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Working Paper

The impact of Mexican immigrants on US wage structure

Working Paper, No. 2007-24

Provided in Cooperation with:
Federal Reserve Bank of Chicago

Suggested Citation: Toussaint-Comeau, Maude (2007) : The impact of Mexican immigrants on US wage structure, Working Paper, No. 2007-24, Federal Reserve Bank of Chicago, Chicago, IL

This Version is available at:
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The Impact of Mexican Immigrants on U.S. Wage Structure

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Working Paper 2007

Key Words: Immigration, Wages, Occupation

JEL Classification: J61, J62

The views expressed are the author's they do not reflect the views of the Federal Reserve Bank of Chicago or the Board of Governors of the Federal Reserve System.
The author thanks Phil Doctor for valuable research assistance.

Abstract

Previous study by Card and Lewis (2005) has found (puzzling) that inflows of Mexican immigrants into "new" metropolitan areas have had no effect on the relative wages of very low-skill (high school dropouts). Rather, Mexican workers do affect relative wages for high school graduates. Whereas Card and Lewis' study uses variations across geographies, this paper considers variations across occupations. Recognizing that Mexican immigrants are highly occupationally clustered (disproportionately work in distinctive "very low wage" occupations), we use this fact to motivate the empirical approach to analyze the relationship between the composition of Mexican immigrants across occupations/industries and average wages in the occupations/industries. To summarize our finding, we confirm that in spite of the fact that Mexican immigrants are disproportionately in "low-skill" occupations, (which we define as occupations where the average workers have no high school education), we find no significant impact of Mexican immigrants on wages in those occupations. By contrast, inflows of Mexican immigrants have some small effects on the wages of native workers in "medium-skill" occupations (which we define as occupations where the average worker has at least some high school education or is a high school graduate). These results suggest potential "spill over effects" as natives may be reallocating their labor supply into non-predominant Mexican occupations. An analysis of employment changes of natives into different occupation groupings in response to an inflow of Mexican immigrants, confirms that natives' employment in occupations where the average worker has a high school education increases in response to Mexican inflows in the U.S labor force from previous periods.

Introduction and Overview

During the 1990s, the number of Mexican immigrants living in the U.S. rose by more than five million. By the 2000 Census, Mexican immigrants made up more than 4 percent of the working age population, close to twice more than the proportion a decade earlier, in 1990. The growing importance of Mexican immigrants in the labor force has catalyzed a research and policy debate regarding their impact on wages and employment outcomes of U.S.-born workers. It remains unclear whether less-educated Mexican

immigrants simply merely fill jobs that are unappealing to native workers, displace, or serve as complement in the production process. It is also unclear whether they have contributed to the overall downward wage pressures experienced in recent decades by all low-skilled workers.

There is no consensus regarding the impact of immigrants in general on natives' wages. Depending on the methodological approach, some studies have found a negative impact of immigrants on natives. Others have found no significant impact on natives.[1] Focusing on Mexicans immigrants, Card and Lewis (2005) found that inflows of Mexican immigrants into "new" metropolitan areas have had no effect on the relative wages of very low-skill (high school dropouts). Rather, Mexican workers do affect relative wages for high school graduates. They suggest that this may be due to 2 possibilities. First, Mexican workers may be closer substitutes to natives with high school diploma, as such their impact may be felt over a broader wage structure than intuition might first dictate. Second, firms may be absorbing new "inflow" of low-skilled Mexican workers in local labor markets by adjusting for skill requirements in the workplace.

Building upon Card and Lewis' results, in this paper, we propose an additional consideration. Whereas Card and Lewis' study uses variations across geographies and considers firms' absorption capacity of the supply of Mexicans in their local labor markets, we propose to look at variations across occupations. We ask whether movements across occupations (i.e., native workers' moving into non-Mexican occupation niches) may play a role in the fact that Mexican immigrants do not appear to affect wages of very low-skill workers. To summarize our finding, we confirm that Mexican immigrants, in spite of the fact that they are disproportionately in "very low

