

**BEYOND ASSIMILATION, DO IMMIGRANTS' CONTRIBUTE TO A MORE
FLEXIBLE LABOR FORCE?
EVIDENCE FROM 21st CENTURY SPAIN**

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May 2009

Abstract

To increase our understanding of immigrants' assimilation process in Spain—a country that has experienced an unprecedented immigration boom since the turn of the new century, we compare its immigrants and natives' occupational distributions. Using data from the 2000 to 2008 Spanish Labor Force Survey (EPA), we find that immigrants are more occupationally mobile than natives. Much of this greater flexibility is explained by immigrants' assimilation process soon after arrival to the host country: just after arrival, immigrants enter occupations below their skill level and then move toward more skilled occupations with time. Although assimilation does occur, the evidence shows that there is no full adaptation. In addition, we find evidence that this greater flexibility reflects a greater sensitivity of high-skilled and female immigrants to Spanish economic changes, and thus suggests that immigrants are making the Spanish economy more adaptable to new technology and demand shocks.

Key words: immigrants' assimilation effects, cohort effects, and occupational distributions and mobility.

JEL classification: J61

Financial support from the Spanish ministry of Education and Science (grant SEJ2006-712) and the *Generalitat de Catalunya* (grant SGR2005-712) is also gratefully acknowledged.

I. Introduction

In the last decade, the immigrant population in Spain has soared. While, as recently as a decade ago, immigrants made up less than 2% of the population, they are now more than 10%. Most of this massive inflow of immigrants has taken place after the turn of the new century. About 12% of the immigrants in Spain come from eastern and northern Europe; 17% come from Latin America; and 44% from Africa. Several factors explain this rapid change. First, Spanish booming economy and the social promotion—in the form of increased education levels and higher labor force participation—of its national (especially female) population generated a demand for foreign workers (Carrasco, Gimeno, and Ortega, 2008 a; Domingo, Gil, and Vidal, 2006; and Gil and Domingo, 2006).¹ Second, its physical proximity to northern Africa and eastern Europe places Spain close to countries that supply immigrants. Third, its shared language and historical past with Latin Americans facilitates the social and cultural assimilation of immigrants from this continent. Finally, the progressive culture of post-Franco Spain has also contributed to increase immigrants' social acceptance (New York Times, 2008).

An important policy question, especially in a country with such an unprecedented immigration boom, is how immigrants assimilate as their residency lengthens. While the international literature on this topic is vast, little is known on the assimilation process of the recent wave of immigrants in Spain.² To our knowledge, one of the first studies to explore this question is that of Amuedo-Dorantes and De la Rica, 2008. Using 2001 decennial Population Census data, the authors find evidence of immigrants' progressive employment and occupational mobility as their residence in Spain increases. Unfortunately, due to data limitations, their analysis focuses on immigrants who arrived during the second half of the 1990s and, therefore, misses most of the massive recent inflow of immigrants.³ When expanding the analysis to the beginning of the 21st century, the evidence on immigrants' assimilation is somewhat mixed. On the one hand, using cross-sectional data from the 1996 to 2005 Spanish Labor Force Survey (EPA), Fernandez and Ortega, 2008, find that although the Spanish labor market is able to absorb immigrants within five years after arrival, it does so at the expense of allocating them in temporary jobs for which they are overqualified.⁴ On the other hand, using recently available panel data from social security records, Izquierdo, Lacuesta, and Vegas, 2008, find that, despite a sizeable and significant wage gap reduction between immigrants and natives within the first five years after arrival to Spain, full assimilation of wages does not take place.

In this article, we aim to increase our knowledge on how immigrants adjust to a host country both in economic and social terms, and how they affect economic growth. More specifically, we use data on the recent immigration wave in Spain to compare the occupational distribution of immigrants to that of native-born Spaniards, and in particular with native-born Spaniards with similar education and age. This analysis provides new evidence on whether and to what extent the immigrant resource is underutilized in Spain, and helps our understanding of the recent wave of immigrants' adaptation process. In addition, we examine how the occupational distribution of immigrants has changed with time spent in Spain. Finally, we

¹ In contrast with northern European countries, the ageing of national working-age population does not explain the arrival of large number of immigrants in Spain (Domingo, Gil, and Vidal, 2006).

² For thorough discussions of the international literature review see Borjas 1994 and 1999, and Fernandez and Ortega, 2008, among others.

³ Amuedo-Dorantes and De la Rica, 2008, restrict their analysis to immigrants who arrived between 1996 and 2001.

⁴ Fernandez and Ortega, 2008, use the following four measures of immigrants' success in the Spanish labor market: 1) the labor force participation rate, 2) the unemployment rate, 3) a statistical measure of over-education that considers that a worker is overeducated when his/her level of education is above the mean plus one standard deviation of their occupational category, and (4) the incidence of temporary contracts.

explore the extent to which immigrants' occupations and mobility have changed with immigrants' cohort characteristics.

To conduct our analysis, we estimate separate multinomial logit models of occupational choice for immigrants and native-born individuals using data from the 2000 to 2008 Spanish Labor Force Survey (EPA). Our model of occupational selection relates selection to observable characteristics such as age, sex, education level, and place of residence. In addition, for immigrants the occupational choice is related to region of birth as well as to year of arrival in Spain. Descriptive and cross-sectional estimates provide evidence that the immigrant occupational distribution changes more over time than does the native-born distribution. However, from these comparisons, it is unclear whether immigrants' relative greater occupational mobility compared to the native born is due to: (1) immigrants' assimilation process to a new economy—the assimilation effect; (2) differences in occupational skills across successive cohorts of immigrants—the cohort effect; or (3) differences in reaction to economic change between immigrants and natives after accounting for assimilation and cohort effects. Pooling the cross-sectional data we are able to disentangle the importance of these alternative explanations for the Spanish case. As in Green (1999), the discussion of cohort and assimilation effects presented below follows the framework in the immigrant earnings literature employed by Borjas (1985), LaLonde and Topel (1992), and Baker and Benjamín (1994), among others.

Our analysis highlights five important results. First, consistent with previous findings, we find evidence that although assimilation occurs, there is no full convergence. Our results show that, compared to natives with similar characteristics, all immigrants who arrived within the last year are overrepresented in the “non-qualified” occupations. In addition, recent immigrants with a college degree are over-represented in the “blue-collar” category and in the “not working” category (young and female immigrants are also over-represented in this category). While the relative over-representation of immigrants in the “not-working” category disappears within one or two years of being in Spain for young and female workers (but only decreases for college graduates), the pace of adjustment out of the “non-qualified” occupations category does not occur right after arrival, instead it takes longer—about three years—and does not lead to full convergence between immigrants and natives. Second, we find that the assimilation process seems to work through a shift from low-skilled jobs to “blue-collar” jobs or “other white-collar” jobs. Third, we do not find much evidence of important cohort effects among immigrants without a college degree. Fourth, we do find evidence of occupational differences in reaction to economic changes between high-skilled or female immigrants and their native counterparts after accounting for assimilation and cohort effects. This result suggests that female and high-skilled immigrants (that is, those with a college degree or a trade certificate) are more sensitive than natives to changes in the Spanish economy, which, if true, would imply that they provide labor in a flexible manner that could help in adjustments to new technology and demand shocks. Finally, consistent with several recent papers (Ottaviano and Peri, 2006; Peri and Sparber, 2008; Dustmann, Frattini and Preston, 2008; Carrasco *et al.*, 2008 b; Amuedo and De la Rica, 2009), we find evidence suggesting that natives and immigrants in Spain have become more complementary over the last decade as there has been a shift towards less manual jobs among the native population compared to a shift in the opposite direction for immigrants. The two papers providing evidence of complementarity between natives and immigrants in Spain offer brief descriptive evidence consistent with these hypotheses, as they focus on measuring the effects of immigration on the Spanish wage structure (Carrasco *et al.*, 2008 b) and measuring the impact that the large inflow of immigrants has had on the occupational distribution of natives (Amuedo and De la Rica, 2009).⁵

⁵Carrasco *et al.* (2008 b) use data from the Spanish Structure of Earnings Survey and only have information on immigrants from the 2002 wave. Amuedo and De la Rica (2009) use the EPA 1999-2007 and focus on workers with at most a high-school degree. In addition, their analysis on substitutability of natives and immigrants is mainly descriptive, as it is not the focus of their paper.

The structure of our paper is as follows. Section 2 describes our data. Section 3 presents the cross-sectional fitted estimators. Section 4 contains the main results. Section 5 concludes.

II. The Data and Descriptive Statistics

To examine immigrants and native-born occupational patterns, we use a series of samples from the Spanish Labor Force Survey (EPA)—years 2000 to 2008 (second trimesters). The EPA gathers information on demographic characteristics (such as, age, years of education, marital status, and region of residence), and employment characteristics (such as work status, occupation, and industry).⁶ In addition, for immigrants—defined as foreign-born workers who do not have the Spanish nationality, the EPA collects information on the number of years of residence in Spain and on the country of birth.

The native-born samples are random samples of males and females aged 20 to 64 at the time of the relevant EPA. The sample sizes are around 100,000 per year (see Table 1 for precise sample sizes per year). The immigrant sample consists of all immigrants in the relevant EPA who entered Spain after January 1, 1990, were aged 20 to 64 at their time of arrival, and are under age 65 at the time of the relevant EPA. The sample sizes are 773 for the EPA 2000; 1,147 for the EPA 2001; 1,579 for the EPA 2002; 2,252 for the EPA 2003; 2,838 for the EPA 2004; 2,931 for the EPA 2005; 3,968 for the EPA 2006; 4,968 for the EPA 2007; and 5,544 for the EPA 2008. Analysis is restricted to immigrants aged 20 to 64 at time of arrival to concentrate on individuals who were likely headed for the labor force in the near future and to avoid issues of non-comparability of the experiences of young immigrants who receive part of their basic education in Spain and those who arrive at older ages (Boyd, 1985; Kossoudji, 1989; and Green, 1999). The samples are restricted to individuals under age 65 in the EPA year to avoid complications involving retirement decisions. The immigrant samples are restricted to those entering in 1990 and after because the vast majority of immigrant flows has taken place from the late mid-nineties onwards (Amuedo-Dorantes and De la Rica., 2006, and Gonzalez and Ortega, 2008, among others). By year of arrival, the immigrant sample sizes are: 2,659 for the cohorts 1990-1994; 3,222 for the cohorts 1995-1998; 1,851 for the 1999 cohort; 3,342 for the 2000 cohort; 3,839 for the 2001 cohort; 3,815 for the 2002 cohort; 2,791 for the 2003 cohort; 2,236 for the 2004 cohort; 1,606 for the 2005 cohort; 1,317 for the 2007 cohort; and 367 for the 2008 cohort.

