analysed confirms the necessity to run a two-step estimation, with a selection equation before estimating the interest equation. Two different models correcting this sample selection will be explored depending on the nature of the output considered. Consequently, the empirical strategy relies on a selection model *à la* Heckman (HECKMAN, 1998) when considering wage, and a bivariate probit with selection model when considering job security and working time. The samples include  $N_F = 209927$  individuals in France and  $N_{USA} = 266433$  in the United States.

Concerning wage, the Heckman selection model (GRONAU, 1974; LEWIS, 1974; HECKMAN, 1976, 1979) assumes that there exists an underlying regression relationship such that:

$$y_i = x_i\beta + w_i\delta + u_{1i} \quad \text{regression equation}$$

The dependent variable  $y_i$ , however, is not always observed. Rather, the dependent variable for observation  $i$  is observed if:

$$\gamma z_i + u_{2i} > 0 \quad \text{selection equation}$$

Where:

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<sup>79</sup> The potential interaction between wage and working time is addressed in the sensitivity analyses.

$$u_1 \sim N(0, \sigma)$$

$$u_2 \sim N(0, 1)$$

$$\text{corr}(u_1, u_2) = \rho$$

When  $\rho \neq 0$ , as it is the case for wage in this analysis, standard regression methods applied to the first equation yield biased results. Heckman provides reliable, asymptotically efficient estimates for all the parameters in such models. Results are detailed in the following section.

For the discrete explained variables, a bivariate probit model with selection (VAN DE VEN and VAN PRAAG, 1981) is run, as in Chapter 1. This model consists in explaining the fact to have a secure job or a voluntary working time, the dependent variables  $y_i$  knowing that  $y_i$  is observed only for a certain value of  $y_i^*$ . In the probit equation,  $y_i^*$  is the latent variable that cannot be observed and that measures the probability to have a secure job or a voluntary working time.

$$y_i = \begin{cases} 1 & \text{if } y_i^* > \gamma \\ 0 & \text{otherwise} \end{cases}$$

With

$$y_i^* = x_i\beta + w_i\delta + \varepsilon_{1i}$$

The dependent variable is however not always observed. Rather, the dependent variable for observation  $i$  is observed if (VAN DE VEN and VAN PRAAG, 1981):

$$y_i^{\text{select}} = (z_i\gamma + \varepsilon_{2i} > 0)$$

Where

$$\varepsilon_{1i} \sim N(0, 1)$$

$$\varepsilon_{2i} \sim N(0, 1)$$

And

$$\text{corr}(\varepsilon_{1i}, \varepsilon_{2i}) = \rho$$

In both cases of discrete and continuous variables, the vector  $x_i$  defines explanatory independent variables. In order to shed light on the relationship between wage and labour market characteristics. A second step involves the introduction of a second vector of explanatory variables:

$$y_i^* = x_i\beta + w_i\delta + \varepsilon_i$$

The vector  $x_i$  defines individual explanatory independent variables and the vector  $w_i$  gathers explanatory control variables which relate to labour market characteristics.

The vector  $x_i$  of explanatory variables includes, first, origin: natives are distinguished from their immigrants' offspring' counterparts. Second, gender is controlled for, as women are largely prejudiced in terms of employment quality in both countries (DAVOINE *et al.*, 2007; KALLEBERG *et al.*, 2000).

## *Chapter 2: Employment quality of immigrants' offspring*

Age is also introduced as it allows for taking into account the different age structures among populations and to capture difficulties that young adults face (LE RHUN and MINNI, 2012). However, as age does not have a linear effect – seniors also face difficulties (*ibid.*) – age groups are introduced instead of using a continuous variable. Education level contribution is also considered in order to take structure effects into account, as the more educated workers have better employment quality (LE RHUN and POLLET, 2011). A variable that provides information about the individual having at least one native-born parent is constructed in order to control for the potential differential in terms of cultural integration. Indeed, an individual who benefits from the French or US-American national culture by at least one of his parents is better integrated (ALGAN *et al.*, 2012). Given the territorial inequalities in both countries (RATHELOT, 2010; BORJAS, 1995), a residential variable is also introduced; it considers for the United States the fact to live in a metropolitan area and, for France, the fact to live in the Paris region and in a sensitive urban zone (ZUS in French). Finally, a variable controlling for the year of the survey is added in the model.

The second vector  $w_i$  relates to explanatory control variables, which includes some labour market characteristics. The first one is a variable on the industry in which the individual is working, as some studies point out industry-based inequalities in terms of employment quality (see for instance ASKENAZY *et al.*, 2012, or BAUDELOT *et al.*, 2014). Second, the occupation of workers is also taken into account (KALLEBERG *et al.*, 2000). These two labour market characteristics allow acknowledging some institutional country-specificities.

In the two types of selection models, the selection equation should have at least one variable that is not in the probit equation, for the model to be well identified. In the case of employment quality, in order to define the exclusion variables, I refer to the same literature as in chapter 1, devoted to the estimation of labour market participation models. Consequently, I assume that household characteristics, such as the matrimonial situation and the number of children, are reliable exclusion variables (MROZ (1987); HYSLOP (1999); BUCHINSKY *et al.* (2010)). The estimations show that these two variables are significantly related to job access but not to job characteristics. They are then used in the two countries in the same manner. More precisely, a variable is constructed to distinguish single individuals from married individuals or those in a relationship. Besides, a variable that captures the number of children is created with five modalities, from zero to four or more children. Except from these exclusion variables that are added in the selection equation, and the labour market characteristics that are added in the second equation (which obviously cannot be introduced in the selection equation, as they refer to characteristics of the job), the two equations (the selection equation and the probit one) include the same explanatory variables detailed above.

Several models are estimated. All employment quality variables are estimated in light of individual and employment characteristics in the two countries. As a result, in France, model (1) deals with wage,

model (2) deals with working hours, and model (3) deals with job security. In the United States, model (4) deals with wage, model (5) deals with working hours and model (6) deals with job security. The following section aims at presenting the results of these estimations and of the related sensitivity analyses.

## SECTION 3. HOW DOES THE FACT OF HAVING IMMIGRANT PARENTS RELATE TO EMPLOYMENT QUALITY?

Descriptive statistics have shed light on the strong differences existing in terms of employment quality, between natives and immigrants' offspring on the one hand, and among immigrants' offspring, by parents' country of birth on the other hand. The econometric analysis investigates the effect of origin on employment quality by controlling, in a first step, for individual characteristics but without controlling for employment characteristics, and by controlling, in a second step, for both individual and employment characteristics. As presented above, a selection model is estimated with some household characteristics as exclusion variables. In accordance to theoretical relationships raised in the literature (MROZ (1987); HYSLOP (1999); BUCHINSKY *et al.* (2010)), these exclusion variables are significant in both countries (Tables 2.5 and 2.6<sup>80</sup>), with and without taking employment related variables into account.

### 3.1. MIGRANT PARENTS AND EMPLOYMENT QUALITY: MIXED RESULTS

Estimation results point out a negative and significant effect of having immigrant parents on the probability to get a job in France whereas this effect is not significant in the United States (tables 2.5 and 2.6). This result is not surprising. Gaps of employment/unemployment rates, as well as the different selection into jobs or discrimination to access employment have been extensively documented in France and considered as an issue, whereas it is not the case in the United States. Knowing this contrast, one can wonder whether differences between the two countries holds true for the three dimensions of employment quality studied. The models seem of good quality, as indicated by the significant likelihood ratio test.

Our results show that, once the selection bias is taken into account, having immigrant parents significantly affect employment quality in the two countries. All other things being equal, having immigrant parents tends to raise wage in France (table 2.5), as well as in the United States (table 2.6). However, this does not affect significantly job security in the United States, all other things being

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<sup>80</sup> The tables of this section are short version of the estimation results. Full tables are presented in appendix.

equal, contrary to France. In France, this factor does not significantly impact working time, but it does significantly and negatively impact this dimension in the United States.

The positive effect found on wage may be surprising. Yet, this finding confirms the literature on wage inequalities in the United States and is in line with the results traditionally found for France. In France, studies regarding specific groups of immigrants' offspring (*e.g.* African immigrant offspring) argue that wage gaps may be explained by individual characteristics (AEBERHARDT, *et al.*, 2010a). In the case of the United States, this finding confirms the relative absence of difficulties faced by immigrants' offspring, other things being equal, even suggesting that the fact of having immigrant parents gives a relative advantage on wages. Further analyses (see the sensitivity analyses below) investigate the reason of those positive coefficients. Do these positive coefficient result from the effect of working hours? Or from compositional effects (*i.e.* the composition of immigrants' offspring in terms of parents' country of birth)? The next chapter investigates the distribution of wage gaps in order to understand whether the positive effect holds for the entire distribution.

From tables 2.5 and 2.6, the main difference between the two countries is the dimension of employment quality, which is negatively affected by the origin of parents. In France, job security is negatively impacted whereas the working time dimension is the variable that shows a greater impact for the United States. The positive effect associated to wage and the negative effect on other dimensions may illustrate the theory of hedonic prices (ROSEN, 1974). Indeed, the positive effect found on wage could be interpreted as a compensation for the negative effects found on other job characteristics, such as job security in France or working time in the United States. These compensating effects may for instance refer to the functioning of different labour markets (this will be discussed more extensively in the next section). In France, the segmentation of the labour market is stronger between permanent (CDI) and temporary (CDD, etc.) contracts, whereas this is less a discriminating pattern in the United States. Besides, the negative correlation in the United States between having immigrant parents and working time can correspond to the difficulties the offspring of French immigrants may have to integrate the labour market. Indeed, this negative relationship in the United States means that immigrant offspring are less likely to choose their working hours.

The literature insists on the role played by observable characteristics other than parents' immigrant status to explain differences of outcomes on the labour market between immigrants' offspring and other native-born individuals. A more precise look on control variables illustrates the importance of several individual observable characteristics to explain the lower levels of employment quality for immigrants' offspring.<sup>81</sup> In both countries, being a woman has a negative effect on employment quality and on the probability to get a job (KALLEBERG *et al.*, 2000; DAVOINE and ERHEL, 2007). Age groups also have an expected effect, *i.e.* being older increases the probability to get a job and improves

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<sup>81</sup> The tables do not report all the control variables. Please see in Appendix the complete tables.

its characteristics (MONCEL, 2012; KALLEBERG, 2000). In the same vein, diplomas seem to have a protective effect: the higher the diploma, the higher the probability to get a job, and the better its characteristics (MONCEL, 2012; KALLEBERG, 2000). Residential characteristics are also significantly related to job access and employment quality. In France, living in a Sensitive Urban Area (ZUS) decreases the probability to get a job (FITOUSSI *et al.*, 2004). The effects are also different whether the ZUS is in the Paris region or not (see table 2.5). In the United States, living in a metropolis is negatively related both to employment quality and to the probability to get a job. This result tends to confirm previous studies on the lower employment quality in big cities or metropolis (BERNHARDT *et al.*, 2013). Lastly, in the two countries, the effect of having two immigrant parents is negative on the probability to get a job and on wage, which can refer to the “integrating role” hypothesis of having at least one native-born parent (ALGAN *et al.*, 2012).

The individual characteristics considered tend to significantly explain the differences observed for immigrants' offspring and for natives. However, employment quality also varies greatly with industries and occupations. Considering employment characteristics reveals significant relationships between job characteristics and employment quality. Indeed, all the sectors of activity and occupations are significantly related to employment quality. For example, in France, compared to working in the public sector, working in industry is positively related to all three dimensions of employment quality. For financial, information, professional or business activities, the relationship with wage and working time is significantly positive but significantly negative with job security. In the United States, compared to working in the public sector, working in agriculture or in wholesale and retail is significantly and negatively related to the three dimensions of employment quality. On the contrary, working in the industry is significantly and positively related to these three dimensions.

Concerning occupations, in France, compared to workers, working as craftsmen, retailers and business owners, in managerial, professional or mid-level occupations is significantly and positively related to the three dimensions of employment quality. In the United States, compared to being in transportation or material moving occupations, working in management, business, and financial occupations, in professional and related occupations, or office and administrative support occupations is significantly and positively correlated with the three dimensions of employment quality. Overall, it seems that in both countries, workers at the bottom of the qualification hierarchy have a relatively lower employment quality. This result recalls the conclusions of CAROLI and GAUTIÉ (2009), who suggest that, despite numerous legal rules, effective countermeasures in the workplace are limited in many sectors due to the weakness and division of unions and high levels of unemployment, which undermines the bargaining power of the most vulnerable workers. In the United States, MACDERMID *et al.* (2001) show that, although most variation in employment quality was associated with individual characteristics, significant variation was still associated with the organizational and industrial levels. They show that workers in smaller organizations earn lower wages, have fewer benefits, and are less

educated than workers in larger organizations. However, their actual and desired work hours seem to fit better.

**Table 2.5. Estimation of individual determinants of employment quality in France**

	Model 1		Model 2		Model 3	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Migrants' offspring	-0.0962*** (0.0122)	0.0262*** (0.00649)	-0.119*** (0.0126)	0.00185 (0.0191)	-0.116*** (0.0126)	-0.0321* (0.0191)
Female	-0.155*** (0.00583)	-0.173*** (0.00307)	-0.220*** (0.00610)	-0.759*** (0.0116)	-0.223*** (0.00603)	-0.0212** (0.0105)
15-29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
30-49	0.812*** (0.00814)	0.0221*** (0.00438)	0.976*** (0.00805)	-0.0965*** (0.0150)	0.959*** (0.00809)	0.648*** (0.0154)
50-64	0.132*** (0.00861)	0.279*** (0.00477)	0.151*** (0.00936)	0.0756*** (0.0136)	0.128*** (0.00942)	1.070*** (0.0176)
No diploma	-0.370*** (0.00951)	-0.0872*** (0.00556)	-0.429*** (0.00961)	0.00681 (0.0163)	-0.429*** (0.00960)	0.0320** (0.0162)
Brevet des collèges/BEPC	-0.455*** (0.0102)	0.0648*** (0.00641)	-0.478*** (0.0103)	0.0849*** (0.0187)	-0.480*** (0.0103)	0.0366** (0.0182)
BEP/CAP	0.0394*** (0.00853)	-0.0661*** (0.00422)	0.0625*** (0.00909)	0.0477*** (0.0130)	0.0597*** (0.00906)	0.0293** (0.0134)
Baccalauréat	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Bac +2	0.343*** (0.0107)	-0.00333 (0.00474)	0.435*** (0.0117)	0.00164 (0.0153)	0.428*** (0.0116)	0.0607*** (0.0167)
Licence ou plus	0.405*** (0.0107)	0.00655 (0.00550)	0.427*** (0.0112)	-0.0298* (0.0167)	0.424*** (0.0112)	-0.0794*** (0.0177)
Two parents immigrant	-0.0417** (0.0174)	-0.00155 (0.00918)	-0.0458** (0.0179)	0.0360 (0.0273)	-0.0422** (0.0179)	0.0381 (0.0271)
Live outside Paris' suburbs, not in a sensitive urban area	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Live in Paris' suburbs, not in a sensitive urban area	0.0551*** (0.00842)	0.128*** (0.00404)	0.0686*** (0.00899)	0.231*** (0.0135)	0.0718*** (0.00896)	0.144*** (0.0140)
Live outside Paris' suburbs, in a sensitive urban area	-0.180*** (0.0155)	0.0189** (0.00860)	-0.199*** (0.0160)	0.0170 (0.0247)	-0.188*** (0.0160)	-0.00921 (0.0246)
Live in Paris' suburbs, not in a sensitive urban area	-0.0104 (0.0286)	0.0719*** (0.0141)	0.0129 (0.0309)	0.264*** (0.0488)	0.0304 (0.0311)	0.134*** (0.0490)
Constant	7.727* (4.174)	-16.91*** (2.072)	7.996* (4.429)	12.96** (6.297)	8.847** (4.419)	18.91*** (6.613)
Observations	209,381	209,381	209,381	209,381	209,381	209,381
rho	-0.889	-0.889	-0.423	-0.423	-0.712	-0.712

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model, whereas working time and job security estimations are binomial probits with selection. Controls for years, sectors of activity, occupations and

selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in France.

Source: Enquête Emploi en Continu 2008-2012, Insee.

**Table 2.6. Estimation of individual determinants of employment quality in the United States**

	Model 4		Model 5		Model 6	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Migrants' offspring	0.00193 (0.0200)	0.0232** (0.0109)	-0.0171 (0.0216)	-0.0490* (0.0263)	-0.0135 (0.0213)	-0.00420 (0.0163)
Female	-0.0328*** (0.00792)	-0.496*** (0.00486)	-0.0822*** (0.00847)	-0.492*** (0.0131)	-0.103*** (0.00848)	-0.427*** (0.00752)
15-29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
30-49	0.288*** (0.0124)	0.201*** (0.00777)	0.360*** (0.0132)	0.0687*** (0.0177)	0.339*** (0.0132)	0.223*** (0.0111)
50-64	0.218*** (0.0134)	0.245*** (0.00821)	0.246*** (0.0143)	0.0163 (0.0182)	0.248*** (0.0142)	0.302*** (0.0117)
No diploma	-0.187*** (0.0456)	-0.320*** (0.0334)	-0.293*** (0.0446)	-0.223*** (0.0563)	-0.283*** (0.0444)	-0.479*** (0.0412)
High school without diploma	-0.301*** (0.0173)	-0.172*** (0.0122)	-0.381*** (0.0179)	-0.121*** (0.0258)	-0.369*** (0.0179)	-0.383*** (0.0168)
High school degree	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Associate degree	0.145*** (0.0122)	0.0907*** (0.00662)	0.179*** (0.0135)	-0.0153 (0.0163)	0.167*** (0.0133)	0.100*** (0.0103)
Bachelor's degree	0.314*** (0.0107)	0.240*** (0.00613)	0.306*** (0.0113)	0.0705*** (0.0154)	0.285*** (0.0111)	0.195*** (0.00897)
Master's degree	0.323*** (0.0160)	0.394*** (0.00837)	0.367*** (0.0170)	0.129*** (0.0231)	0.345*** (0.0167)	0.282*** (0.0130)
Professional school degree	0.780*** (0.0429)	0.822*** (0.0187)	0.648*** (0.0453)	0.106** (0.0454)	0.603*** (0.0438)	0.268*** (0.0261)
PhD.	0.701*** (0.0506)	0.677*** (0.0190)	0.640*** (0.0495)	0.0388 (0.0497)	0.609*** (0.0486)	0.284*** (0.0296)
Two parents immigrant	-0.00804 (0.0286)	0.00357 (0.0154)	0.0288 (0.0309)	0.0246 (0.0377)	0.0366 (0.0307)	-0.00398 (0.0234)
Live in metropolitan areas	0.0188** (0.00908)	0.161*** (0.00506)	0.0195** (0.00980)	0.0624*** (0.0120)	0.0213** (0.00967)	0.0570*** (0.00765)
Constant	916.7*** (9.461)	-226.2*** (5.193)	1,037*** (9.548)	68.69*** (16.50)	1,023*** (9.508)	299.7*** (8.869)
Observations	173,146	173,146	173,146	173,146	173,146	173,146
rho	-0.860	-0.860	-0.415	-0.415	0.840	0.840

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model, whereas working time and job

security estimations are binomial probits with selection. Controls for years, sectors of activity, occupations and selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in the United States.

Source: Current Population Survey 2008-2012, BLS.

### 3.2. SENSITIVITY ANALYSES

To investigate the sensitivity of the results, the analysis goes one step further. I first explore the role played by the number of hours worked. Second, I examine the effect of parental region of origin on employment quality. Finally, I examine the potential role of race.

#### *HOW DOES THE NUMBER OF HOURS WORKED DRIVE THE RESULTS ON WAGES?*

The positive effect of having immigrant parents found on wages might be related to the working time. The variable considered in the models is the monthly wage and not the hourly wage. One can thus question whether the positive impact of having immigrant parents is related to the quantity of hours worked. The monthly wage will then be replaced by the hourly wage. This estimation is, yet, challenging because of the quality of data.

To obtain the hourly wage, the monthly net wage is divided by the number of hours worked per month. In the two declarative surveys used, and in particular in the French one, the number of hours worked is not satisfyingly filled by workers.<sup>82</sup> This analysis therefore concerns only individuals who declare a plausible number of hours worked, and for whom the hourly wage is superior to the minimum hourly wage.<sup>83</sup> Hence, the sample of workers corresponds to 71% of the initial sample of workers in France and 88% in the United States.

Tables 2.7 and 2.8 depict the results of the same estimations of model (1) for France and of model (4) for the United States, with the hourly wage, becoming (1b) for France and (4b) for the United States. The quality of the estimation for France is lower on the hourly wage than on the monthly wage. The likelihood ratio test accepts the hypothesis of independent equations in France, indicating that the selection model is not adapted. The predictive capacity of model (1b) is therefore lower than the one

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<sup>82</sup> Because of the missing values, considering hourly wages instead of monthly wages diminishes the sample of more than one fifth, and the American one of 5%. Moreover, the values tend not to be reliable. Indeed, among workers, 18% of the French sample declares to work either zero hour or 999 hours per month, and 6% of the American workers in the sample declares to work zero hour. It also reduces the size of the sample, as I remove them for this estimation. In addition, some outliers remain. In France, on the 93893 individuals for whom hourly wages can be computed, only 83113 have an hourly wage which is at least equal to the hourly minimum wage. In the United States, this phenomenon is less pronounced. Out of the 318205 workers for whom hourly wages can be computed, 317916 have an hourly wage which is at least equal to the national hourly minimum wage.

<sup>83</sup> The American federal hourly wage is 7.25\$ since 2009 (with exception for tipped labour or workers younger than 20 years old). Yet, the minimum wage in the United States is not equal in all states. It is set by a system of federal, state, and local laws. Employers then pay workers the highest minimum wage enforced by federal, state, or local law. In October 2016, 29 States have minimum wages superior to the federal one (<http://www.ncsl.org/research/labor-and-employment/state-minimum-wage-chart.aspx>, consulted on 12/2/2016).

of model (1), which better estimates the outcome. In the United States, on the contrary, the likelihood ratio test indicates that the selection model is reliable.

**Table 2.7. Estimation of hourly wage determinants in France**

	Model 1b	
	Job access	Wage
Native	Ref.	Ref.
Migrants' offspring	-0.108*** (0.0141)	0.920 (1.045)
Two parents immigrant	-0.0613*** (0.0202)	-1.455 (1.072)
Constant	-14.66*** (4.939)	583.1** (257.5)
Observations	165,132	165,132
rho	-0.00353	-0.00353

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model. Controls for gender, age, education level, place of residence, years, sectors of activity, occupations and selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in France. Source: Enquête Emploi en Continu 2008-2012, Insee.

**Table 2.8. Estimation of hourly wage determinants in the United States**

	Model 4b	
	Job access	Wage
Native	Ref.	Ref.
Migrants' offspring	-0.0158 (0.0217)	64.74*** (17.25)
Two parents immigrant	0.0349 (0.0309)	-55.76** (24.86)
Constant	1,035*** (8.700)	-75,065*** (8,990)
Observations	164,283	164,283
rho	-0.0298	-0.0298

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model. Controls for gender, age, education level, place of residence, years, sectors of activity, occupations and selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in the United States. Source: Current Population Survey 2008-2012, BLS.

Although the positive effect to have immigrant parents on monthly wages remains with the hourly measure of wages for the United States, this is not the case for France. In France, the estimation on hourly wage indicates that the lower number of hours worked by immigrants' offspring seems to explain the significant relationship observed between having immigrant parents and monthly wage, as the coefficient is not significant anymore. This result seems counterintuitive as the positive effect could have been expected to be stronger on hourly wage, because of the lower number of hours worked by immigrants' offspring. Because of the limitations mentioned above, another estimation is

run by including in model (1) a variable distinguishing several categories of hours worked. This estimation indicates that the positive relationship between having immigrant parents and wages remains significant (Table 2.9). In addition, contrary to the analysis on hourly wage, the likelihood ratio indicates that the hypothesis of independence of the two equations cannot be accepted, meaning that the selection model is justified.

**Table 2.9. Estimation of wage determinants in France, with a control for the working time**

	Model 1d	
	Job access	Wage
Native	Ref.	Ref.
Migrants' offspring	-0.112*** (0.0125)	0.0119** (0.00478)
Two parents immigrant	-0.0475*** (0.0178)	-0.00284 (0.00671)
Part-time, less than 15 hours		Ref.
Part-time, from 15 to 29 hours		0.923*** (0.0123)
Part-time, 30 hours or more		1.280*** (0.0127)
Full-time, less than 30 hours		1.316*** (0.0156)
Full-time, from 30 to 34 hours		1.455*** (0.0143)
Full-time, from 35 to 39 hours		1.447*** (0.0122)
Full-time, more than 40 hours		1.579*** (0.0123)
No regular work schedule, or not declared		0.765*** (0.0203)
Constant	8.809** (4.354)	-18.99*** (1.536)
Observations	209,381	209,381
rho	-0.679	-0.679

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model. Controls for gender, age, education level, place of residence, years, sectors of activity, occupations and selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in France. Source: Enquête Emploi en Continu 2008-2012, Insee.

*DOES THE PARENTS' REGION OF ORIGIN EXPLAIN PART OF THE GAPS BETWEEN IMMIGRANTS' OFFSPRING AND NATIVES?*

We disaggregate the origin variable into several modalities, corresponding to parents' region of birth. In our French sample, immigrant parents may come from North Africa, South Europe, sub-Saharan Africa, East Europe or North Europe. In the United States, more groups of origin are disentangled:

Mexico, Puerto Rico, Asia, Canada, northern Europe, southern Europe, eastern Europe, the Caribbean, Latin America. Parents' country of origin is defined by the father's, if both parents do not come from the same country (MINNI and OKBA, 2014).

**Table 2.10. Estimation of employment quality determinants in France, by parents' region of birth**

	Model 1c		Model 2c		Model 3c	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
North Africa	-0.250*** (0.0222)	0.0595*** (0.0119)	-0.287*** (0.0231)	0.0145 (0.0357)	-0.279*** (0.0233)	-0.0641* (0.0350)
southern Europe	0.0197 (0.0171)	-0.00246 (0.00861)	0.0125 (0.0178)	0.0174 (0.0261)	0.0149 (0.0178)	-0.0105 (0.0263)
Subsaharan Africa	-0.258*** (0.0377)	0.0218 (0.0221)	-0.278*** (0.0383)	-0.0545 (0.0647)	-0.272*** (0.0384)	-0.00926 (0.0600)
eastern Europe	-0.154*** (0.0338)	0.0387** (0.0181)	-0.173*** (0.0354)	0.0120 (0.0547)	-0.167*** (0.0355)	-0.0133 (0.0602)
northern Europe	-0.102*** (0.0275)	0.0295** (0.0149)	-0.136*** (0.0285)	-0.0428 (0.0428)	-0.133*** (0.0285)	-0.0609 (0.0440)
Two parents immigrant	0.0110 (0.0202)	-0.0120 (0.0103)	0.0134 (0.0213)	0.0233 (0.0315)	0.0162 (0.0213)	0.0384 (0.0320)
Constant	5.997 (4.209)	-16.39*** (2.080)	6.285 (4.470)	13.99** (6.353)	7.110 (4.460)	18.17*** (6.672)
Observations	205,852	205,852	205,852	205,852	205,852	205,852
rho	-0.891	-0.891	-0.412	-0.412	-0.709	-0.709

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model. Controls for gender, age, education level, place of residence, years, sectors of activity, occupations and selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in France.

Source: Enquête Emploi en Continu 2008-2012, Insee.

**Table 2.11. Estimation of employment quality determinants in the United States, by parents' region of birth**

	Model 4c		Model 5c		Model 6c	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Mexico	0.0433* (0.0240)	-0.0105 (0.0164)	0.0567** (0.0257)	0.00175 (0.0323)	0.0569** (0.0252)	-0.00639 (0.0226)
Puerto Rico	-0.00505 (0.0405)	0.0182 (0.0261)	0.0169 (0.0443)	-0.0987* (0.0533)	0.0152 (0.0439)	0.0553 (0.0381)
Asia	-0.0550 (0.0339)	0.0171 (0.0244)	-0.0903** (0.0356)	0.00152 (0.0472)	-0.0951*** (0.0350)	0.0769** (0.0322)
Canada	-0.0312 (0.0420)	0.0607** (0.0252)	-0.0359 (0.0462)	-0.106** (0.0541)	-0.0391 (0.0452)	0.0144 (0.0370)
northern Europe	-0.0189 (0.0292)	0.0315* (0.0189)	-0.0460 (0.0312)	-0.00494 (0.0402)	-0.0465 (0.0306)	-0.0255 (0.0261)
southern Europe	-0.0467 (0.0347)	0.0862*** (0.0218)	-0.0831** (0.0373)	-0.0814* (0.0457)	-0.0891** (0.0367)	0.102*** (0.0311)
eastern Europe	0.0461 (0.0577)	-0.0389 (0.0330)	0.0894 (0.0655)	-0.144** (0.0676)	0.0692 (0.0628)	-0.0697 (0.0471)
Caribbean	-0.197*** (0.0514)	0.0750* (0.0409)	-0.223*** (0.0539)	-0.00929 (0.0733)	-0.232*** (0.0525)	0.0153 (0.0519)
Latin America	-0.00334 (0.0426)	-0.0879*** (0.0314)	-0.00350 (0.0449)	-0.0961* (0.0552)	-0.0200 (0.0435)	-0.101** (0.0404)
Other	-0.0214 (0.0394)	-0.0238 (0.0279)	-0.0336 (0.0415)	-0.113** (0.0508)	-0.0364 (0.0407)	-0.0597* (0.0359)
Two parents immigrant	0.0503** (0.0224)	0.0154 (0.0153)	0.0577** (0.0240)	0.000839 (0.0299)	0.0585** (0.0234)	-0.0478** (0.0207)
Constant	918.0*** (6.788)	-280.5*** (5.056)	1,019*** (6.842)	98.03*** (15.75)	1,005*** (6.957)	-192.7*** (8.386)
Observations	250,448	250,448	250,448	250,448	250,448	250,448
rho	-0.855	-0.855	-0.244	-0.244	-0.785	-0.785

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model. Controls for gender, age, education level, place of residence, years, sectors of activity, occupations and selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in the United States.

Source: Current Population Survey 2008-2012, BLS.

This separation of native-born by parents' place of birth sheds light on the large heterogeneity of relationships between parents' region or country of birth and dimensions of employment quality, thus recalling the history and specificities of each diaspora in the two countries. In both countries, the likelihood ratio test assesses the validity of the selection model. In France, a negative effect on job access is found for native-born whose parents come from Africa, and from eastern and northern Europe. However, the effect on job security is also negative only for individuals with northern African immigrant parents. Native-born with southern European immigrant parents seems to be the only group that is not significantly affected by their parents' country of birth, on any dimension. For native-born

with North African, eastern European or northern European immigrant parents, the coefficient on wage is significantly positive.

In the United States, a negative effect on job selection can be noticed only for native-born with Caribbean and southern European immigrant parents: other things being equal, it is harder for them to get employed. However, once this selection process is taken into account in the model, for native-born with Caribbean immigrant parents, the effect of their origin on wage is positive. For native-born with southern European immigrant parents, the place of birth of the parents is positively related to wage and job security, but negatively to working hours. Those with eastern immigrant parents also have a significantly negative coefficient on working hours, as well as those with Puerto-Rican immigrant parents: they are more inclined to involuntary work in part-time jobs. For native-born with South American immigrant parents, a negative coefficient is associated to all the three dimensions of employment quality. Surprisingly, native-born with Mexican immigrant parents are positively selected into jobs. This effect might be related to the strong network they have in the United States (see discussion below). For native-born with Canadian or northern European immigrant parents, a positive coefficient is associated to wage: other things being equal, they have better-paid jobs.

These results highlight the heterogeneity of the inequality mechanisms playing on employment quality. This heterogeneity recalls the specificities of the various migration movements (cultural, linguistic), which will be discussed in Section IV.

*DOES RACE PLAY A SIGNIFICANT ROLE ON EMPLOYMENT QUALITY INEQUALITIES BETWEEN IMMIGRANTS' OFFSPRING AND NATIVES?*

As mentioned in the general introduction, the consideration of race and its place within the public debate and the national statistics differs in France and the United States. In the United States, the question of race plays a greater role compared to France. It is widely agreed, in civil society, as well as in academia (see for instance BONILLA-SILVA, 2015) that racial inequalities remain important in the post-Civil Rights era, especially affecting African-American. In order to test the strength of these racial inequalities among native-born, whatever the origin of their parents may be, a variable capturing the fact of being African-American is introduced in models (4), (5) and (6). This test cannot be reproduced for France because the French national statistical system does not allow to “measure” race.

Table 2.12 shows that, once this variable is introduced, the negative coefficient of having immigrant parents initially found on working hours becomes non-significant anymore. Instead, being African-American makes it more difficult to get employed, as well as it increases the chances of getting lower wages, all other things being equal. However, positive and significant coefficients appear on working hours and job security. The positive coefficient initially found on wages, associated to the fact of having immigrant parents remains significant.

These results are in line with the literature on racial inequalities on the labour market in the United States, which depicts lower levels of labour market outcomes for African-American (Blacks in their terminology) (ALTONJI and BLANK, 1999). Besides, concerning immigrants' offspring, the results also supports the hypothesis of a relatively more pronounced and penalizing role on employment quality of having immigrant parents in France compared to the United States. Controlling for race blurs the negative effect on working hours. The only remaining significant coefficient of being immigrants' offspring is on wage and it is positive.

**Table 2.12. Estimation of employment quality determinants in the United States, with a control of race**

	Model 4d		Model 5d		Model 6d	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Migrants' offspring	-0.00464 (0.0200)	0.0215** (0.0109)	-0.0234 (0.0216)	-0.0413 (0.0263)	-0.0187 (0.0213)	-0.000802 (0.0163)
Two parents immigrant	-0.00787 (0.0285)	0.00346 (0.0154)	0.0294 (0.0309)	0.0240 (0.0377)	0.0371 (0.0307)	-0.00415 (0.0235)
Black	-0.0863*** (0.0130)	-0.0289*** (0.00731)	-0.0777*** (0.0139)	0.112*** (0.0186)	-0.0580*** (0.0138)	0.0504*** (0.0115)
Constant	916.1*** (9.464)	-226.1*** (5.193)	1,037*** (9.549)	66.59*** (16.06)	1,023*** (9.514)	295.7*** (9.060)
Observations	173,146	173,146	173,146	173,146	173,146	173,146
rho	-0.860	-0.860	-0.429	-0.429	0.828	0.828

Note: Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance. Wage estimations use Heckman selection model. Controls for gender, age, education level, place of residence, years, sectors of activity, occupations and selection variables are detailed in appendix. Scope: Natives and descendants of immigrants, from 15 to 64 years old, in the United States. Source: Current Population Survey 2008-2012, BLS.

## SECTION 4. DISCUSSION OF THE RESULTS

In addition to considering the composition of the population of interest, and its main characteristics, MUÑOZ DE BUSTILLO, *et al.* (2011) argue that, regarding employment quality, “the institutional context should always be considered in the interpretation of results” (p. 457). The interpretation of the results requires the consideration of the potential influence of institutions in both countries on the levels and discrepancies (1) in the job access and (2) on employment quality. Two sets of institutions must be taken into account: first, labour market institutions and second, immigration and integration measures and policies.

### 4.1. THE POTENTIAL ROLE PLAYED BY LABOUR MARKET INSTITUTIONS

The literature on the varieties of capitalisms (VoC) (GALLIE, 2007; AMABLE, 2005) insists on the role played by institutions in the determination of employment quality levels and discrepancies. More precisely, GALLIE (2007) predicts a lower employment quality in liberal countries, like the United States, but fewer inequalities than in European continental countries like France, where inequalities are more pronounced, despite higher levels of employment quality. Hence, various labour market institutions may affect different employment quality components.

To begin with, the two countries differ on the level of wage bargaining institutions. DU CAJU *et al.* (2008), distinguish several groups of countries regarding wage bargaining institutions. France, with other western European countries, has a highly-regulated system of wage bargaining, characterised by “the existence of extension procedures and a high level of collective agreement coverage, a dominance of sectoral (and to a less extent firm-level) wage bargaining, and the general absence of coordination except through minimum wages (or trend setting sectors)” (DU CAJU *et al.*, 2008, p.4). On the contrary, the United States belongs to a group of countries characterized by a deregulated wage bargaining system. Hence, the centralization and the coverage rate of collective conventions are higher in France than in the United States (ILO, 2008). Moreover, the existence of a higher minimum wage in France compared to the United States induces a better remuneration for low qualified jobs and then, in association with a better coverage rate of wage bargaining, an improvement of employment quality in its wage dimension. Given the low level of education of immigrants' offspring in France (ALBA, HOLDAWAY, 2014), this minimum wage policy and the relatively thinner wage distribution might help reduce wage gaps with natives. Nevertheless, the minimum wage policy contributes to raise labour costs for firms, then being perhaps more reluctant to hire workers at minimum wages (CAHUC and KRAMARZ, 2004; ABOWD *et al.*, 2000). *In fine*, one might think that the French institutions increase the selection in the job access for immigrants' offspring, but reduce at the same time wage gaps.

The results underlines the selection issue as being a crucial difference between the two countries. In France, having immigrant parents is always associated with a negative coefficient on employment access, contrary to the United States. Instead, workers who have immigrant parents seem to be less likely to choose their working time, other things being equal. The differences between the two countries in terms of employment protection may explain these results and may also have consequences on job security. According to the OECD (2013a), the job protection level is higher in France than in the United States. Even though this higher protection contributes to improve employment quality for workers in permanent jobs in France, some economists argue that this might also withhold job creations, making it more expensive for employers to hire as well as more difficult to fire workers (CAHUC and KRAMARZ, 2004). In a dual labour market, the people first affected are the less educated, among which immigrants' offspring are overrepresented in France (ALBA and HOLDAWAY, 2014). Although this institutional feature contributes to explain lower levels of job

security in France for immigrants' offspring, it does not explain the negative effect of having immigrants' parents on job security, all other things being equal.

Active labour market policies in France and the United States (LAYARD and NICKELL, 1999) may explain some differences on employment quality discrepancies. The use of active labour market policies may contribute to reduce employment quality's inequalities. The system in place to help workers returning to work tends to be more generous in France compared to the United States. Indeed, active labour market policies include training, assistance regarding job search and employment subsidies for the unemployed (LAYARD and NICKELL, 1999). These policies aim at increasing qualifications and at improving the functioning of the labour market (ERHEL, *et al.*, 2015), thus helping to lower inequalities in terms of employment quality between highly and low educated workers, who are numerous among immigrants' offspring in France. But the main challenge is to know how immigrants' offspring are concerned by these active labour market policies. Immigrant-specific active labour market policies, such as language training or introduction programmes, are relatively scarce in France, despite relatively high levels of expenditures for global active labour market policies. Therefore, and due to their lower knowledge of labour market functioning, one can assume that immigrants and their offspring benefit less from active labour market policies than natives.