[1] For example, some previous studies exploit variations across geographies and estimate immigration and changes in natives' employment outcome across cities or states (Altonji and Card, 1991; Butcher and Card, 1991; LaLonde and Topel, 1991; Card, 2005). These studies have generally found no sizable effect on natives. Other studies take a national factor proportion approach and estimate the changes in the supply of different skill (education) groups brought about by immigration and combining these changes with estimates of labor demand elasticity, calculate the effects on natives' wages (Borjas et al 1992, 1996, 1997; Jaeger, 1996; Card, 2005; Orrenius and Zavodny, 2006). These studies have found a significant effect of immigration on wages of natives. Some researchers have also used natural experiments on immigration that are driven by political events in the host country, such as the Mariel Boatlifts and Russian mass migration to Israel (Card 1990; Hunt 1992; Carrington and DeLima, 1996; Friedberg, 2001). These studies have found no adverse impact of immigration on native employment outcomes.

skill" occupations (which we define as occupations where the average workers have no high school education), they have no significant impact on wages in those occupations. Consistent with Card and Lewis's finding, we also find a negative and significant impact of an inflow of Mexican immigrants on average wages in "low skill" occupations (which we define as occupations where the average worker has at least some high school education or is a high school graduate). As Card and Lewis suggested, this result may reflect the fact that Mexican immigrants are greater substitutes in the "low-skill"/high school level occupations. In the context of this paper, this suggests further potential "spill over effects" as natives reallocate their labor supply into "non-Mexican" occupations, or occupations in which they have a relative comparative advantage. An analysis of employment changes of natives into different occupation groupings in response to inflows of Mexican immigrants, confirms that employment in occupations where the average worker has a high school education increases in response to Mexican inflows in previous periods.

This paper is organized as follows. The next section gives an overview of the theoretical relationship between immigrants and wages of natives, based on previous literature. Next, we present methodological specifications for this study, describe the data, and then discuss the empirical results. The final section contains a summary of the paper and the potential implications of the study.

II. Theoretical Background

A large economic literature exists that has debated and identified various channels through which immigrants could potential affect wages and other labor market outcomes for natives workers (e.g., Borjas, 1999; Greenwood and Hunt 1995; Johnson, 1998; Ottavano and Peri, 2005; Chiswick et al., 1992). One thing that seems obvious is that, assessing the impact of immigrants is a difficult and complex problem—as it is before all a general equilibrium question. The effect depends on a number of interrelated factors. First, the size of the immigrant flows into a given area must be large enough to have any measurable impact. In addition, the extent to which factors of production are mobile will dictate whether immigrants can have any local labor market impact. In the extreme case, if factors of production are perfectly mobile, this means that there will be no local effects

of immigration—these effects would be entirely mediated through general equilibrium impacts on the larger market.[2] It is debatable whether natives are in fact mobile by responding to an influx of immigrants by moving to other areas (Card, 2001; Kritz and Gurak, 2001; Frey, 1995).

The impact of immigrants on labor market outcomes for natives depends on the substitutability between natives and immigrants. If immigrants and natives are perfect substitutes, an increase in the supply of immigrants will lower wages for natives. This negative impact is magnified if immigrants are willing to work for less than natives. On the other hand, if immigrants and native workers are not gross substitutes for each other, but rather, are complements in production, then an increase in immigrants' inflow into the labor market could raise the wages of native workers, if the latter reallocate into occupations with higher wages.

Convention suggests that low-skill immigrants and natives are potentially greater substitutes for one another. This is because low-skilled occupations tend to have lower training costs, and require less institutional knowledge. While, high-skilled professional occupations, in the health and legal fields, for instance, require licensing and other entry barriers, which lower the degree of transferability of skills acquired by immigrants in their countries of origin (Friedberg, 2000; Duleep and Regets, 1999; Gallo and Bailey, 1996)). An interesting brand of newer and more recent researches has however begun to look at "task specialization" and suggest that low-skilled immigrants and natives may not be competing for similar jobs. To that effect, Peri and Sparber, (2007) provides a formal model in which low-skill natives reallocate their labor by specializing into jobs that are intensive in "interactive production tasks" as opposed to "manual tasks" in which immigrants specialize in. They show that "task specialization" by immigrants causes natives with similar education to reallocate their own task supply into jobs requiring more interactive and communication skills. They show that as a result of increased

[2] This follows from trade theory; if economies are perfectly integrated, then local quantities are unrelated to local prices—the law of one world price for all factors will prevail. In order words, if one assumes that there is perfect factor price equalization, (FPE) and no international factor price equalization, this means that immigration can affect aggregate wage but not relative wages across areas within a country.

specialization of immigrants, downward pressure on wages for less-educated natives has been reduced in states with large immigration flows.