Table 1 displays personal and demographic descriptive statistics for natives and immigrants for each of the EPA years. The major difference between the two population groups is that immigrants are younger than natives.⁷ In addition, we observe that there are education differences across the two groups.⁸ Within the native population, there has clearly been an increase of workers' investment in human capital, as the fraction of natives with a college degree, vocational training, or a high-school diploma has increased over the nine years under analysis. Although a similar trend is observed for immigrants with less than a college degree (with the share of those with vocational training increasing the most), the share of immigrants with a college degree has decreased over-time from 22% to 17%. These changes are likely due to the changes in the origin of immigrants over the last decade. Comparing immigrants and natives in our sample, we observe that immigrants are slightly more educated than natives (especially in the earlier surveys). However, much of this result is due to the fact that we restricted the sample of immigrants to those arriving after 1990. Finally, it is noteworthy to

⁶ Unfortunately, the EPA does not gather workers' earnings information.

⁷ One exception is in the range between 20 and 24 years old, where we observe that there are more natives than immigrants. This is an artifact of how the sample of immigrants was selected as we restricted immigrants to be 20 years old or older at the time of arrival.

⁸ Throughout the analysis we consider four education levels: high-school dropouts; individuals with a high-school degree; individuals with some college education or vocational training (they may have a trade certificate, but no college degree); and individuals with completed university studies.

highlight the change in the continent of origin of immigrants over the last decade. While in the early 2000s, immigrants came from Europe, Africa and Latin America in similar proportions; by the 2008 EPA, the weight of immigrants from Europe and Africa has been reduced drastically, representing only 12% and 17%, respectively, and giving room to a large inflow of immigrants from Latin America.

Table 2 presents the occupational distributions at each EPA for the native born and for immigrants from each of the entering cohorts. The occupations are grouped into five categories as follows: “Professionals”, which include managers, engineers, social scientists, teachers, health occupations, and arts; “Other white-collar” occupations, which include clerical, sales, and service occupations; “Qualified blue-collar” occupations, which cover qualified workers in agriculture and the fishing industry, handcraft workers, mining and construction technical workers; “Non-qualified” occupations; and “Not working”, which includes both the unemployed and persons out of the labor force. The latter category is included because, as argued by Green 1999, it is an important part of immigrant adaptation and will likely vary between immigrants and native born.

There are at least six striking differences in the amount and type of change within the immigrant and native-born distributions across EPA years. First, while both population groups have shown a clear tendency of moving out of the “not working” category over the 2000-2008 period, the change has been considerably larger for immigrants arriving after 1999, with reductions of 20 to 28 percentage points, versus the—by no means negligible—reduction of 11 percentage points experienced by the native-born cohort.⁹ This shift out of the “not working” category for both population groups reflects the Spanish economic growth over the period under analysis. However, the fact that this trend is stronger for some, but not all, cohorts of immigrants, added to the observation that frequently the earlier cohorts show a movement similar or even smaller to that of the native population seems to suggest that part of what is going on is the assimilation of the immigrants. Second, the trend of this movement out of the “not working” category has also differed across the two populations. For the native-born population, the tendency has been gradual over the nine years, while for the immigrants most of the shift out of this category has occurred within the first two to three years after arrival to Spain, reflecting the initial assimilation process that this population experiences.

Third, the destination of these individuals has also differed for the two groups. While the native-born population have seen an increase in the “professional”, and, to a lesser extent, the “other white-collar” categories; the immigrant population has mainly moved into the “blue-collar” and, to a lesser extend, “other white-collar” categories. Among immigrants arrived within the last decade, there is a trend out of the “professional” category. Fourth, there is clearly a greater fluidity of the immigrant distribution relative to that of the natives, as several cohorts of immigrants experience changes within an occupational category of up to 17 percentage points over the decade, while no native born category changes by more than 7 percentage points. This greater fluidity of the immigrant distribution may well reflect a greater ability to adjust to economic changes.

It is also noteworthy to highlight that in the two last EPA surveys (that is, those of 2007 and 2008), there seems to be an increase of the “not working” category for the cohorts arriving

⁹ Such reductions are not observed for the cohort arriving in 2001 and are considerably smaller for the cohort 2002. This is probably explained by the fact that, due to the 2001 crisis, immigrants entering during 2001 and 2002 did so with favorable job perspective, as reflected by the lower fraction of immigrants from these cohorts “not working” compared to the other cohorts. The reductions are also smaller for the most recent cohorts, that is, those arriving in the last three years. The data suggests that the smaller reductions are most likely a consequence of these immigrants still assimilating to the new country.

during the early 2000s. This trend is muted or non-existent among the natives, and may suggest that immigrants are more vulnerable to economic changes.¹⁰

Finally, when comparing the occupational distributions for earlier cohort of immigrants with those of the native born, we find that over-time natives have increased their likelihood of being in the “professional” category, and “other white-collar” category compared to immigrants from the 1990s. In contrast, the immigrant population is relatively more concentrated in “blue-collar” and “non-qualified” occupations. This seems to suggest that there has been a shift towards less manual jobs among the native population compared to a shift in the opposite direction for immigrants, providing some evidence that these two populations have become more complementary over time. Several recent papers have highlighted that native and immigrant workers of similar educational attainment specialize in different occupations and therefore do not compete for the same jobs, explaining the small effect the inflows of immigrants on the wages of the less-educated natives in the U.S. as well as in Spain (Ottaviano and Peri, 2006). For instance, Peri and Sparber (2008) find evidence of imperfect substitutability between natives and immigrants of similar educational attainment in the U.S. Dustmann , Frattini and Preston (2008) also show that natives and immigrants in the U.K. of comparable skills do not compete for the same jobs, and Carrasco *et al.* (2008 b) Amuedo and De la Rica (2009) find evidence of immigrants and natives being imperfect substitutes within skill categories.¹¹ Amuedo and De la Rica (2009) explore the reasons for this imperfect substitution and find evidence that natives relocate to jobs with a lower content of manual tasks.

III. Fitted Results at Each EPA Survey Years

We turn now to estimation of a more detailed model of occupational selection, which relates that selection to observable characteristics such as age, education, region of birth as well as to arrival year. This exercise provides some insight into whether the immigrant resource is being underutilized in the sense of being found in lower skilled jobs for the same education level than the native born and into the effects of characteristics that are used in immigrant selection. More importantly, it provides the basis for an examination of relative occupational mobility.

For each EPA year, we estimate separate multinomial logit (MNL) model of occupational choice over each of the immigrant and native-born samples described in the previous section. The MNL model permits estimation of the effects of various characteristics of an individual on his choice from among a set of alternatives that do not have a natural ordering, occupations in this case.¹²

The variables used to explain choices among these alternatives include sex, age, education, and marital status. In addition, a set of location dummy variables are included because immigrants tend to exhibit different location patterns from the native born. For immigrants, a second set of variables is also used. These include: (1) a set of dummy variables

¹⁰ The fact that this trend is not observed for the most recent cohorts may be due to the fact that the trend is muted by an opposite trend coming from their assimilation process.

¹¹ Carrasco *et al.* (2008 b) use data from the Spanish Structure of Earnings Survey (SES henceforth), of which two waves (1995 and 2002) are available. Only the latter wave has information on worker’s nationality. Amuedo and De la Rica (2009) use the EPA 1999-2007 and focus on workers with at most a high-school degree. In addition, their analysis on substitutability of natives and immigrants is mainly descriptive, as it is not the focus of their paper.

¹² Because the MNL has the disadvantage that the relative odds of choosing any one option over another is unrelated to the introduction of further options, we will also try with a multinomial probit (MNP) model instead of the MNL model presented here. The MNP model allows relaxation of the independence assumption. However, since individuals are observed making only one occupational choice, a correlation matrix cannot be estimated with these data. See footnote 3 in Green 1999.

corresponding to the region of birth to pick up differences in assimilation that might be related to regional characteristics, and (2) cohort-dummy variables to capture differences in entrance cohorts and time in the Spanish economy effects.

The model is estimated on eighteen samples—nine samples of native-born Spaniards from EPA 2000 to EPA 2008; and nine samples of immigrants from the same survey years. Because the actual coefficients estimated by a MNL model are difficult to interpret, we calculate the fitted probabilities for a set of “types” of individuals, where the types are chosen to capture the main variation of interest in the data.

For native-born individuals, the type 1 person is a male living in Madrid, aged 35 to 39 years old, currently married, without a high-school degree. For immigrants, that person is from Latin America and arrived in Spain in 1990. Type 2 is the same as type 1 but with a high-school degree. Type 3 is the same as type 1 but with vocational training or some college. Type 4 is the same as type 1 but with a university degree. Type 5 is the same as type 3 but for a female. Type 6 is the same as type 3 but for a person aged 25 years old. Type 7 is the same as type 3 but comes from the EU15. Type 8 is the same as type 3 but comes from the EU25. And Type 9 is the same as type 3 but comes from Africa.