As detailed in chapter 1, the lower knowledge of labour market functioning of immigrants' offspring is closely related to their network and their social capital. Because the social capital of immigrants' offspring seems to be lower (PORTES, 1995), information about labour market functioning or employment advice may be reduced. In a context of higher levels of active labour market expenditures in France compared to the United States (ERHEL, *et al.*, 2015), this lack of social capital may disadvantage immigrants' offspring in a bigger proportion in France, as it may create higher inequalities with natives. Indeed, if immigrants' offspring do not know well how to mobilize these resources, active labour market policies would primarily target natives. This lack of social capital partly stems from weaker networks, and notably from their parents' network. In addition, this negative network effect, in providing capital and information, also affects their education. Immigrants' offspring also tend to graduate with diplomas considered of lower quality (see Chapter 1), in terms of both network and skills.

The heterogeneity of diplomas has consequences on employability. Because immigrants' offspring tend to graduate with diplomas less valued on the labour market in France (BRINBAUM and GUÉGNARD, 2013), one can assume that it will create discrepancies in the access to employment with natives, as well as potentially in terms of job security. The educational segregation by the parents'

immigrant status seems less pronounced in the United States,<sup>84</sup> which would be in line with the non-significant effect found on job access and on job security.

In sum, French labour market institutions appear to sustain a better employment quality, meanwhile favouring employment quality inequalities (especially in terms of job security), by constraining job access. However, labour market institutions do not seem to explain all the differences among native-born (with immigrant or native-born parents). It is therefore necessary to look into other specific institutions.

#### 4.2. A LARGER INSTITUTIONAL PERSPECTIVE: IMMIGRATION AND INTEGRATION

The employment quality inequalities observed in the two countries among immigrants' offspring by their parents' country of birth advocate for a larger inclusion of institutions. In addition to labour market institutions, considering immigrants' offspring also involves examining immigration policies and integration measures (SWEETMAN and VAN OURS, 2015). Origin-based inequalities echo the discrepancies existing between France and the United States in terms of selectivity and of the subsequent composition of the immigration flows (WEIL, 2003; SWEETMAN and VAN OURS, 2015). Human capital levels of immigrants in the United States are historically higher compared to those in France, because of its greater selectivity of immigration based on human capital criteria (MAXWELL *et al.*, 2009; WEIL, 2003). This leads to a greater intergenerational transmission of capital (human, economic) for the selected population and a potential reduction of origin-based inequalities. As mentioned in the general introduction, in France, the selectivity of immigrants based on educational criteria does not apply, resulting in a lower educated population, which massively immigrated after World War II in order to work, and which transmits less human capital to their children. Because of intergenerational transmission, one can think that children of low educated immigrants will face more difficulties to reach high levels of education and good labour market outcomes.

In addition, BORJAS (1992) argues that the ethnic capital, defined as parental inputs and the quality of the ethnic environment in which a person grows up, plays a significant role on the skills and labour market outcomes of immigrants' offspring. These outcomes, consequently, depend on parental characteristics, among which social capital is also major. Parents' social network and the average skills of the parents' generation ethnic group contribute to the social capital of immigrants' offspring. In the United States, ethnic enclaves, i.e. "spatially clustered networks of business owned by members of the same minority" (PORTES, 1995) are strong, contrary to France. southern European immigrants' offspring in France tend to benefit from an ethnic enclave in construction, but one can safely assume that this remains weaker compared to the role of these communities in the US-American labour market.

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<sup>84</sup> This educational segregation is however important by race, disfavoring for instance African-Americans.

To counteract lower education and human capital levels of certain immigration movements, school may play a redistributive role and reduce origin-based inequalities. In France, free and mandatory school may allow for a more homogeneous access to instruction (but also to the French language) independently of social backgrounds; school might *in fine* allow immigrants' offspring to enlarge their educational orientation. On the contrary, in the United States, preschool is not free and higher education is more costly than in France (OCDE, 2014). One might then suppose larger inequalities in terms of job access and employment quality in the United States than in France. However, as explained before, some analyses point out the limited capacity of school to reduce inequalities based on transmitted human capital (ALBA and HOLDAWAY, 2014); the initial immigration selection seems to play a major role in inequalities between natives and descendants of immigrants. France has been pointed out as one of the countries in which inequalities at school are the highest, far ahead the United States (UNICEF, 2013; CNESCO, 2016). In fact, in addition to noticing inequalities in terms of levels of education, some educational inequalities seem to emerge in the type of diplomas and fields of study. Immigrants' offspring tend to be in less valued diplomas, which provide a less efficient network.

These difficulties to tackle intergenerational transmission of human capital may be related to another individual characteristic: the cultural and linguistic distance between the sending and the receiving country may influence the transferability of skills and the ability to acquire new ones (SWEETMAN and VAN OURS, 2015). The shares of immigrants' offspring in the population does not, alone, reflect the challenges faced by school in "addressing second language fluency, or labour market regulators in combating racial [and] ethnic discrimination" (SWEETMAN and VAN OURS, 2015, p.1150). The concept of linguistic distance has been quantified by CHISWICK and MILLER (2005, 2012). The fact that English is an international language eases the integration of children in the United States compared to France. Indeed, the language at school can be easier to learn, and immigrants and their offspring may be more motivated to learn a language that they will use in more countries and more often abroad (SWEETMAN and VAN OURS, 2015, p.1150).

This issue of language and culture is closely related to immigrant settlement services (SWEETMAN and VAN OURS, 2015). To facilitate immigrants' integration, destination countries may set up services of domestic language training and of job search assistance. These services help immigrants to integrate the destination country, improving their economic position and the one of their children. France depicts more integration services (notably through the various *contrats d'intégration* implemented since the mid-2000s) than the United States. Yet, these remain relatively new and will therefore mainly affect the immigrants' offspring. In the United States, less formal integration services exist. However, the role of the ethnic network is particularly significant and effective in the United States. For instance, in the case of Mexican immigrants' offspring, this network may explain the positive coefficient on job access (GARIP and ASAD, 2016). Besides, LEWIS (2011) highlights that the large

Hispanic community allows the existence of a Spanish-speaking labour market, which reduces the labour market's language barrier.

The United States have strong anti-discrimination laws and protections, which allow legal immigrants to benefit from employment and educational opportunities. The country has set up affirmative action policies since the 1970s to fight against existing discrimination (MAGUAIN, 2006). Several measures at school (quotas by origin in universities for example) or on the labour market have contributed to attain lower inequalities between natives and immigrants' offspring (HOLZER and NEUMARK, 2006). This type of measures might contribute to explain our results, specifically those related to wages, in the United States. In France, the republican approach to citizenship and equality makes this kind of measures hard to implement. Yet, some studies argue for the existence of discrimination in the job access (SILBERMAN *et al.*, 2007; BERSON, 2013). Some recent measures, based on socioeconomic criteria, have been implemented but remain at the experimental level (as the anonymous curriculum for instance, which has been abandoned after a few years (BEHAGHEL *et al.*, 2011)). They show that, in France, descendants of immigrants face more difficulties than natives persons to get secure jobs or choose working time. Thus, it seems that immigrants' offspring are not only facing barriers in hiring but also on the quality of their jobs, as assessed by our results. Estimations show that these barriers seem to be compensated, at least partly, by higher wages.

In sum, the French combination of dual labour market institutions and low effective integration policies suggest a higher employment quality level on average (GALLIE, 2007), and, at the same time, higher inequalities based on individual characteristics. On the contrary, the US-American liberal labour market institutions seem to lead to lower employment quality levels but without favouring inequalities as much as France. Moreover, despite the lack of comprehensive integration policy, the strong role of network, language channels and efficient anti-discrimination laws and protections for immigrants and their offspring in the United States contribute to favour their integration on the labour market and to reduce inequalities related to their parents' country of birth.

## CONCLUSION

This chapter aims at comparing employment quality across native-born people in France and in the United States by their parents' country of birth. Besides developing a method to compare these two institutionally different countries, the main contribution of this chapter is to consider differences between groups of individuals in terms of employment quality as a combination of three dimensions: wage, job security and working time. Hence, this chapter provides new empirical evidence on the labour market integration of immigrants' offspring.

The chapter points out existing gaps in terms of employment quality between natives and descendants of immigrants in the two countries. In all three dimensions, descriptive statistics show that, in both countries, the employment quality of immigrants' offspring is lower than that of natives. However, the econometric results show that some of these gaps result from compositional effects, in terms of the level of education, for instance. The econometric analysis confirmed as well the main hypothesis that, notably due to distinct institutional frameworks, the potential negative effects of having immigrant parents do not influence the same employment quality dimensions in both countries. First, inequalities on the access to jobs are only significantly stronger for immigrants' offspring in France. Second, in both countries, having immigrant parents is positively related to wages. Third, having immigrant parents is negatively correlated with job security in France, whereas in the United States, the negative effect is on working time. In sum, it seems that immigrants' offspring face stronger barriers to be employed and to have secure jobs in France, but only on their working time in the United States.

This chapter finally points out that origin-based inequalities in the two countries recall specificities of various immigration waves, regarding language or network for instance. In other words, immigrants' offspring, whose parents come from low-educated immigration waves are less likely to have a job, and *a fortiori* a good one. In addition, taking race into account in the United States removes the negative effects primarily observed on working time. Hence, once race is controlled for, having immigrant parents is not associated either with a lower employment quality, or with more difficulties in the job access.

Overall, our empirical analysis confirms that the inequalities in terms of employment quality are not the same in France and in the United States. The discussion questions the role that labour market institutions play to explain these results. Indeed, the dual French labour market institutions appear to foster inequalities between native-born, with native-born or immigrant parents, while guarantying global higher employment quality levels compared to the United States. Integration-related institutions seem to play in the same direction. The stronger selection to immigrate to the United States and anti-discrimination measures lead to better results on the labour market for those whose parents are well instructed. In that sense, our work goes well in line with the literature, and shows the strong heterogeneity of employment quality among origins.

## CHAPTER 3: THE DECOMPOSITION AND DISTRIBUTION OF WAGE INEQUALITIES: A NON-PARAMETRIC METHODOLOGY

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### INTRODUCTION

As discussed in the previous chapters of this dissertation, immigrants' offspring face difficulties to integrate into the labour market and the barriers to enter a job are higher in France than in the United States. Moreover, in both countries, and only recently in the United States, the average wage of immigrants' offspring is lower than the one of natives. A part of this wage gap<sup>85</sup> seems to be explained by individual characteristics as well as employment characteristics. In addition, more important wage differences have also been documented among native-born people with immigrant parents according to their parents' region of birth. *In fine*, these aggregated wage gaps may hide higher spreads, when decomposing them for different levels of wages.

Several questions arise: is the wage gap constant across countries? In what part of the distribution are these gaps higher? To what extent can those gaps be explained by observable characteristics and how much is left unexplained? This chapter exploits data from France and the United States to investigate these three questions.

Wage differences have become an area of concern for theoretical and empirical research first in the United States, and more recently in France and other countries. Decomposition methods help determine whether wage differences are due to workforce's composition and individual characteristics, or to different compensation of similar individual (observed) characteristics. In this context, it is

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<sup>85</sup> In this chapter, just as in the whole thesis, the wage gap is considered positive when natives earn more than immigrants' offspring and negative when immigrants' offspring earn more than natives.

particularly interesting to decompose wage gaps along the wage distribution and to compare them between countries. This chapter offers a comparison of wage decomposition between France and the United States. Several recent papers have investigated the issue of wage inequalities concerning native-born people with immigrant parents in some European countries (ALGAN, *et al.*, 2010) or in North American countries (AYDEMIR and SWEETMAN, 2007). However, they scarcely focus on the distributional composition of these gaps, despite the overrepresentation of immigrants' offspring in certain parts of the wage distribution. The present chapter aims at filling this literature gap; it is the first work to explore the distribution of wage gap between descendants of immigrants and natives.

To deal with these issues, the national labour force surveys are used. The empirical strategy is based on Ñopo's decomposition methodology of wage differences. Ñopo used a non-parametric approach to decompose gender-based inequalities in Peru between 1986 and 1999 (ÑOPO, 2008). The methodology is adapted here to wage differences by parents' immigrant status. The main contribution of this analysis is to decompose the wage gaps into explained and unexplained components that vary alongside the wage distribution. Ultimately, the logic driving our analysis is in line with the famous Oaxaca-Blinder decomposition. The wage gap decomposition developed by OAXACA and BLINDER in 1973 has been a key tool in explaining the wage gap and the role played by observable individual characteristics. However, the Oaxaca-Blinder decomposition presents some misspecification problems and limits, for instance, regarding the distribution of unexplained differences. The strength of Ñopo's decomposition methodology is that it allows one to overcome these important limitations.

From a public policy perspective, decomposing the wage gap and knowing the magnitude of unexplained differences is essential. Filling the explained part of the gap can provide easily measurable policy objectives (in terms of education or spatial development for instance). The unexplained part, although it may signal major issues, is more subject to interpretative debates.

This chapter is organized as follows. Section 1 presents quantitative facts about wage inequalities between the descendants of immigrants and natives both in France and in the United States. In Section 2, the analytical framework is detailed and the dataset and empirical model are described. Section 3 provides the econometric results. Finally, Section 4 presents a discussion of the results in light of some specific institutional features.

## SECTION 1. THE WAGE GAP IN THE LITERATURE: THE MEASUREMENT ISSUE

### 1.1. WAGE INEQUALITIES BETWEEN NATIVES AND IMMIGRANTS' OFFSPRING IN THE LITERATURE

The literature and Chapter 2 outlines major differences regarding wage gap between descendants of immigrants and natives in France and in the United States. Wage gaps between native-born persons according to their parents' immigrant status are observed in France – with magnitude variations depending on data or sample – whereas no significant wage gap is noticeable in the United States. Some US-American studies even suggest higher wages for native-born people with immigrant parents. Looking at what happens in the different parts of the wage distribution is important to understand where these aggregated results come from.

Only a few empirical studies have been devoted to the distributional heterogeneity of wage inequalities between native-born people according to their parents' immigrant status in France; the same is true in the United States, but to a lesser extent -and no study compares France and the United States. Overall, analyses focus on average wage inequalities.

In France, the literature shows that the migration status of parents induces a raw wage gap of more than 10%. AEBERHARDT, *et al.* (2010a) use the two-step Heckman methodology to measure the wage gap while taking into account selection bias. They find an existing wage gap of about 13% between native-born persons with North African immigrant parents and natives (with Labour Force Survey data, pooled for 2005 to 2008). Moreover, RATHELOT (2010) finds a wage gap of 12.6% for native-born with African immigrant parents and of 5.2% for those with southern European immigrant parents. He uses OLS in panel, with the French Labour Force Survey data that is also used in this chapter, pooled for 2005 to 2008, with an emphasis put on the residence location. MULLER and RATHELOT (2010) analyse this gap with an innovative combination of two surveys, the professional survey *Enquête sur l'activité professionnelle* and the *Ecmoss* survey (*Enquête sur le coût de la main d'œuvre et la structure des salaires*). In line with the previous results, they first stress that, comparing to native-born wage-earners with native-born parents, those with African immigrant parents have a monthly gross wage lower of 14%. Those with Spanish, Italian or Portuguese immigrant parents have lower monthly gross wages of 7%. Second, they show that these differences are lower when considering hourly gross wages, respectively of 9% and 4% for wage-earners whose working time is counted in hours.

To calculate this wage gap, ALGAN *et al.* (2010) use linear earnings equations on the log net hourly wage, with the 2005 to 2007 French Labour Force Surveys, and focus only on immigrants' offspring with two immigrant parents (hence excluding those with one native-born parent). They highlight that native-born males with North African immigrant parents earn 6.2% less than natives with similar educational attainment; native-born with sub-Saharan immigrant parents earn 21.5% less; and native-born with Turkish immigrant parents earn 23.8% less. For women, those with Asian immigrant parents perform very well, earning 41.2% more than their native counterparts. But the authors emphasize that the sample of Asian women is small, so conclusions from this should be made carefully. On the contrary, three groups of female immigrants' offspring perform worse than their native counterparts: those with North African immigrant parents earn 6.9% less than native women; those with sub-Saharan African immigrant parents 22% less; and those with southern European immigrant parents earn 8.9% less than native women.

MEURS, LHOMMEAU and OKBA (2012), with *Trajectoires et Origines* data, also support the claim that there is a relatively low wage gap between natives and children of immigrants. They also confirm that hourly earnings are lower for children of non-European (here from Africa or Turkey) immigrants. The wage gap between male natives and male descendants of North African, sub-Saharan African, or Turkish immigrants are respectively of 10.9%, 10.6% and 10.6%.

These wage gaps seem to be low due to the strong selection at job entry level, which is especially pronounced in France. In other words, children of immigrants tend to face deeper difficulties finding a job, compared to natives with the same observed characteristics. In France, SILBERMAN and FOURNIER (2006) were the first to statistically point out the ethnic penalty that immigrants' offspring face to access employment. In France, barriers that descendants of immigrants have to overcome are more related to access employment rather than to employment characteristics (MEURS *et al.*, 2006; CÉDIEY and FORONI, 2005). BOUMADI and GIRET (2005) argue that a young cohort of immigrants' offspring, studied three years after the end of their education, demonstrate lower integration in terms of employment but are slightly better paid than natives, at about 5%.

In comparison, in the United States, the migration status of parents induces a raw wage gap which is positive or negative depending on data. PICOT and HOU (2011) argue that immigrants' offspring used to have a relative wage advantage over natives. They argue that this advantage is decreasing over time "from 18% in 1940, 15% in 1970, to just 6% in 2000" (PICOT and HOU, 2011, p.26). They claim that the shift in composition in terms of parents' country of origin explains this evolution. Indeed, BORJAS (2006) shows that Mexican, Nicaraguan, Haitian, Salvadorian, and Dominican immigrants' offspring had lower wages, between 4% to 19%, than natives (age-adjusted) whereas Canadian, German, Greek, Indian, Polish and British immigrants' offspring earn 17% to 27% more than natives. He argues that the rapid increase of Mexican and other South American immigrants (and consequently of their

offspring among the population of immigrants' offspring) in the United States can explain why the former wage gap in favour of descendants of immigrants compared to natives is decreasing, if not reversing on average. In Chapter 2, a raw negative wage gap of 5.9% on average compared to natives is also found.

Using Current Population Survey data from 1998 to 2004, AYDEMIR and SWEETMAN (2006) find no significant wage differences between natives and of immigrants. On the contrary, back in the 1970s, CHISWICK (1977) points out a 5% earnings advantage for immigrants' offspring. At that time, however, Hispanic native-born people with immigrant parents already earned less. In the 2000s, CARD (2005) finds no negative gap in schooling attainment and wages between immigrants' offspring and natives. He shows that, among men, when education is not controlled for, immigrants' offspring have 4 to 8% higher wages. The wage gap for native-born women with immigrant parents is about the same as for native-born men with immigrant parents. When controlling for education, the wage gap in favour of men and women with immigrant parents falls, to under 2% in each case. Therefore, CARD argues that the higher wages of immigrants' offspring are partly explained by their higher education and their geographic location. The introduction of two additional controls for "Black" race and Hispanic ethnicity<sup>86</sup> slightly increases the wage advantage of immigrants' offspring. Overall, results suggest that immigrants' offspring in the United States perform relatively well, on average. As already mentioned earlier, most of their wage advantage relative to natives seems attributable to higher education. Despite the lower education of their parents, individuals born to immigrant parents seem to catch up and even surpass the education levels of natives.

On average, France demonstrates a significant wage gap between descendants of immigrants and natives. By contrast, no wage gap is noticeable in the United States, and immigrants' offspring may even earn more than natives. However, in terms of methodologies, in both countries, analyses focus on average wage gap instead of on their distribution. A distributional approach might show even higher levels of inequalities across the distribution. This work is the first to shed light on this distributional issue and to compare France and the United States. Moreover, the wage gap found may be completely explained by differences in terms of individual characteristics other than the migration background and would consequently illustrate no inequality. The two following subsections address those issues by exploring the results of the related literature.

## 1.2. THE DECOMPOSITION OF WAGE INEQUALITIES: WHAT DO PARAMETRIC METHODS SAY?

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<sup>86</sup> I use the terminology adopted by the authors.

The interest in wage inequalities shifted a few decades ago to the decomposition of these gaps, with the seminal work of OAXACA (1973) and BLINDER (1973), who studied gender wage differences. Their method aims at decomposing differences in mean wages across two groups (in their case, men and women) (FORTIN *et al.*, 2011). They tackle the issue of distinguishing the role of individual observed characteristics and of unobservable ones, that is, respectively, the role of characteristics and the coefficient effect.

The method consists in estimating separately earnings equation for both groups – namely immigrants’ offspring and natives in this dissertation. Then, the method attributes immigrants’ offspring their observable characteristics’ distribution, but with the group of reference’s returns – namely here the natives. This second step can be interpreted as the counterfactual situation “What would a child of immigrant earn if the compensation scheme for his/her individual characteristics was aligned with that of a child of native-born person?” (ÑOPO, 2008). The observed wage difference – based on that counterfactual – is then decomposed into two additive components: one explained by differences in individual observed characteristics (*i.e.* the gap between the average wage of natives and the average wage estimated for the children of immigrants) and one unexplained, resulting from differences in the compensation for these individual characteristics. This latter element is generally and improperly interpreted as the single result of discrimination. In fact, this interpretation is subject to a debate since this share also encompasses the wage differences due to omitted or unobserved characteristics that may be important.

In France, AEBERHARDT, *et al.* (2010a) use this methodology and control, in addition, for the selection bias. This way, they provide a decomposition not only for the employed individuals but also for those potentially discriminated against at the job market entry. They argue that differences in individual characteristics totally explain wage differences between natives and children of either North African or southern European immigrants. On the contrary, it is not the case for employment rate differences between both groups. For this output, individual characteristics only explain 4 out of 18 percentage points of the gap with children of North African immigrants. In line with their findings, RATHELOT (2010), using a decomposition method *à la* Oaxaca–Blinder, highlights that the contribution of neighbourhoods’ quality on wage differences between natives and children of North African or southern European immigrants is 25%. The rest of the wage differences are totally explained by other observable characteristics, leaving the unexplained part null. Similarly, MULLER and RATHELOT (2010) argue that wage differences can be mainly explained by individual characteristics. Once socioprofessional characteristics are taken into account, wage gap between groups are not significant anymore. They previously insist on the similar distribution of observable characteristics between natives and those with southern European immigrant parents, which is not the case for those with African immigrant parents.

In another article, AEBERHARDT, *et al.* (2010b) use a new method, applied with the FQP survey (*Formation Qualification Professionnelle*). They more precisely take into account the selection bias in two manners: either with the Heckman two-step model or with the maximum likelihood estimator (MLE). Both procedures raise similar results. They show that about one quarter of the wage gap is unexplained. In another attempt to estimate the contributions in the wage gap, they introduce a new method, which addresses some methodological issues<sup>87</sup> and yields more precise estimates – though it does not allow for the usual decompositions (AEBERHARDT, *et al.*, 2010b). Using this methodology, they show that only 5% of the wage gap remains unexplained. Yet, they suggest, in line with other audit studies on the hiring process (see for instance BERSON, 2013), that the French labour market is characterized by a significant discrimination against children of African immigrants who apply for jobs. They show that a higher share of this employment gap is unexplained (half of it) compared to the unexplained share of the wage gap.

MEURS, LHOMMEAU and OKBA (2012) adopt the Oaxaca-Blinder decomposition with *Trajectoires et Origines* data. The richness of the database makes it possible to go further in the analysis of wage inequalities between both groups (travel time between home and work allows for instance to better capture the effects of territorial segregation to places of employment, subjective and self-declared measure of “discrimination”, etc.). They suggest that an important part of wage differences could be explained by job-related characteristics. The unexplained part sharply diminishes - almost halved - when they include those employment characteristics in the model.

In the United States, to my knowledge, only few empirical analyses explore the decomposition of wage gap between natives and of immigrants. For example, TREJO (1998) uses Current Population Survey data from November 1979 and 1989, and finds that children of Mexican immigrants “earn low wages primarily because they possess less human capital than other workers, not because they receive smaller labor market rewards for their skills” (TREJO, 1998, p. 1264). Compared to the French decompositions, this study takes into account their potential English language deficiency.

The literature on the wage gap decomposition in the United States has mainly focused on gaps due to migration or gender; to our knowledge, these works on decomposition have never addressed the wage gap between natives and descendants of immigrants. For instance, RIVERA-BATIZ (1999) compares the wage of legal and illegal immigrants. Using the Oaxaca-Blinder decomposition on the Legalized Population Survey for illegal immigrants and the Current Population Survey for legal immigrants, he decomposes the wage gap for men and women separately. He shows that, “for males, 51.3% of the wage premium received by legal immigrants over illegals cannot be explained by differences in

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<sup>87</sup> As they state, they “treat the following two problems simultaneously: 1. First, the error terms of our two equations (employment and wages) could be correlated, which means that the wage equation could be affected by a selectivity bias. 2. Second, we would like to run the estimation on group A only, as group B is too small to provide precise estimates.” AEBERHARDT, *et al.* (2010b), p. 887.

measured characteristics” (RIVERA-BATIZ, 1999, p.106), and this corresponding part is 57% for women. This share appears extremely large. Yet, it takes into account the basic sociodemographic characteristics such as education level, but also some less common as English proficiency or the period of residence in the United States. Altogether, those characteristics explain less than half of the wage gap, whether for men or women.

Decomposition methodologies have been extensively used to explore the wage gap. The development of the Oaxaca-Blinder decomposition allows new investigations on this issue. They remain however relatively scarce on origin-based wage inequalities, especially in the United States. In France, the results of these decompositions vary depending on methods, samples and databases. Yet, there is a consensus around a small unexplained part of the wage gap. It seems that in both countries, most of the potential wage gap is explained by individual and job-related characteristics.

These decompositions tend to address the average wage gap, with no consideration to the distribution of the gap. The next section focuses on the limits of decomposition *à la* Oaxaca-Blinder, including the distributional issue.

### 1.3. THE DRAWBACKS OF PARAMETRIC ESTIMATIONS AND THE DISTRIBUTION OF WAGE DIFFERENCES

#### *1.3.1. SOME METHODOLOGICAL LIMITS*

Several problems are associated with the Oaxaca-Blinder approach of wage inequalities (ÑÓPO, 2008; L’HORTY and MEURS, 2016). Two main methodological limits can be disentangled.

First of all, misspecification can occur with the issue of the “empty category”. In our situation, some cases may exist (for specific individual characteristics) for which no immigrants’ offspring is similar to natives. This makes it impossible to compute an immigrants’ offspring’s average wage if they were compensated as much as natives. The parametric Oaxaca-Blinder decomposition does not identify these differences in the support of the individual characteristics’ empirical distributions for the two groups (the common support deals with individuals with comparable combinations of characteristics; by contrast, individuals out-of-the common support depict incomparable combinations of characteristics). It estimates earning equations for all working immigrants’ offspring and natives, without restricting the comparison to the individuals with comparable characteristics. This limit on differences in the supports has been recognized in several empirical papers. In BARSKY, *et al.* (2002) or BLACK, *et al.* (2004) for instance, the comparative analysis is restricted to the common support of

individual characteristics. By not considering this limit, ÑOPO (2008) states that the Oaxaca-Blinder decomposition is implicitly based on an “out-of-support assumption”. The author pleads for linear estimators of the earning equations that would also be “valid out of the supports of individual characteristics for which they were estimated” (ÑOPO, 2008, p.290). He argues that this hypothesis tends to overestimate the component of the gap attributable to unobservable characteristics (ÑOPO, 2008).

To clarify further, let's take the example of gender. It can be difficult to find women with low level of education, married, with a high number of children and who are relatively young, at the top of the wage distribution. It is conversely a lot easier to find men in this situation. With such combinations of characteristics, one cannot compare wages across genders. This comparability issue is even more pronounced when job characteristics are considered to explain the wage gap. In our case, immigrants' offspring might concentrate in certain occupations and natives in others, as it has been showed in the two previous chapters. Young native-born males with immigrant parents in France, living in the countryside and working in agriculture might be less likely to exist than the same individual would be, without immigrant parents.

The second limit of parametric decomposition methods is that they require estimating beforehand wage by parents' origin, to which a linear form is imposed (ÑOPO, 2008). Yet, many interactions between the determinants of the level of wage cannot be considered when estimating linear wage equations. Therefore, overlooking theoretical relationships between different determinants of wages is likely to lead to biased assessment of returns for these variables, and of their relative importance in explaining the wage gap between the two groups.

Finally - and it is not, strictly speaking, an inherent limit of the methodology - one must be careful with the interpretation of the “unexplained” component. This component corresponds to the part of the wage gap attributable to differences in the compensation of observable characteristics. These differences can result for instance from wage discrimination, but also from unobserved characteristics' differences between immigrants' offspring and natives, and from measurement errors that may affect the observed variables. Conversely, among the observed variables, considered in the “explained” part of the wage difference, some may result from discriminatory behaviours.

### *1.3.2. THE DISTRIBUTIONAL APPROACH*

DOLTON and MAKEPEACE (1987) and MUNROE (1988) shed light on another limit of the original Oaxaca-Blinder method. The wage gap decomposition only informs the average unexplained wage differences but not on its distribution. However, the growing literature on wage differences, especially on gender, has pointed out the unevenness of the distribution of the wage gap. MEURS and PONTIEUX

(2000) have for instance highlighted that, in France, the gender gap is more pronounced at the top of the distribution among full-time workers, suggesting that the minimum wage may act as a floor effect. Yet, this gap is more pronounced at the bottom of the distribution among all workers (including part-time workers), illustrating the higher concentration of women among the part-time work. ALTONJI and BLANK (1999) mentioned that group differences in preferences and skills can lead, in a competitive labour market, to wage differences.

Due to the observed job segregation in France, where immigrants' offspring are concentrated in relatively low-paid occupations (AEBERHARDT and POUGET, 2007), looking at the distribution of wage differences appears important.

One approach for overcoming that distribution limit, proposed by BUCHINSKY (1994), has been to estimate quintile earnings equations. Alternatively, JENKINS (1994) and HANSEN and WAHLBERG (1999) propose to use Generalized Lorenz Curves (GLC) for both observed wages and predicted counterfactual wages. Nevertheless, these strategies are not designed to deal with the problem of origin-based differences in the supports.

Developing new decomposition methods for distributional statistics other than the mean has been an active research area over the last 20 years (FORTIN *et al.*, 2011). However, the summary measures of dispersion (such as the variance) provide little information regarding what happens at different moments of the distribution. In the literature on variations in wage inequality, where many significant explanations of observed changes have specific implications for specific points of the distribution, this turns out to be a central shortcoming. Going beyond summary measures is also important in the case of the quest for sources of origin-based wage gap. The most common method is to make a decomposition by quantiles (or differences between quantiles, e.g. 90-10 gap) of the distribution.

The decomposition method proposed by ÑOPO (2008) fits into this line of research. Compared to other methodologies, this one is particularly interesting because it overcomes two of the main methodological problems associated with parametric decomposition methods such as Oaxaca-Blinder. It is based on an exact matching principle between groups and therefore, it does not require estimating any beforehand wage equation by parents' immigrant status. Therefore, this method takes into account the issue of "common support" by distinguishing descendants of immigrants and natives who do not belong to the common support. Sticking to the general definition of the explained part of the wage gap by parents' immigrant status, the explained part in Ñopo's decomposition includes wage differences between individuals on and out of the common support in terms of observable characteristics. Besides, Ñopo's decomposition, thanks to the matching methodology, addresses the distribution of wage gap. As these two issues appear to affect the quantification and analysis of the wage gap among native-born

by parents' immigrant status, Ñopo's decomposition seems the most fitted. The method is presented in more details in the following section, as well as the overall framework of the empirical analysis.

## SECTION 2. THE FRAMEWORK OF THE EMPIRICAL ANALYSIS

This section aims first at providing details on the database and the scope of the study, then on salient descriptive characteristics of the two samples. Finally, this section describes Ñopo's decomposition method, which has been briefly introduced in the first section.

### 2.1. THE DATABASE AND THE SCOPE OF THE STUDY

The empirical work of this study relies on the use of two databases. The French Labour Force Survey *Enquête Emploi en Continu* (EEC) is used for two years, 2009 and 2012. It provides a large representative sample, adapted to origin-based comparisons (see Chapter 2 for more details). Working on 2009 and 2012 allows us to enlarge the sample, without having the same individuals twice (following the two national surveys' sampling methodologies). On the other hand, in the United States, the *Annual Social and Economic* (ASEC) March monthly supplement from the *Current Population Survey* (CPS) is used for the two same years, 2009 and 2012. The CPS survey is conducted monthly by the *Census Bureau* and provides, in the ASEC supplement, detailed information on household labour market characteristics. These two databases also make it possible to precisely identify immigrants' offspring (details on the variables for parents' immigrant status and their country of birth are detailed in the previous chapters).

The sample contains individuals born in the countries considered, which means descendants of immigrants and natives and excludes immigrants.<sup>88</sup> Individuals from 20 to 60 years old are considered. Those age limits are more suited for matching. Indeed, fewer individuals are employed from 15 to 20 or from 60 to 65. Those limits also make it possible to preserve a relatively high probability to find similar individuals in the two groups. Besides, this sample only includes the employed population and more precisely, only individuals who earn a salary.

The main variable of the model developed in this chapter is monthly net wage. Decomposing the monthly wage gap rather than the hourly one can take into account the weight of the labour supply. The labour supply chosen by individuals is an example of inequalities' drivers. As seen in the previous

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<sup>88</sup> The exclusion of immigrants is based on the perspective adopted in this dissertation: the consideration of an integration path suggests that immigrants' offspring have no apparent reason not to be equally integrated on the labour market as natives do (see the General Introduction of the dissertation).

chapter, hours worked can result from a choice or not. A sensitivity test in section 3 however addresses the issue, by only considering individuals working full-time. This chapter does not deal with hourly wage, also because, as demonstrated in Chapter 2, hourly wage is not reliable in the French Labour Force Survey.

In both countries, workers declaring zero as a wage are removed out of the sample. Similarly, workers in the highest wage percentile are dropped. In France, it corresponds to those who earn more than €6000 per month. The corresponding wage in the United States is \$20,417. In France, outliers remain at the beginning of the wage distribution. For this reason, workers who declare less than \$67 per month are also removed.

The sample consequently covers 25,173 individuals in France, of which 12.3% are immigrants' offspring and 120,810 individuals in the United States, of which 9.5% are immigrants' offspring.

## 2.2. DESCRIPTIVE STATISTICS

Table 3.A.1 in the appendix depicts the descriptive statistics of the French sample. The composition of the population of immigrants' offspring slightly differs from the composition observed in the two previous chapters. The main reason is that the individuals considered in this chapter are wage-earners, leaving out the inactive and unemployed population, among which immigrants' offspring are more represented. The French sample of this study includes 12.3% of immigrants' offspring. Immigrants' offspring are younger than natives in this sample, the latter are for instance more likely to be under 25. Age is an important determinant of wages: the younger tend to earn lower wages. The sample depicts differences in terms of gender between the two groups: immigrants' offspring are for instance slightly more often men than natives. The diploma distribution also differs. Immigrants' offspring are overall less educated than natives. Immigrants' offspring are for instance 2.4 percentage points more likely to be without a diploma (except the *Brevet des Collèges*) than natives, although they remain more likely to graduate with bachelor's degree too (of 0.8 percentage points). Next, immigrants' offspring are more likely to live in the Paris region than natives (14.9% versus 26.3%). Immigrants' offspring are more likely to work part-time and notably to work less than 30 hours per week (25.9% compared to 22.6% for natives). Moreover, they are less likely than natives to work in agriculture and more likely to work in services.

Table 3.A.2 in the appendix shows the same descriptive statistics for the US-American sample. The population of immigrants' offspring represents 9.5% of the total US-American sample. Just like in France, immigrants' offspring are also younger: 16.4% of them are under 25 whereas 8.8% of natives are. Just like in the French sample, immigrants' offspring tend to be more often men than natives, around 0.8 percentage point more. The specificities of the diploma distribution are however slightly

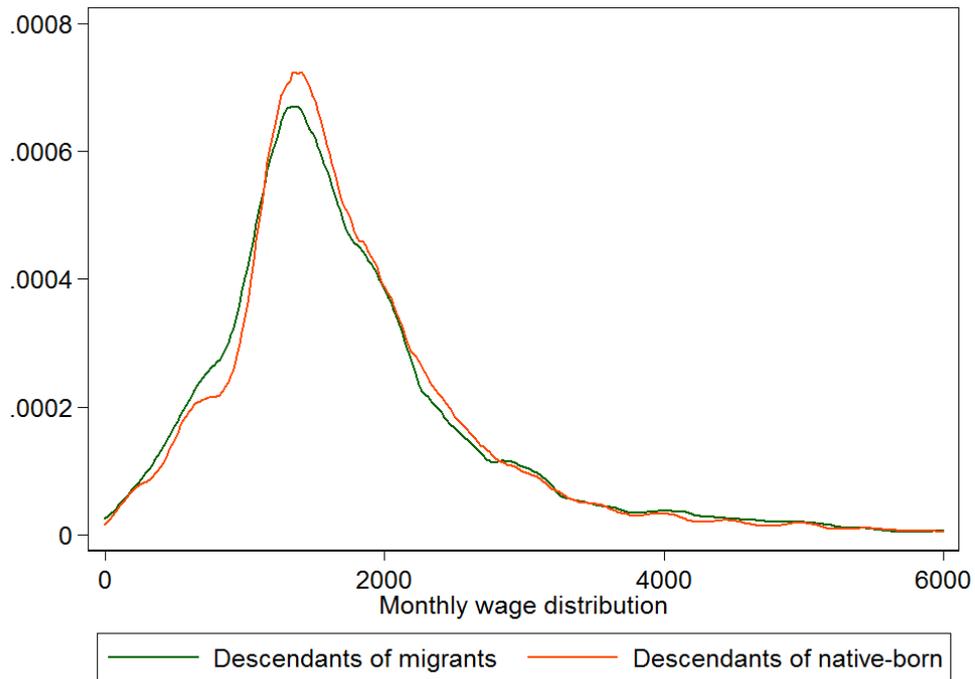
different from the ones of the French sample: immigrants' offspring are more represented than natives at both ends of the diploma distribution (this is not the case for the *Grande Ecole* category in France). In other words, they are more likely to leave high school with no degree (5.9% versus 4.1% for natives) and more likely to graduate with a master's degree or professional degree (11.3% versus 10.2%). Just as in France, immigrants' offspring are significantly more represented in metropolitan areas (12 percentage points). Immigrants' offspring are more likely to work part-time and less than 30 hours per week (16.7% compared to 15.8% for natives), but the difference remains lower than in France. Moreover, they are less likely than natives to work in agriculture or in industry and more likely to work in services or wholesale and retail trade.