The methodological approach presented next follows the study of Peri and Sparber (2007) in spirit. Recognizing that Mexican immigrants disproportionately work in distinctive "very low wage" occupations, we use this fact to motivate the empirical approach to analyze the relationship between the composition of Mexican immigrants across occupations/industries and average wages in the occupations/industries, as well as wages earned by natives in those occupations/industries. If the clustering of Mexican immigrants is indicative of "task specialization" or comparative advantage in those distinct occupations (such as manual occupations where the English language requirement is low), this would suggest that their impact on wages of "comparable" natives would be mitigated. Potential downward pressures of low-skilled Mexican immigrants on wages of "comparable" natives should be reduced, as the native workers reallocate their task supply into jobs, such as those where they have a comparative advantage due to language and communication ability.

III. Methodological Specification

We first consider an occupation-level wage model where we postulate that immigrants impact occupation wages through their proportional/density in the occupation/industry, relative to the native labor force. This basic relationship can be expressed as follows:

$$w_{jt} = \alpha_t + \gamma r_{jt} + \beta X_{jt} + \varepsilon_{jt}$$

Where w_{jt} is the average log of real hourly wage in occupation/industry j at time t, r_{jt} is the ratio of (Mexican) immigrants to native workers in occupation j at time t. X_{jt}, a vector of occupation/industry level variables that may also affect occupation wage (e.g., average education and average age).

A well-known econometric issue is that the density of immigrants in an occupation may not be independent of ε_{jt}, the unobserved determinants of wages. For example, "new" Mexican immigrants with lower "unmeasured skills" (captured in the error terms) are more likely to be sorted into "low-skill Hispanic" jobs. The error term

also captures unobserved taste differences among workers. New Mexican workers may choose to work in occupations that do not penalize them for low English proficiency or jobs where wage "penalty" for not speaking English is relatively low. To the extent that this is the case, the exogeneity assumption in the model would be violated. The conditional correlation of wages and Mexican density would confound the two direction of causality, making the estimate of γ biased downward, and leading to an overestimate of any potential negative effect of Mexicans.

It is therefore necessary to control for potential endogeneity bias in case Mexican immigrants are found in occupations on the basis of wage level. Our methodological approach is to control for the potential endogeneity of unobservable characteristics of Mexican immigrants with a standard 2-stage least square instrumental variable estimation technique. In the first stage, we model labor supply of Mexican immigrants, following Roy (1951) and Autor et al (2001), by assuming, in the context of this paper, that "new" Mexican workers would choose occupations to maximize earnings according to their relative comparative advantage in those occupations. As a working hypothesis, "new" Mexican immigrants are likely to have comparative advantage in occupations, whose English language skill requirement is low. Therefore their labor supply is likely to be relatively higher in such occupations.

In the first stage, we model the occupation penetration of Mexican immigrants as a function of the "manual" task intensity of the occupation. We use as our indicator variables for the "manual" task, a task intensity index developed by Autor et al (2001). This is a composite index, which ranges from zero to 10, where the lower numbers mean lesser values of the task measure. The "manual" task intensity index measures the extent to which the task content involves "eye hand foot" or "non-routine manual" operations. These occupations have very low or no English language skill requirements. We therefore expect that "new" Mexican immigrants would have relative comparative advantage in those "manual" occupations as opposed to the counterparts of this indicator. (The other skill intensity indices are "finger dexterity, set limits, tolerances and standards" which measures "routine manual tasks and cognitive tasks." There is also an indicator of "direction control planning, math aptitude," which measures non-routine

cognitive/interactive tasks and analytical tasks or abstract tasks.[3]

The first stage where we model occupation penetration must contain an instrument, which is a source of independent variations in immigration that is correlated with occupation inflow, but uncorrelated with the unobserved component of wages, subsequent to the immigrants' arrival. This study exploits the fact that Mexican immigrants are highly occupationally segregated in the U.S. and assumes, along these lines, that such segregation reveals something about preferences or comparative advantage of the group in certain occupations, which is more or less independent of unobserved determinants of the wage structure in the US. "New" Mexican immigrants (at least in the short run before they invest in additional host-country specific human capital or language skills) are likely to take jobs where previous cohorts have established a self-reinforcing niche. Hence we use the past occupation densities of Mexican immigrants in the U.S as instrument for the inflow of "new" Mexican immigrants in a later period.[4] The probability that lagged occupation distributions of Mexicans will predict later inflows increases if the size of Mexicans in the occupations in the past is large enough to influence the choice of the recent waves and if there is a continuous and homogeneous inflow of Mexican immigrants. We will confirm that there has been persistence in the Mexican occupation composition in the U.S over time, as Mexico continued to be an important sender of immigrants throughout the period under study.