Table 3A presents fitted probabilities based on the characteristics of the different types of natives. Each column recreates these probabilities using each of the EPA years. Focusing on any given survey year, we observe that, in general, the fitted proportions match expectations. The probability of being in a professional occupation increases with education, and is smaller for women and younger workers. The probability of being in other white-collar occupations is also directly related to education with the exception of those with a university degree. This probability is higher for women and younger workers. In contrast, the probability of being a blue-collar worker decreases with education. It is higher for younger workers, but almost negligible for women and workers with a university degree. The probability of being in a non-qualified occupation also decreases with education, but does not vary by sex or age. Finally, the probability of not working is highest for women—fluctuating around one fifth of the native-born female population. This probability decreases with education and does not vary by age.

Table 3A also allows us to explore whether the occupational distribution of the different type of natives has varied over-time. Clearly, native types 3 to 6 (that is, those with at least a trade certificate) have increased their participation in the “professional” category at the expense of shifting out of “other white-collar” occupations. We observe that the move into the “professional” category has been the largest among young workers (type 6), whereas the move out of “other white-collar” occupations has been most prominent among the female population (type 5). At the same time, natives with a high-school degree (type 2) have shifted out of the “other white-collar” category into “blue-collar” occupations. Finally, high-school dropouts (type 1) have decreased their participation in “non-qualified” jobs and increased their participation in all the other categories, except “other white-collar” occupations.

Table 3B presents fitted probabilities based on the same characteristics for immigrants. To aid discussing differences between the two groups, differences between immigrants and the native born are showed in Table 3C. The estimates from Table 3C are obtained by subtracting the probability that a native-born Spaniard of a particular education level chooses a particular occupation from the probability that an immigrant of the same type chooses the same occupation at each EPA survey.¹³ Below, we summarize the main findings for Table 3C.

¹³ The native-born comparison group used for types that vary by immigrant characteristics (that is, the type consisting of individuals who did not come from Latin America) is type 3 from the relevant native-born table.

For workers with lower education levels (high-school graduates or less—types 1 and 2), immigrants are over-represented in “non-qualified” occupations relative to natives. At the same time, immigrant workers with a trade certificate (type 3 workers) are over-represented in “blue-collar” and “non-qualified” occupations and underrepresented in “professional” and “other white-collar” occupations. Finally, immigrant workers with a university degree (type 4 workers) are over-represented in “blue-collar” and “non-qualified” occupations (to a lesser extent), and underrepresented in “professional” occupations.

Female immigrants with a trade certificate (type 5 workers) are over-represented in “non-qualified” occupations and under-represented in “professional” occupations. Their over-representation in the non-qualified occupations frequently more than doubles that of their male counterparts, reflecting their more vulnerable position. The occupation distribution pattern of young workers with a trade certificate (type 6 workers) is similar to the one observed for older workers.

Analyzing the occupational distribution by immigrants’ origin, Africans are clearly the most disadvantaged ones with an over-representation in the “non-working”, the “non-qualified”, and the “blue-collar” categories, and an under-representation in the “professional” and “other white-collar” categories. The Eastern Europeans are clearly over-represented in the “blue-collar” category, and under-represented in the “professional” and “other white-collar” categories. Finally, Europeans from the EU-15 tend to be over-represented in the “professional” category relative to natives.

While there are some changes in patterns for the native born over-time (such as the shift towards more qualified occupations), these shifts are small (and of different nature) compared to those observed across EPA surveys for the immigrants. For instance, while only natives with a high-school degree increased their participation in the “blue-collar” category over the 2000-2008 period, all male immigrants (regardless of their education level or continent of origin) increased their participation into “blue-collar” occupations over that same period. In addition, while native women shifted towards “professional” occupations, their immigrant counterparts increased their participation in “non-qualified” jobs. At the same time, we observe a move away from “other white-collar” occupations for both native and immigrant women, the move for immigrant women doubles that observed for native women. Finally, during this period, we also observe that immigrants with a trade certificate show a relative shift away from “low-qualified” jobs to “blue-collar” ones compared to the native-born population.

(Need to add Table 3B for immigrants arriving in 2000 and 2005 in order to say something differences in reactions for immigrants from different cohorts)

IV. Assimilation and Cohort Effects

Tables 1 to 3 present estimates for immigrant and native-born populations at each EPA survey. Their analysis has shown that there is evidence that the immigrant occupational distribution changes more over time than does the native-born distribution. However, the comparisons done, thus far, have been static and are unable to explain the reasons for these differences. More specifically, it is unclear whether immigrants’ relative greater occupational mobility compared to the native born is due to: (1) immigrants’ assimilation process to a new economy—the assimilation effect; (2) differences in occupational skills across successive cohorts of immigrants—the cohort effect; or (3) differences in reaction to economic change between immigrants and natives after accounting for assimilation and cohort effects.

To study the importance of these alternative explanations in the Spanish case of the beginning of the 21st century, we pool data from all EPA surveys and estimate a multinomial logit (MNL) model of occupational selection separately over each of the immigrant and native-born samples. As in Green (1999), the discussion of cohort and assimilation effects presented

below follows the framework in the immigrant earnings literature employed by Borjas (1985), LaLonde and Topel (1992), and Baker and Benjamín (1994), among others.

V.1. Methodology

The MNL can be rationalized using an index model in which the value of a particular occupational choice is represented by:

$$I_{cti}^j = X_{cti}\beta_{ct}^j + \varepsilon_{cti}^j \quad (1)$$

where j indexes the alternative, c indexes the entry cohort of the immigrant, t indexes the EPA year, and i indexes the individual, X_{cti} is a vector of person-specific characteristics (such as, sex, age, education, marital status, and a set of location dummy variables), β_{ct}^j is a parameter vector that varies by alternative and EPA year, ε_{cti}^j is an error term. The probability that individual i from cohort c chooses alternative j in period t is the probability that $I_{cti}^j > I_{cti}^k$ for all $k \neq j$. Note that ε_{cti}^j can be decomposed in the following way,

$$\varepsilon_{cti}^j = a_{ct}^j + b_{ct}^j + \mu_c^j + \eta_{cti}^j \quad (2)$$

where a_{ct}^j is a cohort-specific effect reflecting changes in the index value for choice j with time in the economy due to the assimilation process of transferring skills; b_{ct}^j is a cohort-specific effect reflecting changes in the index value for j due to general changes in the economy over time; μ_c^j is a time invariant cohort effect; and η_{cti}^j is an error term.¹⁴ Assuming η_{cti}^j follows an independent extreme value distribution, the resulting specification for the choice probabilities will be a MNL model with cohort-specific intercept terms capturing the cohort-specific time and assimilation effects.

Estimating the following equation,

$$P_{cti}^j = X_{cti}\beta_{cti}^j + a_{ct}^j + b_{ct}^j + \mu_c^j + \eta_{cti}^j \quad (3)$$

we obtain estimates of the fitted probabilities of choosing alternative j :

$$\hat{P}_{cti}^j = X_{cti}\hat{\beta}_{cti}^j + \hat{a}_{ct}^j + \hat{b}_{ct}^j + \hat{\mu}_c^j \quad (4)$$

Comparisons of the fitted probabilities for a representative immigrant of choosing alternative j between cohort $c+k$ and cohort c at given EPA survey year t provides the following *cross-sectional measure of assimilation*:

$$\hat{P}_{(c+k)ti}^j - \hat{P}_{cti}^j = (\hat{a}_{(c+k)t}^j - \hat{a}_{(c+k)t}^j) + (\hat{b}_{(c+k)t}^j - \hat{b}_{ct}^j) + (\hat{\mu}_{(c+k)}^j - \hat{\mu}_c^j) \quad (5)$$

¹⁴ Note that for a given cohort, both time in the economy and calendar time count up in the same way and so are indexed by t .

Thus, the cross-sectional difference will reflect assimilation (the difference in \hat{a} 's terms) but will also reflect differences in the way the two cohorts experience changes in the economy (the difference in \hat{b} 's terms) and fixed differences between cohorts (the difference in $\hat{\mu}$'s terms).

Note that the $\hat{\beta}$'s cancel out if we assume a common X vector and calculate the fitted probabilities for a representative immigrant.

To isolate the assimilation effect, we shall compare the same cohort across EPA years. In addition, we can use the native born as a comparison group to eliminate the effects due to changes in the economy. Therefore, using the same MNL model for occupational choice of the native born, but with the obvious omission of assimilation effects, the fitted probabilities of choosing alternative j for a native born person is:

$$\hat{P}_{nti}^j = X_{nti} \hat{\lambda}_{ti}^j + \hat{b}_{nt}^j + \hat{\mu}_n^j \quad (6)$$

where n indexes the native born and is $\hat{\lambda}_{ti}^j$ a parameter vector. As such, comparisons of the fitted probabilities for a representative immigrant from cohort c of choosing alternative j between EPA survey year t and EPA survey year $(t-k)$ normalized by the changes observed in the fitted probabilities experienced by a representative native over the same time period yields:

$$(\hat{P}_{cti}^j - \hat{P}_{c(t-k)i}^j) - (\hat{P}_{nti}^j - \hat{P}_{n(t-k)i}^j) \quad (7)$$

which is an estimate of the ***net assimilation effect***, $(\hat{a}_{ct}^j - \hat{a}_{c(t-k)}^j)$, assuming that immigrants and natives experience change in the economy in the same way, that is, assuming that $(\hat{b}_{ct}^j - \hat{b}_{c(t-k)}^j) = (\hat{b}_{nt}^j - \hat{b}_{n(t-k)}^j)$, and that X is common vector across time.¹⁵ Note that the fixed differences between cohorts (the difference in $\hat{\mu}$'s terms) cancel out.

To examine ***differences in reaction to economic change between immigrants and natives after accounting for assimilation and cohort effects***, we compare the fitted probabilities for a representative immigrant from different cohorts observed at the same number of years after arrival in Spain, again normalizing for changes experienced by the native born over the same time period. This yields the following estimate:

$$(\hat{P}_{(c+k)ti}^j - \hat{P}_{c(t-k)i}^j) - (\hat{P}_{nti}^j - \hat{P}_{n(t-k)i}^j) \quad (8)$$

V.2. Empirical Results

Tables 4.1A through 4.6.A show the fitted probabilities for a native-born worker of types 1 through 6, respectively. The occupational distribution of these different types of worker does not vary much across survey years. Worth highlighting are the following two trends over the 2000-2008 period. First, the odds that a native women with vocational training “does not work” decrease over time, while their odds of working in “professional” and “other white-collar” categories increase over the same period. Similarly, low educated native workers (types

¹⁵ This seems a reasonable assumption given that we are only analyzing a period of eight years. Alternatively, we could assume that $\hat{\beta}_t^j = \hat{\lambda}_t^j$.