The wage gaps are relatively small compared to the ones observed in Chapter 2 and lower in France than in the United States. In France, the average monthly wage of immigrants' offspring is almost as high as the one of natives: the difference remains very small, around €10 per month and is not significant. Compared to Chapter 2, the wage gap is smaller and becomes non-significant in this chapter.<sup>89</sup> In the United States, table 3.A.2 highlights a corresponding wage gap of \$75, which is significant, just as in Chapter 2. The wage gap in this chapter is smaller than in Chapter 2, partly due to the restricted sample. Figures 3.1 and 3.2 illustrate the wage distribution, respectively in France and in the United States. Both figures show the higher proportion of immigrants' offspring in the left part of the figure and their relatively lower proportion in the right part. In other words, immigrants' offspring tend to be more represented in lower wages in both countries, even in France, where the difference is not significant.

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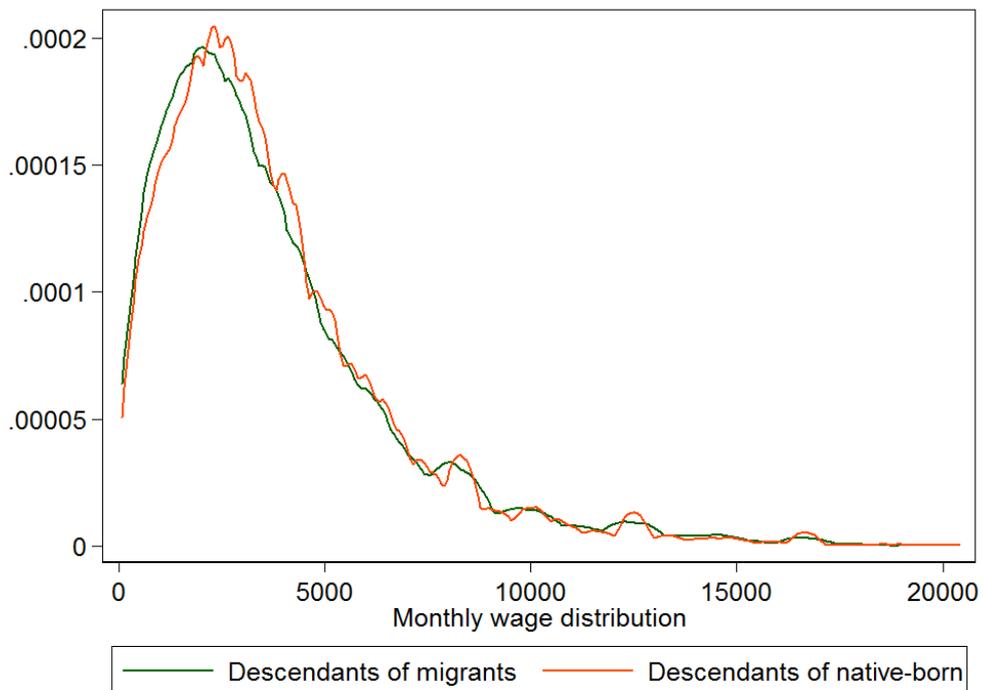
<sup>89</sup> This is mostly due to the fact that the sample in this chapter excludes individuals aged 15 to 20, and that it is among young that the wage gaps are higher.

**Figure 3.1. Wage distribution (kernel density estimation) in France, by parents' immigrant status**



Source: *Enquête Emploi en Continu*, 2009 and 2012, Insee.

**Figure 3.2. Wage distribution (kernel density estimation) in the United States, by parents' immigrant status**



Source: Current Population Survey, 2009 and 2012, BLS.

### 2.3. ÑOPO'S DECOMPOSITION METHOD

The nonparametric decomposition method proposed by ÑOPO (2008) is viewed as an “exact matching method”. It overcomes the restrictive hypotheses imposed by estimations of wage equations and common support, which the 1973 Oaxaca-Blinder parametric decomposition method relies on. His work concerns the wage gap between males and females, while this chapter deals with the wage gap between descendants of immigrants and natives. The methodology is detailed for the latter case. In brief, Ñopo's technique uses matching comparisons to explain origin-based wage differences, which allows to emphasize differences in the supports of observable characteristics' distributions, and to provide insights into the distribution of unexplained origin-based pay differences.

#### *2.3.1. THE DETERMINATION OF DESCENDANTS OF IMMIGRANTS OR OF NATIVES BELONGING TO THE COMMON SUPPORT*

To determine descendants of immigrants and natives who belong to the common support and those out of the support, Ñopo's method matches individuals depending on their parents' immigrant status using the following procedure (ÑOPO, 2008):

Step 1: Selection without replacement of one immigrants' offspring from the sample.

Step 2: Selection of all natives having the same vector of characteristics than the immigrants' offspring selected in the first step. The vector of individual characteristics in the models developed in this chapter includes age, gender, education level, place of residence, number of children, marital situation, sector of activity, hours worked and the type of contract (part-time or full-time).<sup>90</sup>

Step 3: With all the natives selected in step 2, construction of a “synthetic” natives having the same average characteristics than the set of these natives. This “synthetic” natives is then matched with his/her “twin” immigrants' offspring selected in step 1.

Step 4: This “synthetic” natives and his/her immigrants' offspring “twin” are placed in their respective sample of matched individuals.

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<sup>90</sup> The justification for the choice to consider these variables can be found in the previous chapter (it is extensively discussed in the literature review). The choice to consider in the model (Ñopo's methodology) the variables that have been used as exclusion variables (marital situation and number of children) in the two other chapters addresses the potentially different role of these variables over the wage distribution. One might think that, despite playing a non-significant role on wage in chapter 2, one might expect that these two variables can play a significant role at the beginning of the wage distribution, as individuals, and most probably women, with several children might think differently of their career than individuals earning more. They may more specifically have interrupted their work or worked part-time in the past, consequently leading to potentially lower wage increases. The distributional approach therefore supports the inclusion of these two variables in the model.

Step 5: Steps 1 to 4 are repeated for each immigrants' offspring of the sample. If, in step 2, no "twin" has been found, the procedure stops and the immigrants' offspring concerned is placed in the sub-sample of out-of-the-support immigrants' offspring.<sup>91</sup>

Following this procedure, four different sub-samples of natives and immigrants' offspring are disentangled:

- 1) Immigrants' offspring for whom at least one "twin" natives exists. In other words, it means that for each of these immigrants' offspring, it is possible to find a similar natives, given the variables used to match individuals. These immigrants' offspring belong to the common support.
- 2) Natives for whom at least one "twin" immigrants' offspring exists. In other words, it means that for each of these natives, it is possible to find an exactly similar immigrants' offspring, given the variables used to match individuals. These natives belong to the common support.
- 3) Immigrants' offspring for whom no "twin" natives can be found. They are consequently out of the common support.
- 4) Natives for whom no "twin" immigrants' offspring can be found. They are consequently out of the common support.

### *2.3.2. THE REPARTITION OF INDIVIDUALS ON AND OUT OF THE COMMON SUPPORT*

The repartition and the results depend on the structural factors selected. The more variables one includes, the better one can explain the differences and identify the reasons for these differences.

To better understand the underlying mechanisms of wage gap between natives and those of immigrants, two models are estimated successively. In the first one, only individual characteristics are considered: age, gender, education level, place of residence, number of children and marital situation.<sup>92</sup> In the second model, these individual characteristics are supplemented by variables characterizing the employment: sector of activity, hours worked, firm's size and the type of contract (whether part-time or full-time). If the unexplained gap then narrows, it means that persons with the same observed individual characteristics do not work in the same jobs. In other words, part of the wage gap observed is employment segregation. A third model is also run for each country with additional country-specific variables that can influence wage gap. They differ from one country to another, as cultural and institutional backgrounds vary.

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<sup>91</sup> One could equally perform the same kind of procedure with the sample of natives to determine the "twin" immigrants' offspring. The results would nevertheless be perfectly identical.

<sup>92</sup> The results of this model are not presented in this chapter. Only the repartition of individuals in each of the four groups (matched or not matched by parents' immigrant status) is in appendix, in Table 3.A.5.

Applied on the sample, the following repartition is obtained for the second model, for France and the United States (Table 3.1). In the second model, immigrants' offspring in both countries are more likely to be matched – they are more likely to be on the common support and to find their “twin” than natives. In France, 80.6% of immigrants' offspring are matched and this figure is higher in the United States, where they are 94.5% to be matched. By contrast, natives are more likely not to be matched. In France, 43.1 % of them are not matched and 30% in the United States.

**Table 3.1. Repartition of individuals in each of the four groups in France and in the United States**

	France		United States	
	Matched	Not matched	Matched	Not matched
Natives	56,9%	43,1%	70,0%	30,0%
Migrants' offspring	80,6%	19,4%	94,5%	5,5%

Source: Enquête Emploi en Continu and Current Population Survey, 2009 and 2012.

The difference between those shares in the two models illustrates the differences between immigrants' offspring and other native-born. The difference between these two groups seems to be more important in France than in the United States. It may reflect two things. First, the individual characteristics of descendants of immigrants and natives differs more systematically in France than in the United States. Second, immigrants' offspring and natives are more likely to have different employment characteristics in France than in the United States, given similar individual characteristics. These two explanations may be combined as well. Either way, those figures are in line with the results of the literature and the figures of the two other chapters.

To illustrate the second explanation, a comparison with the first model can be done. The comparison with the first model (Table 3.A.5), with no control for employment-related variables, suggests stronger employment segregation in France than in the United States. Indeed, going from the first model to the second decreases the percentage of natives matched by 32% in France whereas this decrease is 27% in the United States. For immigrants' offspring, the difference in the decrease between the two countries is stronger: 15% in France and 5% in the United States. Similar immigrants' offspring with the same individual characteristics than natives seem then to be employed in different jobs than natives, more often in France than in the United States.

Looking at the descriptive statistics of immigrants' offspring and natives depending on whether they are matched or not provides another insight into the sources of differences. In France, table 3.A.3 shows that young immigrants' offspring are overrepresented among non-matched individuals. Moreover, natives who graduated from *Grandes Ecoles* are overly represented among the unmatched individuals. In other words, for them, there is no “twin” among immigrants' offspring with the same individual characteristics. The descriptive statistics also show that matched natives earn less than non-

matched natives (respectively €1701 and €1794). On the contrary, matched immigrants' offspring earn more than their non-matched peers (respectively €1747 and €1662). However, matched immigrants' offspring earn more than matched natives.

In the United States, table 3.A.4. illustrates for instance that, non-matched immigrants' offspring tend to be men. Non-matched individuals are five times more likely to have no diploma than matched individuals, no matter their parents' immigrant status. This trend is similar for PhD holders. It seems that, in the United States, individuals have difficulties to find their "twin", especially with the same level of education, among the other group. Similarly to France, matched immigrants' offspring earn more than those non-matched (respectively US\$3721 and US\$3214). But contrary to France, matched natives earn more than non-matched natives (respectively US\$3909 and US\$3475). In addition, contrary to France, matched immigrants' offspring earn less than matched natives.

### 2.3.3. THE DECOMPOSITION OF THE WAGE GAP IN FOUR COMPONENTS

Following the nonparametric decomposition methodology by Ñopo, the wage gap between natives and immigrants' offspring breaks down into four components, as follows:

$$\frac{W^N - W^{MP}}{W^{MP}} = \Delta X + \Delta O + \Delta N + \Delta MP$$

With:

$$\Delta X = E(W_{CS}^N | X_{CS}^N) - E(W_{CS}^N | X_{CS}^{MP})$$

$$\Delta O = E(W_{CS}^N | X_{CS}^{MP}) - E(W_{CS}^{MP} | X_{CS}^{MP})$$

$$\Delta N = [E(W_{NS}^N | X_{NS}^N) - E(W_{CS}^N | X_{CS}^N)] \times Prob(N \in NS)$$

$$\Delta MP = [E(W_{CS}^{MP} | X_{CS}^{MP}) - E(W_{NS}^{MP} | X_{NS}^{MP})] \times Prob(MP \in NS)$$

Where  $E(W_j^i | X_j^i)$  denotes the wage conditional expectation of the population  $i$  ( $i =$  with migrant parents (MP), with native – born parents (N)) belonging to the sub-sample  $j$  ( $j =$  common support (CS), not on the common support (NS)).

$\Delta X$  represents the difference between the average wage of natives belonging to the common support and their average wage if they had the same distribution of characteristics (as presented in the vector in the methodology) than immigrants' offspring belonging to the common support. In other words, this portion corresponds to the wage gap between natives and immigrants' offspring, which results from a difference in the distribution of characteristics between these two groups, but only if they have at least

one “twin” in the other group.  $\Delta X$  is consequently equal to the “explained” part  $(X^N - X^{MP})\beta^N$  from a parametric decomposition *à la* Oaxaca-Blinder.

$\Delta O$  measures the wage gap between natives and immigrants’ offspring who belong to the common support if these two populations had exactly the same distribution of individual characteristics – in this case, those of immigrants’ offspring. In the case of a decomposition *à la* Oaxaca-Blinder, this part, described as “unexplained”, corresponds to  $X^{SG}(\beta^N - \beta^{MP})$ .

$\Delta N$  represents the difference between the average wage of natives who do not belong to the common support and the average wage of immigrants’ offspring who do not belong to the common support, weighted by the probability that a natives were out of the common support.

$\Delta MP$  represents the difference between the average wage of immigrants’ offspring who belong to the common support and the average wage of immigrants’ offspring who do not belong to the common support, weighted by the probability that a immigrants’ offspring were out of the common support.

The sum of  $\Delta X$ ,  $\Delta N$  and  $\Delta MP$  components corresponds to the explained part of wage gap between natives and immigrants’ offspring.

#### *2.3.4. THE INTERPRETATION OF PLUS AND MINUS SIGNS FOR THE FOUR COMPONENTS OF THE WAGE GAP*

The interpretation of the signs associated to the four components of the wage gap are summarized in Table 3.2.

**Table 3.1. Interpretation of the plus and minus signs for the four components of the wage gap**

	Positive sign	Negative sign
$\Delta X$	Natives who belong to the common support have on average better productive characteristics than immigrants' offspring who belong to the common support.	Immigrants' offspring who belong to the common support have on average better productive characteristics than natives who belong to the common support.
$\Delta O$	Similar characteristics are better paid for natives than for immigrants' offspring.	Similar characteristics are better paid for immigrants' offspring than for natives.
$\Delta N$	The best paid natives have a set of observable characteristics that immigrants' offspring do not have.	The worst paid natives have a set of observable characteristics that immigrants' offspring do not have.
$\Delta MP$	The worst paid immigrants' offspring have a set of observable characteristics that natives do not have.	The best paid immigrants' offspring have a set of observable characteristics that natives do not have.

Source: Author's computation, adapted from NARCY, *et al.* (2015).

### 2.3.5. THE DISTRIBUTIVE ASPECT OF $\tilde{N}OPO$ 'S METHODOLOGY

Average wage gap between natives and immigrants' offspring may be uninformative if the difference depends on wage level. For instance, we suspect that natives can be overpaid at the top of the distribution and underpaid at the bottom of the distribution. That is why  $\tilde{N}oPo$ 's decomposition is used at different moment of the wage distribution. Thus, the wage gap is calculated at different deciles (p10 to p90). Then, the same four components are obtained as for the mean decomposition:  $\Delta X$ ,  $\Delta O$ ,  $\Delta N$  and  $\Delta MP$ . The only difference is for the calculation of  $\Delta M$  and  $\Delta MP$ : there is no need to use weighted measures, *i.e.*  $Prob(N \in NS)$  and  $Prob(MP \in NS)$ . The empirical demonstration of the  $\tilde{N}oPo$  decomposition by quantile is developed in appendix A.3.1.

As mentioned above, the first contribution of this method is that a linear regression between wages is not imposed and different parent immigrant backgrounds are accounted for. The second contribution and perhaps the most important one is that it takes into account the common support problem by estimating equations for different native-born with comparable characteristics. The decomposition is thus based on an "out-of-the support" assumption.  $\tilde{N}OPO$  (2008) uses an exact covariate matching procedure which selects two sub-samples of natives and immigrants' offspring with comparable characteristics.

## SECTION 3. EMPIRICAL RESULTS

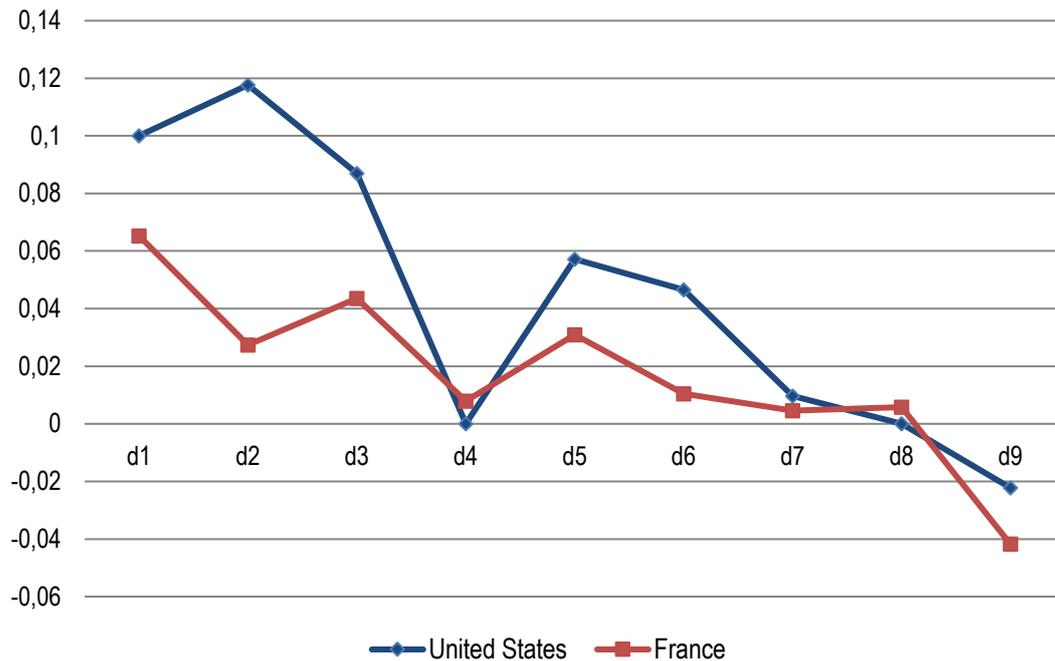
This section first shows the distribution of the wage gap in both countries with Ñopo's methodology. Second, the unexplained components of these wage gaps are quantified and their distributions presented. Finally, this section assesses the non-parametric results by displaying a semi-parametric estimation of the wage gaps by quantile, as a robustness check.

### 3.1. THE DISTRIBUTIONS OF WAGE GAP

Figure 3.3 depicts a more important wage gap in the United States than in France, especially at the beginning of the distribution. In both countries, the wage gap is decreasing with the distribution. In other words, the less workers are paid, the higher the wage gap between immigrants' offspring and natives becomes, all other things being equal. It seems that there is a "sticky floor"; the gap between the two distributions is larger in the first deciles, indicating that more children of immigrants earn the lowest levels of wages. This decrease of the wage gap over the wage distribution even makes the wage gap negative for higher wages. For the 10% better paid workers, immigrants' offspring will have higher wages than natives, all other things being equal. In brief, on the one hand, among the top earners, immigrants' offspring earn more with the same distribution of observable characteristics. On the other hand, among the low to medium earners, immigrants' offspring earn up to 6% less than natives in France and up to 12% in the United States.

An irregularity can be observed on the fourth decile of the US-American wage gap distribution. This irregularity can be attributable to a statistical specificity as a lot of individuals gather around the value of the fourth decile, \$2500. This decile is the same for the two groups and is more precisely equal to the same value, probably due to the self-declaration. Workers tend to round the value of their wage. This is even more pronounced here because the declaration concerns annual wage in the United States rather than monthly wage like in France. The issue of rounding can therefore be more significant.

**Figure 3.3. Wage gap over the distribution (Q1 to Q9), in France and the United States, in percentage, 2009 and 2012**



Note: The fourth decile of the distribution is not interpreted because of a statistical irregularity.  
 Source: Enquête Emploi en Continu and Current Population Survey, 2009 and 2012. Authors' calculations.

For the most part, similarities can be found across the two countries. The wage gap among the native-born population depending their parents' immigrant status is first, positive, *i.e.* those with immigrant parents tend to have lower wages than natives. Second, both wage gaps are declining and become negative in the last decile, indicating that immigrants' offspring have an advantage over natives at the top of the wage distribution. In other words, the wage gap is positive at the beginning of the distribution, and negative at the top of it, in both countries. The non-linearity of the wage gap over the distribution assesses the need to adopt a distributional approach.

Ñopo's methodology makes it possible to distinguish to which characteristics the observed wage gap can be attributed to - either explained or unexplained characteristics. The following section quantifies the role of the unexplained component.

### 3.2. THE DECOMPOSITION OF WAGE GAP

To decompose the wage gap into explained and unexplained components all along the distribution, the wage gap between natives and immigrants' offspring can be written as follows:

$$\frac{\overline{W^N} - \overline{W^{MP}}}{\overline{W^{MP}}} = (\Delta X + \Delta N + \Delta MP) + \Delta O$$

Where  $\Delta X$  stands for the difference between natives (N) and descendants of immigrants (MP) explained by observed characteristics,  $\Delta N$  for the difference between natives out of support and natives on support,  $\Delta MP$  for the difference between immigrants' offspring (MP) on support and those (MP) out of support and  $\Delta O$  for the unexplained difference. As  $\Delta X + \Delta N + \Delta MP$  can be considered as the explained component,  $\Delta O$ , the unexplained component, corresponds to the wage gap "all things being equal".

The second section decomposes the wage gap into four components:  $\Delta X$ ,  $\Delta O$ ,  $\Delta N$  and  $\Delta MP$ . Figure 3.4 shows the contribution of the unobserved component on each decile.

The analysis of the weight of occupational segregation in the wage gap according to parents' place of birth is more refined with the  $\tilde{N}$ opo method than with that of Oaxaca-Blinder. The decomposition of the explained part into three components allowed by  $\tilde{N}$ opo's methodology makes it possible to distinguish between "partial" segregation and "total" segregation (NARCY, *et al.*, 2015). More specifically, an increase in  $\Delta X$  after taking into account the unequal distribution of immigrants' offspring and natives in occupations reflects a "partial" origin-based segregation. In other words, among occupations within which identical immigrants' offspring and natives can be found, natives are overrepresented among the better-paid occupations and/or underrepresented among the lowest-paying occupations. On the other hand, an increase in the components  $\Delta N$  and  $\Delta MP$  reflects "total" segregation; some of the most profitable occupations are exclusively occupied by immigrants' offspring (increase in  $\Delta N$ ), which are also absent from some of the less profitable occupations (increase in  $\Delta MP$ ).

### 3.3. THE UNEXPLAINED PART

Figure 3.4 depicts the share of the unexplained component<sup>93</sup> of the wage gap in the second model (with a control for employment-related variables), over the wage distribution, in the two countries. It gives three new results.

First, in France, the magnitude of the unexplained component is about two times lower than in the United States. In other words, the labour force compositions of the two populations of interest and their individual characteristics tend to explain more the wage gap in France.

Second, figure 3.4 shows that, despite this positive but small linear trend observed for the French unexplained component, this component is positively contributing to the wage gap contrary to the United States. More precisely, in France, the unexplained component is negatively contributing to the

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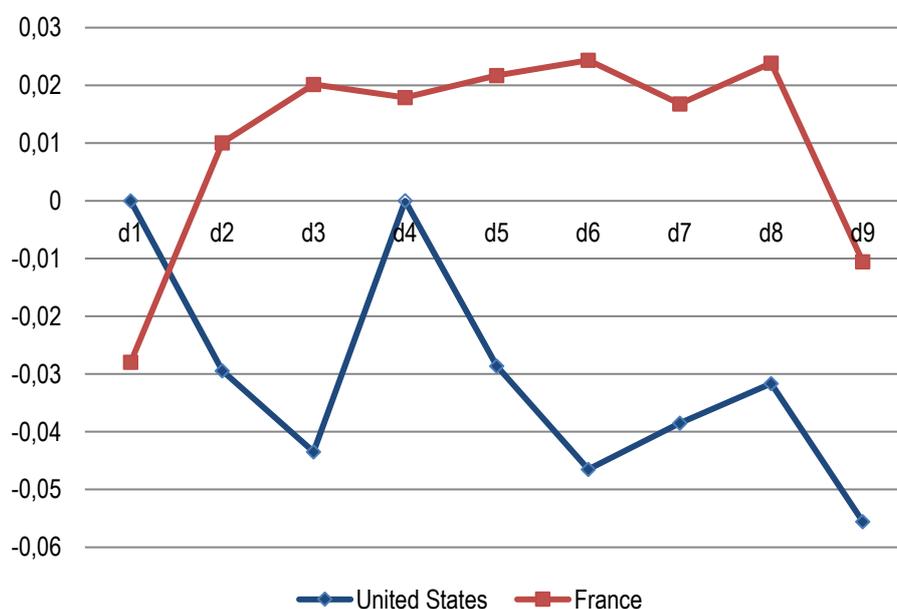
<sup>93</sup> As a reminder, the explained part captures the effect of age, gender, education level, place of residence, number of children, marital situation, sector of activity, hours worked and the type of contract (part-time or full-time).

wage gap for the first and last deciles and positively for the rest of the distribution. In the United States, the unexplained component is never positive. In other words, in France, for the bulk of the distribution, the unobservable component contributes to increase the wage gap. This result is in line with the literature on the cumulative process of inequalities for immigrants' offspring in France. For part-time, low wage workers, as well as for top earners, native-born with an immigrant background display unobservable characteristics that tend to increase their wage gap with natives. One can assume that, at the bottom of the distribution, there can be a selection effect. Indeed, immigrants' offspring tend to be more strongly selected in the job access (see Chapters 1 and 2), potentially leading to "more rewarding" unobservable characteristics. In the United States, the unexplained component is negatively contributing to the wage gap, which means that it contributes to reducing the wage gap. This opposition in terms of direction of unexplained components between the two countries may be related either to individual behaviours and unobserved characteristics, or to labour market characteristics and institutional contexts.

The third result is that, in the United States, the unexplained component is increasing with the growth of wages, hence being more important for higher wages, contrary to France, where the contribution of the unobservable component is relatively constant over the distribution, except at its ends.

These results are in line with the overall literature on labour market inequalities between descendants of immigrants and natives. First, in France, the share of the unobservable contribution of the wage gap is often considered relatively small, as found in these results as well. Second, there is a negative contribution of the unobservable component to the wage gap in the United States. The results of this chapter admittedly display wage gap between descendants of immigrants and natives in the United States, but in the meantime, this wage gap tends to be reduced with the (positive) unobservable characteristics of the immigrants' offspring.

**Figure 3.4. The unexplained component over the distribution, in France and the United States, 2009 and 2012**



Note: The fourth decile of the distribution is not interpreted because of a statistical irregularity.  
 Source: Enquête Emploi en Continu and Current Population Survey, 2009 and 2012. Authors' calculations.

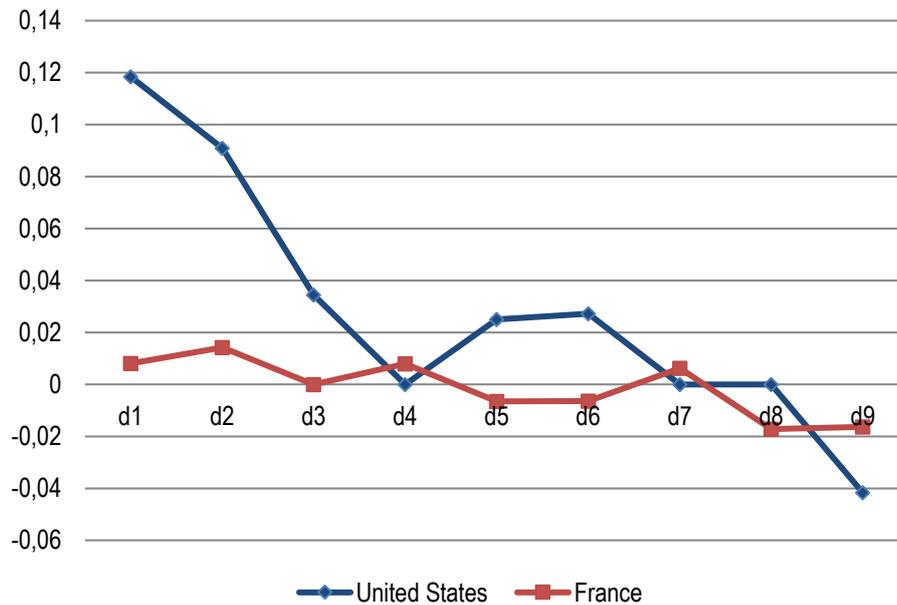
### 3.4. SOME SENSITIVITY ANALYSES

#### 3.4.1. WHAT IS THE DIFFERENCE BETWEEN FULL-TIME AND PART-TIME WORKERS?

Individuals' working time obviously influences wages. Full-time workers are more likely to earn more than part-time workers. As Chapter 2 has shown, immigrants' offspring are more likely to work part-time, which can have consequences on the wage gap with natives. In order to better understand the mechanisms of wage inequalities, the working time is taken into account by distinguishing full-time from part-time workers.

Figure 3.5. shows differences between France and the United States for full-time workers. In the United States, the global trend of wage gap is broadly similar to the one observed for all workers. However, the trend for France clearly differs from Figure 3.3. The wage gap for full-time workers is close to zero all along the distribution. Compared to Figure 3.3., the French wage gap distribution in Figure 3.5. for full-time workers indicates that the wage gap is primarily due to part-time workers. It suggests that the wage gap is significant for part-time workers, unlike for full-time workers.

**Figure 3.5. Wage gap over the distribution (Q1 to Q9) for full-time workers, in France and the United States, in percentage, 2009 and 2012**



Source: Enquête Emploi en Continu and Current Population Survey, 2009 and 2012. Authors' calculations.

### 3.4.2. COUNTRY-SPECIFIC DETERMINANTS

In each country, some key variables may influence levels of wage and wage gap. In France, field of study is a major determinant of successful labour market integration. LE RHUN and POLLET (2011) show that field of study influences access to employment and its quality, in addition to the role of the education level. For instance, they mention that the field of study “production” is more likely to lead to better outcomes, especially if this production field concerns high-tech. On the contrary, graduating in secretarial or in textile sectors increases the probability to be unemployed or to work in low-wage jobs. Chapter 1 also assessed the importance of the field of study on overeducation.

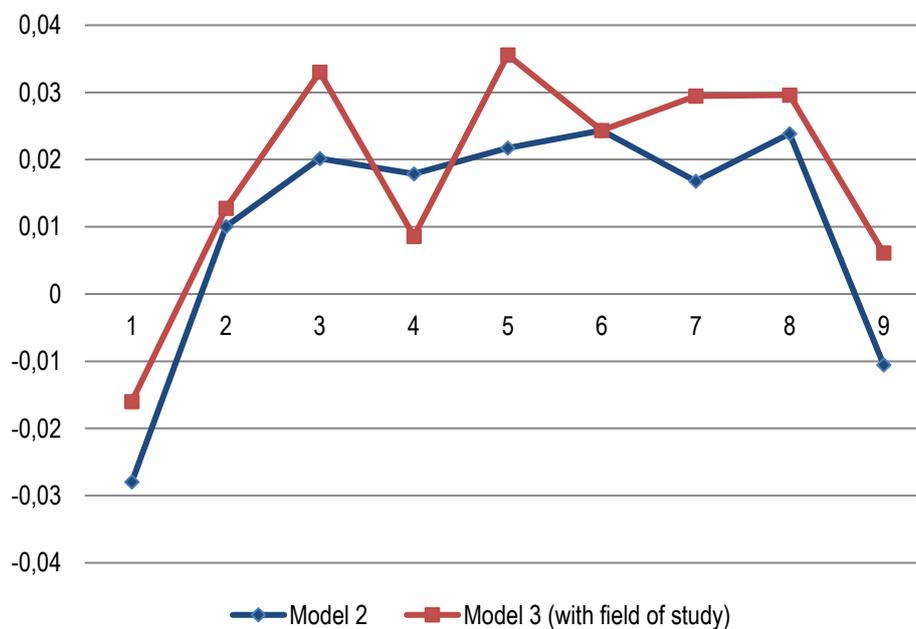
In the United States, race significantly affects labour market outcomes, as extensively demonstrated in the literature. ALTONJI and BLANK (1999) review the dimensions on which gaps and inequalities exist by race, and the different economic mechanisms for these inequalities. Among them, wage is the most visible and one of the most studied: the black/white wage gap is of concern for decades. More recently, focusing on women, ALBRECHT *et al.* (2014) demonstrate that the median log wage gap increased extensively between 1990 and 2011, even when this gap is corrected for selection. They explain that these trends notably result from changes in the educational attainment distribution.

In the United States, the field of study seems to have fewer consequences on labour market outcomes than in France and conversely, race seems not to influence wage the same way in France, at least, from

what is suspected in the absence of empirical data. These supplementary analyses therefore consider another variable that capture the field of study<sup>94</sup> in France and race<sup>95</sup> in the United States.

Figures 3.6 and 3.7 illustrate the variations of the unexplained component of the wage gap, with these additional variables in France (Figure 3.6) and in the United States (Figure 3.7). In France, considering field of study in the model tends to increase the positive contribution of the unexplained component to the wage gap. In other words, including field of study in the model slightly decreases the explained component of the wage gap, meaning that the field of study of immigrants' offspring do not penalize their wage. This result can be surprising given the relatively less prestigious education of immigrants' offspring on average, but the expected explanative role of the field of study may play at a finer level.

**Figure 3.6. The unexplained component over the distribution with and without controlling for field of study, in France, 2009 and 2012**



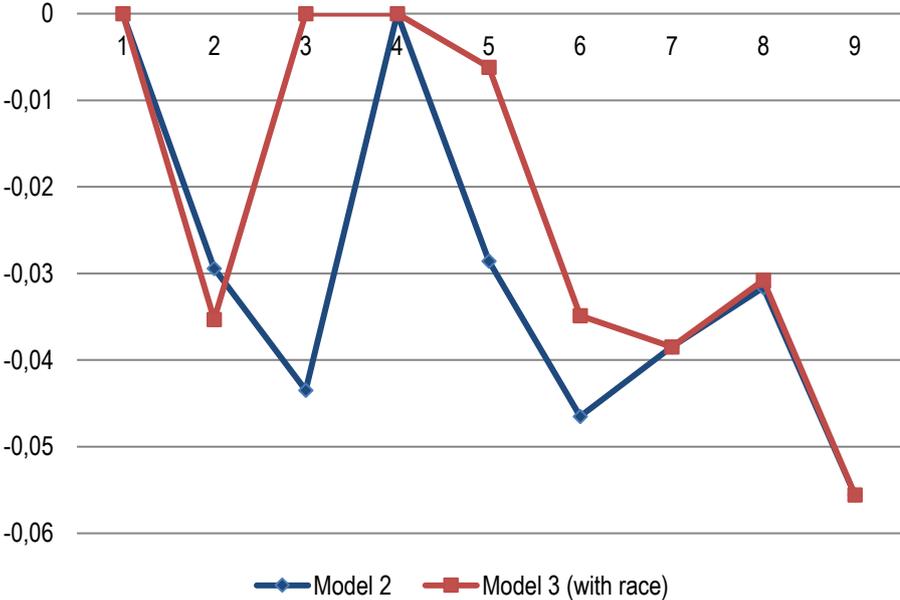
Source: Enquête Emploi en Continu, 2009 and 2012. Authors' calculations.

In the United States, the introduction of race in the model also leads to mixed results. The distribution of the unexplained component of the wage gap between immigrants' offspring and natives is not radically different at the extremities of the distribution with the introduction of race. Yet, it seems to reduce the unexplained component in the middle of the distribution (from the third decile to the seventh). In other words, the introduction of race contributes to explaining the wage gap, in particular in the middle of the distribution.

<sup>94</sup> This variable has five modalities: no dominant field; application and economic and social administration; technic and professional fields; direct production and services.

<sup>95</sup> The variable capturing race has 20 modalities.

**Figure 3.7. The unexplained component over the distribution with and without controlling for race, in the United States, 2009 and 2012**



Source: Current Population Survey, 2009 and 2012. Authors’ calculations.

3.5. SEMI-PARAMETRIC ESTIMATIONS OVER THE DISTRIBUTION

This section provides robustness checks regarding the validity of the non-parametric analysis. Using the same data, concerns regarding the non-parametric estimation introduced by Ñopo are addressed with quantile regressions. The variables used in the non-parametric estimation are introduced as control variables in the quantile regressions. The parametric estimation technique also allows us to analyse the effect of each variable taken into account in Ñopo’s methodology. Indeed, this methodology does not make it possible to identify the effect of each variable on the wage gap and instead takes them all together.

Quantile regressions describe the impact of explanatory variables on a variable of interest, not only at the sample average but at different points of the distribution (KOENKER, 2005). It allows a more comprehensive analysis of the relationship between variables. Given the suspected non-linear effect of some variables on the wage distribution, this methodology better fits to address those specificities. The quantile regressions are run simultaneously.<sup>96</sup> Two quantile regressions are estimated for each country: the first looks at the quantiles (*i.e.* 0.25; 0.5 and 0.75) in figures 3.8 and 3.9, whereas the second one looks at the quintiles (0.1; 0.3; 0.5; 0.7; 0.9) in figures 3.A.1. and 3.A.2. in appendix.