The choice of lagged occupation density as instrument is consistent with previous empirical economic studies that use historical immigrant allocation patterns in industries, or historical concentration in various location choices as instruments (e.g., Lewis, 2003; Card and Lewis, 2005). There is also an interesting sociology literature that suggests how certain immigrant, ethnic, or minority groups become occupationally clustered and

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[3] These composite indices were developed based on Dictionary of Occupational Titles. David Autor provided these indices data for this study.

[4] Previous research by Friedberg (2001) uses the occupation of the Russian immigrants prior to migrating to Israel as an instrument variable. The logic being, the occupations of the Russian Jews were independent of wages expectation, they were chosen on the basis on labor market condition in Russia and not that of Israel, since their migration was quite sudden. For that purpose the previous occupation of Russian Jews in Israel is assumed correlated with their occupation distribution in Israel, and uncorrelated with unobserved determinants of changes in wage in Israel, subsequent to their arrival, thus making it an acceptable instrument.

develop "occupational niches," as a by-product of an historical process, which also supports the choice of all these instruments in these studies.[5]

IV. Data and Sample Statistics

As in previous research, we make use of Public Use Micro Statistics (PUMS) data from the 1980, 1990, and 2000 U.S Censuses, 5% sample. The primary advantages of using these data files are sample size and occupation coverage.[6] Undercounting of Mexicans due to the undocumented can however be a drawback in these data, as noted in Card and Lewis (2005). Calculations by Borjas, Freeman, and Lang (1991) suggest that the 1980 Census missed approximately 40 percent of unauthorized Mexican immigrants, leading to a 25% undercount in the overall Mexican immigrant population. Van Hook and Bean (1998) estimate a 30% undercount rate of unauthorized Mexicans in the 1990

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[5] We have learned for instance that occupational clustering may emerge from the tendency of certain immigrant groups to concentrate historically in *ethnic enclaves*, where there may be comparative advantage in the production of "ethnic goods". Occupation niches also arise from the process of "ethnic succession" in the job market. This process may reflect dynamics of "residential segregation," whereby natives (e.g., non-whites) would exit certain sectors as immigrants enter them. (e.g., the case noted in New York City between Whites and Cubans (Waldinger, 1996; Wright and Elllis, 1996)). Occupational clustering is reinforced as immigrants share information about employment opportunities through self-reinforcing ethnic networks. Clustering of occupation by an immigrant group may also be facilitated by the heterogeneity of occupations in their use of language. In occupations traditionally held by immigrants, employers may be less likely to screen out those who have a lack of English knowledge (Kossouji, 1998). Such occupations can thus be viewed as being segregated by language ability of the dominant workforce employed. Finally, an ethnic occupation niche can arise from historic practices of recruitment of workers (e.g., the Bracero program), and other special provisions in immigration policy or accord between the sending and host countries (Park, 2004; Waldinger and Der-Martirosian, 2001; Mouw, 2003).

[6] There have been significant changes in the classification of occupations between the 1990 and 2000 Censuses that warrant careful attention when making comparisons. The 1990 Census occupational codes are based on the 1980 Standard Occupational Classification (SOC) system in which occupations are organized hierarchically in terms of the skill level and the experience considered necessary for individuals engaged in the occupations. By contrast, the 2000 Census occupational codes are based on the 1998 SOC, which classifies occupations by 'job families'—job families combine occupations where people involved work together regardless of their respective skill level (i.e., doctors, nurses, and nurse assistants are grouped together). In addition, the 1998 SOC has more professional and technical occupations due to advances in technology and shifts in service-oriented sectors of the economy. Some 1990 occupations have become obsolete and do not figure in the 1998 SOC. In addition, some occupations have been "upgraded" or "downgraded." For example, farm, ranch and other agricultural managers are found in the major groups of management occupations in the 2000 Census whereas in 1990 they were listed under farming occupations. Without ensuring that occupational categories across Censuses are comparable, it is impossible to get an accurate measure involving change in the occupational classifications over the period. Peter B. Meyer and Anastasiya Osborne of BLS converted Census occupation codes from 1970, 1980, 1990 and 2000 to 1990 scheme, available at the University of Minnesota "IPUMS Project" (ipums@pop.umn.edu). This data set is used in the empirical analysis.