1 and 2) decrease their chances of “not working”, and increase their odds of being in a “blue-collar” category.

Tables 4.1B to 4.6B show the fitted probabilities for a given type of immigrant worker for different years since arrival, in each of the EPA surveys. To aid discussing differences between the immigrants and natives, differences between the two groups are showed in Tables 4.1C to 4.6C. The estimates from Tables 4.1C to 4.6C are obtained by subtracting the probability that a native-born worker of a given type chooses a particular occupation from the probability that an immigrant of the same type chooses the same occupation at each EPA survey (as indicated by equation 5 above), and therefore represent the cross-sectional measure of assimilation. The results from these tables are summarized below:

- ***Compared to natives, immigrants tend to concentrate in the “non-qualified” category, regardless of their education, sex, age, and of time in the country.*** Compared to natives, immigrants are over-represented in the “non-qualified” category. This is true across EPA survey years, for all six types of workers, and it does not seem to change with time spent in the country. Moreover, this relative over-representation of immigrants in “non-qualified” jobs (regardless of their education, sex and age) is large, representing a hefty 10 percentage-points difference or more for males. For female workers, the difference between immigrants and natives is even larger (in the three-digit range for women). These results suggest that full assimilation does not occur.
- ***Compared to natives, middle-aged immigrants without a college degree are under-represented in the “not working” category—if not immediately after arrival, within two to three years. Moreover, this under-representation increases at two to three after arrival in Spain.*** For male high-school dropout immigrants, there is an initial under-representation in the “not working” category relative to their native counterparts, and this under-representation increases after two or three years in the country. For male immigrants with a high-school degree or trade certificate, an under-representation in the “not working” category relative to their native counterparts arises two to three years after arriving in the country. In contrast, for male immigrants with a college degree, or female or young immigrants with a trade certificate, we observe an initial over-representation in the “not-working” category compared to their native counterparts. However, after two or three years after arrival this over-representation of immigrants in the “not working” category decreases for college graduates and even changes sign for women and young workers.
- ***There is some evidence of convergence between low-skilled male immigrants and natives in “blue-collar” occupations around three to five years after arrival in Spain.*** For low-skilled male immigrants (that is, those with a high-school degree or less), there is an initial under-representation in the “blue-collar” category relative to their native counterparts that decreases within two (three) years after arrival, and seems to disappear three (five) years after arrival for high-school graduates (high-school dropouts). Moreover, for high-school graduates, after five years in Spain, they are over-represented in this category relative to their native counterparts. This suggests that there may be some convergence between low-skilled immigrants and natives around three to five years after arrival in Spain.
- ***There is little evidence of convergence for high-skilled male immigrants.*** Relative to natives, male immigrants with a trade certificate, are over-represented in the “blue-collar” and “non-qualified” categories and under-represented in the “professional” and “other white-collar” categories. There is no apparent trend

suggesting some convergence over time. The findings for young male workers with a trade certificate or male immigrants with a college degree are very similar. The major difference is the relative concentration in the different categories for the most educated type. For instance, compared to natives they are under-represented in the “professional” category and over-represented in the “other white-collar” category. The fact that the relative differences between immigrants and natives are not reduced over time seems to suggest that there is little convergence within this group.

- ***There is little evidence of convergence for female immigrants.*** Relative to natives, women immigrants with a trade certificate, are over-represented in the “non-qualified” category and under-represented in the “professional” and “other white-collar” categories. Again there does not seem to be an apparent trend suggesting some convergence over time.

As discussed above, the differences between cross-sectional estimates from Tables 4.1 through 4.6 reflect assimilation (the difference in \hat{a} ’s terms), differences in the way the two cohorts experience changes in the economy (the difference in \hat{b} ’s terms), and fixed differences between cohorts (the difference in $\hat{\mu}$ ’s terms). To isolate the assimilation effect, Tables 5.1 through 5.6 present estimates of the net assimilation effects, which have been estimated using equation 7 and estimates from Tables 4.1 through 4.6 (columns A and B). Column A of Tables 5.1 through 5.6 compares the same cohort of immigrants one year apart for different EPA years net of the changes observed in the native population over the same time period. The top segment of column A shows the distribution for those immigrants who arrived within a year. As one moves down column A, the time spent in Spain increases. Column B of Tables 5.1 through 5.6 compares the same cohort of immigrants two years apart for different EPA years net of the changes observed in the native population over the same time period. The top segment of column B shows the distribution for those immigrants who arrived two years ago. As one moves down column B, the time spent in Spain increases. Columns C through F show similar estimates but increasing the time the same cohort is observed: from three years apart (column C) to six years apart (column F).

A negative estimate implies that there is an over-representation for a particular cohort of immigrants in a given occupation category compared to that same cohort t years later (net of the changes that have occurred within that same period among the natives). Looking at Table 5.5, there is clearly a relative over-representation of immigrant women in the “not working” category within the first two years of arrival to Spain, that dyes out thereafter. A similar pattern (although of smaller magnitude) is observed for young male immigrants (in Table 5.6) and male immigrants without a college degree (in Tables 5.1 through 5.3). These results reflect the assimilation process these immigrants go through.

The patterns observed in the “non-qualified” and “blue-collar” categories suggest an assimilation effect as recently arrived immigrants adjust to the new economy. Within the first year after arrival, male immigrants without a college degree first move to “non-qualified” jobs (as shown in the positive estimates for the “non-qualified” category in the top segment of columns B and C of Tables 5.1 through 5.3). However, soon after they begin to shift out of “non-qualified” jobs towards “blue-collar” occupations. Notice that the move into “blue-collar” occupations occurs about three years after arrival in Spain (as shown by the large and positive estimates in the “blue-collar” category in the “3 years ago” segment of column A, or the estimates in that same category in columns B through F, that is, when the same cohort is compared across EPA survey years separated by three years or more).

Similar assimilation patterns are observed for immigrants with a college degree, or female immigrants. The major differences for high-skilled male immigrants is that the assimilation takes place both through “blue-collar” and “other white-collar” occupations, whereas for females immigrants with a trade certificate the assimilation seems to take place through “other white-collar” jobs.

The differences between estimates from Tables 4.1 through 4.6 and Tables 5.1 through 5.6 reflect either differences across the cohorts or differences in the way cohorts react to changes in the economy. For low-skilled workers, we find little differences between estimates from Tables 4.1 and 4.2 and Tables 5.1 and 5.2, respectively, suggesting that for this type of workers the differences across cohorts (or how cohorts react to changes in the economy) are small. In contrast, the results for female immigrants or more educated workers differ. While the net assimilation effects of Tables 5.3 through 5.6 indicate that there is a clear assimilation pattern with immigrants quickly moving from “non-work” or “low-qualified” occupations within one year after arrival to “blue-collar” or “other white-collar” jobs two to three years after arrival; results from Tables 4.3 to 4.6 indicate that convergence between immigrants and natives does not occur, suggesting either that the intrinsic characteristics of these type of immigrants has changed over time or that their reaction to changes in the economy has also changed over time.

Tables 6.1 to 6.6 examine whether any of the relative occupational differences observed between immigrants and natives can be explained by differences in reaction to economic change between these two populations after accounting for assimilation and cohort effects. Evidence of such explanation would imply that, once the initial adjustment is completed, immigrants continue to be more occupationally mobile than natives adding flexibility in the labor market. Using equation 8 and estimates from columns A and B in Tables 4.1 through 4.6, Tables 6.1 through 6.6 compare the fitted probabilities for a representative immigrant from different cohorts observed at the same number of years after arrival in Spain, again normalizing for changes experienced by the native born over the same time period. Examining the various cohorts, holding time in Spain constant, permits and evaluation of whether there have been trends in unobservable cohort characteristics over time.

Table 6.4 clearly shows that, over this period, immigrants with a college degree have increased their odds of being in “blue-collar” occupations at the expense of being in “professional” jobs (and “other white-collar” occupations at a lesser extent), suggesting that immigrants are more flexible to economic changes than natives. For immigrant women, the changes are more complex. Until 2004, immigrant women in Spain increase their odds (relative to native women) of working in “low-qualified” jobs or “not working” and reduce their odds of working in “other white-collar” occupations (Tables 6.5A through 6.5D). In the most recent years, we continue to observe a relative shift towards the “not working” category, but a move away from “low-qualified” jobs. Finally, all along this period, there seems to be a small but steady decrease in female immigrants’ odds of being in the “professional” category, relative to natives. We interpret these findings as evidence suggesting that high-skilled and female immigrants in Spain add flexibility into the economy as they react differently than natives to changes in the economy (after accounting for assimilation and cohort effects).

V. Conclusion

In this article, we study how immigrants have assimilated in Spain since the turn of the new century. More specifically, we aim to increase our knowledge on how immigrants adjust to a host country both in economic and social terms, and how they affect economic growth. To achieve this goal, we use data from the 2000 to 2008 Spanish Labor Force Survey (EPA) to compare the occupational distribution of immigrants to that of native-born Spaniards, and in particular with native-born Spaniards with similar education and age. This analysis provides

new evidence on whether and to what extent the immigrant resource is underutilized in Spain, and helps our understanding of the recent wave of immigrants' adaptation process. In addition, we examine how the occupational distribution of immigrants has changed with time spent in Spain. Finally, we explore the extent to which immigrants' occupations and mobility have changed with immigrants' cohort characteristics.