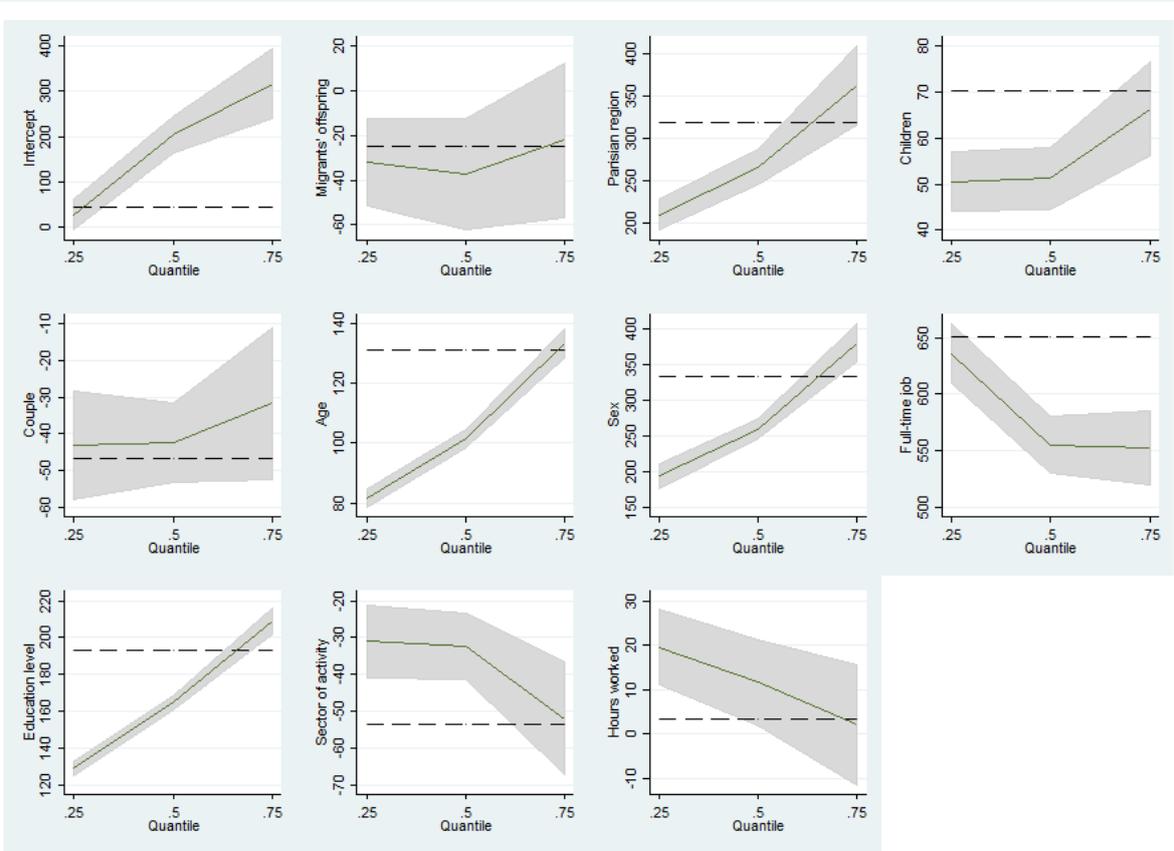
<sup>96</sup> The command used in Stata is *sqreg*. It generates the same coefficients as *qreg* would generate if each quantile was estimated separately. Reported standard errors are similar, the difference is that *sqreg* gets standard errors via bootstrapping rather than analytical formula.

The results of quantile regressions can be presented either in tables or in figure. Following GIVORD and D'HAULTFOEUILLE (2013), coefficients are graphically presented for each quintile, with the 95% confidence intervals in the shaded area in figures 3.A.1. and 3.A.2., in appendix. The estimations of quantile regressions point out interesting results, which tend to confirm, in both countries, the results found with Ñopo's decomposition. The dotted line indicates the value of the coefficient found with OLS, which is an average coefficient, whereas the two figures also depict the values of the coefficient for three points of the distribution, *i.e.* 0.25; 0.5 and 0.75. First, the parametric estimations display varying coefficients associated with being immigrants' offspring, depending on the quartile considered. Thus, and just as Ñopo's methodology raised, it supports the relevance of adopting a distributional approach: the relationship between wage and observable characteristics appears not to be linear.

More precisely, in France, having immigrant parents significantly decreases estimated wages at the three distinguished points of the distribution (Figure 3.8). It decreases wages more at the middle of the distribution, less on the first quartile and even less on the last quartile. In the United States on the contrary, being a child of immigrants increases wages, all other things being equal (Figure 3.9). This positive relationship is less pronounced at the top of the distribution and most pronounced at the bottom of the distribution. These results recall the trends found in Figure 3.2. in which the unobserved component in the United States increases over the distribution but remains negative; whereas the one in France is positive and tends to increase over the distribution.

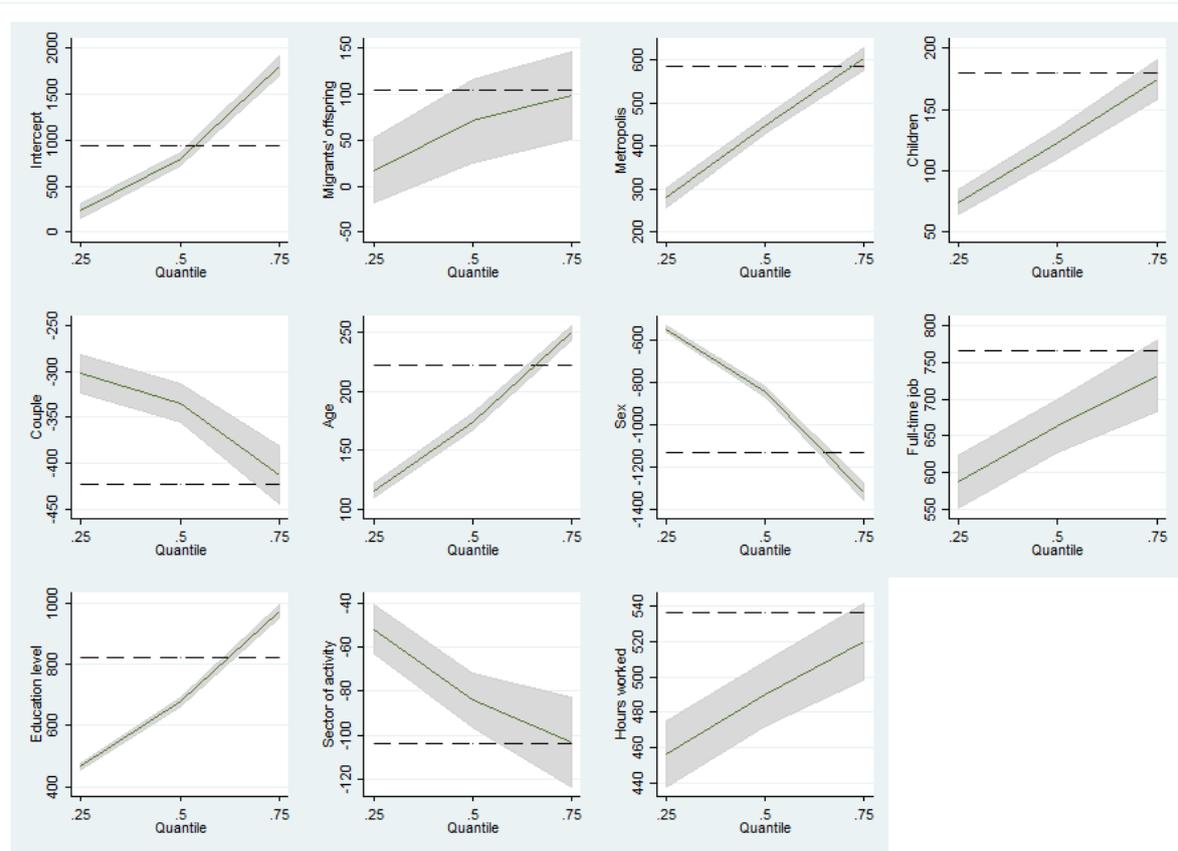
In terms of control variables, the results of quantile estimations in the two countries also support the non-linearity hypothesis. In the two countries, being a woman negatively contributes to wage. This negative effect is stronger at the beginning of the distribution, decreasing over the wage distribution. In France, living in the Paris region is positively and significantly related with wage and the coefficient increases with the wage distribution, as shown through the quartiles. This result is convergent with analyses on the levels of wage in France, as wages are 24% higher in the Paris region relative to the rest of the country (COMBES *et al.*, 2015). Similarly, living in a metropolitan area in the United States is positively and significantly related with wage. This result is also in line with the literature, as big cities are said to offer higher wages (ALBOUY, 2008). One difference between the two countries is the importance of working time on wage: as expected, the more hours workers work, the more they are paid, but this effect is extremely pronounced in the United States, whereas in France, it remains low, and becomes negative in the last quartile.

**Figure 3.8. Quantile regressions on the wage distribution in France: estimation of the coefficients**



*Note:* The dotted line indicates the value of the coefficient found with OLS, which is an average coefficient.  
*Source:* Enquête Emploi en Continu, 2009 and 2012.

**Figure 3.9. Quantile regressions on the wage distribution in the United States: estimation of the coefficients**



Note: The dotted line indicates the value of the coefficient found with OLS, which is an average coefficient.  
 Source: Current Population Survey, 2009 and 2012.

## SECTION 4. DISCUSSION OF THE RESULTS

This chapter provides new contributions to the literature on labour market inequalities in France and the United States among descendants of immigrants and natives. First, this chapter shows the relative absence of wage gap at the aggregate level. Second, the results of this chapter plead for a distributional approach of these wage differences, as the wage gap varies along the distribution, even going from positive to negative. Finally, this chapter highlights the magnitude of unobservable components to explain the wage gap, which are also varying over the wage distribution.

The results found in this chapter argue for clear differences between the two countries in the analysis of the wage gap between descendants of immigrants and natives. Despite observing the same declining trend for wage gap magnitudes along the wage distribution, the magnitude of the gap observed in the United States seems higher than in France. However, the lower interest on this wage gap in the United States might be explained partly by the role of unobservable characteristics. Indeed, while the unobservable characteristics are playing a positive role on the French wage gap – *i.e.* contribute to

increase the wage gap –, it is the contrary in the United States, where the unobservable characteristics are contributing to reduction in the wage gap. Hence, one might question the role played by having immigrant parents on wage in the two countries. In France, having immigrant parents seems unfavourable, first on some individual and employment characteristics such as education or place of residence, but also, second, in a lesser extent, on unobservable characteristics. On the contrary, in the United States, having immigrant parents only has a negative role on individual and employment characteristics, but not on unobservable characteristics, which are conversely leading to an improvement of their situation concerning the wage gap, *e.g.* reducing the wage gap.

#### 4.1. THE ROLE OF INDIVIDUAL BEHAVIOURS AND COMPOSITIONAL EFFECTS

Several factors can explain the major differences between the two countries. First, immigrants' offspring in the United States are of different countries of origin. These different countries of origin can be associated with different mother tongues, which are more or less valued on the labour market. In France, mastering English is, for example, more likely to be valued than Arabic. In the United States, speaking Spanish in addition to English is generally highly valued in specific occupations and sectors.

The compositional effect may also refer to education and more generally socioeconomic levels. Some groups of immigrants are more educated than others and can transmit more social or economic capital, some may value more their children's education, *etc.* Asian immigrants for instance, who represent a growing share in the United States, are known to be more educated and to strongly encourage their children to succeed in school. In this respect, the composition in terms of groups of origin of immigrants' offspring in the two countries may highlight the trends of unobservable contributions (through unobservable characteristics, such as the average education level of parents, associated more to certain parents' country of origin for instance).

This compositional effect may also recall the selectivity of the migration policy and the capacity of the two countries to favour intergenerational mobility. As explained in earlier chapters, the human and economic capital that immigrants have may influence the social capital of their offspring, as well as their network, resulting in different levels of outcomes on the labour market. Hence, one may assume that the higher selectivity of the US-American migration policy may perhaps be associated to better network and social capital for immigrants' offspring than in France, as their parents can be more integrated into the society and on the labour market. It is for instance the case for Mexican immigrants' offspring (GARIP and ASAD, 2016). Therefore, the negative unobserved component in France may partly capture differences in immigrants' characteristics, transmitted to their children, just as for the positive unobserved component in the United States.

#### 4.2. THE LABOUR MARKET: SEGMENTATION AND SEGREGATION ISSUES

The occupational segregation influences the wage gap. In France, immigrants' offspring are more likely to work in part-time jobs. According to the theory of segmentation, those jobs are characteristic features of external labour market (PIORE and DOERINGER, 1971). On the contrary, natives are more likely to work in stable and full-time jobs. Yet, as mentioned in chapter 1, wage increases happen more in internal labour markets (PIORE and DOERINGER, 1971; LAZEAR, 2004). Hence, one might expect that the wage progression of immigrants' offspring would be slower than the one of natives, leading to a higher wage gap. The sensitivity analysis focusing on full-time workers confirms the importance of the higher concentration of immigrants' offspring in part-time jobs on the wage gap with other native-born people in France. When considering only full-time workers, the wage gap tends to disappear. In other words, this wage gap, in France, is primarily explained by the relatively high segregation of immigrants' offspring in part-time jobs. In the United States, the segmentation of the labour market is less pronounced. The wage gap between different types of contracts would be, under this approach, less important. The sensitivity analysis on full-time workers only is in line with this assumption. The wage gap is not strongly different from when all workers are considered. This segmentation approach may consequently explain the differences in terms of unobservable component between France and the United States.

Another possibility, also related to the segmentation of labour markets, is that wage gap is affected by differential selection into employment. As shown in Chapters 1 and 2 for France, immigrants' offspring seem to be more toughly selected to access jobs. One may assume that this selection bias is stronger for low-wage jobs. Therefore, immigrants' offspring accessing low-wage jobs could depict more favourable individual characteristics than natives. This may explain why, for a given combinaison of observable characteristics, among low wage earners, the unobservable characteristics of immigrants' offspring help reduce the wage gap. This difference in preferences on the labour market can play a significant role on wage gap. In addition, initial wages may also influence later wages and might consequently play a downward role on the wage of immigrants' offspring. In this respect, labour markets where discrimination is prominent also constitute a context in which getting a job might be harder for immigrants' offspring with the same individual characteristics than natives. The importance of social networks on the labour market may be another decisive factor to get access to "good jobs", especially penalizing for segregated individuals (see IOANNIDES and LOURY (2004) or BAYER, ROSS and TOPA (2008)). These factors may contribute to make pay raises more difficult to get.

## CONCLUSION

This chapter contributes to the literature on wage inequalities between natives and immigrants' offspring by using a non-parametric methodology to (1) study the distribution of wage differences and (2) decompose these differences into explained and unexplained components, while overcoming the traditional BLINDER and OAXACA limits. It raises two main results. First, the wage gap between natives and immigrants' offspring tends to be higher at the beginning of the distribution and become slightly negative at the end of it. It implies that for the same characteristics, immigrants' offspring earn less than natives, except when considering higher wages. At this level, they tend to earn more than natives, all other things being equal.

Second, the decomposition of wage gaps reveals a more important unexplained component in the United States than in France. More precisely, this unexplained component in the United States is negatively contributing to the wage gap, suggesting that immigrants' offspring depict more positive unobservable characteristics than natives in this country. This unexplained component is increasing with the wage: the more workers earn, the more important positive unobservable characteristics become; hence, reducing, if not reverting, the wage gap. In France, the unexplained part is low, but the trend remains positive. In other words, all things being equal, immigrants' offspring depict unobservable characteristics that contribute to handicap them in terms of wage, compared to natives, contrarily to most cases in the United States.

This analysis is the first study to compare, in France and in the United States, wage distribution inequalities between native-born according to the immigrant status of their parents. While it can be tempting to associate wage gap to the treatment of immigrants' offspring in the labour market, this gap can also emerge from institutional factors that are not related to the immigrant parents *per se*. The higher labour market segmentation in France (in terms of working time, as attested by the sensitivity analysis regarding the distinction between full-time and part-time jobs) seems to relatively negatively affects children of immigrants. Occupational segregation and occurrence of labour market discrimination can also, among other things, be key features that might influence wage inequalities between descendants of immigrants and natives. Because the unexplained component may be attributable to many other features than discrimination, this chapter calls for further work on the identification of its components. One can for instance think that the lower and less efficient network of immigrants' offspring can justify why the unexplained component is overall disfavoured to them.

## GENERAL CONCLUSION

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The contribution of this thesis is threefold. First, this dissertation enriches the literature on the integration of immigrants' offspring in the labour market in France and in the United States, through a micro-economic analysis of employment conditions. It has enlarged the set of indicators of labour market integration adopted in the literature -traditionally focusing on employment, unemployment or wage for instance- by considering a broad range of employment conditions, going from overeducation to job security. Second, this thesis enriches the literature in labour economics on employment conditions, which rarely addresses immigrants' offspring. Third, the comparative perspective adopted highlights the different mechanisms of inequalities on the labour market in each country. By comparing France and the United States, this thesis strengthens the comprehension of the labour market integration of immigrants' offspring in each country and enhances the connection between institutional framework and employment conditions.

Being born to immigrant parents is not systematically penalizing *per se*. Rather, compositional effects (such as education levels) seem to be more important in explaining the gaps found in terms of employment conditions between descendants of immigrants and of native-born people. In addition, this thesis highlights the importance of systematically considering the heterogeneity among descendants of immigrants. At the aggregated level, non-significant results can hide diverging results once disaggregated. The main contribution of this work lies not so much in the definitive nature of the answers as in the originality of the employment conditions approach. My thesis is also a methodological contribution focused on how to deal with heterogeneity, thanks to selection models, distributional approaches and decomposition of wage gaps.

The conclusion is organized as follows. After recalling the main results of this thesis, I discuss potential interpretations in terms of public policies. The final section sketches perspectives of future research.

## MAIN RESULTS AND INTERPRETATIONS

### AN ENLARGEMENT OF THE MEASURES OF INTEGRATION ON THE LABOUR MARKET

With the consideration of employment conditions, this dissertation enlarges the characterisation of the labour market integration of immigrants' offspring in France and the United States. Chapter 1 demonstrates a higher incidence of overeducation among immigrants' offspring compared to natives in France than in the United States, where these levels are broadly similar between the two populations. However, this chapter shows that the gaps between the two populations are not significantly related to the fact of being born to immigrant parents at the aggregate level. Rather, they are associated to structural effects, *i.e.* to individual characteristics other than immigrant background (*e.g.* education level, place of residence, *etc.*). Similarly, chapter 2 finds lower levels of employment quality for immigrants' offspring in both countries. Nevertheless, these lower levels are mostly explained by individual and employment-related characteristics. It seems that immigrants' offspring depict disfavoured individual characteristics and tend to be segregated in occupations that are related with lower levels of employment conditions. Yet, being born to immigrant parents is still negatively associated to job security in France and to working time in the United States. However, the picture is not entirely negative. Being born to immigrant parents is positively associated to wage (whether monthly or hourly) in both countries, and the unobservable characteristics of immigrants' offspring contribute to lowering the wage gap in the United States. This surprising result may be explained by the theory of compensating wage differentials. However, it may also hide some heterogeneity, which is explored in this thesis.

Overall, this dissertation shows more unfavourable employment conditions for immigrants' offspring, which are nevertheless mainly explained by individual and employment-related characteristics. In other words, immigrants' offspring face difficulties on the labour market primarily because of unfavourable characteristics. This result indicates that implementing public policies targeting individual characteristics related to the socioeconomic background can help reduce these gaps. Since several of these individual characteristics are significantly related to employment conditions, policies can be implemented to intervene before immigrants' offspring access employment. Immigrants' offspring tend for example to have lower levels of education and to be more likely to live in disadvantaged areas. As a result, acting on these individual characteristics may help decrease the gaps. For instance, in all chapters, education plays a significant role on employment conditions, whether directly captured by education levels, or acting through a network or skills effects among the same education level. Therefore, implementing policies that favour social mix at school may help decrease the different levels of opportunities and employment conditions on the labour market. These policies have to take into account specific challenges sometimes faced by immigrants' offspring in the

education system and labour market, such as language, in particular if they spoke a different language at home during their childhood. For those with low-educated parents, a successful integration in schools will help limit the potential intergenerational transmission of disadvantage and support social cohesion in the longer-term. Further public policies can address the issue of residential segregation, as it is closely related to school segregation, diminishing henceforth the network disadvantage for immigrants' offspring.

## A CONSIDERATION OF HETEROGENEITY

Studying the employment conditions of immigrants' offspring sheds light on the substantial heterogeneity that exists among this group. This dissertation addresses heterogeneity first by distinguishing parents' region of birth. In the first two chapters, it appears that one of the potential reasons explaining that having immigrant parents is not significantly related to employment conditions is the significant heterogeneity existing among immigrant's offspring. My results indicate that it is not the fact of having immigrant parents that can lead to lower employment conditions but rather the parents' region of birth. Not all immigrants negatively influence the employment conditions of their children. In France, having immigrant parents born in North African countries is negatively correlated with job security, whereas having parents born in eastern or northern Europe is positively associated to wage. In the United States, having parents born in Asia, southern or northern Europe, or Canada positively influences employment quality. On the other hand, having parents born in Latin American countries negatively influences employment quality.

The second way to investigate heterogeneity in this dissertation relies on the distributional issue of the wage gap, as examined in the last chapter. From a methodological point of view, a significant innovation lies in the decomposition of wage gaps all along the distribution. Chapter 3 suggests that the wage gap between descendants of immigrants and natives tends to be higher at the beginning of the distribution and becomes slightly negative at its end. This implies that immigrants' offspring earn less than natives, except when considering higher wages. At this level, descendants of immigrants tend to earn more than natives, all other things being equal. This result is in line with the positive coefficient associated to wage in Chapter 2. However, the wage gap is rather small all along the distribution in France when only full-time workers are in the sample. In the United States, on the contrary, the trend is broadly similar whether only full-time workers or all workers are considered. The second result of this analysis is the different role played by unobservable characteristics on the wage gap. In France, unobservable characteristics play a negative role, while the opposite is found for the United States. In other words, unobservable characteristics contribute to increasing the wage gap between natives and immigrants' offspring in France and to decreasing this gap in the United States. In this latter country, unobservable characteristics contribute to decreasing the wage gap even more at

## *General Conclusion*

the top of the wage distribution. In France, the unobservable characteristics only contribute to decreasing the wage gap at the very bottom of the wage distribution (and slightly at the top, to a lower extent), which may recall the stronger selection to access employment faced by immigrants' offspring, that can be more important for low-wage workers.

### WHAT DIFFERENCES ACROSS COUNTRIES?

Despite their similarities, the investigation of employment conditions of immigrants' offspring in the United States and in France raises cross-country differences. The first difference relies on access to jobs. Having immigrant parents significantly affects the probability to be employed in France, but not in the United States. While this indicator is not part of employment conditions, because it deals with access and not employment characteristics *per se*, this difference is salient between the two countries. The selection bias in France implies that being employed for an immigrants' offspring is more difficult than for natives, all other things being equal. Therefore, from a conceptual perspective, the probability to have a certain level of employment conditions is different from its propensity, *i.e.* the conditional probability given the selection bias. This requires adapting the methodology with models that take into account the selection bias in France for studying the labour market integration of immigrants' offspring.

The second difference can be found in the dimensions of employment conditions through which inequalities affect immigrants' offspring. In France, it seems that inequalities exist mainly regarding job security whereas in the United States they can mainly be found on the working time. In addition to inequalities, the gaps between the descendants of immigrants and those of native-born are for instance more pronounced regarding overeducation in France than in the United States.

Overall, it seems that immigrants' offspring faces barriers to employment in France but not in the United States. However, inequalities in employment conditions can be found in both countries, yet not along the same dimensions. Moreover, no systematic negative coefficient is associated with the fact of being born to immigrant parents. Instead, it seems that compositional effects (*i.e.* differences in education level, age, etc.) contribute the most to explaining the gaps in employment conditions between the descendants of immigrants and those of native-born people. These effects refer to the composition in terms of education level of immigrants, which may have consequences on the acquisition of human capital for their children. The OECD has indeed documented the relatively higher level of education of immigrants in the United States compared to France (OECD, 2015).

The differences raised in this dissertation have nevertheless to be contextualised, recalling some differences mentioned in the general introduction. Despite the use of comparable data, the empirical comparison provided in this thesis cannot address all differences between the two countries. Some

important differences must be kept in mind when reading and interpreting the results. For instance, the racial issue is central to understanding the US-American society, especially the dominant black-white paradigm (Alba, 2005). Hence, the average level of employment conditions of natives are, to some extent, lowered by the inferior level of African-Americans, on average. In other words, the *color line* can contribute to reducing the gaps between natives and immigrants' offspring, given the high share of African-Americans among natives.

## FUTURE RESEARCH PERSPECTIVES

This work opened and implies future research. Relying on a broad conception of labour market integration and employment conditions, my future work will explore working conditions. Yet, because of data availability—finding comparable data on this particular group of the population has been inconclusive, this coming work will not adopt a comparative perspective and will focus only on the French case. Some analyses can be done at the French level, with the *Conditions de Travail* survey. The United States have yet to investigate this issue at the micro level. This caveat, resulting from data availability, can be important, for low wage workers in particular. Indeed, the inequalities between populations among relatively high-educated workers tend to be reflected through indicators such as overeducation. On the contrary, among relatively low-educated workers, inequalities tend to be reflected through working conditions, such as physical constraints or autonomy. This issue consequently remains to be explored for a complete understanding of the mechanisms on the labour market.

A second research project, in line with the preponderance of heterogeneity along parents' region of birth, is to explore the issue of integration by diaspora rather than by country of residence. As part of my work at the OECD, I am studying the integration of different diasporas in OECD countries. My analysis of the Moroccan diaspora has emphasized better labour market outcomes in the United States compared to France. However, the level of education of immigrants, largely contributes to explaining these differences. To extend this conclusion, the next two projects will be on the Tunisian and the Romanian diaspora. They will help understand whether some characteristics of immigrants can be related with different levels of performance on the labour market in different countries.

Finally, to continue exploring the unexplained component of the gaps on the labour market, I intend to investigate its composition. The third chapter has demonstrated the existence of an unexplained component in wage gaps. However, before attributing this unexplained component to discrimination, other factors have to be considered, such as ethnic networks or language. Therefore, I would like to explore the role of language on labour market outcomes. In the context of my work at the OECD, I am exploring the role of language on the measure of skills, other than through education level, thanks to

## *General Conclusion*

the Survey of Adult Skills (PIAAC data: Programme for the International Assessment of Adult Competencies). This international survey is conducted in over 40 countries by the OECD and measures “adults’ proficiency in key information-processing skills - literacy, numeracy and problem solving in technology-rich environments”<sup>97</sup>. A recent working paper by the European Commission and the OECD has shown that language plays a significant role on access to employment for refugees. I plan to explore whether language plays the same significant role on employment conditions for immigrants and their offspring in France with the *Trajectoires et Origines* data.

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<sup>97</sup> <http://www.oecd.org/skills/piaac/> (consulted on December 6<sup>th</sup>, 2017).



## *General Conclusion*

# APPENDICES

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**Table A.1.1: Distribution of education by parents' region of birth for France**

		Natives	North Africa	SubSaharan Africa	Asia	South Europe	North & Continental Europe	East Europe	Total
Diploma	Professional baccalaureate	23,5	35,1	33,8	27,6	26,4	16,4	6,2	25,2
	General baccalaureate	9,4	16,2	13,5	11,8	11,4	14,1	26,5	10,2
	"Bac + 2"	31,9	24,3	26,4	24,0	34,9	24,0	26,0	31,3
	Bachelor's degree	19,9	14,2	9,9	23,1	17,9	23,8	27,2	19,4
	"Grande Ecole"	6,3	2,3	2,6	5,0	3,1	8,7	3,6	5,9
	Master's degree/PhD	9,1	7,9	13,8	8,6	6,4	13,1	10,4	9
Field of study	Mathematics and sciences	4,4	4,4	2,1	2,1	3,2	4,8	2,4	4,3
	Human sciences and Law	8,8	17,0	13,6	9,5	10,7	13,8	22,9	9,6
	Arts and litterature	5,6	7,7	6,9	12,3	6,0	15,2	11,3	5,9
	Production technological specializations	1,2	1,5	1,3	1,9	1,3	2,6	2,1	1,3
	Agriculture, hunt, forestry and fishing	1,9	0,2	0,0	0,0	0,3	0,5	0,0	1,7
	Transformations	3,3	1,4	5,9	0,7	3,5	1,8	6,1	3,2
	Civil engineering, construction and wood	1,8	1,3	0,5	2,2	2,6	0,7	0,0	1,8
	Flexible material	1,0	0,7	0,1	1,0	0,4	0,8	0,0	0,9
	Mechanics, electricity and electronics	10,0	6,9	7,9	11,9	9,8	6,5	10,1	9,7
	Trading and management	27,1	31,9	34,8	29,8	28,5	22,8	12,3	27,4
	Communication and information	10,6	11,5	11,8	17,7	13,3	15,0	13,5	10,9
	Services to individuals	19,3	13,5	13,9	10,7	19,1	12,0	17,3	15,1
	Services to the community	3,9	0,6	0,3	0,0	0,2	2,6	2,0	0,6
	Non specified	1,2	1,4	0,9	0,2	1,2	0,8	0,0	1,4
Number of individuals		4 433 231	272 195	54 882	53 717	275 176	67 938	16 563	5 233 367

Source: Trajectoires et Origines, 2008.

Table A.1.2: Labour market situation by parents' region of birth for France

		Natives	North Africa	SubSaharan Africa	Asia	South Europe	North & Continental Europe	East Europe	Total
Labor market situation	Inactive population	3,1	7,5	3,8	4,5	4,7	4,7	2,3	4,6
	Unemployed	8,9	16,2	11,1	15,8	4,4	6,7	4,6	10,2
	Active population	88,0	76,3	85,1	79,8	90,9	88,6	93,2	85,2
Sector of activity	Extractive industries	0,1	0,5	0,7	0,0	0,4	0,0	0,0	0,1
	Manufacturing industry	16,8	8,1	6,1	10,8	15,6	13,4	8,8	16,1
	Production and distribution of electricity, gas and water	0,9	1,3	0,1	0,5	0,5	2,3	0,0	0,9
	Construction	4,0	2,6	0,0	8,3	6,4	1,6	5,0	4,0
	Trade, motor vehicles, motorcycles and personal and household goods repairing	15,0	14,9	19,7	14,3	18,7	13,0	14,3	15,2
	Hotel and catering	2,9	3,6	5,9	6,5	2,3	2,5	5,0	3,0
	Transports and communication	4,8	11,5	9,4	8,1	7,7	5,4	10,1	5,4
	Financial activities	5,4	10,8	5,7	5,8	5,5	5,6	4,6	5,7
	Real estate, renting and enterprise services	9,0	7,9	8,8	10,7	7,5	14,7	6,9	8,9
	Public administration	10,0	8,1	10,4	7,9	10,7	8,9	10,4	10,0
	Education	9,4	12,4	8,9	10,4	7,1	14,,17	14,0	9,5
	Health and social work	12,4	8,8	15,1	9,6	11,4	6,8	9,8	12,0
	Other community, social and personal service activities	7,7	6,9	8,7	6,7	4,5	10,7	11,1	7,5
	Activities of household	1,3	2,2	0,4	0,0	0,8	0,8	0,0	1,2
	Extra-territorial activities	0,4	0,3	0,2	0,6	0,9	0,0	0,0	0,4
Occupational group	Intellectual and scientific occupations	20,2	17,2	10,8	25,8	18,0	35,7	21,5	20,2
	Intermediary occupations	35,1	29,3	37,8	27,7	34,3	30,8	36,6	34,7
	Administrative employees	16,3	21,7	14,7	18,5	19,8	15,1	13,3	16,7
	Services staff and salesmen	17,4	16,0	25,3	18,5	17,8	13,1	25,5	17,4
	Plant and machine operators and assemblers	6,8	6,3	6,2	6,4	6,4	4,3	3,7	6,7
	Non qualified workers and employees	4,3	9,4	5,1	3,2	3,7	1,1	1,4	4,4
Number of individuals		4 433 231	272 195	54 882	53 717	275 176	67 938	16 563	5 233 367

Source: Trajectoires et Origines, 2008.

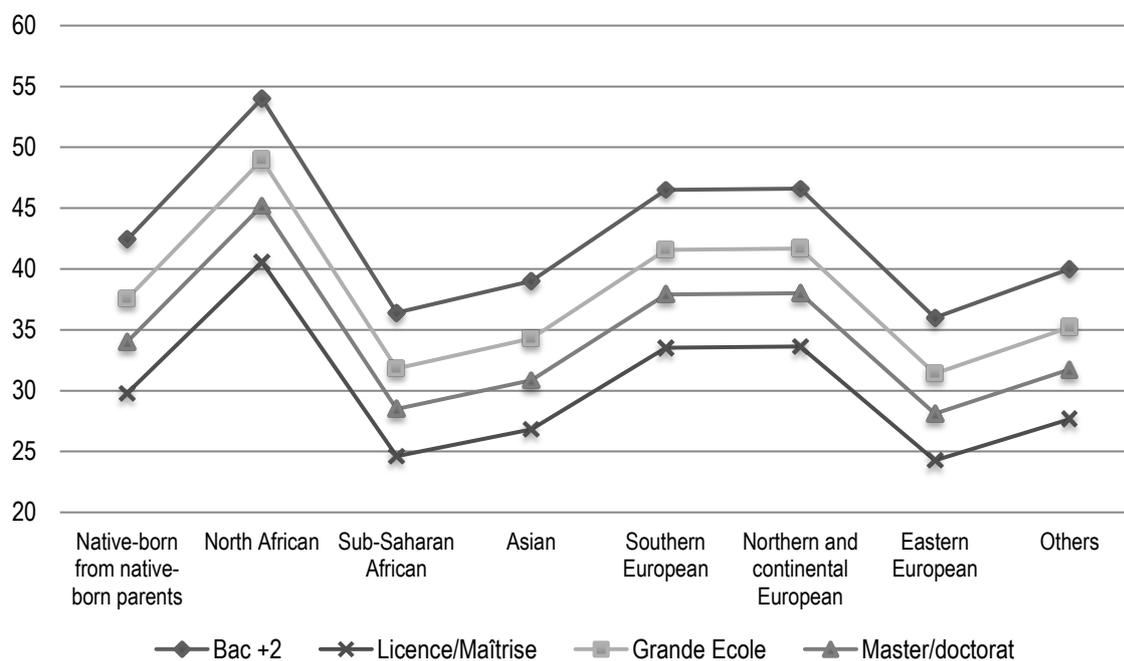
**Table A.1.3: Estimation of the probability of being overeducated by parents' region of birth for France**

	Variables	(3)	(4)
Parents' place of birth	North Africa	1.374* (0.225)	0.906 (0.184)
	SubSaharan Africa	0.951 (0.214)	0.813 (0.222)
	Asia	1.015 (0.194)	1.143 (0.251)
	South Europe	1.042 (0.144)	0.936 (0.152)
	North and Continental Europe	1.048 (0.253)	0.961 (0.273)
	East Europe	0.829 (0.329)	0.881 (0.399)
	Others	1.016 (0.449)	0.982 (0.500)
Diploma	"Baccalauréat professionnel et technologique"	0.335*** (0.0431)	0.233*** (0.0399)
	"Baccalauréat général"	0.760* (0.125)	0.548*** (0.106)
	"Bac +2"	Ref.	Ref.
	Bachelor's degree	0.632*** (0.0843)	0.652*** (0.102)
	"Grande Ecole"	0.873 (0.195)	0.834 (0.213)
	Master's degree or PhD	0.755 (0.134)	0.871 (0.180)
	Female	1.709*** (0.186)	1.696*** (0.214)
	Two immigrant parents	0.987 (0.127)	0.849 (0.130)
	Age	0.980 (0.0121)	0.983 (0.0147)
	General education	Ref.	Ref.
Field of study	Technicoprofessional areas of production	0.634*** (0.111)	0.565*** (0.119)
	Technicoprofessional areas of services	0.860 (0.101)	0.758** (0.106)
	Partner in activity	1.133 (0.145)	1.156 (0.169)
	Low skilled occupations		
Father's occupation	Medium skilled occupations	0.943 (0.194)	0.974 (0.239)
	High skilled occupations	0.934 (0.214)	0.926 (0.252)
	Low skilled occupations		
Mother's occupation	Medium skilled occupations	0.740** (0.0942)	0.727** (0.110)
	High skilled occupations	0.729* (0.118)	0.683** (0.130)
	Living in Sensitive Urban Area	1.147 (0.201)	1.205 (0.240)
Place of living	Living in the Paris region	0.858 (0.0880)	0.858 (0.103)
	Agriculture, hunt, forestry		0.912 (0.860)

Industry	Manufacturing industry		0.748 (0.155)
	Production and distribution of electricity, gas and water		0.472 (0.276)
	Construction		0.408** (0.155)
	Trade, motor vehicles, motorcycles and personal and household goods repairing	Ref.	Ref.
	Hotel and catering		1.655 (0.573)
	Transports and communication		1.391 (0.326)
	Financial activities		1.057 (0.246)
	Real estate, renting and enterprise services		0.898 (0.192)
	Public administration		0.832 (0.176)
	Education		0.241*** (0.0647)
	Health and social work		0.401*** (0.0880)
	Other community, social and personal service activities		0.650 (0.185)
	Activities of household		2.978** (1.302)
	Extra-territorial activities		0.963 (0.606)
		Permanent contract	
	Constant	1.638 (0.857)	3.039* (1.927)
	Observations	840	840
	McFadden's pseudo R2	0.129	0.220

Source: Trajectoires et Origines, 2008.

**Figure A.1.1: Average marginal effects of diplomas depending on parents' region of birth in France**



Source: Trajectoires et Origines, 2008.

**Table A.1.4: Estimation of the probability of being overeducated by parents' region of birth with a control of the selection bias in France**

	Variables	(5)		(6)	
		Selection	Overeducation	Selection	Overeducation
	Migrant parents	0.761** (0.0922)	0.843 (0.0993)	0.735** (0.0904)	0.848 (0.106)
Diploma	"Baccalauréat professionnel et technologique"	0.658*** (0.0791)	0.307*** (0.0408)	0.656*** (0.0797)	0.250*** (0.0374)
	"Baccalauréat général"	0.722* (0.127)	0.647*** (0.104)	0.716* (0.127)	0.519*** (0.0903)
	"Bac +2"	Ref.	Ref.	Ref.	Ref.
	Bachelor's degree	0.988 (0.149)	0.581*** (0.0768)	0.981 (0.144)	0.658*** (0.0923)
	"Grande Ecole"	1.116 (0.277)	0.850 (0.179)	1.082 (0.273)	0.885 (0.200)
	Master's degree or PhD	1.038 (0.205)	0.723* (0.120)	0.959 (0.195)	0.927 (0.172)
	Two immigrant parents	0.685*** (0.0843)	0.782** (0.0941)	0.666*** (0.0833)	0.827 (0.107)
	Female	0.733*** (0.0815)	1.385*** (0.146)	0.746*** (0.0844)	1.531*** (0.173)
	Age	1.015 (0.0131)	0.986 (0.0118)	1.014 (0.0130)	0.999 (0.0131)
Field of study	General education	Ref.	Ref.	Ref.	Ref.
	Technicoprofessional areas of production	0.893 (0.154)	0.588*** (0.103)	0.890 (0.154)	0.580*** (0.109)
	Technicoprofessional areas of services	0.973 (0.124)	0.841 (0.0954)	0.963 (0.122)	0.776** (0.0951)
	Partner in activity		1.263** (0.145)		1.213 (0.152)
Father's occupation	Low skilled occupations	Ref.	Ref.	Ref.	Ref.
	Medium skilled occupations	1.142 (0.226)	1.117 (0.223)	1.116 (0.223)	1.141 (0.241)
	High skilled occupations	1.034 (0.233)	1.069 (0.238)	0.996 (0.226)	1.105 (0.262)
Mother's occupation	Low skilled occupations	Ref.	Ref.	Ref.	Ref.
	Medium skilled occupations	1.080 (0.135)	0.734*** (0.0879)	1.077 (0.138)	0.782* (0.102)
	High skilled occupations	0.985 (0.161)	0.674** (0.105)	0.964 (0.161)	0.728* (0.122)
Place of living	Living in Sensitive Urban Area	1.135 (0.205)	1.254 (0.205)	1.123 (0.200)	1.188 (0.207)
	Living in the Paris region	1.022 (0.108)	0.961 (0.0945)	1.031 (0.111)	0.908 (0.0965)
Industry	Agriculture, hunt, forestry				0.900 (0.779)
	Extractive industry				0.00208 (309.7)
	Manufacturing industry				0.699** (0.127)
	Production and distribution of electricity, gas and water				0.458 (0.259)
	Construction				0.446**

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					(0.143)
	Trade, motor vehicles, motorcycles and personal and household goods repairing				Ref.
	Hotel and catering				1.294 (0.343)
	Transports and communication				1.219 (0.240)
	Financial activities				0.942 (0.185)
	Real estate, renting and enterprise services				0.776 (0.141)
	Public administration				0.799 (0.144)
	Education				0.261*** (0.0621)
	Health and social work				0.395*** (0.0758)
	Other community, social and personal service activities				0.631* (0.157)
	Activities of household				2.002*** (0.501)
	Extra-territorial activities				0.810 (0.436)
	Permanent contract				0.738** (0.100)
	Family features	2.510*** (0.173)		0.386** (0.173)	
	Constant	0.354** (0.161)	1.214 (0.609)	7.233** (6.350)	1.450 (0.783)
	Observations	1,174	1,174	1,174	1,174
	Rho	0.999	0.999	-0.578	-0.578

Note: Rho is only statistically significant at the 10% threshold in the (6) model. The likelihood-ratio test validates the use of selection models, as the null hypothesis that the two equations are independent can be rejected, at the 0.05 threshold.