To conduct our analysis, we estimate separate multinomial logit models of occupational choice for immigrants and native-born individuals using data from the 2000 to 2008 Spanish Labor Force Survey (EPA). Our model of occupational selection relates selection to observable characteristics such as age, sex, education level, and place of residence. In addition, for immigrants the occupational choice is related to region of birth as well as to year of arrival in Spain. Descriptive and cross-sectional estimates provide evidence that the immigrant occupational distribution changes more over time than does the native-born distribution. However, from these comparisons, it is unclear whether immigrants' relative greater occupational mobility compared to the native born is due to: (1) immigrants' assimilation process to a new economy—the assimilation effect; (2) differences in occupational skills across successive cohorts of immigrants—the cohort effect; or (3) differences in reaction to economic change between immigrants and natives after accounting for assimilation and cohort effects. Pooling the cross-sectional data we are able to disentangle the importance of these alternative explanations for the Spanish case. As in Green (1999), the discussion of cohort and assimilation effects presented below follows the framework in the immigrant earnings literature employed by Borjas (1985), LaLonde and Topel (1992), and Baker and Benjamín (1994), among others.

Our results show that immigrants are more occupationally mobile than natives. Most of this greater flexibility is explained by immigrants' assimilation process soon after arrival to the host country: just after arrival, immigrants enter occupations below their skill level and then move as immigrants are over represented in "non-qualified" occupations relative to natives. We also find evidence that, for high-skilled and female immigrants, this greater flexibility reflects a greater sensitivity of immigrants to Spanish economic changes, and thus suggests that these immigrants are making the Spanish economy more adaptable to new technology and demand shocks.

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Table 1: Occupational distribution by EPA survey

	EPA	2000	2001	2002	2003	2004	2005	2006	2007	2008	2000	2001	2002	2003	2004	2005	2006	2007	2008
Male		0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,51	0,50	0,48	0,51	0,49	0,50	0,51	0,50	0,50	0,50	0,51
Married		0,63	0,63	0,62	0,62	0,62	0,61	0,60	0,60	0,60	0,66	0,63	0,56	0,61	0,63	0,61	0,59	0,59	0,60
Household head		0,37	0,37	0,38	0,38	0,39	0,40	0,42	0,43	0,43	0,43	0,40	0,42	0,41	0,44	0,43	0,43	0,43	0,44
Residence (years)											4,00	3,07	3,20	3,24	3,73	4,38	4,60	4,88	5,29
College degree		0,16	0,16	0,17	0,17	0,18	0,20	0,20	0,20	0,21	0,22	0,24	0,23	0,21	0,21	0,20	0,18	0,17	0,17
Vocational training		0,26	0,27	0,27	0,27	0,28	0,30	0,30	0,31	0,31	0,29	0,33	0,34	0,35	0,37	0,40	0,42	0,42	0,41
High-school degree		0,22	0,23	0,24	0,25	0,25	0,25	0,26	0,26	0,26	0,14	0,17	0,16	0,15	0,15	0,15	0,15	0,16	0,17
High-school dropout		0,36	0,34	0,32	0,30	0,29	0,26	0,25	0,23	0,23	0,35	0,26	0,27	0,30	0,26	0,26	0,25	0,26	0,26
Working		0,60	0,62	0,62	0,63	0,64	0,66	0,68	0,69	0,69	0,62	0,69	0,71	0,69	0,71	0,75	0,75	0,73	0,71
From EU15											0,28	0,21	0,17	0,14	0,13	0,11	0,11	0,11	0,10
From EU25											0,01	0,01	0,04	0,03	0,03	0,02	0,01	0,01	0,02
From Africa											0,27	0,21	0,16	0,18	0,16	0,15	0,17	0,17	0,17
From Latin America											0,32	0,40	0,47	0,46	0,47	0,47	0,48	0,46	0,44
Other origin											0,12	0,18	0,16	0,19	0,21	0,24	0,23	0,25	0,27
Year of arrival: 1990-94											0,30	0,17	0,14	0,10	0,09	0,07	0,05	0,05	0,04
Year of arrival: 1995-98											0,40	0,24	0,19	0,14	0,09	0,10	0,09	0,07	0,05
Year of arrival: 1999											0,12	0,14	0,11	0,08	0,08	0,08	0,04	0,04	0,04
Year of arrival: 2000											0,18	0,18	0,17	0,16	0,15	0,15	0,13	0,09	0,09
Year of arrival: 2001											0,27	0,14	0,20	0,18	0,16	0,15	0,13	0,09	
Year of arrival: 2002											0,25	0,14	0,17	0,16	0,14	0,14	0,14		
Year of arrival: 2003											0,18	0,12	0,13	0,13	0,11	0,10			
Year of arrival: 2004											0,11	0,11	0,10	0,11	0,11	0,11			
Year of arrival: 2005											0,05	0,10	0,09	0,10					
Year of arrival: 2006											0,07	0,10	0,08						
Year of arrival: 2007											0,07	0,10							
Year of arrival: 2008											0,06								
20-24 years old		0,13	0,13	0,12	0,12	0,11	0,10	0,10	0,10	0,09	0,04	0,08	0,07	0,05	0,04	0,03	0,04	0,04	0,04
25-29 years old		0,13	0,13	0,13	0,13	0,13	0,12	0,12	0,11	0,18	0,21	0,21	0,21	0,21	0,21	0,20	0,20	0,18	
30-34 years old		0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,23	0,21	0,21	0,25	0,23	0,22	0,23	0,24	0,25
35-39 years old		0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,17	0,18	0,19	0,17	0,20	0,20	0,20	0,19	0,19
40-44 years old		0,12	0,12	0,12	0,12	0,12	0,12	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,13	0,14	0,14
45-49 years old		0,10	0,10	0,11	0,11	0,11	0,11	0,12	0,12	0,12	0,09	0,08	0,08	0,08	0,07	0,10	0,09	0,08	0,09
50-54 years old		0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,11	0,05	0,05	0,05	0,06	0,06	0,06	0,06	0,06	0,06
55-59 years old		0,08	0,09	0,09	0,09	0,09	0,10	0,10	0,10	0,10	0,04	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03
60-64 years old		0,08	0,08	0,08	0,08	0,08	0,09	0,09	0,09	0,09	0,05	0,03	0,03	0,02	0,02	0,02	0,02	0,02	0,02
Number obs		107.616	103.173	101.808	103.277	102.625	89.925	93.037	95.077	95.013	773	1.147	1.579	2.252	2.838	2.931	3.968	4.968	5.544
Population		24.041.257	24.150.911	24.316.196	24.431.598	24.500.364	24.585.513	24.659.040	24.711.814	24.729.812	444.660	732.970	1.038.226	1.437.719	1.906.487	2.197.253	2.603.168	3.064.664	3.407.717

Table 2A: Natives occupational distribution at each EPA survey

EPA year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Not working	0,40	0,38	0,38	0,37	0,36	0,34	0,32	0,31	0,31
Professional	0,18	0,19	0,19	0,20	0,21	0,22	0,23	0,25	0,25
Other White	0,15	0,15	0,15	0,16	0,15	0,16	0,17	0,17	0,17
Blue Collar	0,20	0,20	0,20	0,20	0,20	0,20	0,20	0,19	0,19
Non Qualified	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08

Table 2B: Immigrants occupational distribution at each EPA survey

EPA year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cohort:1990-1994									
Not working	0,38	0,31	0,27	0,30	0,29	0,27	0,26	0,34	0,32
Professional	0,20	0,23	0,23	0,21	0,22	0,24	0,15	0,22	0,23
Other White	0,15	0,14	0,16	0,12	0,09	0,09	0,12	0,12	0,11
Blue Collar	0,13	0,17	0,18	0,23	0,24	0,19	0,27	0,19	0,20
Non Qualified	0,14	0,16	0,16	0,14	0,15	0,21	0,19	0,13	0,14
Cohort:1995-1998									
Not working	0,33	0,30	0,32	0,29	0,32	0,31	0,30	0,26	0,32
Professional	0,10	0,17	0,14	0,09	0,20	0,17	0,15	0,16	0,14
Other White	0,18	0,19	0,23	0,14	0,12	0,16	0,17	0,12	0,13
Blue Collar	0,18	0,15	0,12	0,20	0,15	0,17	0,18	0,20	0,20
Non Qualified	0,21	0,19	0,20	0,27	0,21	0,18	0,21	0,25	0,22
Cohort:1999									
Not working	0,35	0,39	0,28	0,28	0,26	0,25	0,23	0,25	0,30
Professional	0,18	0,11	0,05	0,07	0,09	0,08	0,08	0,08	0,14
Other White	0,16	0,09	0,16	0,09	0,09	0,14	0,19	0,18	0,16
Blue Collar	0,05	0,19	0,26	0,21	0,22	0,26	0,25	0,26	0,22
Non Qualified	0,26	0,22	0,26	0,34	0,34	0,27	0,25	0,23	0,18
Cohort:2000									
Not working	0,51	0,32	0,23	0,21	0,22	0,20	0,19	0,20	0,27
Professional	0,09	0,07	0,05	0,11	0,07	0,04	0,06	0,08	0,08
Other White	0,12	0,15	0,18	0,17	0,16	0,18	0,19	0,17	0,17
Blue Collar	0,08	0,13	0,23	0,18	0,23	0,28	0,27	0,27	0,29
Non Qualified	0,20	0,34	0,31	0,33	0,32	0,29	0,28	0,27	0,20
Cohort:2001									
Not working	0,26	0,27	0,25	0,20	0,19	0,19	0,24	0,24	0,24
Professional	0,14	0,09	0,08	0,07	0,07	0,08	0,07	0,07	0,07
Other White	0,12	0,14	0,16	0,15	0,22	0,17	0,16	0,16	0,16
Blue Collar	0,16	0,12	0,20	0,27	0,21	0,27	0,24	0,26	0,26
Non Qualified	0,32	0,39	0,32	0,32	0,31	0,28	0,29	0,26	0,26
Cohort:2002									
Not working		0,35	0,30	0,27	0,25	0,23	0,18	0,23	
Professional		0,12	0,04	0,06	0,06	0,06	0,06	0,07	
Other White		0,16	0,16	0,16	0,16	0,17	0,18	0,15	
Blue Collar		0,11	0,17	0,18	0,19	0,22	0,27	0,27	
Non Qualified		0,26	0,33	0,32	0,33	0,32	0,32	0,27	

Table 2B: Immigrants occupational distribution at each EPA survey (*continued*)

Table 5: Net assimilation effect (equation 7). Type 1: High-school dropouts

Table 5A: Same cohort at EPA year t minus year (t-1)					
	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 1 year ago					
EPA=2001	-0.05	-0.02	0.00	0.09	-0.03
EPA=2002	-0.04	0.01	-0.02	0.05	0.00
EPA=2003	-0.03	-0.02	-0.02	0.07	0.00
EPA=2004	-0.02	-0.01	-0.02	0.05	0.00
EPA=2005	-0.03	0.01	-0.04	0.07	-0.01
EPA=2006	-0.03	0.00	-0.01	0.05	0.00
EPA=2007	-0.03	0.00	-0.03	0.06	0.01
EPA=2008	-0.02	0.00	0.00	0.02	0.00
Table 5B: Same cohort at EPA year t minus year (t-2)					
	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 2 years ago					
EPA=2002	-0.02	0.02	0.02	-0.01	-0.01
EPA=2003	-0.01	-0.01	0.02	0.01	-0.01
EPA=2004	-0.01	0.00	0.03	-0.01	-0.02
EPA=2005	-0.01	0.02	0.00	0.01	-0.02
EPA=2006	-0.02	0.01	0.04	-0.02	-0.02
EPA=2007	-0.02	0.01	0.01	0.00	-0.01
EPA=2008	-0.01	0.01	0.05	-0.04	-0.01
Year of arrival: 3 years ago					
EPA=2003	0.00	-0.03	0.07	-0.04	0.00
EPA=2004	0.00	-0.01	0.07	-0.06	-0.01
EPA=2005	0.00	0.01	0.04	-0.04	-0.01
EPA=2006	0.00	0.00	0.08	-0.06	-0.01
EPA=2007	-0.01	-0.01	0.06	-0.04	0.00
EPA=2008	0.00	0.00	0.09	-0.08	-0.01
Year of arrival: 4 years ago					
EPA=2004	0.01	0.00	-0.01	-0.01	0.01
EPA=2005	0.01	0.02	-0.03	0.00	0.00
EPA=2006	0.00	0.01	0.00	-0.02	0.00
EPA=2007	0.00	0.01	-0.02	0.00	0.01
EPA=2008	0.01	0.01	0.01	-0.03	0.01
Year of arrival: 5 years ago					
EPA=2005	0.00	0.00	0.04	-0.03	-0.01
EPA=2006	-0.01	-0.01	0.08	-0.05	-0.01
EPA=2007	-0.01	-0.01	0.06	-0.03	0.00
EPA=2008	0.00	-0.01	0.09	-0.07	-0.01
Year of arrival: 6 years ago					
EPA=2006	0.00	0.00	0.01	-0.01	0.01
EPA=2007	-0.02	-0.01	0.06	-0.05	0.01
EPA=2008	0.00	-0.01	0.07	-0.06	0.00
Year of arrival: 7 years ago					
EPA=2007	0.00	0.00	-0.02	0.00	0.02
EPA=2008	0.01	0.00	-0.03	0.01	0.01
Year of arrival: 8 years ago					
EPA=2008	0.00	0.01	0.04	-0.05	0.00
Table 5C: Same cohort at EPA year t minus year (t-3)					
	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 3 years ago					
EPA=2003	-0.02	0.00	0.08	-0.04	-0.02
EPA=2004	-0.01	-0.02	0.10	-0.05	-0.02
EPA=2005	0.00	0.01	0.07	-0.05	-0.03
EPA=2006	0.01	0.02	0.08	-0.06	-0.03
EPA=2007	-0.02	0.01	0.09	-0.06	-0.02
EPA=2008	-0.04	0.01	0.02	0.02	-0.01
Table 5D: Same cohort at EPA year t minus year (t-4)					
	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 4 years ago					
EPA=2004	0.01	-0.03	0.06	-0.05	0.00
EPA=2005	0.01	0.01	0.04	-0.05	-0.01
EPA=2006	0.00	0.02	0.05	-0.06	-0.01
EPA=2007	-0.01	0.00	0.06	-0.06	0.00
EPA=2008	0.00	0.01	0.10	-0.08	-0.02
Table 5E: Same cohort at EPA year t minus year (t-5)					
	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 5 years ago					
EPA=2004	-0.01	0.00	0.08	-0.06	-0.01
EPA=2005	0.00	0.00	0.06	-0.04	-0.02
EPA=2006	0.00	0.02	0.08	-0.07	-0.03
EPA=2007	-0.02	0.03	0.06	-0.05	-0.02
EPA=2008	-0.04	0.03	0.07	-0.03	-0.02
Table 5F: Same cohort at EPA year t minus year (t-6)					
	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 6 years ago					
EPA=2005	-0.01	0.00	0.12	-0.09	-0.02
EPA=2006	0.00	0.00	0.14	-0.10	-0.03
EPA=2007	-0.01	0.01	0.13	-0.10	-0.03
EPA=2008	-0.02	0.01	0.15	-0.12	-0.03
Year of arrival: 7 years ago					
EPA=2006	0.01	-0.02	0.11	-0.09	0.00
EPA=2007	0.00	0.01	0.13	-0.10	0.00
EPA=2008	0.00	0.01	0.12	-0.12	0.00
Year of arrival: 8 years ago					
EPA=2007	0.01	0.01	0.02	-0.04	0.02
EPA=2008	0.01	0.01	0.03	-0.08	0.02
Year of arrival: 9 years ago					
EPA=2008	-0.01	0.01	0.02	-0.06	0.02
Year of arrival: 10 years ago					
EPA=2008	0.00	0.02	0.06	-0.11	0.03

Table 5.2: Net assimilation effect (equation 7). Type 2: High-school graduate

Table 5.2A: Same cohort at EPA year t minus year (t-1)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 1 year ago					
EPA=2001	-0.05	-0.02	0.01	0.09	-0.02
EPA=2002	-0.05	0.01	-0.02	0.05	0.00
EPA=2003	-0.03	-0.03	-0.01	0.07	0.00
EPA=2004	-0.01	-0.01	-0.01	0.05	0.00
EPA=2005	0.03	0.01	-0.03	0.06	-0.01
EPA=2006	0.04	0.00	0.00	0.04	0.00
EPA=2007	-0.04	0.00	-0.02	0.06	0.01
EPA=2008	-0.02	0.00	0.00	0.02	0.00

Table 5.2B: Same cohort at EPA year t minus year (t-2)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 2 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.2C: Same cohort at EPA year t minus year (t-3)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 3 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.2D: Same cohort at EPA year t minus year (t-4)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 4 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.2E: Same cohort at EPA year t minus year (t-5)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 5 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.2F: Same cohort at EPA year t minus year (t-6)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 6 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.2G: Same cohort at EPA year t minus year (t-7)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 7 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.2H: Same cohort at EPA year t minus year (t-8)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 8 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.2I: Same cohort at EPA year t minus year (t-9)

	Prof.	Other W.	Blue-C	Non-qual.	Not Work
Year of arrival: 9 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006					
EPA=2007					
EPA=2008					

Table 5.3: Net assimilation effect (equation 7). Type 3: Some college/Vocational training