Source: Trajectoires et Origines, 2008.

**Box A.1.1. The French CSP classification**

The «*Catégories Socioprofessionnelles*» (CSP) classification was created in 1956. In 1982, it was replaced by the «*Professions et Catégories Socioprofessionnelles*» (PCS) classification after being modified with the 1982 census. Both are measuring the same thing and I will refer to the PCS one in this dissertation.

Despite some strong criticisms, this classification remains an irreplaceable tool to analyze the French society. The structuring of the classification was conceived at a time when the French society was structured into consisting social groups, often granted with a strong self-consciousness and powerful representative organizations (farmers, workers, owners, managers) (DESROSIÈRES, 2008). These empirical categories have lost some power in the 1980s as the groups determinants were eroding, partially because of the economic crisis, the labour market transformations and the unionization decrease (DESROSIÈRES, 2008). But the strength of the French classification relies on the “harmony between representations of specialists and neophytes, statisticians and sociologists, who use the same categorization” (CHAUVEL *et al.*, 2002, pages 4-5). This harmony has been implemented through the active participation of institutions in structuring the classification (collective agreement system, social security, unemployment insurance and civil servants’ status) (CHAUVEL *et al.*, 2002).

**Box A.1.1. The US-American Current Population Survey**

The CPS is probably one of the oldest continuous monthly sample surveys of households in the world. Initiated during the Great Depression, it officially started in 1940, and the Census Bureau was in charge to conduct it from 1942 and the BLS assumed then the major responsibility for it in 1959 (BREGGER, 1984). About 60,000 households are surveyed each month; a household is basically interviewed for four successive months, then not interviewed for eight months and then went back to the sample for four months after this break. An adult member of each household provides information for all the household's members. In order to portray the US-American population accurately, the CPS is redesigned every decade, after the decennial census and the demographics are adjusted. Nevertheless, one of the main redesigns happened in 1994 (CPS, 2002).

**Picture A.1.1.: Classification of occupations in ASEC survey**

- 1 Management occupations
- 2 Business and financial operations occupations
- 3 Computer and mathematical science occupations
- 4 Architecture and engineering occupations
- 5 Life, physical, and social science occupations
- 6 Community and social service occupation
- 7 Legal occupations
- 8 Education, training, and library occupations
- 9 Arts, design, entertainment, sports, and media occupations
- 10 Healthcare practitioner and technical occupations
- 11 Healthcare support occupations
- 12 Protective service occupations
- 13 Food preparation and serving related occupations
- 14 Building and grounds cleaning and maintenance occupations
- 15 Personal care and service occupations
- 16 Sales and related occupations
- 17 Office and administrative support occupations
- 18 Farming, fishing, and forestry occupations
- 19 Construction and extraction occupations
- 20 Installation, maintenance, and repair occupations
- 21 Production occupations
- 22 Transportation and material moving occupations
- 23 Armed Forces

Remark: “The occupational classification system used during Census 2000 consists of 509 specific occupational categories for employed people arranged into 23 major occupational groups. This classification was developed based on the Standard Occupational Classification (SOC) Manual: 2000, which includes a hierarchical structure showing 23 major occupational groups divided into 96 minor groups, 449 broad groups, and 821 detailed occupations. For Census 2000, tabulations with occupation as the primary characteristic present several levels of occupational detail. Some occupation groups are related closely to certain industries. Operators of transportation equipment, farm operators and workers, and healthcare providers account for major portions of their respective industries of transportation, agriculture, and health care. However, the industry categories include people in other occupations. For example, people employed in agriculture include truck drivers and bookkeepers; people employed in the transportation industry include mechanics, freight handlers, and payroll clerks; and people employed in the health care industry include occupations such as security guard and secretary”.

Source: CPS, 2008 ASEC dictionary.

**Picture A.1.2. UNESCO table of equivalence for the 1997 ISCED classification**

**Table 1. LEVELS OF EDUCATION AT A GLANCE**

How to determine the level of a programme		Name of the level	Code	Complementary dimensions
Proxy criteria for contents				
Main criteria	Subsidiary criteria			
Educational properties School or centre-based Minimum age Upper age limit	Staff qualification	Pre-primary education	0	None
Beginning of systematic apprenticeship of reading, writing and mathematics	Entry into the nationally designated primary institutions or programmes Start of compulsory education	Primary education First stage of basic education	1	None
Subject presentation Full implementation of basic skills and foundation for lifelong learning	Entry after some 6 years of primary education End of the cycle after 9 years since the beginning of primary education End of compulsory education Several teachers conduct classes in their field of specialization	Lower secondary education Second stage of basic education	2	Type of subsequent education or destination Programme orientation
Typical entrance qualification Minimum entrance requirement		(Upper) secondary education	3	Type of subsequent education or destination Programme orientation Cumulative duration since the beginning of ISCED level 3
Entrance requirement; Content; Age; Duration		Post-secondary non tertiary education	4	Type of subsequent education or destination Cumulative duration since the beginning of ISCED level 3 Programme orientation
Minimum entrance requirement; Type of certification obtained; Duration		First stage of tertiary education (not leading directly to an advanced research qualification)	5	Type of programmes Cumulative theoretical duration at tertiary National degree and qualification structure
Research-oriented content; Submission of thesis or dissertation	Prepare graduates for faculty and research posts	Second stage of tertiary education (leading to an advanced research qualification)	6	None

Source: UNESCO documentation.

**Picture A.1.3. Table of equivalence between diplomas in *Trajectoires et Origines* and the 1997 ISCED classification**

**Table de passage entre les Diplômes de TeO et la nomenclature Isced (Cite97)**

Diplômes du tronc commun	ISCED	ISCEDO
<b>1- aucun diplôme, 2- CEP, 3- brevet des collèges, BEPC</b>		
1-pas de scolarisation, mais alphabétisation, apprentissage du français	0	0
2-scolarité en école primaire	1	1
3-scolarité au collège (de la 6 <sup>ème</sup> à la 3 <sup>ème</sup> )	2	2
4-scolarité au-delà du collège	2	2
5-aucun diplôme, sans autre indication	2	2
<b>4-CAP, BEP ou diplôme de ce niveau</b>	<b>3Cm</b>	<b>3</b>
1-CAP, CAPA, mention complémentaire au CAP	3Cm	3
2-BEP, BEPA, mention complémentaire au BEP	3Cm	3
3-Autres diplômes et titres de niveau CAP ou BEP : brevet de compagnon, aide soignante, auxiliaire de vie, titre AFPA 1 <sup>er</sup> degré...	3Cm	3
4-CAP, BEP ou diplôme de ce niveau, sans autre indication	3Cm	3
<b>5- Baccalauréat technologique ou professionnel ou diplôme de ce niveau</b>		
1-Baccalauréat technologique (séries F, G, H, SMS, STI, STL, STT)	3A	3
2-Baccalauréat professionnel	3B	3
3-Brevet professionnel (BP, BPA) ou de technicien (BT, BTA) ou de maîtrise, Brevet d'enseignement agricole (BEA), commercial (BEC), industriel (BEI), hôtelier (BEH), brevet supérieur d'enseignement commercial (BSEC)	3CI	3
4-Baccalauréat technologique ou professionnel ou diplôme de ce niveau, sans autre indication.	3CI	3
<b>6- Baccalauréat général (séries A, B, C, D, E, ES, L, S), brevet supérieur, capacité en droit, DAEU, ou diplôme étranger de même niveau</b>	<b>3A</b>	<b>3</b>
<b>7- Diplôme de niveau Bac+2</b>		
1- Diplôme de 1 <sup>er</sup> cycle universitaire, propédeutique, DUEL, DUES, DEUG, PCEM, certificat d'aptitude pédagogique, certificat de fin d'études normales (CFEN)	5As	5
2- BTS (brevet de technicien supérieur), DUT (diplôme universitaire de technologie), DEUST (diplôme d'études universitaires scientifiques et techniques) ou de niveau équivalent d'un institut ou d'une école juridique, commerciale, d'arts appliqués, y compris 1 <sup>er</sup> cycle des écoles de notariat, secrétariat de direction, marine marchande, , CNAM...	5B	5
3-Diplôme des professions sociales et de la santé de niveau bac+2 (infirmière, kinésithérapeute, assistante sociale, éducateur spécialisé, ...)	5B	5
4- Diplôme de niveau Bac+2, sans autre indication	5B	
<b>8- Diplôme de niveau supérieur à Bac+2</b>		
1- Diplôme de 2 <sup>ème</sup> cycle universitaire (licence, maîtrise), IUFM, CAPE, CAPES, CAPET, agrégation...	5Am	5
2- Diplôme d'une grande école (ingénieur, commerce...), diplôme d'études comptables supérieures (DECS), d'avocat (CAPA), d'expert-comptable, 2 <sup>è</sup> cycle de notariat, ingénieur du CNAM,...	5AI	5
3- Diplôme de 3 <sup>ème</sup> cycle universitaire (DES, DEA, DESS, master), doctorat des professions de santé (médecine, pharmacie, chirurgien-dentiste)	5AI	5
4-Autre doctorat de 3 <sup>ème</sup> cycle universitaire hors professions de santé	6	6
5- Diplôme de niveau supérieur à Bac+2, sans autre indication	5A	5

Source: *Trajectoires et Origines* documentation.

**Picture A.1.4. Table of equivalence between occupations in *Trajectoires et Origines* and the 1988 ISCO classification**

Nomenclature ISCO (ou CITP) 88

ISCO 1 position		ISCO , 2 positions	
code	libellé	code	libellé
0	FORCES ARMEES	01	Forces armées
		12	Directeurs de société
		13	Dirigeants et gérants de petites entreprises <sup>1</sup>
2	PROFESSIONS INTELLECTUELLES ET SCIENTIFIQUES	21	Spécialistes des sciences physiques, mathématiques et techniques
		22	Spécialistes des sciences de la vie et de la santé
		23	Spécialistes de l'enseignement
		24	Autres spécialistes des professions intellectuelles et scientifiques
3	PROFESSIONS INTERMÉDIAIRES	31	Professions intermédiaires des sciences physiques et techniques
		32	Professions intermédiaires des sciences de la vie et de la santé
		33	Professions intermédiaires de l'enseignement
		34	Autres professions intermédiaires
4	EMPLOYÉS DE TYPE ADMINISTRATIF	41	Employés de bureau <sup>1</sup>
		42	Employés de réception, caissiers, quichetiers et assimilés
5	PERSONNEL DES SERVICES ET VENDEURS DE MAGASIN ET DE MARCHÉ	51	Personnel des services directs aux particuliers et des services de protection et de sécurité
		52	Modèles, vendeurs et démonstrateurs
6	AGRICULTEURS ET OUVRIERS QUALIFIÉS DE L'AGRICULTURE ET DE LA PECHE	61	Agriculteurs et ouvriers qualifiés de l'agriculture et de la pêche <sup>1</sup>
7	ARTISANS ET OUVRIERS DES MÉTIERS DE TYPE ARTISANAL <sup>1</sup>	71	Artisans et ouvriers des métiers de l'extraction et du bâtiment
		72	Artisans et ouvriers des métiers de la métallurgie, de la construction mécanique et assimilés
		73	Artisans et ouvriers de la mécanique de précision, des métiers d'art, de l'imprimerie et assimilés
		74	Autres artisans et ouvriers des métiers de type artisanal
8	CONDUCTEURS D'INSTALLATIONS ET DE MACHINES ET OUVRIERS DE L'ASSEMBLAGE	81	Conducteurs d'installations et de matériels fixes et assimilés <sup>1</sup>
		82	Conducteurs de machines et ouvriers de l'assemblage
		83	Conducteurs de véhicules et d'engins lourds de levage et de manoeuvre
9*	OUVRIERS ET EMPLOYÉS NON QUALIFIÉS <sup>1</sup>	91	Employés non qualifiés des services et de la vente
		92	Manoeuvres de l'agriculture, de la pêche et assimilés
		93	Manoeuvres des mines, du bâtiment et des travaux publics, des industries manufacturières et des transports

Source: *Trajectoires et Origines* documentation.

**Table A.1.5: Estimation of the probability of being overeducated by parents' region of birth in France**

Variables	(3)	(4)
North Africa	1.254** (0.122)	1.037 (0.116)
SubSaharan Africa	1.121 (0.150)	0.940 (0.143)
Asia	1.096 (0.128)	0.919 (0.125)
South Europe	1.186* (0.119)	1.211* (0.135)
North and Continental Europe	1.021 (0.175)	0.938 (0.184)
East Europe	1.116 (0.283)	0.956 (0.264)
Others	1.013 (0.265)	0.822 (0.263)
High level of education	0.642*** (0.0532)	0.506*** (0.0513)
Two immigrant parents	1.109 (0.0957)	1.103 (0.108)
Woman	1.366*** (0.0902)	1.701*** (0.132)
Age	0.948*** (0.00776)	0.969*** (0.00957)
Paris region	0.915 (0.0624)	0.948 (0.0727)
Trade	Ref.	Ref.
Teching and health		0.239*** (0.0308)
Administration		0.430*** (0.0621)
Industry		0.377*** (0.0503)
Services		0.581*** (0.0659)
Permanent contract		0.723*** (0.0677)
Constant	2.705*** (0.690)	3.343*** (0.986)
Observations	1,732	1,492
McFadden's pseudo R2	0.0608	0.155

Source: *Trajectoires et Origines*, 2008. Note: seEform in parentheses; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

**Table A.1.6: Estimation of the probability of being overeducated by immigrant parents with a control of the selection bias in France**

Variables	(5)		(6)	
	Selection	Overeducation	Selection	Overeducation
Migrant parents	0.774*** (0.0727)	1.074 (0.116)	0.774*** (0.0737)	1.035 (0.106)
High level of education	0.915 (0.0877)	0.502*** (0.0478)	0.896 (0.0862)	0.504*** (0.0551)
Two immigrant parents	0.854* (0.0819)	1.070 (0.105)	0.855 (0.0830)	1.077 (0.104)
Woman	0.931 (0.0781)	1.472*** (0.120)	0.955 (0.0797)	1.694*** (0.128)
Age	1.039*** (0.0124)	0.956*** (0.0119)	1.038*** (0.0123)	0.971*** (0.00967)
Paris region	1.258*** (0.106)	0.936 (0.0806)	1.244** (0.106)	0.913 (0.0760)
Trade	Ref.	Ref.	Ref.	Ref.
Teching and health				0.231*** (0.0321)
Administration				0.421*** (0.0595)
Industry				0.375*** (0.0499)
Services				0.563*** (0.0626)
Permanent contract				0.730*** (0.0656)
Familial features	0.854*** (0.0424)		0.865*** (0.0433)	
Constant	2.310** (0.891)	1.825 (0.758)	2.262** (0.867)	3.512*** (1.138)
Observations	1,886	1,886	1,886	1,886
Rho	0.319	0.319	-0.214	-0.214

Note: Rho is statistically significant at the 10% threshold in model (6). The likelihood-ratio test validates the use of selection models, as the null hypothesis that the two equations are independent can be rejected, at the 0.05 threshold.

Source: *Trajectoires et Origines*, 2008.

**Table A.1.7: Estimation of the probability of being overeducated by parents' region of birth in the United States**

Variables	(3)	(4)
Mexico	1.087 (0.150)	1.038 (0.151)
Puerto Rico	1.531 (0.405)	1.559 (0.434)
Asia	0.931 (0.257)	0.897 (0.255)
South East Asia	0.872 (0.137)	0.911 (0.147)
Africa and Middle East	1.285 (0.310)	0.992 (0.254)
Canada and North Europe	0.968 (0.111)	0.894 (0.108)
South and East Europe	1.148 (0.194)	1.025 (0.191)
Caribbean	0.765 (0.212)	0.728 (0.203)
Latin America	0.792 (0.160)	0.668* (0.145)
Other	2.914* (1.757)	3.212* (1.984)
High education level	0.339*** (0.0151)	0.382*** (0.0183)
Woman	0.838*** (0.0232)	1.045 (0.0323)
Age	0.983*** (0.00343)	0.985*** (0.00365)
Trade	Ref.	Ref.
Teaching and health		0.182*** (0.0103)
Public administration		0.526*** (0.0381)
Industry		0.502*** (0.0314)
Other services		0.398*** (0.0209)
Health insurance		0.685*** (0.0211)
Constant	1.649*** (0.171)	4.831*** (0.574)
Observations	9,055	9,055
McFadden's pseudo R2	0.0685	0.178

Source: Current Population Survey, 2008.

**Table A.1.8: Estimation of the probability of being overeducated by immigrant parents with a control of the selection bias in the United States**

Variables	(5)		(6)	
	Selection	Overeducation	Selection	Overeducation
Natives	1.227 (0.274)	0.955 (0.0781)	1.246 (0.278)	0.953 (0.0807)
High education level	1.155 (0.134)	0.330*** (0.0177)	1.153 (0.134)	0.364*** (0.0212)
Two immigrant parents	0.999 (0.313)	1.042 (0.118)	1.013 (0.317)	1.070 (0.126)
Woman	0.892 (0.0769)	0.820*** (0.0289)	0.899 (0.0780)	1.040 (0.0421)
Age	1.019 (0.0125)	0.989** (0.00521)	1.019 (0.0125)	0.984*** (0.00552)
Trade	Ref.	Ref.	Ref.	Ref.
Teaching and health				0.192*** (0.0148)
Public administration				0.586*** (0.0539)
Industry				0.503*** (0.0403)
Other services				0.406*** (0.0292)
Health insurance				0.735*** (0.0288)
Family features	1.138*** (0.0536)		1.144*** (0.0551)	
Constant	3.638*** (1.790)	1.320 (0.264)	3.521** (1.730)	2.669 (4.041)
Observations	5,742	5,742	5,742	5,742
Rho	0.948	0.948	0.754	0.754

Note: Rho are not statistically significant at the 10% threshold. The likelihood-ratio shows that the null hypothesis that the two equations are independent can be rejected, at the 0.05 threshold.

Source: Current Population Survey, 2008.

**Table A.1.9: Estimation of the overeducation by parents' region of birth in France, controlling for the selection bias and unemployment considered as a potential situation of overeducation**

Variables	(7)		(8)	
	Selection	Overeducation	Selection	Overeducation
Natives	Ref.	Ref.	Ref.	Ref.
North Africa	0.631*** (0.0717)	1.335*** (0.124)	0.657*** (0.0758)	1.246** (0.123)
SubSaharan Africa	0.773 (0.126)	1.169 (0.150)	0.802 (0.130)	1.036 (0.139)
Asia	0.705*** (0.0949)	1.133 (0.126)	0.726** (0.0980)	1.065 (0.125)
South Europe	1.063 (0.143)	1.209** (0.116)	1.084 (0.145)	1.164 (0.118)
North and Continental Europe	0.817 (0.167)	1.048 (0.169)	0.783 (0.159)	1.005 (0.173)
East Europe	0.911 (0.299)	1.141 (0.284)	0.969 (0.313)	0.979 (0.246)
Others	0.757 (0.231)	0.936 (0.236)	0.787 (0.238)	0.984 (0.266)
High level of education	0.932 (0.0886)	0.617*** (0.0498)	0.905 (0.0872)	0.627*** (0.0556)
Two immigrant parents	0.934 (0.101)	1.121 (0.0937)	0.912 (0.0984)	1.097 (0.0963)
Woman	0.924 (0.0762)	1.431*** (0.0914)	0.934 (0.0767)	1.566*** (0.107)
Age	1.024** (0.0107)	0.952*** (0.00749)	1.021** (0.0107)	0.969*** (0.00851)
Paris region	1.274*** (0.110)	0.875** (0.0569)	1.293*** (0.113)	0.891* (0.0612)
Trade	Ref.	Ref.	Ref.	Ref.
Teching and health				0.308*** (0.0329)
Administration				0.484*** (0.0593)
Industry				0.441*** (0.0506)
Services				0.615*** (0.0619)
Permanent contract				0.758*** (0.0563)
Familial features	0.946 (0.0326)		0.955 (0.0337)	
Constant	2.298*** (0.719)	2.369*** (0.582)	2.343*** (0.736)	3.519*** (0.935)
Observations	1,694	1,694	1,694	1,694
Rho	-0.983	-0.983	-0.978	-0.978

Note: Rho are statistically significant at the 10% threshold in model (8). The likelihood-ratio test validates the use of selection models, as the null hypothesis that the two equations are independent can be rejected, at the 0.05 threshold.

Source: Trajectoires et Origines, 2008.

**Table A.1.10: Estimation of overeducation by parents' region of birth in the United States, with a selection model and unemployment as a potential situation of overeducation**

Variables	(7)		(8)	
	Selection	Overeducation	Selection	Overeducation
Natives	Ref.	Ref.	Ref.	Ref.
Mexico	1.076 (0.239)	1.037 (0.182)	1.083 (0.241)	0.950 (0.179)
Puerto Rico	164.0 (199,024)	1.328 (0.431)	165.8 (181,640)	1.548 (0.537)
Asia	109.6 (419,039)	0.272** (0.149)	128.7 (320,067)	0.343** (0.173)
South East Asia	0.986 (0.281)	0.842 (0.210)	0.985 (0.282)	0.856 (0.223)
Africa and Middle East	170.2 (192,929)	0.658 (0.254)	171.1 (231,880)	0.577 (0.237)
Canada and North Europe	0.893 (0.145)	0.902 (0.131)	0.897 (0.147)	0.854 (0.134)
South and East Europe	1.417 (0.453)	0.921 (0.208)	1.394 (0.446)	0.925 (0.231)
Carribbean	0.679 (0.329)	0.770 (0.352)	0.684 (0.332)	0.700 (0.326)
Latin America	1.241 (0.480)	0.524** (0.167)	1.235 (0.479)	0.493** (0.168)
High education level	1.326*** (0.0754)	0.345*** (0.0228)	1.329*** (0.0759)	0.372*** (0.0215)
Woman	0.529*** (0.0244)	0.943 (0.0716)	0.533*** (0.0246)	1.109* (0.0674)
Age	1.018*** (0.00624)	0.987** (0.00512)	1.018*** (0.00625)	0.984*** (0.00555)
Trade	Ref.	Ref.	Ref.	Ref.
Teaching and health				0.193*** (0.0174)
Public administration				0.577*** (0.0537)
Industry				0.513*** (0.0408)
Other services				0.411*** (0.0293)
Health insurance				0.699*** (0.0282)
Family features	0.802*** (0.0248)		0.797*** (0.0240)	
Constant	4.561*** (0.880)	1.615*** (0.267)	4.552*** (0.884)	5.121*** (0.956)
Observations	6,359	6,359	6,359	6,359
Rho	-0.579	-0.579	-0.369	-0.369

Note: Rho are statistically significant at the 10% threshold at least. The likelihood-ratio test does not assess the need for selection models, as the null hypothesis that the two equations are independent cannot be rejected, at the 0.05 threshold.

Source: Current Population Survey, 2008.

**Table A.1.11: Estimation of the probability of being overeducated by parents' region of birth with a control of being "Black" in the United States**

Variables	(3)	(4)
Natives	Ref.	Ref.
Mexico	1.104 (0.152)	1.059 (0.154)
Puerto Rico	1.499 (0.395)	1.516 (0.419)
Asia	0.944 (0.261)	0.914 (0.260)
South East Asia	0.884 (0.139)	0.928 (0.150)
Africa and Middle East	1.282 (0.310)	0.988 (0.254)
Canada and North Europe	0.978 (0.112)	0.908 (0.110)
South and East Europe	1.161 (0.197)	1.038 (0.194)
Carribbean	0.719 (0.201)	0.669 (0.188)
Latin America	0.792 (0.161)	0.667* (0.145)
Other	2.954* (1.781)	3.273* (2.022)
High education level	0.339*** (0.0151)	0.382*** (0.0184)
Woman	0.834*** (0.0231)	1.038 (0.0321)
Age	0.983*** (0.00343)	0.985*** (0.00365)
Being "Blanck"	1.181*** (0.0582)	1.246*** (0.0645)
Trade		Ref.
Teaching and health		0.181*** (0.0102)
Public administration		0.517*** (0.0375)
Industry		0.503*** (0.0315)
Other services		0.396*** (0.0208)
Health insurance		0.685*** (0.0211)
Constant	1.623*** (0.169)	4.759*** (0.566)
Observations	9,055	9,055
McFadden's pseudo R2	0.0694	0.180

Source: Current Population Survey, 2008.

**Table A2.1. Employment quality by parents' place of birth in France**

	Natives	North Africa	South Europe	SubSaharan Africa	East Europe	North Europe
Average monthly wage (in Euros)	1877	1610	1717	1440	1848	1971
Type of contract (in %)						
<i>Fixed term contract</i>	17,9	19,5	16,5	22,5	17,7	21,4
<i>Permanent contract</i>	82,2	80,5	83,5	77,6	82,3	78,6
Working time (in %)						
<i>Involuntary part-time</i>	17,7	19,6	16,4	21,2	18,8	18,4
<i>Voluntary part-time</i>	1,1	0,7	1,1	2,3	1,0	3,4
<i>Full-time</i>	81,2	79,7	82,6	76,6	80,2	78,2
Total	25217	681	1213	152	200	296

Source: *enquêtes Emploi en continu* 2008-2012, Insee.

**Table A2.2. Employment quality by parents' place of birth in the United States**

	Native-born parents	Mexico	Puerto Rico	Asia	Canada	North Europe	South Europe	East Europe	Caribbean	Latin America	Other
Average monthly wage (in dollars)	4120	2821	3097	4287	4569	4712	5487	6005	3094	3027	4024
Type of contract (in %)											
<i>Without health insurance</i>	41,4	55,0	44,2	40,2	39,6	38,1	37,8	31,9	47,5	56,1	54,2
<i>With health insurance</i>	58,7	45,0	55,8	59,9	60,4	61,9	62,2	68,1	52,5	43,9	45,9
Working time (in %)											
<i>Involuntary part-time</i>	8,8	11,0	7,3	11,8	9,0	11,5	10,6	5,7	12,0	12,7	9,6
<i>Voluntary part-time</i>	17,6	16,3	23,3	14,4	20,1	17,6	16,5	12,1	16,5	21,5	20,3
<i>Full-time</i>	73,6	72,8	69,4	73,9	70,9	70,9	73,0	82,2	71,5	65,8	70,1
Total	58778	1716	389	717	361	714	555	179	236	414	436

Source: Current Population Survey 2008-2012, BLS.

**Table A.2.3. Estimation of job satisfaction in France and in the United States**

<b>Dependent variable: <i>Job Satisfaction</i></b>			
	All	France	United States
High Income	0.193*** (0.0228)	0.143*** (0.0319)	0.235*** (0.0330)
Working Hours	0.200*** (0.0465)	0.171** (0.0674)	0.261*** (0.0652)
Job Security	-0.256*** (0.0483)	-0.219*** (0.0692)	-0.174** (0.0717)
Working Conditions	0.0689*** (0.0229)	0.0676** (0.0313)	0.0761** (0.0341)
Job Content	-0.265*** (0.0168)	-0.201*** (0.0269)	-0.292*** (0.0224)
Working Relations	-0.590*** (0.0539)	-0.590*** (0.0821)	-0.574*** (0.0723)
Constant	-2.057*** (0.146)	-1.807*** (0.218)	-2.059*** (0.202)
Observations	2,092	1,014	1,078
Log Likelihood	-2983,97	-1408,93	-1516,05
Log Likelihood at zero	-3323,55	-1513,63	-1711,86
Pseudo R <sup>2</sup>	0,1022	0,0692	0,1144

Note: Standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Source: International Social Survey Programme, 2005.

**Table A.2.4. Estimation of employment quality in France**

	Model 1		Model 2		Model 3	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Migrants' offspring	-0.0962*** (0.0122)	0.0262*** (0.00649)	-0.119*** (0.0126)	0.00185 (0.0191)	-0.116*** (0.0126)	-0.0321* (0.0191)
Female	-0.155*** (0.00583)	-0.173*** (0.00307)	-0.220*** (0.00610)	-0.759*** (0.0116)	-0.223*** (0.00603)	-0.0212** (0.0105)
15-29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
30-49	0.812*** (0.00814)	0.0221*** (0.00438)	0.976*** (0.00805)	-0.0965*** (0.0150)	0.959*** (0.00809)	0.648*** (0.0154)
50-64	0.132*** (0.00861)	0.279*** (0.00477)	0.151*** (0.00936)	0.0756*** (0.0136)	0.128*** (0.00942)	1.070*** (0.0176)
No diploma	-0.370*** (0.00951)	-0.0872*** (0.00556)	-0.429*** (0.00961)	0.00681 (0.0163)	-0.429*** (0.00960)	0.0320** (0.0162)
Brevet des collèges/BEPC	-0.455*** (0.0102)	0.0648*** (0.00641)	-0.478*** (0.0103)	0.0849*** (0.0187)	-0.480*** (0.0103)	0.0366** (0.0182)
BEP/CAP	0.0394*** (0.00853)	-0.0661*** (0.00422)	0.0625*** (0.00909)	0.0477*** (0.0130)	0.0597*** (0.00906)	0.0293** (0.0134)
Baccalauréat	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Bac +2	0.343*** (0.0107)	-0.00333 (0.00474)	0.435*** (0.0117)	0.00164 (0.0153)	0.428*** (0.0116)	0.0607*** (0.0167)
Licence ou plus	0.405*** (0.0107)	0.00655 (0.00550)	0.427*** (0.0112)	-0.0298* (0.0167)	0.424*** (0.0112)	-0.0794*** (0.0177)
Two parents immigrant	-0.0417** (0.0174)	-0.00155 (0.00918)	-0.0458** (0.0179)	0.0360 (0.0273)	-0.0422** (0.0179)	0.0381 (0.0271)
Live outside Paris' suburbs, not in a sensitive urban area	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Live in Paris' suburbs, not in a sensitive urban area	0.0551*** (0.00842)	0.128*** (0.00404)	0.0686*** (0.00899)	0.231*** (0.0135)	0.0718*** (0.00896)	0.144*** (0.0140)
Live outside Paris' suburbs, in a sensitive urban area	-0.180*** (0.0155)	0.0189** (0.00860)	-0.199*** (0.0160)	0.0170 (0.0247)	-0.188*** (0.0160)	-0.00921 (0.0246)
Live in Paris' suburbs, not in a sensitive urban area	-0.0104 (0.0286)	0.0719*** (0.0141)	0.0129 (0.0309)	0.264*** (0.0488)	0.0304 (0.0311)	0.134*** (0.0490)
Year	-0.00381* (0.00208)	0.0119*** (0.00103)	-0.00394* (0.00220)	-0.00626** (0.00312)	-0.00436** (0.00220)	-0.00977*** (0.00328)
Agriculture		-0.0619*** (0.0109)		-0.151*** (0.0391)		0.0302 (0.0368)
Industry		0.136*** (0.00357)		0.510*** (0.0170)		0.547*** (0.0171)
Construction		0.109*** (0.00507)		0.532*** (0.0266)		0.510*** (0.0219)
Wholesale and retail trade		0.00207 (0.00383)		0.121*** (0.0135)		0.419*** (0.0157)

Appendices

Transportation and utilities		0.160*** (0.00481)		0.327*** (0.0226)		0.686*** (0.0270)
Financial, information, professional and business services		0.0408*** (0.00371)		0.0321** (0.0127)		-0.134*** (0.0124)
Public sector	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Leisure and hospitality		-0.0903*** (0.00742)		-0.228*** (0.0224)		0.215*** (0.0239)
Other services		-0.289*** (0.00740)		-0.362*** (0.0167)		-0.129*** (0.0181)
Craftmen, retailers and business owners		0.910*** (0.143)		1.367** (0.615)		1.761*** (0.658)
Managerial and professional occupations		0.535*** (0.143)		1.213** (0.615)		1.538** (0.658)
Mid-level occupations		0.316** (0.143)		0.968 (0.615)		1.416** (0.658)
Clerks		0.304** (0.143)		1.053* (0.615)		1.103* (0.658)
Workers	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
No children	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
One child	0.0129** (0.00613)		0.0441*** (0.00812)		0.0441*** (0.00794)	
Two children	-0.0821*** (0.00649)		-0.0830*** (0.00886)		-0.0813*** (0.00837)	
Three children or more	-0.325*** (0.00844)		-0.429*** (0.0105)		-0.428*** (0.00990)	
Being in couple	0.155*** (0.00557)		0.159*** (0.00740)		0.199*** (0.00728)	
Constant	7.727* (4.174)	-16.91*** (2.072)	7.996* (4.429)	12.96** (6.297)	8.847** (4.419)	18.91*** (6.613)
Observations	209,381	209,381	209,381	209,381	209,381	209,381
rho	-0.889	-0.889	-0.423	-0.423	-0.712	-0.712

Note: Wage estimations use Heckman selection model, whereas working time and job security estimations are binomial probits with selection. Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance.

Scope: Natives and native-born with migrant parents, from 15 to 64 years old, in metropolitan France.

Source: *enquêtes Emploi en continu* 2008-2012, Insee.

**Table A.2.5. Estimation of employment quality in the United States**

	Model 4		Model 5		Model 6	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Migrants' offspring	0.00193 (0.0200)	0.0232** (0.0109)	-0.0171 (0.0216)	-0.0490* (0.0263)	-0.0135 (0.0213)	-0.00420 (0.0163)
Female	-0.0328*** (0.00792)	-0.496*** (0.00486)	0.0822*** (0.00847)	-0.492*** (0.0131)	-0.103*** (0.00848)	-0.427*** (0.00752)
15-29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
30-49	0.288*** (0.0124)	0.201*** (0.00777)	0.360*** (0.0132)	0.0687*** (0.0177)	0.339*** (0.0132)	0.223*** (0.0111)
50-64	0.218*** (0.0134)	0.245*** (0.00821)	0.246*** (0.0143)	0.0163 (0.0182)	0.248*** (0.0142)	0.302*** (0.0117)
No diploma	-0.187*** (0.0456)	-0.320*** (0.0334)	-0.293*** (0.0446)	-0.223*** (0.0563)	-0.283*** (0.0444)	-0.479*** (0.0412)
High school without diploma	-0.301*** (0.0173)	-0.172*** (0.0122)	-0.381*** (0.0179)	-0.121*** (0.0258)	-0.369*** (0.0179)	-0.383*** (0.0168)
High school degree	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Associate degree	0.145*** (0.0122)	0.0907*** (0.00662)	0.179*** (0.0135)	-0.0153 (0.0163)	0.167*** (0.0133)	0.100*** (0.0103)
Bachelor's degree	0.314*** (0.0107)	0.240*** (0.00613)	0.306*** (0.0113)	0.0705*** (0.0154)	0.285*** (0.0111)	0.195*** (0.00897)
Master's degree	0.323*** (0.0160)	0.394*** (0.00837)	0.367*** (0.0170)	0.129*** (0.0231)	0.345*** (0.0167)	0.282*** (0.0130)
Professional school degree	0.780*** (0.0429)	0.822*** (0.0187)	0.648*** (0.0453)	0.106** (0.0454)	0.603*** (0.0438)	0.268*** (0.0261)
PhD.	0.701*** (0.0506)	0.677*** (0.0190)	0.640*** (0.0495)	0.0388 (0.0497)	0.609*** (0.0486)	0.284*** (0.0296)
Two parents immigrant	-0.00804 (0.0286)	0.00357 (0.0154)	0.0288 (0.0309)	0.0246 (0.0377)	0.0366 (0.0307)	-0.00398 (0.0234)
Live in metropolitan areas	0.0188** (0.00908)	0.161*** (0.00506)	0.0195** (0.00980)	0.0624*** (0.0120)	0.0213** (0.00967)	0.0570*** (0.00765)
Year	-0.456*** (0.00471)	0.116*** (0.00258)	-0.516*** (0.00475)	-0.0334*** (0.00822)	-0.509*** (0.00473)	-0.149*** (0.00442)
Agriculture		-0.444*** (0.0346)		-0.460*** (0.0585)		-0.810*** (0.0370)
Industry		0.173*** (0.00673)		0.308*** (0.0254)		0.0998*** (0.0123)
Construction		-0.0108 (0.0102)		-0.292*** (0.0302)		-0.414*** (0.0170)
Wholesale and retail trade		-0.0888*** (0.00779)		-0.161*** (0.0202)		-0.205*** (0.0122)
Transportation and utilities		0.154*** (0.00840)		-0.0303 (0.0267)		0.0231 (0.0150)
Financial, information, professional and business services		0.0844*** (0.00591)		-0.0420*** (0.0162)		-0.217*** (0.00931)
Public sector		Ref.		Ref.		Ref.
Leisure and hospitality		-0.264*** (0.0104)		-0.366*** (0.0213)		-0.510*** (0.0153)
Other services		-0.202*** (0.0112)		-0.250*** (0.0249)		-0.616*** (0.0169)
Management, business, and financial occupations		0.556*** (0.00991)		0.632*** (0.0284)		0.260*** (0.0161)
Professional and related occupations		0.269***		0.270***		0.157***

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		(0.00995)		(0.0274)		(0.0164)
Service occupations		-0.0351*** (0.0105)		0.0496* (0.0270)		-0.0797*** (0.0169)
Sales and related occupations		0.264*** (0.0113)		0.265*** (0.0279)		0.00826 (0.0174)
Office and administrative support occupations		0.160*** (0.00955)		0.467*** (0.0270)		0.204*** (0.0160)
Farming, fishing, and forestry occupations		0.214*** (0.0442)		0.340*** (0.0876)		0.0404 (0.0566)
Construction and extraction occupations		0.187*** (0.0128)		0.262*** (0.0383)		0.121*** (0.0219)
Installation, maintenance, and repair occupations		0.227*** (0.0108)		0.518*** (0.0399)		0.245*** (0.0200)
Production occupations		0.0548*** (0.0108)		0.252*** (0.0345)		0.184*** (0.0191)
Transportation and material moving occupations		Ref.		Ref.		Ref.
No children	Ref.		Ref.		Ref.	
One child	0.0508*** (0.00947)		0.0616*** (0.0115)		0.0807*** (0.0107)	
Two children	0.0719*** (0.0104)		0.0646*** (0.0125)		0.104*** (0.0116)	
Three children or more	-0.0206 (0.0130)		- 0.0595*** (0.0152)		0.0172 (0.0142)	
Being in couple	0.174*** (0.00832)		0.213*** (0.0101)		0.278*** (0.00933)	
Constant	916.7*** (9.461)	-226.2*** (5.193)	1,037*** (9.548)	68.69*** (16.50)	1,023*** (9.508)	299.7*** (8.869)
Observations	173,146	173,146	173,146	173,146	173,146	173,146
rho	-0.860	-0.860	-0.415	-0.415	0.840	0.840

Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance.