Table 5.3A: Same cohort at EPA year t minus year (t-1)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 1 year ago					
EPA=2001 -0.08	-0.02	0.03	0.08	-0.02	
EPA=2002 -0.08	0.02	0.00	0.05	0.01	
EPA=2003 -0.05	-0.03	0.00	0.07	0.01	
EPA=2004 -0.04	-0.01	0.00	0.04	0.00	
EPA=2005 -0.05	0.02	-0.02	0.06	-0.01	
EPA=2006 -0.06	0.00	0.02	0.05	0.00	
EPA=2007 -0.06	0.00	-0.01	0.06	0.01	
EPA=2008 -0.03	0.00	0.01	0.02	0.01	
Table 5.3B: Same cohort at EPA year t minus year (t-2)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 2 years ago					
EPA=2002 -0.04	0.04	0.02	0.00	-0.01	
EPA=2003 -0.02	-0.02	0.03	0.01	-0.01	
EPA=2004 -0.01	0.01	0.03	-0.01	-0.02	
EPA=2005 -0.02	0.03	0.00	0.00	-0.03	
EPA=2006 -0.03	0.02	0.04	-0.01	-0.02	
EPA=2007 -0.04	0.02	0.02	0.00	-0.01	
EPA=2008 -0.01	0.02	0.04	-0.03	-0.01	
Year of arrival: 3 years ago					
EPA=2003 0.00	-0.04	0.07	-0.03	-0.01	
EPA=2004 0.01	-0.01	0.07	-0.05	-0.01	
EPA=2005 0.01	0.01	0.04	-0.04	-0.02	
EPA=2006 -0.01	-0.01	0.08	-0.05	-0.01	
EPA=2007 -0.02	-0.01	0.06	-0.04	0.00	
EPA=2008 0.01	-0.01	0.08	-0.07	-0.01	
Year of arrival: 4 years ago					
EPA=2004 0.02	0.00	-0.01	-0.01	0.00	
EPA=2005 0.02	0.03	-0.04	0.00	0.00	
EPA=2006 0.00	0.01	0.00	-0.01	0.00	
EPA=2007 -0.01	0.01	-0.02	0.00	0.01	
EPA=2008 0.01	0.01	0.00	-0.03	0.01	
Year of arrival: 5 years ago					
EPA=2005 0.00	0.00	0.04	-0.03	-0.01	
EPA=2006 -0.02	-0.02	0.08	-0.04	-0.01	
EPA=2007 -0.02	-0.02	0.06	-0.02	0.00	
EPA=2008 0.00	-0.02	0.08	-0.05	-0.01	
Year of arrival: 6 years ago					
EPA=2006 -0.01	0.00	0.01	-0.01	0.01	
EPA=2007 -0.01	0.01	-0.02	0.07	-0.04	
EPA=2008 -0.01	-0.02	0.07	-0.05	0.00	
Year of arrival: 7 years ago					
EPA=2007 0.00	0.01	0.00	-0.01	0.01	
EPA=2008 0.01	0.00	-0.03	0.00	0.01	
Year of arrival: 8 years ago					
EPA=2008 0.01	0.01	-0.03	0.00	0.01	
Table 5.3C: Same cohort at EPA year t minus year (t-3)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 3 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003 -0.04	0.00	0.09	-0.03	-0.02	
EPA=2004 -0.01	-0.03	0.10	-0.04	-0.02	
EPA=2005 0.01	0.02	0.07	-0.05	-0.04	
EPA=2006 -0.03	0.03	0.08	-0.05	-0.04	
EPA=2007 -0.10	0.02	0.04	0.05	-0.01	
EPA=2008 -0.07	0.02	0.03	0.02	0.00	
Table 5.3D: Same cohort at EPA year t minus year (t-4)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 4 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003 -0.12	-0.02	0.12	0.05	-0.04	
EPA=2004 -0.09	-0.01	0.10	0.02	-0.02	
EPA=2005 -0.05	-0.01	0.07	0.02	-0.03	
EPA=2006 -0.06	0.02	0.08	0.00	-0.04	
EPA=2007 -0.09	0.03	0.08	0.01	-0.03	
EPA=2008 -0.09	0.01	0.12	-0.02	-0.02	
Table 5.3E: Same cohort at EPA year t minus year (t-5)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 5 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004 -0.02	0.00	0.08	-0.04	-0.01	
EPA=2005 0.00	0.00	0.06	-0.04	-0.02	
EPA=2006 -0.01	0.03	0.07	-0.06	-0.03	
EPA=2007 -0.03	0.04	0.06	-0.05	-0.02	
EPA=2008 -0.03	0.02	0.10	-0.08	-0.01	
Table 5.3F: Same cohort at EPA year t minus year (t-6)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 6 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005 -0.10	-0.02	0.15	0.02	-0.04	
EPA=2006 -0.09	0.00	0.14	-0.02	-0.03	
EPA=2007 -0.08	-0.02	0.14	-0.02	-0.03	
EPA=2008 -0.07	0.01	0.14	-0.05	-0.03	
Year of arrival: 7 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005 -0.03	0.00	0.13	-0.08	-0.02	
EPA=2006 -0.02	0.00	0.10	-0.09	0.00	
EPA=2007 -0.03	0.01	0.13	-0.08	-0.03	
EPA=2008 -0.02	0.01	0.15	-0.10	-0.03	
Year of arrival: 8 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005 -0.01	0.00	0.11	-0.07	-0.01	
EPA=2006 -0.01	0.01	0.11	-0.07	0.00	
EPA=2007 -0.01	0.00	0.11	-0.10	0.00	
Year of arrival: 9 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005 -0.01	0.01	0.01	-0.04	0.09	
EPA=2006 -0.01	0.01	0.02	-0.05	0.02	
EPA=2007 -0.01	0.01	0.03	-0.06	0.01	
EPA=2008 -0.01	0.01	0.04	-0.07	0.01	
Year of arrival: 10 years ago					
EPA=2000					
EPA=2001					
EPA=2002					
EPA=2003					
EPA=2004					
EPA=2005					
EPA=2006 -0.01	0.01	0.01	-0.04	0.09	
EPA=2007 -0.01	0.01	0.02	-0.05	0.02	
EPA=2008 -0.01	0.01	0.03	-0.06	0.01	

Table 5.4: Net assimilation effect (equation 7). Type 4: College graduate

Table 5.4A: Same cohort at EPA year t minus year (t-1)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 1 year ago					
EPA=2001	-0.17	0.01	0.07	0.08	0.01
EPA=2002	-0.20	0.05	0.06	0.07	0.03
EPA=2003	-0.14	0.00	0.05	0.07	0.03
EPA=2004	-0.09	0.00	0.03	0.05	0.01
EPA=2005	-0.15	0.04	0.04	0.07	0.01
EPA=2006	-0.17	0.03	0.06	0.06	0.02
EPA=2007	-0.16	0.02	0.04	0.06	0.03
EPA=2008	-0.10	0.02	0.04	0.03	0.02

Table 5.4B: Same cohort at EPA year t minus year (t-2)

Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 2 years ago					
EPA=2002	-0.14	0.06	0.05	0.03	0.00
EPA=2003	-0.08	0.00	0.05	0.03	-0.01
EPA=2004	-0.03	0.01	0.03	0.00	-0.02
EPA=2005	-0.09	0.05	0.04	0.02	-0.02
EPA=2006	-0.10	0.04	0.06	0.02	-0.01
EPA=2007	-0.09	0.03	0.04	0.02	0.00
EPA=2008	-0.04	0.03	0.04	-0.01	-0.01

Table 5.4C: Same cohort at EPA year t minus year (t-3)

Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 3 years ago					
EPA=2003	0.00	-0.04	0.06	-0.01	-0.01
EPA=2004	0.05	-0.02	0.03	-0.04	-0.02
EPA=2005	0.00	0.02	0.03	-0.02	-0.03
EPA=2006	-0.02	0.00	0.06	-0.03	-0.01
EPA=2007	-0.01	0.00	0.04	-0.02	-0.01
EPA=2008	0.03	-0.01	0.04	-0.05	-0.01

Table 5.4D: Same cohort at EPA year t minus year (t-4)

Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 4 years ago					
EPA=2004	0.07	-0.01	-0.03	-0.02	0.00
EPA=2005	0.02	0.03	-0.03	-0.01	-0.01
EPA=2006	0.00	0.01	0.00	-0.01	0.00
EPA=2007	0.01	0.01	-0.02	-0.01	0.01
EPA=2008	0.06	0.00	-0.03	-0.04	0.00

Table 5.4E: Same cohort at EPA year t minus year (t-5)

Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 5 years ago					
EPA=2005	-0.03	0.01	0.05	-0.01	-0.02
EPA=2006	-0.04	-0.01	0.08	-0.01	-0.01
EPA=2007	-0.04	-0.01	0.06	-0.01	0.00
EPA=2008	0.01	-0.02	0.05	-0.04	-0.01

Table 5.4F: Same cohort at EPA year t minus year (t-6)

Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 6 years ago					
EPA=2006	-0.01	0.00	0.00	-0.01	0.01
EPA=2007	0.00	0.00	-0.02	0.00	0.02
EPA=2008	0.05	0.00	-0.03	-0.03	0.01

Table 5.4G: Same cohort at EPA year t minus year (t-7)

Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 7 years ago					
EPA=2007	0.02	0.00	-0.03	-0.01	0.01
EPA=2008	0.07	-0.01	-0.03	-0.03	0.01

Table 5.4H: Same cohort at EPA year t minus year (t-8)

Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 8 years ago					
EPA=2008	-0.03	0.07	0.00	-0.02	0.02
EPA=2009	0.08	-0.01	-0.06	-0.04	0.02
EPA=2010	0.00	0.02	-0.01	-0.03	0.02

Table 5.5: Net assimilation effect (equation 7). Type 3: Women Vocational Training

Table 5.5A: Same cohort at EPA year t minus year (t-1)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 1 year ago					
EPA=2001	-0.05	-0.04	0.00	0.13	-0.04
EPA=2002	-0.06	0.02	0.00	0.05	-0.01
EPA=2003	-0.03	-0.07	0.00	0.09	0.01
EPA=2004	-0.03	-0.02	0.00	0.06	-0.01
EPA=2005	-0.04	0.02	-0.01	0.07	-0.05
EPA=2006	-0.05	0.00	0.00	0.06	-0.01
EPA=2007	-0.05	-0.02	0.00	0.06	0.01
EPA=2008	-0.02	0.00	0.00	0.02	0.01
Table 5.5B: Same cohort at EPA year t minus year (t-2)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 2 years ago					
EPA=2002	-0.02	0.08	0.00	-0.01	-0.04
EPA=2003	-0.01	-0.02	0.00	0.04	-0.02
EPA=2004	-0.01	0.03	0.00	0.01	-0.04
EPA=2005	-0.01	0.07	0.00	0.01	-0.07
EPA=2006	-0.02	0.05	0.01	0.00	-0.04
EPA=2007	-0.03	0.04	0.00	0.01	-0.02
EPA=2008	0.00	0.06	0.01	-0.04	-0.02
Year of arrival: 3 years ago					
EPA=2003	0.00	-0.05	0.01	0.02	0.01
EPA=2004	0.01	0.00	0.01	-0.01	-0.01
EPA=2005	0.01	0.05	0.01	-0.03	-0.04
EPA=2006	0.00	0.03	0.01	-0.02	-0.01
EPA=2007	-0.01	0.02	0.01	-0.02	0.00
EPA=2008	0.01	0.03	0.01	-0.06	0.00
Year of arrival: 4 years ago					
EPA=2004	0.01	0.00	0.00	-0.02	0.01
EPA=2005	0.01	0.05	-0.01	-0.03	-0.02
EPA=2006	0.00	0.02	0.00	-0.03	0.01
EPA=2007	-0.01	0.01	0.00	-0.02	0.02
EPA=2008	0.01	0.03	0.00	-0.06	0.02
Year of arrival: 5 years ago					
EPA=2005	0.00	0.03	0.01	-0.01	-0.03
EPA=2006	-0.01	0.00	0.00	-0.03	0.00
EPA=2007	-0.02	0.01	0.01	-0.02	0.02
EPA=2008	0.00	0.02	0.01	-0.06	0.01
Year of arrival: 6 years ago					
EPA=2006	-0.01	0.00	0.00	-0.02	0.02
EPA=2007	-0.01	-0.01	0.00	-0.02	0.04
EPA=2008	0.01	0.01	0.00	-0.06	0.04
Year of arrival: 7 years ago					
EPA=2007	-0.01	-0.01	0.00	-0.02	0.04
EPA=2008	0.02	0.01	0.00	-0.06	0.04
Year of arrival: 8 years ago					
EPA=2008	0.00	0.05	0.00	-0.07	0.02
Table 5.5C: Same cohort at EPA year t minus year (t-3)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 3 years ago					
EPA=2003	-0.02	0.03	0.01	0.01	-0.03
EPA=2004	-0.01	-0.01	0.02	0.03	-0.03
EPA=2005	0.00	0.08	0.01	-0.01	-0.08
EPA=2006	-0.01	0.10	0.01	-0.02	-0.08
EPA=2007	-0.03	0.07	0.02	-0.02	-0.03
EPA=2008	-0.05	0.04	0.00	0.02	-0.02
Table 5.5D: Same cohort at EPA year t minus year (t-4)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 4 years ago					
EPA=2003	-0.07	-0.01	0.02	0.14	-0.07
EPA=2004	-0.06	0.01	0.01	0.08	-0.04
EPA=2005	-0.03	0.01	0.01	0.08	-0.07
EPA=2006	-0.04	0.08	0.01	0.05	-0.09
EPA=2007	-0.07	0.09	0.01	0.05	-0.08
EPA=2008	-0.06	0.07	0.02	0.01	-0.03
Table 5.5E: Same cohort at EPA year t minus year (t-5)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 5 years ago					
EPA=2004	-0.01	0.03	0.01	-0.01	-0.02
EPA=2005	0.00	0.04	0.01	0.00	-0.05
EPA=2006	-0.01	0.10	0.01	-0.04	-0.07
EPA=2007	-0.03	0.11	0.01	-0.03	-0.06
EPA=2008	-0.02	0.10	0.02	-0.08	-0.01
Table 5.5F: Same cohort at EPA year t minus year (t-6)					
Prof.	Other W.	Blue-C	Non-qual.	Not Work	
Year of arrival: 6 years ago					
EPA=2005	-0.06	0.02	0.02	0.12	-0.10
EPA=2006	-0.06	0.06	0.02	0.04	-0.06
EPA=2007	-0.05	0.02	0.02	0.06	-0.05
EPA=2008	-0.04	0.10	0.02	-0.01	-0.06
Year of arrival: 7 years ago					
EPA=2006	-0.01	0.06	0.02	-0.02	-0.05
EPA=2007	0.01	0.05	0.02	-0.05	-0.03
EPA=2008	-0.02	0.12	0.03	-0.03	-0.08
Year of arrival: 8 years ago					
EPA=2007	0.00	-0.02	0.02	-0.04	-0.03
EPA=2008	0.01	0.05	0.02	-0.12	0.04
Year of arrival: 9 years ago					
EPA=2008	0.00	0.04	0.02	-0.08	0.02