Note: Wage estimations use Heckman selection model, whereas working time and job security estimations are binomial probits with selection.

Scope: Natives and native-born with migrant parents, from 15 to 64 years old, in metropolitan France.

Source: *enquêtes Emploi en continu* 2008-2012, Insee.

Table A.2.6. Estimation of hourly wage in France

	Model 1b	
	Job access	Wage
Native	Ref.	Ref.
Migrants' offspring	-0.108*** (0.0141)	0.920 (1.045)
Female	-0.243*** (0.00673)	-1.958*** (0.316)
15-29	Ref.	Ref.
30-49	1.073*** (0.00899)	1.504*** (0.297)
50-64	0.191*** (0.0109)	4.238*** (0.558)
No diploma	-0.454*** (0.0107)	-1.957*** (0.303)
Brevet des collèges/BEPC	-0.472*** (0.0115)	-0.793** (0.366)
BEP/CAP	0.0748*** (0.0101)	-0.789*** (0.292)
Baccalauréat	Ref.	Ref.
Bac +2	0.446*** (0.0129)	0.635* (0.370)
Licence ou plus	0.299*** (0.0129)	2.809*** (0.708)
Two parents immigrant	-0.0613*** (0.0202)	-1.455 (1.072)
Live outside Paris' suburbs, not in a sensitive urban area	Ref.	Ref.
Live in Paris' suburbs, not in a sensitive urban area	-0.0242** (0.0103)	1.737*** (0.508)
Live outside Paris' suburbs, in a sensitive urban area	-0.186*** (0.0177)	-0.124 (0.584)
Live in Paris' suburbs, not in a sensitive urban area	-0.107*** (0.0365)	0.373 (0.324)
Year	0.00720*** (0.00246)	-0.286** (0.128)
Agriculture		-1.522*** (0.361)
Industry		1.130 (0.689)
Construction		-0.582* (0.341)
Wholesale and retail trade		-0.992** (0.434)
Transportation and utilities		0.480 (0.486)
Financial, information, professional and business services		-0.478 (0.434)
Public sector		Ref.
Leisure and hospitality		-1.546***

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		(0.292)
Other services		-1.080*** (0.369)
Craftmen, retailers and business owners		11.68*** (0.858)
Managerial and professional occupations		3.574*** (0.620)
Mid-level occupations		1.949*** (0.599)
Clerks		1.209** (0.595)
Workers		Ref.
No children	Ref.	
One child	0.0501*** (0.00905)	
Two children	-0.0754*** (0.00950)	
Three children or more	-0.474*** (0.0116)	
Being in couple	0.171*** (0.00818)	
Constant	-14.66*** (4.939)	583.1** (257.5)
Observations	165,132	165,132
rho	-0.00353	-0.00353

Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance.

Note: Wage estimations use Heckman selection model.

Scope: Natives and native-born with migrant parents, from 15 to 64 years old, in metropolitan France.

Source: enquêtes Emploi en continu 2008-2012, Insee.

Table A.2.7. Estimation of hourly wage in the United States

	Model 4b	
	Job access	Wage
Native	Ref.	Ref.
Migrants' offspring	-0.0158 (0.0217)	64.74*** (17.25)
Female	-0.0776*** (0.00855)	-413.6*** (7.840)
15-29	Ref.	Ref.
30-49	0.360*** (0.0134)	258.5*** (12.21)
50-64	0.241*** (0.0148)	333.6*** (12.83)
No diploma	-0.317*** (0.0451)	-234.9*** (45.90)
High school without diploma	-0.396*** (0.0181)	-161.1*** (19.00)
High school degree	Ref.	Ref.
Associate degree	0.184*** (0.0137)	126.9*** (11.03)
Bachelor's degree	0.310*** (0.0115)	449.4*** (9.552)
Master's degree	0.372*** (0.0172)	657.7*** (13.46)
Professional school degree	0.649*** (0.0454)	1,838*** (26.11)
PhD.	0.645*** (0.0495)	1,396*** (29.35)
Two parents immigrant	0.0349 (0.0309)	-55.76** (24.86)
Live in metropolitan areas	0.0267*** (0.00995)	209.2*** (8.231)
Year	-0.515*** (0.00433)	37.60*** (4.476)
Agriculture		-28.23 (42.95)
Industry		232.7*** (13.45)
Construction		117.3*** (19.48)
Wholesale and retail trade		-3.525 (13.83)
Transportation and utilities		216.0*** (17.19)
Financial, information, professional and business services		254.9*** (10.43)
Public sector		Ref.

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Leisure and hospitality		-116.3*** (17.40)
Other services		-88.41*** (18.87)
Management, business, and financial occupations		630.3*** (18.57)
Professional and related occupations		311.2*** (18.96)
Service occupations		147.5*** (19.72)
Sales and related occupations		363.2*** (20.22)
Office and administrative support occupations		160.4*** (18.60)
Farming, fishing, and forestry occupations		16.27 (64.39)
Construction and extraction occupations		164.3*** (25.55)
Installation, maintenance, and repair occupations		149.3*** (22.94)
Production occupations		18.89 (22.00)
Transportation and material moving occupations		Ref.
No children	Ref.	
One child	0.0644*** (0.0118)	
Two children	0.0666*** (0.0128)	
Three children or more	-0.0566*** (0.0156)	
Being in couple	0.214*** (0.0102)	
Constant	1,035*** (8.700)	- 75,065*** (8,990)
Observations	164,283	164,283
rho	-0.0298	-0.0298

Note: Wage estimations use Heckman selection model, whereas working time and job security estimations are binomial probits with selection.

Scope: Natives and those with migrant parents, from 15 to 64 years old, in the United States.

Source: Current Population Survey 2008-2012, BLS.

**Table A2.8. Estimation of monthly wage in France, with a control of working time**

	Model 1d	
	Job access	Wage
Native	Ref.	Ref.
Migrants' offspring	-0.112*** (0.0125)	0.0119** (0.00478)
Female	-0.213*** (0.00605)	-0.0847*** (0.00249)
15-29	Ref.	Ref.
30-49	0.898*** (0.00927)	0.111*** (0.00526)
50-64	0.116*** (0.00910)	0.301*** (0.00389)
No diploma	-0.417*** (0.00968)	-0.111*** (0.00465)
Brevet des collèges/BEPC	-0.480*** (0.0103)	-0.00756 (0.00558)
BEP/CAP	0.0475*** (0.00898)	-0.0653*** (0.00313)
Baccalauréat	Ref.	Ref.
Bac +2	0.401*** (0.0116)	0.0192*** (0.00382)
Licence ou plus	0.431*** (0.0112)	0.0459*** (0.00448)
Two parents immigrant	-0.0475*** (0.0178)	-0.00284 (0.00671)
Live outside Paris' suburbs, not in a sensitive urban area	Ref.	Ref.
Live in Paris' suburbs, not in a sensitive urban area	0.0630*** (0.00880)	0.0953*** (0.00308)
Live outside Paris' suburbs, in a sensitive urban area	-0.192*** (0.0158)	0.00798 (0.00624)
Live in Paris' suburbs, not in a sensitive urban area	0.00294 (0.0301)	0.0312*** (0.0102)
Year	-0.00434** (0.00217)	0.0123*** (0.000765)
Agriculture		-0.0395*** (0.00963)
Industry		0.0990*** (0.00307)
Construction		0.0717*** (0.00429)
Wholesale and retail trade		-0.00665** (0.00319)
Transportation and utilities		0.121*** (0.00416)
Financial, information, professional and business services		0.0439*** (0.00317)
Public sector		Ref.

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Leisure and hospitality		-0.0590*** (0.00627)
Other services		-0.138*** (0.00563)
Part-time, less than 15 hours		Ref.
Part-time, from 15 to 29 hours		0.923*** (0.0123)
Part-time, 30 hours or more		1.280*** (0.0127)
Full-time, less than 30 hours		1.316*** (0.0156)
Full-time, from 30 to 34 hours		1.455*** (0.0143)
Full-time, from 35 to 39 hours		1.447*** (0.0122)
Full-time, more than 40 hours		1.579*** (0.0123)
No regular work schedule, or not declared		0.765*** (0.0203)
Craftmen, retailers and business owners		0.569*** (0.0146)
Managerial and professional occupations		0.269*** (0.0141)
Mid-level occupations		0.0948*** (0.0139)
Clerks		0.0666*** (0.0139)
Workers		Ref.
No children	Ref.	
One child	0.0426*** (0.00732)	
Two children	-0.0468*** (0.00773)	
Three children or more	-0.351*** (0.0103)	
Being in couple	0.203*** (0.00656)	
Constant	8.809** (4.354)	-18.99*** (1.536)
Observations	209,381	209,381
rho	-0.679	-0.679

Note: Wage estimations use Heckman selection model. Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance.

Scope: Natives and native-born with migrant parents, from 15 to 64 years old, in metropolitan France.

Source: *enquêtes Emploi en continu* 2008-2012, Insee.

**Table A2.9. Estimation of employment quality in France, by parents' country of birth**

	Model 1c		Model 2c		Model 3c	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
North Africa	-0.250*** (0.0222)	0.0595*** (0.0119)	-0.287*** (0.0231)	0.0145 (0.0357)	-0.279*** (0.0233)	-0.0641* (0.0350)
southern Europe	0.0197 (0.0171)	-0.00246 (0.00861)	0.0125 (0.0178)	0.0174 (0.0261)	0.0149 (0.0178)	-0.0105 (0.0263)
Subsaharan Africa	-0.258*** (0.0377)	0.0218 (0.0221)	-0.278*** (0.0383)	-0.0545 (0.0647)	-0.272*** (0.0384)	-0.00926 (0.0600)
Easter Europe	-0.154*** (0.0338)	0.0387** (0.0181)	-0.173*** (0.0354)	0.0120 (0.0547)	-0.167*** (0.0355)	-0.0133 (0.0602)
northern Europe	-0.102*** (0.0275)	0.0295** (0.0149)	-0.136*** (0.0285)	-0.0428 (0.0428)	-0.133*** (0.0285)	-0.0609 (0.0440)
Female	-0.154*** (0.00588)	-0.174*** (0.00309)	-0.221*** (0.00616)	-0.767*** (0.0117)	-0.223*** (0.00609)	-0.0215** (0.0106)
15-29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
30-49	0.805*** (0.00822)	0.0246*** (0.00436)	0.969*** (0.00815)	-0.0919*** (0.0153)	0.953*** (0.00819)	0.650*** (0.0156)
50-64	0.124*** (0.00872)	0.283*** (0.00480)	0.144*** (0.00948)	0.0781*** (0.0138)	0.121*** (0.00955)	1.071*** (0.0177)
No diploma	-0.371*** (0.00961)	-0.0874*** (0.00560)	-0.430*** (0.00972)	0.00758 (0.0165)	-0.429*** (0.00971)	0.0312* (0.0164)
Brevet des collèges/BEPC	-0.456*** (0.0103)	0.0645*** (0.00644)	-0.480*** (0.0104)	0.0817*** (0.0189)	-0.482*** (0.0104)	0.0320* (0.0183)
BEP/CAP	0.0350*** (0.00860)	-0.0655*** (0.00425)	0.0579*** (0.00916)	0.0486*** (0.0131)	0.0550*** (0.00914)	0.0291** (0.0136)
Baccalauréat	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Bac +2	0.341*** (0.0107)	-0.00181 (0.00476)	0.433*** (0.0118)	0.00565 (0.0154)	0.426*** (0.0117)	0.0626*** (0.0168)
Licence ou plus	0.405*** (0.0108)	0.00870 (0.00552)	0.426*** (0.0113)	-0.0245 (0.0168)	0.422*** (0.0113)	-0.0783*** (0.0178)
Two parents immigrant	0.0110 (0.0202)	-0.0120 (0.0103)	0.0134 (0.0213)	0.0233 (0.0315)	0.0162 (0.0213)	0.0384 (0.0320)
Live outside Paris' suburbs, not in a sensitive urban area	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Live in Paris' suburbs, not in a sensitive urban area	0.0611*** (0.00856)	0.127*** (0.00408)	0.0748*** (0.00916)	0.231*** (0.0137)	0.0781*** (0.00913)	0.145*** (0.0143)
Live outside Paris' suburbs, in a sensitive urban area	-0.163*** (0.0158)	0.0150* (0.00870)	-0.183*** (0.0163)	0.0174 (0.0251)	-0.172*** (0.0164)	-0.00986 (0.0250)
Live in Paris' suburbs, not in a sensitive urban area	0.0178 (0.0296)	0.0710*** (0.0142)	0.0425 (0.0320)	0.273*** (0.0501)	0.0594* (0.0323)	0.134*** (0.0503)
Year	-0.00294 (0.00209)	0.0117*** (0.00103)	-0.00308 (0.00222)	-0.00678** (0.00315)	-0.00349 (0.00222)	-0.00940*** (0.00330)
Agriculture		-0.0620*** (0.0110)		-0.156*** (0.0394)		0.0282 (0.0370)
Industry		0.136*** (0.00358)		0.509*** (0.0171)		0.547*** (0.0172)

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Construction		0.108*** (0.00509)		0.531*** (0.0269)		0.510*** (0.0221)
Wholesale and retail trade		0.00224 (0.00385)		0.122*** (0.0137)		0.415*** (0.0159)
Transportation and utilities		0.160*** (0.00480)		0.327*** (0.0228)		0.683*** (0.0272)
Financial, information, professional and business services		0.0419*** (0.00373)		0.0338*** (0.0128)		-0.133*** (0.0125)
Public sector		Ref.		Ref.		Ref.
Leisure and hospitality		-0.0900*** (0.00748)		-0.227*** (0.0227)		0.208*** (0.0242)
Other services		-0.289*** (0.00742)		-0.360*** (0.0168)		-0.130*** (0.0183)
Craftmen, retailers and business owners		0.908*** (0.143)		1.368** (0.616)		1.762*** (0.659)
Managerial and professional occupations		0.535*** (0.143)		1.215** (0.616)		1.536** (0.659)
Mid-level occupations		0.316** (0.143)		0.969 (0.616)		1.415** (0.659)
Clerks		0.304** (0.143)		1.056* (0.616)		1.102* (0.659)
Workers		Ref.		Ref.		Ref.
No children		Ref.		Ref.		Ref.
One child	0.0145** (0.00618)		0.0468*** (0.00820)		0.0464*** (0.00801)	
Two children	-0.0811*** (0.00654)		-0.0799*** (0.00899)		-0.0795*** (0.00847)	
Three children or more	-0.316*** (0.00852)		-0.416*** (0.0108)		-0.417*** (0.0101)	
Being in couple	0.155*** (0.00560)		0.160*** (0.00748)		0.200*** (0.00736)	
Constant	5.997 (4.209)	-16.39*** (2.080)	6.285 (4.470)	13.99** (6.353)	7.110 (4.460)	18.17*** (6.672)
Observations	205,852	205,852	205,852	205,852	205,852	205,852
rho	-0.891	-0.891	-0.412	-0.412	-0.709	-0.709

Note: Wage estimations use Heckman selection model, whereas working time and job security estimations are binomial probits with selection. Robust standard errors in parentheses. \*, \*\* and \*\*\* symbols stand for thresholds, respectively 10, 5 and 1% of statistical significance.

Scope: Natives and native-born with migrant parents, from 15 to 64 years old, in metropolitan France.

Source: *enquêtes Emploi en continu* 2008-2012, Insee.

**Table A2.10. Estimation of employment quality in the United States, by parents' country of birth**

	Model 4c		Model 5c		Model 6c	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Mexico	0.0433* (0.0240)	-0.0105 (0.0164)	0.0567** (0.0257)	0.00175 (0.0323)	0.0569** (0.0252)	-0.00639 (0.0226)
Puerto Rico	-0.00505 (0.0405)	0.0182 (0.0261)	0.0169 (0.0443)	-0.0987* (0.0533)	0.0152 (0.0439)	0.0553 (0.0381)
Asia	-0.0550 (0.0339)	0.0171 (0.0244)	-0.0903** (0.0356)	0.00152 (0.0472)	-0.0951*** (0.0350)	0.0769** (0.0322)
Canada	-0.0312 (0.0420)	0.0607** (0.0252)	-0.0359 (0.0462)	-0.106** (0.0541)	-0.0391 (0.0452)	0.0144 (0.0370)
northern Europe	-0.0189 (0.0292)	0.0315* (0.0189)	-0.0460 (0.0312)	-0.00494 (0.0402)	-0.0465 (0.0306)	-0.0255 (0.0261)
southern Europe	-0.0467 (0.0347)	0.0862*** (0.0218)	-0.0831** (0.0373)	-0.0814* (0.0457)	-0.0891** (0.0367)	0.102*** (0.0311)
eastern Europe	0.0461 (0.0577)	-0.0389 (0.0330)	0.0894 (0.0655)	-0.144** (0.0676)	0.0692 (0.0628)	-0.0697 (0.0471)
Caribbean	-0.197*** (0.0514)	0.0750* (0.0409)	-0.223*** (0.0539)	-0.00929 (0.0733)	-0.232*** (0.0525)	0.0153 (0.0519)
Latin America	-0.00334 (0.0426)	-0.0879*** (0.0314)	-0.00350 (0.0449)	-0.0961* (0.0552)	-0.0200 (0.0435)	-0.101** (0.0404)
Other	-0.0214 (0.0394)	-0.0238 (0.0279)	-0.0336 (0.0415)	-0.113** (0.0508)	-0.0364 (0.0407)	-0.0597* (0.0359)
Female	0.00961 (0.00604)	-0.392*** (0.00450)	-0.00935 (0.00656)	-0.303*** (0.00951)	0.00559 (0.00650)	-0.290*** (0.00650)
15-29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
30-49	0.363*** (0.00756)	0.465*** (0.00550)	0.514*** (0.00763)	0.290*** (0.0122)	0.518*** (0.00749)	0.251*** (0.00854)
50-64	0.295*** (0.00847)	0.515*** (0.00617)	0.413*** (0.00881)	0.252*** (0.0131)	0.428*** (0.00867)	0.387*** (0.00938)
No diploma	-0.329*** (0.0330)	-0.447*** (0.0338)	-0.505*** (0.0302)	-0.255*** (0.0436)	-0.495*** (0.0301)	-0.296*** (0.0347)
High school without diploma	-0.334*** (0.0111)	-0.517*** (0.0109)	-0.483*** (0.0105)	-0.149*** (0.0176)	-0.481*** (0.0103)	-0.264*** (0.0146)
High school degree	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Associate degree	0.202*** (0.0103)	0.114*** (0.00617)	0.256*** (0.0116)	0.0409*** (0.0141)	0.260*** (0.0115)	0.0638*** (0.00942)
Bachelor's degree	0.370*** (0.00859)	0.278*** (0.00557)	0.412*** (0.00943)	0.165*** (0.0133)	0.422*** (0.00934)	0.158*** (0.00814)
Master's degree	0.385*** (0.0138)	0.422*** (0.00777)	0.474*** (0.0154)	0.206*** (0.0206)	0.476*** (0.0153)	0.218*** (0.0123)
Professional school degree	0.760*** (0.0359)	0.846*** (0.0174)	0.709*** (0.0400)	0.233*** (0.0419)	0.708*** (0.0397)	0.146*** (0.0246)
PhD.	0.685*** (0.0415)	0.699*** (0.0180)	0.703*** (0.0445)	0.150*** (0.0455)	0.696*** (0.0442)	0.142*** (0.0282)
Two parents immigrant	0.0503**	0.0154	0.0577**	0.000839	0.0585**	-0.0478**

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	(0.0224)	(0.0153)	(0.0240)	(0.0299)	(0.0234)	(0.0207)
Live in metropolitan areas	0.00521 (0.00733)	0.145*** (0.00490)	0.0164** (0.00781)	0.0567*** (0.00990)	0.0188** (0.00768)	0.0747*** (0.00683)
Year	-0.457*** (0.00338)	0.143*** (0.00252)	-0.507*** (0.00340)	-0.0482*** (0.00785)	-0.500*** (0.00346)	0.0961*** (0.00418)
Agriculture		-0.349*** (0.0315)		-0.355*** (0.0516)		-0.718*** (0.0337)
Industry		0.223*** (0.00652)		0.372*** (0.0216)		0.166*** (0.0119)
Construction		0.0588*** (0.00986)		-0.167*** (0.0262)		-0.355*** (0.0161)
Wholesale and retail trade		-0.0832*** (0.00714)		-0.168*** (0.0156)		-0.205*** (0.0105)
Transportation and utilities		0.213*** (0.00812)		0.0344 (0.0223)		0.0927*** (0.0143)
Financial, information, professional and business services		0.111*** (0.00542)		0.0306** (0.0135)		-0.159*** (0.00853)
Public sector		Ref.		Ref.		Ref.
Leisure and hospitality		-0.302*** (0.00828)		-0.328*** (0.0151)		-0.515*** (0.0119)
Other services		-0.180*** (0.0104)		-0.219*** (0.0202)		-0.557*** (0.0146)
Management, business, and financial occupations		0.532*** (0.00949)		0.595*** (0.0231)		0.283*** (0.0144)
Professional and related occupations		0.230*** (0.00962)		0.210*** (0.0215)		0.149*** (0.0144)
Service occupations		-0.0385*** (0.00995)		0.0164 (0.0206)		-0.0987*** (0.0142)
Sales and related occupations		0.147*** (0.0104)		0.161*** (0.0208)		-0.0303** (0.0145)
Office and administrative support occupations		0.104*** (0.00921)		0.333*** (0.0208)		0.178*** (0.0138)
Farming, fishing, and forestry occupations		0.166*** (0.0387)		0.303*** (0.0675)		0.0392 (0.0466)
Construction and extraction occupations		0.241*** (0.0126)		0.255*** (0.0315)		0.142*** (0.0198)
Installation, maintenance, and repair occupations		0.287*** (0.0107)		0.518*** (0.0312)		0.285*** (0.0181)
Production occupations		0.0685*** (0.0107)		0.217*** (0.0274)		0.181*** (0.0172)
Transportation and material moving occupations		Ref.		Ref.		Ref.
Constant	918.0*** (6.788)	-280.5*** (5.056)	1,019*** (6.842)	98.03*** (15.75)	1,005*** (6.957)	-192.7*** (8.386)
Observations	250,448	250,448	250,448	250,448	250,448	250,448
rho	-0.855	-0.855	-0.244	-0.244	-0.785	-0.785

Note: Wage estimations use Heckman selection model, whereas working time and job security estimations are binomial probits with selection. Scope: Natives and those with migrant parents, from 15 to 64 years old, in the United States. Source: Current Population Survey 2008-2012, BLS.

**Table A2.11. Estimation of employment quality in the United States, with a control of being of “Black” race**

	Model 4d		Model 5d		Model 6d	
	Job access	Wage	Job access	Working hours	Job access	Job security
Native	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Migrants' offspring	-0.00464 (0.0200)	0.0215** (0.0109)	-0.0234 (0.0216)	-0.0413 (0.0263)	-0.0187 (0.0213)	-0.000802 (0.0163)
Female	-0.0301*** (0.00794)	-0.495*** (0.00486)	-0.0814*** (0.00847)	-0.492*** (0.0131)	-0.102*** (0.00850)	-0.429*** (0.00757)
15-29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
30-49	0.289*** (0.0125)	0.202*** (0.00777)	0.361*** (0.0132)	0.0655*** (0.0176)	0.340*** (0.0132)	0.221*** (0.0112)
50-64	0.219*** (0.0134)	0.246*** (0.00822)	0.247*** (0.0143)	0.0115 (0.0182)	0.249*** (0.0142)	0.300*** (0.0117)
No diploma	-0.187*** (0.0456)	-0.320*** (0.0333)	-0.293*** (0.0446)	-0.221*** (0.0562)	-0.284*** (0.0444)	-0.479*** (0.0413)
High school without diploma	-0.299*** (0.0173)	-0.171*** (0.0122)	-0.379*** (0.0179)	-0.124*** (0.0257)	-0.368*** (0.0179)	-0.385*** (0.0169)
High school degree	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Associate degree	0.142*** (0.0122)	0.0900*** (0.00662)	0.178*** (0.0135)	-0.0129 (0.0163)	0.167*** (0.0133)	0.101*** (0.0104)
Bachelor's degree	0.310*** (0.0108)	0.239*** (0.00613)	0.303*** (0.0113)	0.0746*** (0.0153)	0.283*** (0.0112)	0.196*** (0.00901)
Master's degree	0.319*** (0.0160)	0.393*** (0.00838)	0.363*** (0.0170)	0.134*** (0.0230)	0.343*** (0.0167)	0.283*** (0.0130)
Professional school degree	0.775*** (0.0430)	0.820*** (0.0187)	0.644*** (0.0453)	0.112** (0.0453)	0.600*** (0.0438)	0.269*** (0.0261)
PhD.	0.696*** (0.0506)	0.674*** (0.0190)	0.636*** (0.0495)	0.0452 (0.0496)	0.607*** (0.0486)	0.285*** (0.0296)
Two parents immigrant	-0.00787 (0.0285)	0.00346 (0.0154)	0.0294 (0.0309)	0.0240 (0.0377)	0.0371 (0.0307)	-0.00415 (0.0235)
Live in metropolitan areas	0.0258*** (0.00914)	0.163*** (0.00509)	0.0254*** (0.00985)	0.0547*** (0.0121)	0.0259*** (0.00974)	0.0536*** (0.00770)
Black	-0.0863*** (0.0130)	-0.0289*** (0.00731)	-0.0777*** (0.0139)	0.112*** (0.0186)	-0.0580*** (0.0138)	0.0504*** (0.0115)
Year	-0.456*** (0.00471)	0.116*** (0.00259)	-0.516*** (0.00475)	-0.0324*** (0.00800)	-0.509*** (0.00473)	-0.147*** (0.00451)
Agriculture		-0.448*** (0.0346)		-0.452*** (0.0585)		-0.808*** (0.0371)
Industry		0.170*** (0.00673)		0.312*** (0.0254)		0.104*** (0.0124)
Construction		-0.0146 (0.0102)		-0.284*** (0.0302)		-0.411*** (0.0171)
Wholesale and retail trade		-0.0917*** (0.00779)		-0.156*** (0.0202)		-0.202*** (0.0122)
Transportation and utilities		0.154*** (0.00839)		-0.0300 (0.0267)		0.0234 (0.0151)

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Financial, information, professional and business services		0.0826*** (0.00590)			-0.0394** (0.0162)		-0.216*** (0.00935)
Public sector	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Leisure and hospitality		-0.266*** (0.0104)			-0.361*** (0.0213)		-0.509*** (0.0153)
Other services		-0.204*** (0.0112)			-0.247*** (0.0249)		-0.616*** (0.0169)
Management, business, and financial occupations		0.553*** (0.00990)			0.638*** (0.0284)		0.266*** (0.0163)
Professional and related occupations		0.265*** (0.00994)			0.276*** (0.0275)		0.162*** (0.0165)
Service occupations		-0.0361*** (0.0105)			0.0511* (0.0270)		-0.0791*** (0.0169)
Sales and related occupations		0.261*** (0.0113)			0.270*** (0.0279)		0.0130 (0.0175)
Office and administrative support occupations		0.157*** (0.00955)			0.473*** (0.0270)		0.209*** (0.0161)
Farming, fishing, and forestry occupations		0.213*** (0.0442)			0.341*** (0.0876)		0.0425 (0.0567)
Construction and extraction occupations		0.184*** (0.0128)			0.266*** (0.0383)		0.126*** (0.0220)
Installation, maintenance, and repair occupations		0.223*** (0.0108)			0.524*** (0.0399)		0.251*** (0.0201)
Production occupations		0.0539*** (0.0108)			0.253*** (0.0345)		0.186*** (0.0193)
Transportation and material moving occupations	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
No children	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
One child	0.0489*** (0.00948)		0.0597*** (0.0115)			0.0784*** (0.0107)	
Two children	0.0690*** (0.0104)		0.0623*** (0.0125)			0.102*** (0.0116)	
Three children or more	-0.0211 (0.0130)		-0.0602*** (0.0152)			0.0154 (0.0143)	
Being in couple	0.167*** (0.00836)		0.208*** (0.0101)			0.273*** (0.00945)	
Constant	916.1*** (9.464)	-226.1*** (5.193)	1,037*** (9.549)	66.59*** (16.06)	1,023*** (9.514)	295.7*** (9.060)	
Observations	173,146	173,146	173,146	173,146	173,146	173,146	173,146
rho	-0.860	-0.860	-0.429	-0.429	0.828	0.828	

Note: Wage estimations use Heckman selection model, whereas working time and job security estimations are binomial probits with selection.

Scope: Natives and those with migrant parents, from 15 to 64 years old, in the United States.

Source: Current Population Survey 2008-2012, BLS.

**Table 3.A.1. Descriptive statistics of the French sample**

In %		Natives	Immigrants' offspring
Age	20-25	6,9	7,9
	26-30	11,4	12,0
	31-35	11,9	12,0
	46-40	13,6	14,0
	41-45	14,7	13,1
	46-50	15,1	13,5
	51-55	13,8	14,1
	56-60	12,5	13,4
Gender	Male	49,9	50,5
	Female	50,1	49,5
Diploma	No diploma	20,9	23,2
	CAP-BEP	28,9	25,5
	Professional or technologic baccalaureate	10,3	10,3
	General baccalaureate	7,1	8,9
	Bac+2	14,1	12,3
	Bachelor's degree (or DEUG or Maîtrise)	9,7	10,5
	Master's degree and PhD	5,2	6,0
	Grandes Ecoles	4,0	3,2
	Live in metropolitan area	14,9	26,3
Working time	Part-time	17,2	18,3
	Full-time	82,8	81,7
	Average wage	1740,8	1730,5
Sector of activity	Agriculture	2,0	1,4
	Industry	16,4	15,1
	Wholesale and retail trade	5,8	5,9
	Services	75,8	77,6
Hours worked	Less than 30 hours per week	22,6	25,9
	Between 30 and 35 hours per week	5,3	4,2
	35 hours per week	2,0	2,6
	More than 35 hours per week	70,1	67,4
Number of children	0	55,5	55,6
	1	20,6	20,5
	2	18,3	17,7
	3	4,8	5,2
	4 or more	0,8	1,1
Marital situation	In a couple	75,4	72,1
	Single	24,6	27,9
	Total	87,7	12,3

Source: Enquête Emploi en Continu, 2012.

**Table 3.A.2. Descriptive statistics of the US-American sample**

<i>In %</i>		Natives	Immigrants' offspring
Age	20-25	8,8	16,4
	26-30	11,1	17,1
	31-35	12,4	15,5
	46-40	12,9	12,8
	41-45	14,5	11,8
	46-50	14,7	10,1
	51-55	13,6	8,3
	56-60	12,0	8,0
Gender	Male	49,6	50,4
	Female	50,4	49,6
Diploma	No diploma (less than 12th grade diploma)	4,1	5,9
	High school and college no degree	48,7	46,5
	Associate degree in college	12,3	10,7
	Bachelor's degree	23,5	24,5
	Master's degree and PS degree	10,2	11,3
	Doctorate	1,2	1,3
	Live in metropolitan area	77,1	91,2
Working time	Part-time	15,7	17,5
	Full-time	84,3	82,5
	Average wage	3750,7	3676,1
Sector of activity	Agriculture	1,0	0,5
	Industry	17,4	14,7
	Wholesale and retail trade	13,6	14,2
	Services	68,0	70,5
Hours worked	Less than 30 hours per week	15,8	16,7
	Between 30 and 39 hours per week	11,3	11,5
	40 hours per week	52,8	55,1
	More than 40 hours per week	20,1	16,7
Number of children	0	51,6	53,7
	1	21,0	20,2
	2	18,7	18,2
	3	6,5	5,8
	4 or more	2,2	2,2
Marital situation	In a couple	61,5	50,8
	Single	38,5	49,2
	Total	90,5	9,5

Source: Current Population Survey, 2012.

**Table 3.A.3. Descriptive statistics of the French sample after matching**

In %		Natives		Immigrants' offspring	
		Matched	Not matched	Matched	Not matched
Age	20-25	5,7	8,38	6,44	13,68
	26-30	11,91	10,7	11,63	13,68
	31-35	10,27	14,04	11,45	14,36
	46-40	12,31	15,31	14,29	12,65
	41-45	13,28	16,57	13,21	12,65
	46-50	14,57	15,72	14,2	10,6
	51-55	15,99	11,09	14,24	13,5
	56-60	15,96	8,18	14,54	8,89
Gender	Male	47,18	53,57	49,16	56,24
	Female	52,82	46,43	50,84	43,76
Diploma	No diploma	23,95	16,8	23,49	22,22
	CAP-BEP	34,82	20,97	27,4	17,78
	Professional or technologic baccalaureate	8,93	12,1	10,26	10,6
	General baccalaureate	6,09	8,43	8,16	11,79
	Bac+2	13,57	14,76	12,73	10,6
	Bachelor's degree (or DEUG or Maîtrise)	7,5	12,49	9,97	12,82
	Master's degree and PhD	3,28	7,7	5,15	9,57
	Grandes Ecoles	1,86	6,74	2,84	4,62
	Live in Paris region	9,87	21,45	20,52	50,43
Number of children	0	62,13	46,83	58,84	42,05
	1	18,2	23,78	19,24	25,47
	2	16,9	20,09	17,63	18,12
	3	2,62	7,63	3,83	10,77
	4 or more	0,15	1,66	0,85	3,59
Marital situation	In a couple	68,34	80,71	75,65	57,26
	Single	31,66	19,28	24,16	42,73
Working time	Part-time	11,69	24,51	15,41	30,43
	Full-time	88,31	75,49	84,59	69,57
Hours worked	Less than 30 hours per week	16,04	31,35	22,46	40
	Between 30 and 35 hours per week	1,84	9,81	3,13	8,55
	35 hours per week	0,42	4,09	1,19	8,21
	More than 35 hours per week	81,7	54,75	73,22	43,25
Sector of activity	Agriculture	0,35	4,22	0,41	5,47
	Industry	14,78	18,56	14,09	19,49
	Wholesale and retail trade	4,35	7,67	4,7	10,77
	Services	80,53	69,55	80,8	64,27
	Average wage	1700,67	1793,64	1746,99	1661,91

Source: Enquête Emploi en Continu, 2012.

**Table 3.A.4. Descriptive statistics of the US-American sample after matching**

In %		Natives		Immigrants' offspring	
		Matched	Not matched	Matched	Not matched
Age	20-25	10,4	6,02	16,39	16,89
	26-30	11,62	10,14	17,16	16,79
	31-35	11,81	13,36	15,37	16,89
	46-40	12,22	14,11	12,44	16,16
	41-45	13,65	16,02	11,84	11,26
	46-50	13,94	16,04	10,06	10,74
	51-55	13,65	13,5	8,44	6,36
	56-60	12,71	10,81	8,31	4,9
Gender	Male	50,33	48,34	50,15	53,28
	Female	49,67	51,66	49,85	46,72
Diploma	No diploma	1,54	8,49	4,23	22,52
	High school degree	52,31	42,27	48,55	25,03
	Associate degree	9,34	17,52	10,19	15,43
	Bachelor's degree	25,62	19,75	25,02	18,98
	Master's degree and PS degree	10,64	9,55	11,01	13,66
	PhD	0,55	2,42	0,99	4,38
	Live in metropolitan area	88,85	56,53	92,39	78,31
Number of children	0	56,25	43,35	55,36	36,91
	1	19,5	23,68	19,9	22,63
	2	18,53	19,01	17,95	20,65
	3	4,74	9,54	5,21	11,47
	4 or more	0,98	4,43	1,58	8,34
Marital situation	In a couple	63,85	57,34	51,37	44,63
	Single	36,15	42,66	48,63	55,37
Working time	Part-time	12,2	21,82	15,92	33,68
	Full-time	87,8	78,18	84,08	66,32
Hours worked	Less than 30 hours per week	12,25	22,03	15,79	26,07
	Between 30 and 39 hours per week	7,45	17,9	10,04	26,8
	40 hours per week	61,46	37,71	57,47	30,87
	More than 40 hours per week	18,84	22,36	16,7	16,27
Sector of activity	Agriculture	0,08	2,53	0,23	3,44
	Industry	14,63	22,36	13,77	24,82
	Wholesale and retail trade	10,19	19,56	13,25	24,3
	Services	75,11	55,55	72,75	47,45
	Average wage	3908,53	3474,97	3721,08	3213,63

Source: Current Population Survey, 2012.

**Table 3.A.5. Repartition of the population among matched and not matched in model 0 (no control for employment-related variables)**

	France		United States	
	Matched	Not matched	Matched	Not matched
Natives	84,0%	16,0%	95,9%	4,1%
Migrants' offspring	94,8%	5,2%	99,9%	0,1%

Source: Enquête Emploi en Continu and Current Population Survey, 2009 and 2012.