Table 5.6: Net assimilation effect (equation 7). Type 3: Young men Vocational Training

Table 5.6A: Same cohort at EPA year t minus year (t-1)						
Prof.	Other W.	Blue-C	Non-qual.	Not Work		
Year of arrival: 1 year ago						
EPA=2001 -0.07 -0.02 0.03 0.08 -0.02						
EPA=2002 -0.07 0.02 -0.01 0.05 0.00						
EPA=2003 -0.04 -0.04 0.00 0.06 0.01						
EPA=2004 -0.03 -0.01 0.00 0.04 0.00						
EPA=2005 -0.04 0.02 -0.02 0.06 -0.01						
EPA=2006 -0.05 0.00 0.01 0.04 0.00						
EPA=2007 -0.05 0.00 -0.01 0.05 0.01						
EPA=2008 -0.03 0.00 0.01 0.02 0.01						
Table 5.6B: Same cohort at EPA year t minus year (t-2)						
Prof.	Other W.	Blue-C	Non-qual.	Not Work		
Year of arrival: 2 years ago						
EPA=2002 -0.03 0.05 0.01 -0.01 -0.02						
EPA=2003 -0.02 -0.02 0.03 0.01 -0.02						
EPA=2004 -0.01 0.01 0.03 -0.01 -0.02						
EPA=2005 -0.01 0.04 0.00 0.00 -0.04						
EPA=2006 -0.03 0.02 0.04 -0.01 -0.02						
EPA=2007 -0.03 0.02 0.02 0.00 -0.01						
EPA=2008 -0.01 0.02 0.04 -0.03 -0.02						
Year of arrival: 3 years ago						
EPA=2003 0.00 -0.05 0.07 -0.02 -0.01						
EPA=2004 0.01 -0.02 0.07 -0.04 -0.02						
EPA=2005 0.01 0.02 0.04 -0.03 -0.02						
EPA=2006 -0.01 -0.01 0.08 -0.05 -0.02						
EPA=2007 -0.01 -0.01 0.06 -0.03 -0.01						
EPA=2008 0.00 -0.01 0.08 -0.06 -0.01						
Year of arrival: 4 years ago						
EPA=2004 0.01 0.00 -0.01 -0.01 0.01						
EPA=2005 0.01 0.04 -0.04 0.00 0.00						
EPA=2006 0.00 0.01 0.00 -0.01 0.00						
EPA=2007 -0.01 0.01 -0.02 0.00 0.01						
EPA=2008 0.01 0.01 0.00 -0.03 0.01						
Year of arrival: 5 years ago						
EPA=2005 0.00 0.00 0.04 -0.02 -0.02						
EPA=2006 -0.01 -0.02 0.08 -0.03 -0.01						
EPA=2007 -0.02 -0.02 0.06 -0.02 0.00						
EPA=2008 0.00 -0.03 0.08 -0.05 -0.01						
Year of arrival: 6 years ago						
EPA=2006 0.00 0.00 0.00 -0.01 0.01						
EPA=2007 -0.01 0.00 -0.02 0.00 0.02						
EPA=2008 0.01 0.00 0.00 -0.03 0.02						
Year of arrival: 7 years ago						
EPA=2007 0.00 0.00 -0.02 0.00 0.02						
EPA=2008 0.02 0.00 0.00 -0.03 0.02						
Year of arrival: 8 years ago						
EPA=2008 -0.01 0.02 0.01 -0.04 0.03						
Table 5.6C: Same cohort at EPA year t minus year (t-3)						
Prof.	Other W.	Blue-C	Non-qual.	Not Work		
Year of arrival: 3 years ago						
EPA=2000						
EPA=2001						
EPA=2002						
EPA=2003 -0.10 0.02 0.04 0.07 -0.04						
EPA=2004 -0.05 -0.03 0.04 0.06 -0.02						
EPA=2005 -0.04 0.03 0.00 0.05 -0.04						
EPA=2006 -0.07 0.04 0.01 0.04 -0.04						
EPA=2007 -0.08 0.02 0.03 0.04 -0.02						
EPA=2008 -0.06 0.02 0.03 0.02 -0.01						
Table 5.6D: Same cohort at EPA year t minus year (t-4)						
Prof.	Other W.	Blue-C	Non-qual.	Not Work		
Year of arrival: 4 years ago						
EPA=2000						
EPA=2001						
EPA=2002						
EPA=2003 -0.10 -0.03 0.12 0.05 -0.05						
EPA=2004 -0.08 -0.01 0.09 0.02 -0.03						
EPA=2005 -0.04 -0.01 0.07 0.02 -0.04						
EPA=2006 -0.05 0.03 0.08 0.00 -0.05						
EPA=2007 -0.08 0.04 0.07 0.01 -0.04						
EPA=2008 -0.06 0.02 0.11 -0.02 -0.03						
Table 5.6E: Same cohort at EPA year t minus year (t-5)						
Prof.	Other W.	Blue-C	Non-qual.	Not Work		
Year of arrival: 5 years ago						
EPA=2000						
EPA=2001						
EPA=2002						
EPA=2003						
EPA=2004 -0.02 0.00 0.08 -0.03 0.11 0.04 -0.04						
EPA=2005 0.00 0.06 0.03 0.05 0.02 -0.03						
EPA=2006 -0.01 0.04 0.07 -0.05 -0.05						
EPA=2007 -0.03 0.05 0.06 -0.04 -0.04						
EPA=2008 -0.03 0.03 0.10 -0.08 -0.02						
Table 5.5F: Same cohort at EPA year t minus year (t-6)						
Prof.	Other W.	Blue-C	Non-qual.	Not Work		
Year of arrival: 6 years ago						
EPA=2000						
EPA=2001						
EPA=2002						
EPA=2003						
EPA=2004						
EPA=2005 -0.08 -0.02 0.15 0.02 -0.06						
EPA=2006 -0.08 0.00 0.13 -0.02 -0.04						
EPA=2007 -0.06 -0.02 0.14 -0.01 -0.04						
EPA=2008 -0.06 0.02 0.14 -0.05 -0.05						
Year of arrival: 7 years ago						
EPA=2000						
EPA=2001						
EPA=2002						
EPA=2003						
EPA=2004						
EPA=2005 -0.02 0.00 0.12 -0.07 -0.03						
EPA=2006 -0.09 -0.02 0.15 0.01 -0.05						
EPA=2007 -0.08 0.00 0.12 -0.02 -0.02						
EPA=2008 -0.05 -0.02 0.14 -0.04 -0.02						
Year of arrival: 8 years ago						
EPA=2000						
EPA=2001						
EPA=2002						
EPA=2003						
EPA=2004						
EPA=2005						
EPA=2006 -0.02 0.00 0.10 -0.08 -0.01						
EPA=2007 0.00 0.01 0.10 -0.10 -0.01						
EPA=2008 -0.01 0.02 0.14 -0.09 -0.05						
Year of arrival: 9 years ago						
EPA=2000						
EPA=2001						
EPA=2002						
EPA=2003						
EPA=2004						
EPA=2005						
EPA=2006 -0.02 0.01 0.09 -0.07 0.01						
EPA=2007 0.00 0.02 0.10 -0.08 0.00						
EPA=2008 -0.01 0.02 0.14 -0.09 0.02						

Table 6.4: Different reaction to economic change between immigrants and natives accounting for assimilation and cohort effects (equation 8). Type 4: College graduates