**Appendix 3.A.1.: Decomposition of the wage gap**

The average wage gap is as follows:

$$\frac{\bar{w}^{NB} - \bar{w}^{MP}}{\bar{w}^{MP}}$$

This wage gap can be decomposed into four components  $DX$ ,  $DO$ ,  $DN$  and  $DMP$ .

$$DX = \frac{\bar{w}_{CS}^{NB} - \frac{MP}{NB} * \bar{w}_{CS}^{NB}}{\bar{w}^{MP}}$$

$$DO = \frac{\frac{MP}{NB} * \bar{w}_{CS}^{NB} - \bar{w}_{CS}^{MP}}{\bar{w}^{MP}}$$

$$DN = \frac{(\bar{w}_{NS}^{NB} - \bar{w}_{CS}^{NB}) * P(NB \in NS)}{\bar{w}^{MP}}$$

$$DMP = \frac{(\bar{w}_{CS}^{MP} - \bar{w}_{NS}^{MP}) * P(MP \in NS)}{\bar{w}^{MP}}$$

Without the denominator, we have:

$$DN = (\bar{w}_{NS}^{NB} - \bar{w}_{CS}^{NB}) * P(NB \in NS)$$

$$DN = \bar{w}_{NS}^{NB} * \frac{NB_{HS}}{NB} - \bar{w}_{CS}^{NB} * \frac{NB_{HS}}{NB}$$

$$DN = \bar{w}_{NS}^{NB} * \frac{NB_{HS}}{NB} + \bar{w}_{CS}^{NB} * \frac{NB_{CS}}{NB} - \bar{w}_{CS}^{NB} * \frac{NB_{CS}}{NB} - \bar{w}_{CS}^{NB} * \frac{NB_{HS}}{NB}$$

$$DN = \bar{w}^{NB} - \left( \bar{w}_{CS}^{NB} * \frac{NB_{CS}}{NB} - \bar{w}_{CS}^{NB} * \frac{NB_{NS}}{NB} \right)$$

$$DM = \bar{w}^{NB} - \bar{w}_{CS}^{NB}$$

$$DMP = (\bar{w}_{CS}^{MP} - \bar{w}_{NS}^{MP}) * P(MP \in NS)$$

$$DMP = \bar{w}_{CS}^{MP} * \frac{MP_{HS}}{MP} - \bar{w}_{NS}^{MP} * \frac{MP_{NS}}{MP}$$

$$DMP = \bar{w}_{CS}^{NB} * \frac{MP_{HS}}{MP} + \bar{w}_{CS}^{NB} * \frac{MP_{CS}}{MP} - \bar{w}_{CS}^{NB} * \frac{MP_{CS}}{MP} - \bar{w}_{HS}^{NB} * \frac{MP_{HS}}{MP}$$

$$DMP = \bar{w}_{CS}^{MP} - \bar{w}^{MP}$$

We have then:

$$\bar{w}^{NB} - \bar{w}^{MP} = DX + DO + DN + DF$$

$$\bar{w}^{NB} - \bar{w}^{MP} = \left( \bar{w}_{CS}^{NB} - \frac{MP}{NB} * \bar{w}_{CS}^{NB} \right) + \left( \frac{MP}{NB} * \bar{w}_{CS}^{NB} - \bar{w}_{CS}^{NB} \right) + (\bar{w}^{NB} - \bar{w}_{CS}^{NB}) + (\bar{w}_{CS}^{MP} - \bar{w}^{MP})$$

$$\bar{w}^{NB} - \bar{w}^{MP} = \bar{w}^{NB} - \bar{w}^{MP}$$

For the quantile decompositions, weighted variables are replaced by the level form. For the median value, we have for instance:

$$DN = w^{median^{NB}} - w^{median^{NB}_{CS}}$$

And

$$DMP = w^{median^{MP}_{CS}} - w^{median^{MP}}$$

We have then:

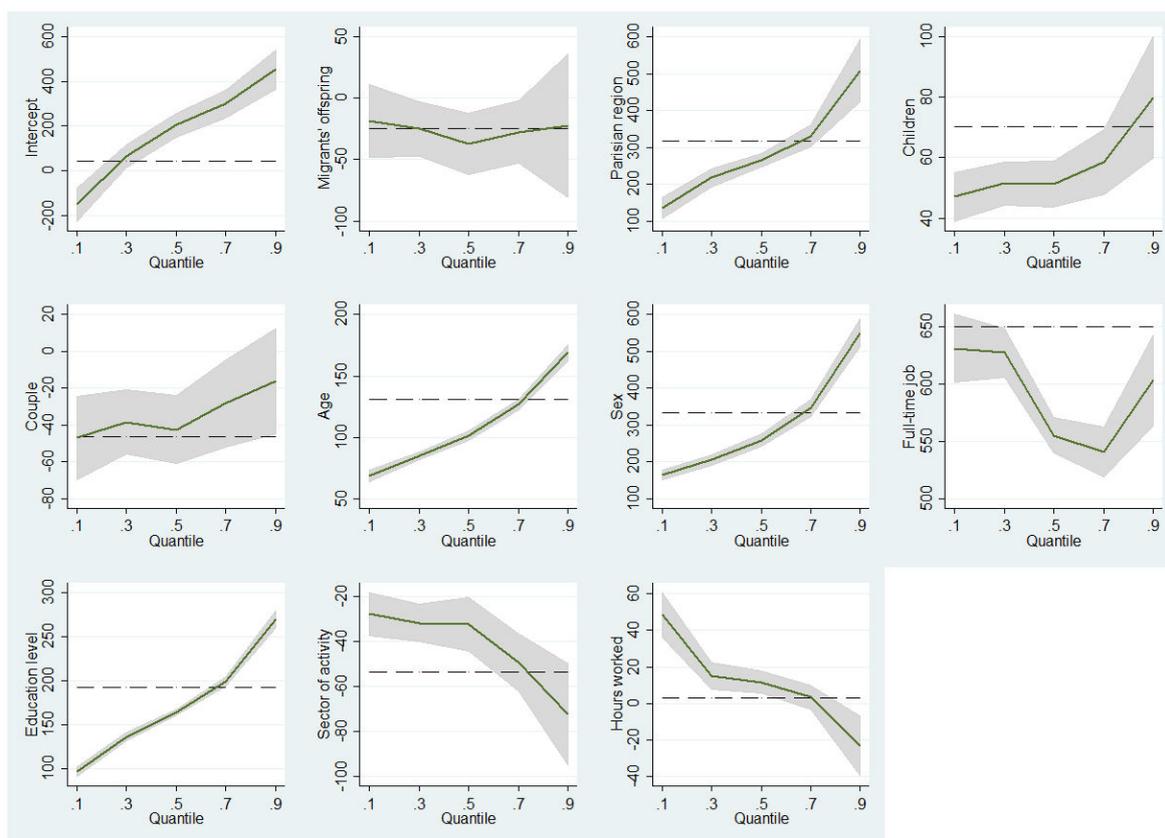
$$\begin{aligned} & w^{median^{NB}} - w^{median^{MP}} \\ &= \left( w^{median^{NB}_{CS}} - \frac{MP}{NB} * w^{median^{NB}_{CS}} \right) + \left( \frac{MP}{NB} * w^{median^{NB}_{CS}} - w^{median^{NB}_{CS}} \right) \\ &+ (w^{median^{NB}} - w^{median^{NB}_{CS}}) + (w^{median^{MP}_{CS}} - w^{median^{MP}}) \end{aligned}$$

Hence:

$$w^{median^{NB}} - w^{median^{MP}} = w^{median^{NB}} - w^{median^{MP}}$$

Thus, Ñopo's decomposition can also be done by quantile.

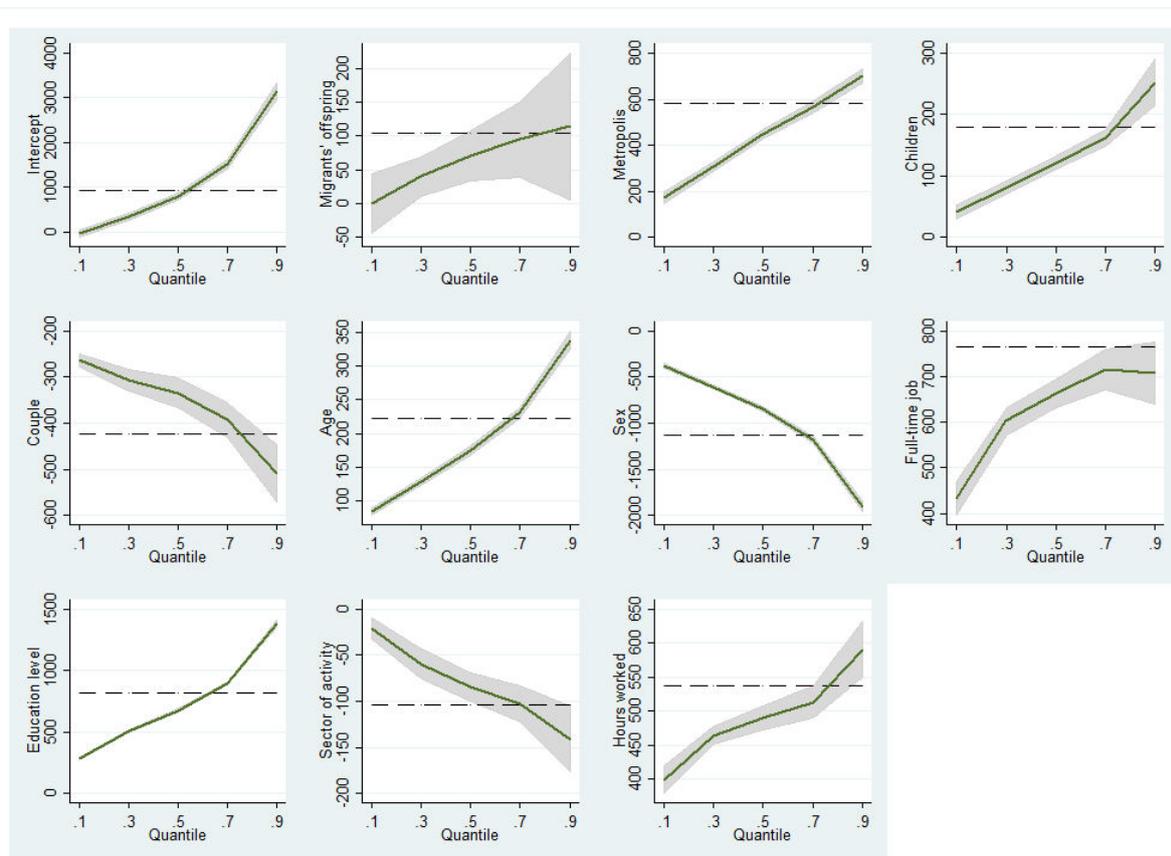
**Figure 3.A.1. Quantile estimations (on the quintiles) of the French sample**



Note: The dotted line indicates the value of the coefficient found with OLS.

Source: Enquête Emploi en Continu, 2009 and 2012.

Figure 3.A.2. Quantile estimations (on the quintiles) of the US-American sample



Note: The dotted line indicates the value of the coefficient found with OLS.

Source: Current Population Survey, 2009 and 2012.

## RESUME EN FRANÇAIS

### LES CONDITIONS D'EMPLOI DES DESCENDANTS D'IMMIGRES EN FRANCE ET AUX ÉTATS-UNIS

En France, environ 7 millions d'individus ont au moins un parent immigré. Aux États-Unis, ce nombre dépasse 36 millions. L'intégration de cette population, tant sur le plan économique que social, est un défi majeur. La participation active de descendants d'immigrés au marché du travail est essentielle pour assurer la cohésion sociale dans le pays d'accueil. Elle apparaît également critique pour leur acceptation par la population du pays d'accueil. L'entrée de grandes cohortes de descendants d'immigrés sur le marché du travail exige que les pays analysent correctement leur intégration économique et sociale, afin de mettre en œuvre des politiques publiques appropriées si nécessaire. Par ailleurs, la situation économique actuelle rend l'accès au marché du travail et aux emplois de qualité extrêmement difficile pour tous les nouveaux entrants sur le marché du travail. Les expériences passées ont démontré que les immigrés et leurs descendants sont particulièrement touchés par les ralentissements et crises économiques.

Cette thèse adopte une approche empirique microéconomique et comparative des conditions d'emploi des descendants d'immigrés en France et aux États-Unis. Cette approche globale de l'intégration dans l'emploi améliore la compréhension de potentiels problèmes d'intégration, que ce soit à l'entrée sur le marché du travail, ou concernant d'autres caractéristiques du travail, bien moins visibles que des indicateurs tel que le taux de chômage par exemple. En outre, cette analyse permet de confronter les mécanismes d'inégalités sur le marché du travail entre descendants d'immigrés et descendants de natifs, en France et aux États-Unis. En étudiant les conditions d'emploi des descendants d'immigrés, cette thèse enrichit ainsi la littérature relative à leur intégration sur le marché du travail.

L'insertion sur le marché du travail est une dimension clé de l'intégration. Elle fournit aux travailleurs une utilité sociale, ainsi que des revenus pour assurer leur subsistance. Cette intégration sur le marché du travail est une question multidimensionnelle, qui devrait être étudiée comme telle. Afin de mieux comprendre les mécanismes d'inégalités auxquels font face les descendants d'immigrés sur le marché du travail, cette thèse adopte une démarche empirique et globale des conditions d'emploi. En comparant deux pays, la France et les États-Unis, cette thèse met en lumière les différents mécanismes d'inégalités du marché du travail dans chaque pays, qui diffèrent selon le cadre institutionnel.

L'intégration est un processus complexe, multidimensionnel et évolutif qui revêt plusieurs dimensions (économique, sociale, juridique, politique, culturelle, etc.). L'intégration sur le marché du travail est largement considérée comme l'indicateur le plus important d'une intégration « réussie ». Gordon (1964) rappelle que la participation au marché du travail est un vecteur fondamental d'intégration. Cependant, l'intégration des descendants d'immigrés sur le marché du travail en France et aux États-Unis est complexe. Ces derniers ont tendance à avoir des taux d'emploi inférieurs, des taux de chômage plus élevés et une assez mauvaise intégration une fois en poste (en termes de salaires, de déclassement ou de progression de carrière par exemple) (Santelli 2016 ; OCDE, 2015).

Les immigrés ayant tendance à conserver des caractéristiques liées à leur origine étrangère, le succès ou l'échec de l'intégration de leurs enfants, élevés et éduqués dans le pays de résidence, est généralement envisagé comme mesure référente de l'intégration (Card, 2005). Même si ces enfants sont nés dans le même pays que les autres natifs, ils semblent pâtir d'avoir des parents immigrés.

Leurs résultats sur le marché du travail peuvent être considérés comme un point de référence pour l'intégration des populations immigrées à long terme. Bien qu'il ne soit pas étonnant que beaucoup d'immigrés éprouvent des difficultés à s'intégrer au marché du travail, la situation devrait être différente pour leurs enfants. En effet, si les personnes immigrées arrivent dans le pays d'accueil à l'âge adulte, certaines caractéristiques acquises dans leur pays d'origine peuvent entraver leurs perspectives d'emploi. Par exemple, les qualifications et l'expérience obtenues dans les pays d'origine - surtout quand ils viennent de pays pauvres - peuvent ne pas être considérées comme égales sur les marchés du travail de la France ou des États-Unis et les employeurs peuvent avoir des difficultés à juger de leur valeur. Cependant, ces difficultés ne devraient pas s'appliquer aux descendants d'immigrés, car ils ont été élevés et éduqués dans les pays d'accueil. L'OCDE a longtemps parlé des difficultés persistantes des descendants d'immigrés sur le marché du travail, même s'ils sont nés et ont été scolarisés dans le pays de résidence, et même lorsqu'ils sont très instruits (OCDE, 2015).

Les grands flux migratoires vers les États-Unis et la France au XX<sup>ème</sup> siècle ont donné lieu à une proportion croissante de descendants d'immigrés dans les sociétés d'aujourd'hui (Alba, Holdoway, 2013). Le résultat est une diversité ethnique, raciale et religieuse croissante (Châteaux, Miller, 2009). Les descendants d'immigrés représentent une population déterminante car un grand nombre d'entre eux entrent sur des marchés du travail tendus dans les pays européens et nord-américains. En outre, on constate une baisse du nombre de jeunes nés de parents autochtones et une augmentation du nombre de leurs pairs nés de parents migrants (Alba, Holdoway, 2013). Le retrait de ce groupe autochtone, qui occupe une part disproportionnée des emplois les plus qualifiés et les mieux rémunérés, va engendrer un regain d'activité sur le marché du travail. Ces sociétés devront donc compter de plus en plus sur les jeunes descendants d'immigrés pour soutenir leur développement économique, culturel et social. Dans des sociétés comme la France, absorber cette diversité reste un défi. Aux États-Unis, où l'immigration

fait partie de la construction de la nation et de mythes fondateurs, la diversité croissante de la population soulève des inquiétudes parmi certaines populations (Alba, Holdoway, 2013).

Bien que la comparaison mette en lumière la similarité des défis auxquels font face les deux pays quant à l'intégration des descendants d'immigrés, les résultats varient considérablement. Ce sont deux pays d'immigration majeurs. L'histoire américaine a toujours été inséparable de l'immigration, et la France est également connue pour être historiquement un des pays européens majeur d'accueil des immigrés (Green, 1991). Ces deux pays ont d'ailleurs aujourd'hui des proportions similaires de descendants d'immigrés, soit environ 12%.

L'intégration de cette population sur le marché du travail en France et aux États-Unis n'est pourtant pas la même, pour plusieurs raisons. Tout d'abord, la composition du groupe des descendants d'immigrés est différente ; les pays d'origine des parents, les niveaux d'éducation, les langues parlées à la maison, varient au sein d'un même pays, et entre les deux pays. Les deux pays ont également des cadres institutionnels particuliers. La France et les États-Unis se distinguent non seulement en termes de politiques migratoires mais également au niveau des institutions liées à l'intégration des populations issues de l'immigration. En outre, leurs institutions du marché du travail sont radicalement opposées. Enfin, une différence saillante, est historique et culturelle : le prisme des inégalités est plutôt lié à la migration en France tandis qu'il est plutôt racial aux États-Unis. Cette différence, qui fait écho à l'histoire des pays (la ségrégation raciale aux États-Unis et le colonialisme en France), entraîne des différences significatives dans la détermination des traits discriminants. Les États-Unis enregistrent l'ethnicité dans leurs statistiques, contrairement à la France. De ce point de vue, les deux pays se distinguent dans la conceptualisation de la race, de l'ethnicité mais aussi de l'immigration.

#### QUI SONT LES DESCENDANTS D'IMMIGRÉS ?

Bien qu'ils représentent environ la même proportion parmi la population, les deux groupes sont très différents. Pour comprendre l'enjeu de cette comparaison, il est nécessaire d'identifier les caractéristiques distinctives des descendants d'immigrés par rapport aux autres natifs.

Cette hétérogénéité est généralement associée au pays de naissance des parents, qui renvoie à des cultures différentes mais aussi à des langues, des niveaux d'éducation moyens ou encore des compétences variées. En France, le niveau d'instruction des migrants est beaucoup plus faible que celui des natifs (Santelli, 2016). Aux États-Unis, les migrants sont également moins instruits que les natifs. Des écarts sont néanmoins observés par pays d'origine : la plupart des immigrés asiatiques (en particulier ceux qui sont arrivés au cours des dernières décennies) sont relativement instruits et hautement qualifiés, ce qui leur permet de travailler dans des professions hautement qualifiées.

Avoir un ou deux parents immigrés influence largement le processus de socialisation également. En France, deux tiers des descendants d'immigrés ont deux parents immigrés et parmi eux, 87% ont des parents qui proviennent du même pays (Lhommeau, Simon, 2010). Ces pourcentages varient selon les pays d'origine (Lhommeau, Simon, 2010). Aux États-Unis, plus de deux de personnes sur cinq (42%) nées de parents migrants ont un parent autochtone. Parmi les 58% restants, 55% ont deux parents nés à l'étranger avec des lieux de naissance dans la même région, et seulement 3% ont des parents nés dans deux régions différentes (MPI, 2006).

Borjas (1995) souligne que la ségrégation urbaine est un facteur déterminant de l'acquisition du capital humain, qui intervient dans le processus de la mobilité intergénérationnelle. En France, les descendants d'immigrés turques et maghrébins constituent plus d'un quart de la population des zones urbaines sensibles, alors que moins de 4% des autres natifs y vivent (Santelli, 2016). Aux États-Unis, les descendants d'immigrés vivent davantage dans les régions métropolitaines. S'ils ont deux parents migrants, 96% vivent dans une région métropolitaine, contre 91% pour les autres natifs.

Liebig et Widmaier (2009) montrent que la différence de niveau d'éducation entre natifs avec et sans parents immigrés est beaucoup plus élevée en France (environ 10%) qu'aux États-Unis, où l'écart est proche de zéro. Par ailleurs, Santelli (2016) montre qu'en France, les descendants d'immigrés ont des taux plus élevés d'abandon et sont moins susceptibles d'obtenir un diplôme de l'enseignement supérieur. Cependant, le niveau d'éducation relativement bas des descendants d'immigrés par rapport aux autres natifs ne semble pas attribuable à l'origine migratoire de leurs parents. D'autres travaux montrent que les descendants d'immigrés ont de meilleurs résultats en matière d'éducation que les autres natifs après contrôle de leurs origines sociales et familiales (Brinbaum, Kieffer, 2009). Ce rôle majeur des caractéristiques sociales et familiales se retrouve également aux États-Unis, mais les descendants d'immigrés restent plus instruits que les autres natifs, que ces caractéristiques individuelles soient ou non prises en compte. Ils sont plus susceptibles de terminer leurs études supérieures que les autochtones : environ 36% des descendants d'immigrés (de 25 ans et plus) ont au moins un baccalauréat, ce chiffre s'élève à 31% pour les autres natifs (Pew Research Center, 2013).

#### *L'intégration sur le marché du travail des descendants d'immigrés*

Les caractéristiques distinctives des descendants d'immigrés expliquent une partie des difficultés auxquelles ils sont confrontés sur le marché du travail.

En France, les hommes descendants d'immigrés maghrébins, turcs ou africains (Afrique subsaharienne) ont un taux de chômage deux fois et demie plus élevé que celui des descendants de natifs (Meurs, *et al.*, 2015). Ces taux sont encore plus importants chez les plus jeunes descendants d'immigrés, en particulier les moins de 25 ans, sans diplôme et/ou ou qui vivent dans des zones urbaines sensibles (Cusset *et al.*, 2015). La comparaison avec les autres natifs (déclarant un père

## *Résumé en Français*

ouvrier) ne change pas les résultats : le taux de chômage des descendants d'immigrés nord-africains est deux fois plus élevé (21% versus 10%) (Santelli, 2016). Aux États-Unis, le taux de chômage des descendants d'immigrés est semblable à celui des autres natifs (4,6% en 2005), même s'il varie selon le sexe. Les hommes descendants d'immigrés ont des taux de chômage plus élevés que les femmes descendantes d'immigrés : il est de 5,5% pour les premiers en 2005 et de 3,6% pour les seconds (Mosisa, 2006).

Les niveaux de salaires des descendants d'immigrés en France sont inférieurs à ceux des autochtones (France Stratégie, 2016). Aeberhardt, Fougère et Pouget (2010) ont constaté un écart salarial brut (non ajusté) d'environ 13% entre descendants d'immigrés d'Afrique du Nord et les descendants de natifs (avec données de l'Enquête Emploi en Continu). En revanche, aux États-Unis, l'écart salarial brut montre que les descendants d'immigrés ont tendance à avoir des revenus plus élevés que les autres natifs, bien que cet avantage diminue avec le temps (Picot, Hou, 2011). De la même manière, Card (2005) constate que, après ajustement de l'âge, les descendants d'immigrés ont un salaire 8% plus élevé que les autres natifs. Borjas (2006) confirme cet ordre de grandeur, avec un écart de 7% à 9% en 2000. Cependant, Picot et Hou (2011) montrent que cet écart salarial positif entre les descendants d'immigrés et les autres natifs disparaît lorsque l'on contrôle notamment le niveau d'éducation et le lieu de résidence. A l'instar de la France, une grande hétérogénéité existe selon la région d'origine des parents. Les descendants d'immigrés asiatiques gagnent le plus (US\$ 47.000), tandis que les descendants d'immigrés hispaniques sont parmi les moins bien rémunérés (US\$ 33.000), ce qui reflète en partie les niveaux d'éducation et les emplois qu'ils obtiennent (Mosisa, 2006).

Frickey et Primon (2010) montrent qu'au début de la vie active, les jeunes descendants d'immigrés sont particulièrement touchés par des contrats précaires (définis comme des CDD). Leurs résultats indiquent que trois ans après la fin de leur scolarité, les descendants d'immigrés nord-africains ayant un niveau d'éducation élevé sont trois fois plus représentés dans des contrats aidés que les descendants de natifs. De même, les auteurs montrent que parmi les jeunes sans diplôme, les descendants d'immigrés nord-africains sont 69% à avoir un emploi précaire trois ans après être sortis du système éducatif contre 55% pour les descendants de natifs. Les descendants d'immigrés sont par ailleurs moins susceptibles d'être employés dans l'administration publique que les autres natifs. L'OCDE (2015) montre que la différence est plus forte en France (1,8 point de pourcentage) qu'aux États-Unis (1 point de pourcentage).

Une autre différence notable concerne la distribution dans l'emploi des descendants d'immigrés. En France, les descendants d'immigrés d'Afrique du Nord (de 35 à 50 ans), dont le père est ouvrier, sont 52% à être ouvriers, contre 45% pour les descendants de natifs (Okba, 2012). A l'inverse, seuls 8% des descendants d'immigrés d'Afrique du Nord sont cadres, contre 20% pour les descendants de natifs (Okba, 2012). La reproduction sociale semble également plus forte concernant le type d'emploi

occupé par les descendants d'immigrés : 6% des fils d'ouvriers immigrés d'Afrique du Nord deviennent cadres, alors que ce chiffre est de 13% pour les descendants de natifs (Okba, 2012). A l'inverse, aux États-Unis, la répartition des descendants d'immigrés dans les secteurs d'activités et professions est globalement similaire à celle des autres natifs (Pew Research Center, 2013 ; Picot, Hou, 2011). Néanmoins, la distinction par région d'origine dévoile de grandes disparités en termes de professions. Les descendants d'immigrés hispaniques semblent occuper des emplois moins qualifiés que les descendants d'immigrés asiatiques (Pew Research Centre, 2013).

## ENJEUX METHODOLOGIQUES DE LA THESE

L'objectif de cette thèse est d'améliorer la compréhension des mécanismes à l'origine de potentielles inégalités auxquelles les descendants d'immigrés font face sur le marché du travail, en France et aux États-Unis. Les deux pays affichent des niveaux différents d'intégration des descendants d'immigrés sur le marché du travail, et, selon les indicateurs considérés, leur intégration est meilleure dans un pays ou dans l'autre. L'objectif de cette thèse est donc d'étendre cette analyse comparative à des indicateurs complémentaires de l'intégration du marché du travail. En dépit d'une proportion semblable de descendants d'immigrés dans leur population, la composition de ce groupe de descendants d'immigrés diffère entre les deux pays. En outre, les contextes institutionnels dans lesquels ils s'intègrent nécessitent d'être spécifiés pour identifier correctement les potentiels canaux d'inégalités.

### *L'approche comparative et institutionnelle*

L'approche comparative adoptée dans cette thèse tient compte à la fois des institutions encadrant le marché du travail et l'éducation ainsi que celles liées à l'immigration et l'intégration. En effet, étudier les conditions d'emploi de cette population de descendants d'immigrés nécessite de prendre en compte le cadre institutionnel qui régit le marché du travail de ces deux pays. On observe plusieurs types de différences entre la France et les États-Unis : les systèmes éducatifs et le lien entre qualification et emploi ; la protection de l'emploi et la question de la sélection ; les relations professionnelles et la politique de l'emploi. En ce qui concerne les institutions liées à l'immigration, la France repose explicitement sur un modèle dit républicain, alors que les États-Unis s'appuient sur un modèle multiculturel (Safi, 2007). Ceci conditionne les politiques d'immigration, les politiques d'intégration ainsi que d'autres fonctionnements institutionnels, globalement plus volontaristes en France. En plus de ces institutions, de nombreux traits distinguent les deux pays tels que le rôle joué par la langue, la religion ou la race (Alba, 2005).

### *Les dimensions des conditions d'emploi explorées*

Cette thèse adopte une perspective globale des conditions d'emploi. Les conditions d'emploi font partie des conditions de travail au sens large. Les conditions de travail couvrent de nombreuses thématiques, allant du temps de travail (heures de travail, périodes de repos et horaires) à la rémunération, ainsi que des conditions physiques et mentales dans l'emploi (BIT, 2016). Cette thèse ne prend pas en compte les conditions de travail, telles que les conditions physiques et mentales, principalement en raison du manque de données. Les données comparatives identifiant au niveau national les conditions de travail et les descendants d'immigrés sont rares. Lorsqu'elles existent, aucune comparaison rigoureuse n'est possible car elles ne couvrent pas les mêmes caractéristiques dans les deux pays.

Une des dimensions des conditions d'emploi étudiée dans cette thèse est le déclassement. Cette composante ne renvoie pas directement aux caractéristiques de l'emploi per se, mais plutôt à l'adéquation entre les compétences de l'individu et celles exigées par l'emploi qu'il occupe. C'est Freeman qui, le premier, a identifié ce phénomène aux États-Unis au début des années 1970, développé dans son ouvrage *The Overeducated America*. En cas de déclassement, le déséquilibre entre les qualifications professionnelles d'un travailleur et le poste qu'il occupe implique des conditions d'emploi dégradées, le travailleur ne pouvant valoriser pleinement ses compétences. On peut par ailleurs penser que cela peut avoir un effet négatif sur sa satisfaction dans l'emploi.

La question de la qualité de l'emploi, lorsqu'elle est liée à la sécurité socio-économique, est aussi centrale dans l'étude des conditions d'emploi. La qualité de l'emploi est définie dans la littérature économique et par les organisations internationales comme un concept multidimensionnel (Davoine, Erhel, 2007 ; BIT, 1999). L'intérêt porté à la qualité de l'emploi émerge au début des années 2000, en particulier dans le cadre de la Stratégie Européenne pour l'Emploi en Europe et à travers la notion de « travail décent » au niveau international (Davoine, et al, 2008 ; BIT, 1999). La notion de qualité de l'emploi a été introduite suite à certains travaux sur la satisfaction au travail, dans lesquels on interrogeait les travailleurs sur les composantes qui augmentaient leur satisfaction au travail. Cela a conduit à définir la qualité de l'emploi par un large éventail de dimensions allant du salaire à l'indépendance au travail par exemple. Cette thèse couvre trois dimensions essentielles liées à la sécurité socio-économique qui sont le salaire, la sécurité de l'emploi et le temps de travail. Ces dernières se retrouvent d'ailleurs dans les travaux universitaires, ainsi que dans les définitions proposées par les organisations internationales.

Le salaire occupe une place unique dans les conditions d'emploi, en particulier parce qu'il est souvent considéré comme le principal déterminant des conditions de vie d'une personne, et comme l'unique indicateur de qualité de l'emploi dans la théorie néoclassique. En outre, les différences salariales brutes entre les descendants d'immigrés et les autres natifs constituent une question centrale, en particulier parce qu'elles semblent être largement expliquées par des caractéristiques individuelles. En

France, les descendants d'immigrés gagnent en moyenne moins que les autres natifs, alors que l'on constate le contraire aux États-Unis. Pour autant, ces différences ont tendance à disparaître lorsque les caractéristiques individuelles sont prises en compte. Parallèlement, en France, les descendants d'immigrés semblent déclarer un certain degré de discrimination perçue, y compris sur le salaire (Safi, Simon, 2013). S'interroger sur la distribution des écarts de salaire et la contribution des caractéristiques inobservables peut améliorer la compréhension des mécanismes d'inégalités salariales entre les deux groupes.

### *La méthodologie empirique*

Etudier les conditions d'emploi des descendants d'immigrés nécessite d'adapter les méthodologies empiriques. En France, les deux caractéristiques principales de l'intégration sur le marché du travail des descendants d'immigrés sont la plus forte sélection pour obtenir un emploi et les inégalités au sein du groupe, selon les pays d'origine des parents. Aux États-Unis, c'est moins le cas, et on ne remarque pas de sélection particulière dans l'accès à l'emploi. Pour répondre à ces enjeux, l'analyse empirique de cette thèse est basée sur des modèles de sélection et sur une prise en compte spécifique de l'hétérogénéité, notamment à travers des méthodes de décomposition et s'appuyant sur la distribution.

Les modèles de sélection ont été élaborés à la fin des années 1970 pour répondre à une question inhérente aux recherches économétriques appliquées : les biais de sélection. Les modèles de sélection, tels ceux développés par Heckman, reposent sur une méthode d'estimation en deux étapes pour corriger ce biais. La première étape consiste à corriger le biais en utilisant une fonction de contrôle, relativement simple à implémenter. Une fois cette correction de sélection incorporée, l'équation du salaire peut être estimée. Ces modèles sont particulièrement pertinents dans la littérature relative aux populations issues de l'immigration, car la pénalité associée au pays de naissance ou au pays de naissance des parents est évidente (OCDE, 2015). Deux types de modèles linéaires sont utilisés dans cette thèse pour traiter le biais de sélection : les modèles continus et les modèles discrets.

La deuxième caractéristique repose sur la composition et la distribution des écarts de salaires. Les articles fondateurs de Oaxaca (1973) et Blinder (1973) ont introduit en économie du travail des méthodes de décomposition, largement utilisées depuis. La décomposition salariale d'Oaxaca et Blinder est une méthode statistique qui explique la différence de moyenne d'une variable dépendante entre deux groupes en décomposant, d'une part, l'écart attribuable aux différences de caractéristiques individuelles observables, et d'autre part, celui attribuable aux différences de caractéristiques inobservées. Une partie de cette thèse s'appuie sur ce type de méthode afin de comprendre la composition des écarts de salaire, tout en creusant la distribution de ces écarts.

La perspective comparative a également des implications sur les variables et les bases de données. Par exemple, il n'existe pas de données comparables pour l'analyse des conditions de travail. Une

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deuxième difficulté réside dans les données utilisées. Aucune base de données comparative entre la France et les États-Unis ne permet l'étude de l'intégration sur le marché du travail des descendants d'immigrés. A l'inverse, plusieurs bases de données recueillent, au niveau national, certains indicateurs de l'intégration sur le marché du travail. Cette thèse utilise la Current Population Survey (CPS), qui recueille des informations sur la population active et inclut une question sur le lieu de naissance des parents, permettant l'étude de l'intégration des descendants d'immigrés. En France, deux bases de données sont utilisées alternativement, l'enquête Trajectoires et Origine, conçue spécialement pour étudier l'intégration des populations issues de l'immigration, et l'Enquête Emploi en Continu. Cette dernière enquête, comme la CPS, vise à fournir des informations clés sur la population active, et a introduit une question sur le lieu de naissance des parents en 2005, rendant dorénavant possible d'étudier les descendants d'immigrés.

### PLAN DE LA THESE

Cette analyse comparative des conditions d'emploi des descendants d'immigrés en France et aux États-Unis, qui apporte un éclairage nouveau de leur intégration sur le marché du travail, repose sur trois analyses empiriques, développées dans chacun des chapitres.

Le premier chapitre examine le déclassement des descendants d'immigrés par rapport aux autres natifs dans les deux pays étudiés, avec dans un premier temps une analyse propre au cas français, puis une analyse comparative. Ce deuxième chapitre explore les écarts de qualité de l'emploi entre les descendants d'immigrés et les autres natifs en France et aux États-Unis. Cette analyse vise plus précisément à approfondir les mécanismes d'inégalités sur le marché du travail auxquels sont confrontés les descendants d'immigrés. Enfin, et suite aux résultats du deuxième chapitre, le dernier chapitre explore une dimension précise de la qualité de l'emploi en étudiant la question des écarts de salaire. En s'intéressant plus précisément à la distribution des salaires et à sa décomposition dans les deux pays ce dernier chapitre propose un regard original de l'intégration sur le marché du travail des descendants en France et États-Unis.

### CHAPITRE 1. LE DECLASSEMENT PROFESSIONNEL DES DESCENDANTS D'IMMIGRES EN FRANCE ET AUX ÉTATS-UNIS

Ce premier chapitre s'intéresse aux écarts de déclassement professionnel entre les descendants d'immigrés et les descendants de natifs en France et aux États-Unis.

#### *Théories, mécanismes et mesures du déclassement*

Le concept de déclassement professionnel résulte d'une différence entre le niveau d'éducation du travailleur et le niveau de qualification exigé par son emploi. Il n'est pas question de déclassement

dans la théorie néoclassique et particulièrement dans la théorie du capital humain, puisqu'il n'y a pas de distinction entre les individus et l'emploi, c'est-à-dire pas de qualification associée à l'emploi. L'ajustement se fait sur le prix relatif, sans impliquer un niveau de qualification. L'approche développée par Lester Thurow, le *job-competition model* (modèle de compétition dans l'emploi), propose deux files d'attente : une pour les emplois et une autre pour les travailleurs. Plus un travailleur potentiel est haut dans la file d'attente, plus il augmente sa probabilité d'avoir un emploi en haut de la file d'attente, qui a donc plus de chances de correspondre à ses qualifications. Dans cette théorie, l'éducation joue un rôle de signal. Ainsi, un individu peut être déclassé dans un emploi si trop d'individus sont au-dessus de lui dans la file d'attente, ne lui permettant pas d'avoir accès à un emploi qui correspond à ses qualifications.

Les caractéristiques institutionnelles peuvent jouer un rôle sur les niveaux et les inégalités de déclassement au sein d'un pays. Les institutions du marché du travail diffèrent entre les économies de marché libérales comme aux États-Unis et les économies du marché dites coordonnées comme en France (Hall et Soskice, 2001). Il semble que les économies de marché coordonnées comme la France produisent moins de travailleurs déclassés, ce qui va de pair avec une meilleure utilisation de la main-d'œuvre (Estevez-Abe, Iversen et Soskice, 2001). Les systèmes scolaires et les politiques éducatives nationales sont également en mesure d'avoir une incidence sur le déclassement. Pour un même niveau d'éducation, les compétences enseignées dans les différents diplômes, peuvent favoriser les inégalités. Le système scolaire français semble difficilement en mesure d'offrir des chances égales pour tous, quelles que soient l'origine sociale et la nationalité des parents. Il reproduit plutôt une « inégalité des possibles » entre les individus, au travers d'opportunités et de choix différents dans leur scolarité (Cnesco, 2016). De même, des effets de réseaux peuvent jouer dans la sélection dans les différents diplômes à un même niveau d'éducation. L'étude des inégalités entre les descendants d'immigrés et les autres natifs appelle aussi à considérer les institutions liées à l'immigration et à l'intégration de ces populations. Certains pays peuvent par ailleurs être amenés à mettre en place des politiques publiques destinées aux descendants d'immigrés, comme par exemple des politiques de discrimination positive.

Le déclassement n'est pas un phénomène homogène et uniforme. Les individus d'un même pays n'en sont pas affectés de la même manière. Les jeunes travailleurs sont plus souvent exposés que leurs homologues plus âgés (le déclassement est un phénomène qui affecte relativement plus les jeunes travailleurs que leurs homologues plus âgés (Giret, *et al.*, 2006 ; Forgeot, Gautié, 1997 ; Sicherman, 1991). Les moins qualifiés parmi les diplômés sont plus touchés par le déclassement, même si les plus diplômés n'en sont préservés (Giret *et al.*, 2006). Ces mêmes auteurs identifient également des effets liés au sexe et à la spécialité de formation, qui vont au-delà du niveau d'éducation. Enfin, aux États-Unis comme en France, les femmes sont plus susceptibles d'être déclassées dans leur emploi que les hommes toutes choses égales par ailleurs (Giret *et al.*, 2006 ; McGoldrick, Robst, 1996).

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La mesure du déclassement reste controversée en économie, comme en sociologie. Trois catégories de mesures sont généralement distinguées : l'approche subjective, l'approche normative et l'approche statistique. L'approche comparative développée dans ce chapitre s'appuie sur une approche normative, plus aisée pour la comparaison, tandis que la partie plus approfondie sur la France s'appuie sur une mesure statistique du déclassement.

### *Un déclassement plus fréquent pour les descendants d'immigrés en France*

L'analyse empirique est basée sur l'exploitation de l'enquête française Trajectoires et Origines (TeO) réalisée en 2008. Les descendants d'immigrés représentent 15,3% de notre échantillon, la majorité d'entre eux vient d'Afrique du Nord (35,5%) et d'Europe du Sud (35,9%). Les descendants d'immigrés ont tendance à être plus jeunes que les descendants de natifs. Ils vivent aussi plus souvent dans des zones urbaines sensibles et en région parisienne (35% contre 17,2% pour les descendants de natifs). Leurs pères sont moins souvent directeurs ou managers (19,9%) que ceux des autres natifs (25,1%). La même chose est vraie pour les mères (21% contre 30,7% pour les descendants de natifs).

Les descendants d'immigrés ont un niveau d'éducation moins élevé que les descendants de natifs. Ceci s'explique notamment par le manque d'informations pour choisir et accéder aux diplômes les plus prestigieux. Par ailleurs, la ségrégation scolaire pour les descendants d'immigrés est particulièrement importante en France (Lorcerie, 2003). Certaines tendances semblent ressortir, avec par exemple le niveau d'éducation relativement bas des descendants d'immigrés africains ou encore un niveau d'éducation relativement similaire entre les descendants d'immigrés d'Europe du Sud et les autres natifs, à ceci près qu'ils sont moins susceptibles d'obtenir les diplômes les plus élevés.

Il existe une proportion plus élevée de descendants d'immigrés inactifs (5,2%) que pour les autres natifs (3,1%). En outre, leur taux de chômage est de 10,6% comparativement à 8,6% pour les descendants de natifs. En termes de secteurs d'activité, les descendants d'immigrés ont une répartition relativement semblable aux autres natifs. Ils sont toutefois plus représentés dans les activités financières ou dans le commerce. En termes de professions, les descendants d'immigrés sont moins représentés dans les professions intellectuelles et scientifiques. De même, ils sont moins représentés dans les professions intermédiaires (-2,6 points de pourcentage), et le sont au contraire davantage dans des emplois administratifs et des professions non qualifiées.

Que ce soit avec une mesure statistique ou une mesure normative, les descendants d'immigrés sont plus souvent déclassés en France<sup>98</sup>. Cet écart est particulièrement marqué pour les individus au niveau

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<sup>98</sup> Afin de mesurer statistiquement le déclassement, les fréquences théoriques sont comparées à celles qui sont effectivement observées, comme l'ont fait Forgeot et Gautié (1997). Pour la mesure normative, la mesure repose sur la mise à jour de Lemistre (2014) de la mesure normative proposée par Affichard (1981) à propos de la situation française dans les années 1970. La table de correspondance d'Affichard propose une correspondance entre l'emploi et l'éducation.

d'éducation élevé, bien que les niveaux de déclassement soient plus élevés pour les individus au niveau d'éducation moyen. La mesure statistique du déclassement révèle que 38,4 % des descendants d'immigrés qui ont un niveau d'éducation élevé sont déclassés contre 33,5 % des descendants de natifs au même niveau d'éducation, soit environ 5 points d'écart. À un niveau d'éducation moyen, 46,6 % des descendants d'immigrés sont déclassés contre 48,5 % des descendants natifs. La part d'individus déclassés est encore plus élevée avec la mesure normative : 46,9% des descendants d'immigrés au niveau d'éducation moyen et 26,9% de ceux au niveau d'éducation élevé sont déclassés, alors que cela concerne respectivement 56% et 23,5% des descendants de natifs. Les plus hauts diplômés semblent donc protéger du déclassement.

### *Comment explique-t-on le plus fort déclassement des descendants d'immigrés ? Le cas de la France*

Dans une première approche un modèle probit est mobilisé afin d'expliquer le fait d'être déclassé statistiquement ou non à l'instant  $t$ . Les résultats de ce modèle montrent que le fait d'être descendant d'immigrés, quel que soit le pays d'origine des parents, joue un rôle non significatif sur la probabilité d'être déclassé. Toutefois, en désagrégant les régions d'origine des parents certains pays semblent plus exposés au risque de déclassement. De nombreuses caractéristiques individuelles sont néanmoins significativement liées à la probabilité d'être déclassé : être une femme accroît par exemple cette probabilité.

L'utilisation d'un modèle de sélection permet, dans un second temps, de prendre en compte le biais de sélection à l'entrée sur le marché travail avant d'analyser la situation de déclassement dans l'emploi. Les statistiques descriptives montrent des taux de chômage plus élevés pour les descendants d'immigrés et laisse soupçonner ce biais de sélection.

Les résultats de ce modèle confirment, après contrôle des variables individuelles et des variables liées à l'emploi, qu'être descendant d'immigrés n'augmente significativement pas la probabilité d'être déclassé. Les situations les plus fréquentes de déclassement soulevées par les statistiques descriptives proviennent ainsi des effets de composition, notamment liés à la ségrégation dans l'emploi (secteur, type d'emploi).

### *Comparaison entre la France et les États-Unis*

Cette section vise à comparer l'écart de déclassement entre les descendants d'immigrés et les autres natifs en France et aux États-Unis. L'un des défis de la comparaison empirique entre deux pays renvoie à la question de la mesure. La catégorie socio-professionnelle est une spécificité française, qui empêche une reproduction de la mesure avec les États-Unis. Les comparaisons internationales relatives au déclassement, réalisées notamment par les organisations internationales, reposent sur une

classification internationale de l'éducation – ISCED – et une classification internationale des professions – ISCO. Compte tenu des limites inhérentes à ces classifications, cette mesure du déclassement concerne uniquement les travailleurs au niveau d'éducation élevé.

La distribution de travailleurs hautement qualifiés montre l'absence de grandes inégalités aux États-Unis en matière d'éducation entre les descendants d'immigrés et les descendant de natifs. En France, au contraire, un écart de 9 points de pourcentage existe entre les deux populations, affectant négativement les descendants d'immigrés. Toutefois, aux États-Unis les descendants d'immigrés de certains pays sont moins souvent hautement qualifiés. La distribution des professions (ISCO) dépeint une tendance relativement similaire que la distribution des qualifications : aux États-Unis, les descendants d'immigrés sont un peu plus dans les emplois hautement qualifiés que les descendants de natifs, alors que c'est le contraire en France. De même que pour l'éducation, certaines origines régionales sont aux États-Unis plus souvent moins qualifiés.

Dans le cadre de cette comparaison, le taux de déclassement mesure la part des personnes hautement qualifiées ayant une profession autre qu'un emploi hautement qualifié (OCDE (2015b, 2007 ; Quintini, 2011)). Les niveaux globaux de déclassement pour toute la population confirment la hiérarchie soulevée dans la littérature comparative : le déclassement est plus fort aux États-Unis qu'en France.

De même que dans la section précédente, l'analyse économétrique est effectuée en deux temps. Une première étape sans sélection repose sur des modèles probit, la deuxième sur un modèle de sélection. Le premier modèle indique qu'être descendant d'immigrés en France augmente significativement la probabilité d'être déclassé toutes choses égales par ailleurs. Cependant, l'introduction de caractéristiques des emplois (secteur d'activité, type de contrat) rend la relation non significative. Avec le modèle de sélection, être descendant d'immigrés devient significatif et négatif sur l'accès à l'emploi, mais non significatif sur la probabilité d'être déclassé. Aux États-Unis, l'origine ne joue aucun rôle significatif sur la probabilité d'être déclassé (sans correction du biais de sélection), tant au niveau agrégé que désagrégé par région d'origine des parents à l'exception des descendants d'immigrés latino-américains. La correction du modèle de sélection, comme précédemment, n'indique aucune pénalité fondée sur l'origine, ni sur la probabilité d'obtenir un emploi, ni sur le fait d'être déclassé.

Dans l'ensemble, les résultats montrent que ce n'est pas tant le fait d'être descendant d'immigrés *per se* qui influence la probabilité d'être déclassé mais plutôt les caractéristiques individuelles des descendants d'immigrés. Pourtant, les descendants d'immigrés restent plus déclassés que les descendants de natifs. Le fait d'être de milieux sociaux défavorisés avec un capital social moins élevé peut avoir des conséquences en termes de réseaux. Or le réseau peut être déterminant en matière d'insertion dans l'emploi. Ces effets de réseaux peuvent jouer à la fois sur les réseaux des parents et

les réseaux des descendants d'immigrés eux-mêmes, qui n'accèdent pas aux filières scolaires les plus sélectives, et ne peuvent ensuite bénéficier du réseau de ces filières.

Les facteurs institutionnels peuvent aussi expliquer en partie les résultats de ce chapitre. Les politiques éducatives peuvent jouer un rôle pour diminuer le déclassement, et surtout pour diminuer les écarts de déclassement selon l'origine des parents. De même, les inégalités spatiales contribuent aux écarts observés, en France notamment, en termes de fréquence du déclassement. Enfin, les marchés du travail où la sélection est forte semblent être, certes, associés à des niveaux plus bas de déclassement mais à des écarts selon l'origine relativement plus importants.

## CHAPITRE 2. LA QUALITE DE L'EMPLOI DES DESCENDANTS D'IMMIGRES EN FRANCE ET AUX ÉTATS-UNIS

Ce deuxième chapitre étudie la qualité de l'emploi des descendants d'immigrés, en se focalisant sur la dimension de sécurité socio-économique. Ce chapitre élargit la littérature concernant l'intégration sur le marché du travail des descendants d'immigrés, en analysant les conditions d'emploi de manière plus globale.

### *La qualité de l'emploi en France et aux États-Unis*

#### *La qualité de l'emploi : un concept multidimensionnel*

La recherche sur la qualité de l'emploi s'est développée depuis le début des années 2000, notamment avec l'émergence des analyses de la satisfaction au travail et de ses liens avec les conditions d'emploi.

La France et les États-Unis ont deux approches distinctes de la qualité de l'emploi. Muñoz de Bustillo, *et al.* (2011) soulèvent la relative absence des indicateurs de qualité de l'emploi spécifiquement développés aux États-Unis, par rapport à l'Europe. L'intérêt des pouvoirs publics pour la qualité de l'emploi semble varier d'un continent à l'autre. Au niveau européen, depuis la fin des années 1990, le sujet s'est intéressé à de multiples thématiques, alors que les débats aux États-Unis ont été principalement centrés sur les emplois à bas salaires et l'accès à la protection sociale (les « benefits »).

Les trois différences significatives entre les deux pays (en ce qui concerne les contextes institutionnels, les définitions adoptées et les données) justifient l'adoption de différentes mesures de qualité de l'emploi dans les deux pays. Dans cette thèse, ces différences impliquent de trouver une définition commune, mais qui tienne compte des spécificités nationales, en ce qui concerne la sécurité de l'emploi par exemple. Conformément à la décomposition de la qualité de l'emploi en deux composantes (qualité de l'emploi et qualité du travail) proposés par Muñoz de Bustillo, *et al.* (2011), ce chapitre se concentre sur la qualité de l'emploi et non pas sur la qualité du travail. Plus précisément,

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la qualité de l'emploi sera analysée en considérant trois dimensions essentielles liées à la sécurité socio-économique : le salaire, la sécurité de l'emploi et le temps de travail.

### *Les inégalités sur le marché du travail entre les descendants d'immigrés et les autres natifs*

En termes de qualité de l'emploi, la littérature sur les descendants d'immigrés est restée assez silencieuse, même si certains auteurs ont appelé à une nouvelle enquête en Europe sur les inégalités de conditions d'emplois et de travail des individus (Davoine *et al.*, 2008).

En revanche, les descendants d'immigrés semblent rassembler quelques caractéristiques défavorables à leur qualité de l'emploi. Les jeunes travailleurs tendent ainsi à avoir une qualité de l'emploi plus faible, qui peut être attribuée en partie à de plus fréquentes transitions sur le marché du travail (Erhel, Guergoat-Larivière, 2013) et à un manque d'expérience professionnelle. De plus, le faible niveau d'éducation des descendants d'immigrés peut aussi contribuer à les cloisonner dans des emplois de faible qualité (Davoine *et al.*, 2008 ; Kalleberg *et al.*, 2000). Les descendants d'immigrés tendent aussi à avoir des réseaux professionnels moins développés, avec une forte composante ethnique, c'est-à-dire composé principalement de migrants du même pays d'origine (Safi, 2006 ; Munshi, 2003 ; Frickey *et al.*, 2002). Enfin, ils vivent dans des zones résidentielles plus démunies, où les opportunités professionnelles sont plus faibles.

### *Les composantes de la qualité de l'emploi au prisme de la comparaison*

Notre comparaison empirique repose sur l'exploitation des deux bases de données, couvrant une période allant de 2008 à 2012. En France, l'enquête Emploi en continu (EEC) fournit un vaste échantillon représentatif qui permet d'étudier la région d'origine des parents. Aux États-Unis, la Current Population Survey et plus précisément le supplément mensuel ASEC est utilisé. Pour les deux pays, l'analyse se concentre sur la population en âge de travailler, à savoir les personnes de 15 à 64 ans, et n'inclut pas les immigrés. En 2012, les descendants d'immigrés représentent 12,1% de l'échantillon français et 9,3% de l'échantillon américain.

Cette thèse adopte une approche désagrégée de la qualité de l'emploi, qui permet de conserver le maximum d'informations disponibles (Osterman, 2013 ; Guergoat-Larivière, Marchand, 2012). Les trois dimensions étudiées dans ce chapitre (le salaire, la sécurité d'emploi et le temps de travail) correspondent aux caractéristiques de l'emploi, mais ne couvrent pas les caractéristiques liées au travail, tels que les conditions physiques de travail.

Le salaire mensuel net qui est utilisé dans les deux pays. Il a été préféré au salaire horaire afin d'étudier les conditions réelles d'emploi des individus. La dimension de sécurité de l'emploi en France repose sur la nature du contrat de travail, avec deux modalités, l'une avec une grande sécurité (emplois à durée indéterminée) et l'autre avec une faible sécurité (emplois à durée déterminée). Aux États-Unis,

la dimension de sécurité de l'emploi est mesurée à travers l'accès à la protection sociale (les « benefits »), et plus précisément sur la mise à disposition de l'assurance santé par l'employeur. Enfin, la dimension du temps de travail comprend deux aspects : la durée du travail (temps plein versus temps partiel) et l'aspect volontaire ou subi du temps de travail.

En France, les salaires moyens des descendants d'immigrés sont inférieurs de 170 € par rapport aux descendants de natifs. Aux États-Unis, cet écart est de 230 \$US. On observe une grande hétérogénéité sur ces niveaux de salaires parmi les descendants d'immigrés en France. Les descendants d'immigrés d'Afrique du Nord ou subsaharienne ont un salaire mensuel inférieur aux descendant de natifs en France, alors que les descendants d'immigrés d'Europe du nord ont eux, un salaire mensuel supérieur aux descendants de natifs. Ces inégalités selon les origines sont plus nettes encore aux États-Unis.

En France, l'accès à des emplois permanents est fortement inégal. Les descendants d'immigrés ont moins accès à des emplois à durée indéterminée que les autres natifs de 3 points de pourcentage. Aux États-Unis, la sécurité de l'emploi, mesurée par la prestation d'assurance-maladie par l'employeur, est généralement plus faible pour les descendants d'immigrés que pour les autres natifs (de 3 points de pourcentage) et l'hétérogénéité des origines de migration est ici encore prononcée. Concernant le temps de travail, en France, les différences entre les descendants d'immigrés et les autres natifs sont relativement faibles. Aux États-Unis, les emplois à temps partiel touchent davantage les descendants d'immigrés, qu'ils soient volontaires ou non. Dans l'ensemble, les statistiques descriptives décrivent une qualité de l'emploi inférieure pour les descendants d'immigrés sur les trois dimensions considérées.

### *Stratégie économétrique*

Notre analyse économétrique tient compte du biais de sélection à l'entrée sur le marché du travail, de la même manière que dans le chapitre 1. Les trois dimensions de la qualité de l'emploi sont explorées. Le salaire net mensuel est une variable continue, alors que le temps de travail et la sécurité de l'emploi sont des variables qualitatives. Empiriquement, des modèles linéaires (MCO) et dichotomiques (probit) sont donc nécessaires. Toutefois, afin de tenir compte de la sélection, pour la variable de salaire, continue, un modèle d'Heckman est utilisé alors qu'un probit binomial avec sélection, est réservé aux variables dichotomiques.

### *Résultats et discussion*

Les résultats des estimations indiquent qu'être descendant d'immigrés a un effet négatif et significatif sur la probabilité d'obtenir un emploi en France, alors que cet effet est non significatif aux États-Unis. Une fois le biais de sélection pris en compte, nous trouvons qu'être descendant d'immigrés a des effets positifs sur le salaire dans les deux pays. Cet effet positif sur le salaire peut être surprenant. Pourtant,

## *Résumé en Français*

cela confirme la littérature sur les inégalités salariales aux États-Unis et les résultats trouvés traditionnellement en France, une fois le biais de sélection pris en compte.

La principale différence entre les deux pays repose sur les dimensions de la qualité de l'emploi affectées négativement par l'origine des parents. En France, être descendant d'immigrés diminue toutes choses égales par ailleurs l'accès à l'emploi stable (emploi à durée indéterminée - la sécurité de l'emploi) alors que cet effet concerne uniquement le temps de travail aux États-Unis. Cet impact négatif aux États-Unis sur le temps de travail peut faire écho aux difficultés observées en France par les descendants d'immigrés pour intégrer le marché du travail, qui se matérialiseraient différemment aux États-Unis. Autrement dit, on peut penser que les difficultés auxquelles font face les descendants d'immigrés pour accéder à l'emploi en France (et en termes de sécurité de l'emploi) se retrouvent aux États-Unis en termes de choix du temps de travail, les descendants d'immigrés rencontrant plus de difficultés à accéder aux emplois dont le temps de travail leur convient.

Les caractéristiques individuelles observées, de même que celles associées à l'emploi occupé, expliquent de manière significative les différences observées entre les descendants d'immigrés et les descendants de natifs, confirmant les résultats de la littérature.

### *Comment le nombre d'heures travaillées influence-t-il les résultats sur les salaires ?*

L'effet positif d'être descendant d'immigrés que nous avons trouvé sur les salaires pourrait être lié à la durée du travail. Rappelons que la variable considérée dans nos modèles est le salaire mensuel et non le salaire horaire. L'impact positif d'être descendant d'immigrés pourrait-il être lié à la quantité d'heures travaillées ? En remplaçant le salaire mensuel par le salaire horaire, l'effet positif observé chez les descendants d'immigrés persiste aux États-Unis, mais pas en France. Cependant, cette estimation est difficile à interpréter en raison de la fiabilité insuffisante des données sur le salaire horaire en France.

### *La région d'origine des parents contribue-t-elle à expliquer l'écart entre les descendants d'immigrés et les autres natifs ?*

Cette séparation des natifs par lieu de naissance des parents met en lumière la grande hétérogénéité des relations entre la région d'origine des parents et certaines dimensions de la qualité des emplois, rappelant ainsi l'histoire et les spécificités de chacune des diasporas dans les deux pays. En France, un effet négatif sur l'accès à l'emploi est observé pour les descendants d'immigrés d'Afrique du Nord et d'Europe de l'Est. L'effet sur la sécurité de l'emploi est également négatif, mais uniquement pour les descendants d'immigrés d'Afrique du Nord.

Aux États-Unis, un effet négatif sur l'accès au marché du travail n'est remarqué que pour les descendants d'immigrés des Caraïbes et du Sud de l'Europe. Cependant, une fois ce processus de

sélection pris en compte dans le modèle, l'effet de leur origine sur le salaire est positif pour les descendants d'immigrés des Caraïbes.

*La race joue-t-elle un rôle important sur les inégalités de qualité de l'emploi parmi les natifs aux États-Unis ?*

Une différence saillante entre la France et les États-Unis est le rôle plus important donné aux États-Unis à la race, sa place dans le débat public et sa mesure dans les statistiques nationales. La société civile et le milieu académique reconnaissent l'importance des inégalités raciales dans l'ère post-droit civique (voir par exemple Bonilla-Silva, 2015). Afin de tester la force de ces inégalités raciales parmi les natifs, quelle que soit l'origine de leurs parents, une variable capturant le fait d'être Noir est introduite dans les différents modèles. Ce test ne peut en revanche pas être reproduit en France puisque le système statistique national ne permet pas d'identifier la race. Une fois cette variable introduite, le coefficient négatif sur les heures de travail lié au fait d'être descendant d'immigrés, n'est plus significatif. Au lieu de cela, on constate que le fait d'être Noir, rend plus difficile l'accès à l'emploi et signifie un salaire plus faible, toutes choses égales par ailleurs. Cependant, les coefficients positifs et significatifs apparaissent sur les heures de travail et la sécurité de l'emploi. Le coefficient positif initialement trouvé sur les salaires, associé au fait d'être descendants d'immigrés, reste toutefois significatif et positif.

De même que pour le chapitre 1, les résultats de ce chapitre peuvent être mis en perspective avec les institutions des deux pays (marché du travail, immigration et intégration). Les descendants d'immigrés bénéficient moins des politiques actives du marché du travail, notamment en raison d'une moins bonne connaissance du marché du travail, d'un capital social moins important, et/ou d'un réseau moins profitable. Cette absence de réseau, y compris liée à une scolarité moins sélective, joue plus largement dans l'accès aux bons emplois. Ces mécanismes sont également à relier aux institutions liées à la migration. Les « enclaves ethniques » semblent jouer un rôle important dans l'intégration sur le marché du travail américain. La faible distance culturelle et la proximité linguistique entre le pays d'origine des migrants et celui dans lequel ils résident peut aussi expliquer la facilité avec laquelle les descendants d'immigrés s'insèrent dans l'emploi. A cet égard, les mesures d'intégration, notamment les cours de langue, peuvent favoriser l'intégration, et ainsi la qualité des emplois occupés. Néanmoins, ces services ne sont que très peu développés aux États-Unis et commencent seulement à prendre de l'ampleur en France. Enfin, les mesures de discrimination positive observées aux États-Unis peuvent aider les descendants d'immigrés. Ces mesures ne sont toutefois pas utilisées en France, suivant les principes du modèle républicain.

### CHAPITRE 3. LA DISTRIBUTION ET LA DECOMPOSITION DES ECARTS DE SALAIRE ENTRE LES DESCENDANTS D'IMMIGRES ET LES AUTRES NATIFS EN FRANCE ET AUX ÉTATS-UNIS

Ce troisième chapitre découle de la relation positive trouvée au deuxième chapitre entre le fait d'être descendant d'immigrés et le salaire, pour les deux pays étudiés. Ce chapitre vise à explorer la distribution de l'écart de salaire trouvé entre les descendants d'immigrés et de natifs et la composition de cet écart.

#### *Inégalités salariales entre les descendants d'immigrés et les autres natifs dans la littérature*

Seules quelques études empiriques ont été consacrées aux différences dans la distribution des inégalités salariales entre les descendants d'immigrés et les autres natifs en France, comme aux États-Unis, dans une moindre mesure. En France, Silberman et Fournier (2006) ont été les premières à souligner statistiquement la pénalité ethnique affectant les descendants d'immigrés. Plus récemment, Aeberhardt, *et al.* (2010a) trouvent un écart salarial d'environ 13% entre descendants d'immigrés nord-africains et descendants de natifs (avec l'Enquête Emploi de 2005 à 2008). À l'inverse, aux États-Unis, Chiswick met en évidence dès 1977 un avantage salarial d'environ 5% pour les descendants d'immigrés (Chiswick, 1977). Aydemir et Sweetman (2006) confirment cette absence significative de différences de salaires entre les descendants d'immigrés et de natifs.

#### *La décomposition des inégalités salariales : que disent les méthodes paramétriques ?*

L'intérêt porté aux inégalités salariales entre deux populations s'est déplacé vers la décomposition de ces écarts consécutivement au travail séminal de Oaxaca (1973) et Blinder (1973). Ces auteurs étudient les différences de salaires moyens entre hommes et femmes, en décomposant cet écart entre le rôle des caractéristiques individuelles observées et la part d'inobservable (Fortin *et al.*, 2011).

La méthode consiste à estimer séparément l'équation des salaires pour les deux groupes, ici, les descendants d'immigrés et les descendants de natifs. Ensuite, la méthode attribue aux descendants d'immigrés la distribution de leurs caractéristiques observables, mais avec les rémunérations du groupe de référence - à savoir ici les descendants de natifs. Cette deuxième étape peut être interprétée comme la situation contrefactuelle suivante : « Quelle serait la rémunération d'un descendant d'immigré si la rémunération de ses caractéristiques individuelles était alignée sur celle d'un descendant de natifs ? » (Ñopo, 2008). L'écart salarial observé, basé sur ce contrefactuel, est ensuite décomposé en deux composantes : l'une est expliquée par les différences observées de caractéristiques individuelles, et l'autre est inexpliquée. Ce dernier élément est généralement interprété comme de la discrimination. En réalité, cette part englobe également les écarts de salaires dus aux caractéristiques omises ou non-observées.

En France, Aeberhardt, *et al.* (2010a) utilisent cette méthodologie et contrôlent, en outre, le biais de sélection lié à l'entrée sur le marché du travail. Meurs, Lhommeau et Okba (2012) mettent en œuvre également la décomposition Oaxaca-Blinder avec les données de Trajectoires et Origines.

Aux États-Unis, à notre connaissance, seules quelques analyses empiriques explorent la décomposition de l'écart salarial entre les descendants d'immigrés et de natifs. Parmi les rares qui le font, Trejo (1998) s'intéresse plus particulièrement aux descendants d'immigrés mexicains. Utilisant les données de la CPS de Novembre 1979 à 1989, il souligne que les enfants d'immigrants mexicains ont des bas salaires, principalement parce qu'ils possèdent moins de capital humain que les autres travailleurs (Trejo, 1998). Par rapport aux décompositions françaises, cette étude prend en compte leurs potentielles lacunes en langue anglaise.

#### *Les inconvénients des estimations paramétriques et la distribution des écarts de salaires*

Plusieurs limites méthodologiques sont associées à l'approche Oaxaca-Blinder des inégalités salariales (Ñopo, 2008 ; L'Horty, Meurs 2016). Tout d'abord, une mauvaise spécification peut se produire dans une situation de « catégorie vide ». En d'autres termes, il peut exister des cas (combinaisons de caractéristiques individuelles spécifiques) pour lesquels aucun descendant d'immigrés n'est similaire à un descendant de natifs. Cela rend impossible le calcul du contrefactuel. La seconde limite des méthodes de décomposition paramétrique est qu'elles nécessitent l'estimation préalable d'une équation du salaire différente par origine des parents, à laquelle une forme linéaire est imposée (Ñopo, 2008). Pourtant, de nombreuses interactions entre les déterminants du niveau des salaires ne peuvent être considérées lors de l'estimation linéaire des équations de salaires.

Dolton et Makepeace (1987) et Munroe (1988) mettent en lumière une autre limite originale de la méthode d'Oaxaca-Blinder. La décomposition de l'écart salarial informe uniquement sur les écarts de salaires inexpliqués moyens mais pas sur leur distribution. Cependant, la littérature sur la question des écarts de salaires, en particulier selon le sexe, a souligné la répartition inégale de l'écart salarial. Une approche pour surmonter cette limite liée à la distribution est d'estimer les équations de revenus par quintile (Buchinsky, 1994).

La méthode de décomposition proposée par Ñopo (2008) surmonte deux des principaux problèmes méthodologiques liés au modèle de décomposition paramétrique comme celui d'Oaxaca-Blinder. Elle est basée sur un principe de correspondance exacte entre les groupes et, par conséquent, ne nécessite pas l'estimation préalable d'une équation de salaire. Cette méthode prend ainsi en compte la question du « support commun » de caractéristiques individuelles entre descendants d'immigrés et de natifs.

#### *Le cadre de l'analyse empirique*

## *Résumé en Français*

L'analyse empirique s'appuie sur deux bases de données : l'EEC pour la France et l'ASEC de la CPS pour les États-Unis. Deux années sont retenues pour chacun des pays dans l'analyse : 2009 et 2012. La principale variable du modèle développé dans ce chapitre est le salaire mensuel net<sup>99</sup> afin de prendre en compte le poids de l'offre de travail.

Dans les deux pays, les travailleurs du dernier centile de salaire sont exclus, ainsi que ceux ne déclarant pas de salaire. En France, ce dernier centile correspond à une rémunération supérieure à 6000 € par mois ; aux États-Unis, 20 417 \$US. Dans ce pays, des valeurs aberrantes persistent au début de la distribution des salaires. C'est pour cette raison que les travailleurs qui déclarent moins de 67 \$US par mois sont également supprimés.

L'échantillon compte 25 173 personnes en France, parmi lesquels 12,3% sont des descendants d'immigrés et 120 810 personnes aux États-Unis, parmi lesquels 9,5% sont des descendants d'immigrés. En France, les descendants d'immigrés sont plus souvent sans diplôme que les autres natifs (+2,4 points de pourcentage). Aux États-Unis, tout comme en France, les descendants de migrants sont plus jeunes : 16,4% d'entre eux ont moins de 25 ans. L'écart salarial entre les descendants d'immigrés et de natifs est relativement faible, quoique plus faible en France qu'aux États-Unis (environ 10 € contre 75 US\$).

### *La méthode de décomposition de Ñopo*

La méthode de décomposition non paramétrique proposée par Ñopo (2008) est considérée comme une « méthode d'appariement exact », qui permet de surmonter les limites des méthodes de décomposition paramétriques. La technique de Ñopo utilise des comparaisons de paires pour expliquer les différences de salaires fondées sur l'origine (sur le genre dans ses travaux), ce qui permet de souligner les différences dans la distribution de caractéristiques observables et de fournir des indications sur la partie inexpliquée des écarts de rémunération entre descendants d'immigrés et de natifs.

### *Résultats empiriques et discussion*

L'écart salarial entre les descendants d'immigrés et les autres natifs existe dans les deux pays, mais est plus important aux États-Unis, en particulier pour les plus bas salaires. Deux résultats similaires sont obtenus dans les deux pays. L'écart salarial entre descendants d'immigrés et autres natifs est positif, c'est-à-dire que les descendants d'immigrés ont tendance à avoir des salaires plus bas que les autres natifs. De plus, les écarts salariaux diminuent et deviennent négatifs dans le dernier décile, indiquant que les descendants d'immigrés ont un avantage par rapport aux autres natifs en haut de la distribution des salaires.

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<sup>99</sup> C'est un choix délibéré de se concentrer sur le salaire net mensuel plutôt que le salaire horaire.

La décomposition des écarts de salaire nous permet d'étudier la partie expliquée et celle inexpliquée des écarts de salaires. En France, les caractéristiques observables expliquent la majorité des différences entre les déciles et la composante inexpliquée est plus faible qu'aux États-Unis. Ce résultat est conforme à la littérature sur le processus cumulatif des inégalités pour les descendants d'immigrés, qui présentent des caractéristiques observables particulièrement défavorables. La part inexpliquée en France contribue à creuser l'écart salarial pour la majorité de la distribution, à l'exception du premier et du dernier décile. Pour les travailleurs à temps partiel à bas salaires (premier décile), ainsi que pour les hauts salaires (dernier décile), les descendants d'immigrés affichent des caractéristiques inobservables qui sont favorables à leur écart salarial avec les autres natifs, puisqu'elles tendent à diminuer l'écart de salaire.

Aux États-Unis, les caractéristiques observables ne suffisent pas à expliquer les différences en termes d'écart salarial au fil des déciles. La composante inexpliquée, contrairement à celle de la France, ne tend pas vers zéro : elle augmente avec les salaires. Elle est donc plus importante pour des salaires plus élevés. En outre, la composante inexpliquée contribue négativement à l'écart salarial, ce qui signifie qu'elle réduit l'écart salarial. Au contraire, en France, la composante inexpliquée est très faible, mais contribue à augmenter l'écart salarial.

*Quelle différence entre travailleurs à temps plein et temps partiel ?*

Les travailleurs à temps plein sont plus susceptibles d'avoir un salaire plus élevé que les travailleurs à temps partiel. Aux États-Unis, la tendance globale en termes d'écart de salaire pour les travailleurs à temps plein est similaire à celle observée pour tous les travailleurs (temps plein et temps partiel). Cependant, en France, l'écart salarial pour les travailleurs à temps plein est proche de zéro tout au long de la distribution. La répartition de l'écart salarial français pour les travailleurs à temps plein indique que l'écart de salaire observé quel que soit le type de contrat est principalement attribuable aux travailleurs à temps partiel.

En conclusion, malgré une part d'inexpliqué, les écarts de salaires observés entre les deux pays dans ce chapitre relèvent essentiellement d'effets de composition, en termes de niveau d'éducation par exemple. La ségrégation sur le marché du travail des descendants d'immigrés dans des emplois peu qualifiés, à temps partiel et avec une rémunération plus faible, justifie également ces écarts de salaires. Cette hypothèse semble d'ailleurs robuste, puisque l'écart salarial est largement réduit lorsque l'on considère uniquement les travailleurs à temps plein.



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**LES CONDITIONS D'EMPLOI DES DESCENDANTS D'IMMIGRES EN FRANCE ET AUX ÉTATS-UNIS**

Cette thèse propose une analyse empirique et comparative des conditions d'emploi des descendants d'immigrés en France et aux États-Unis. L'objectif est de mieux caractériser l'intégration sur le marché du travail des descendants d'immigrés, en adoptant une approche multidimensionnelle. La comparaison entre la France et les États-Unis permet de mettre en lumière les dimensions sur lesquelles portent les inégalités en termes de conditions d'emploi entre les descendants d'immigrés et de natifs dans chacun des pays, afin de mieux spécifier ces inégalités. Notre analyse explore dans un premier chapitre, le déclassement professionnel, dans un deuxième chapitre, trois aspects de la sécurité socio-économique de la qualité de l'emploi et enfin, dans un dernier chapitre, la distribution des écarts de salaire.

Bien que des écarts en termes de conditions d'emploi existent dans les deux pays en défaveur des descendants d'immigrés, ces écarts ne semblent pas être le résultat d'inégalités mais plutôt d'effets de structure, telles que les différences d'âge ou de niveau d'éducation entre les deux groupes. Les professions et secteurs d'activité dans lesquels les descendants d'immigrés travaillent expliquent aussi ces écarts. Les résultats montrent des similarités entre les deux pays : une fois le biais de sélection à l'accès à l'emploi pris en compte, le fait d'avoir des parents immigrés n'a pas d'effet significatif sur le déclassement professionnel (chapitre 1) mais un effet positif et significatif sur le salaire (chapitre 2). En revanche, les deux pays se distinguent sur plusieurs points. En France, être descendant d'immigrés contribue à significativement freiner l'accès à l'emploi et à diminuer la sécurité de l'emploi. En revanche, aux États-Unis cela a un effet négatif uniquement sur le temps de travail (chapitre 2). Cette thèse défend la prise en compte de l'hétérogénéité qui existe au sein de la population des descendants d'immigrés en termes de pays d'origine de leurs parents. En effet, des effets contradictoires selon le pays d'origine des parents peuvent conduire à des effets non significatifs au niveau agrégé, comme c'est le cas pour le déclassement par exemple. Le dernier chapitre montre un écart salarial plus marqué pour les bas salaires dans les deux pays, avec toutefois comme différence majeure que ce qui reste inobservable contribue à diminuer l'écart salarial entre descendants de natifs et d'immigrés aux États-Unis mais à l'augmenter en France.

**Mots clés :** conditions d'emploi, descendants d'immigrés, déclassement, qualité de l'emploi, inégalités de salaire

**THE EMPLOYMENT CONDITIONS OF NATIVE-BORN PEOPLE WITH IMMIGRANT PARENTS: A  
COMPARISON BETWEEN FRANCE AND THE UNITED STATES**

The comparison between France and the United States shows how the inequalities in terms of employment conditions between descendants of immigrants and of native-born persons differ.

This thesis proposes an empirical and comparative analysis of the employment conditions of immigrants' offspring in France and in the United States. The goal is to better characterise the labour market integration of immigrants' offspring, taking a multidimensional approach. The comparison between France and the United States highlight the dimensions of inequalities in terms of employment conditions between the descendants of immigrants and of native-born in each of country, henceforth improving the characterisation of these inequalities. Our analysis explores overeducation in a first chapter, in a second chapter, three aspects of the socio-economic security of job quality and in a final chapter, the distribution of wage differentials.

Although differences in terms of employment conditions exist in both countries to the detriment of immigrants' offspring, these differences do not appear to be the result of inequalities but rather of structural effects such as differences in age or education level between the two groups. The occupations and sectors of activity in which descendants of immigrants work also explain these differences. The results show similarities between the two countries. Once the selection bias to access employment is taken into account, having immigrant parents has no significant effect on overeducation (chapter 1) but a positive and significant effect on wages (chapter 2). On the other hand, the two countries differ on several points. In France, having immigrant parents significantly restricts the access to employment and lowers job security. However, in the United States, there is a negative effect only on working time (chapter 2). This thesis advocates for the consideration of the heterogeneity that exists within the population immigrants' offspring, according to their parents' country of origin. Indeed, contradictory effects according to the parents' country of origin may lead to non-significant effects at the aggregate level, as is the case for overeducation, for example. The final chapter shows a wider wage gap for low-wage workers in the two countries. Nevertheless, the major difference between the two countries is that the unobservable component contributes to narrowing the wage gap between natives and of immigrants but to increasing it in France.

**Keywords:** employment conditions, second generation immigrants, overeducation, job quality, wage Differentials