Census and a 20% undercount of all Mexicans. Norwood et al (2004) estimate suggest that the 2000 Census was substantially more successful in counting unauthorized immigrants. They estimated an undercount rate for unauthorized immigrants on the order of 10 percent, implying an undercount of total Mexican immigrants of 6-8%. With these caveats in mind, we turn to an overview of the occupation landscape in the United States and the relative position of Mexicans, compared to other various, racial ethnic groups based on descriptive statistics.

Figure 1 shows the occupational distribution in the U.S. in the year 2000 based on 1-digit occupation group aggregates by racial/ethnic groups. The data suggest that a higher proportion of Hispanics (including Mexicans) are in service, farming, construction, and production occupations. Differences by country of origin also surface in Figure 2. There, we note that the predominance of Hispanics in farming, construction, and production can be attributed mostly to the disproportionate presence of Mexicans in those occupations. These patterns are reinforced if we condition the Hispanics on whether they are immigrants (they were not born in the U.S) in Figure 3. For example, whereas in Figure 2, we note that 13.3 percent of Mexicans are in professional occupations, conditioned on being an immigrant, the percentage falls to 7.5 percent in Figure 3.

We compute a composite index of socioeconomic status to assess the quantitative meaning of each occupation. This composite index is adapted from the methodology of Sicherman and Galor (1990), whereby we derive a score or an ordinal scale from regression analyses of wages and the human capital requirements of the job. Ranging from 0 to 100, the scores represent the socioeconomic standing of a particular occupation in the universe of detailed occupations of all individuals in the labor force.

The average socioeconomic score across all 475 occupations reported in the Census is 34.8. (Non-Hispanic white males have an average score of 37). In Table 1, we report the respective average scores for 23 major occupational categories, by decreasing socioeconomic status order. This table also shows the relative concentration of Mexican immigrants in each occupation grouping, compared to the whole labor force. The results show that a relatively lower proportion of Mexicans are in occupations that fall within the professional categories that include management, education, training and library, business

and financial operations, and computer and mathematical science. These occupations tend to have the highest socioeconomic scores, ranging from 36 to 61. By contrast, Mexicans are overrepresented in building and grounds cleaning, food preparation and serving occupations, and farming occupations. These occupations score very low in terms of socioeconomic status.

Figure 4 reports the average socioeconomic status scores of occupations by immigrant cohort. We note that in general, the occupational status scores decline with successive cohorts, which is consistent with the idea that immigrants tend to "assimilate" overtime, that is, be in occupations with status more similar to natives'. Even so, Mexican immigrants have relatively lower scores, irrespective of the entry cohort, compared with other Hispanic groups. For example, Mexicans who have been in the country for less than 5 years are employed in occupations with a score of 17 on average. Mexicans who have been in the country for 30 years or more are employed in occupations with an average score of 30, which is below the average for U.S-born workers. Table 2 reports the top 20 detailed occupations where "new" Mexican immigrants went into over the last 3 decades, in 1980, 1990 and 2000. Over 60 percent of "new" Mexican immigrants are in similar occupations with each successive period considered. These suggest that occupational mobility may be more limited for Mexican immigrants (Toussaint-Comeau, 2006).

V. Empirical Results

Table 3 reports the results from first stage regressions that test the strength of the relationship between Mexican occupation density and the inflow of Mexicans with their proposed determinants. The results suggest that the occupation density as well as the penetration of Mexicans in different occupations is positively related with lagged or past occupation distributions from previous decades. The results also suggest that the task intensity of an occupation is correlated with Mexican labor supply into the occupation. The higher the "manual" or "routine" task intensity of an occupation, the higher is Mexican density in the occupation. Higher "abstract" task intensity of an occupation is significantly negatively correlated with the propensity of "new" Mexican immigrants to penetrate the occupation.

Table 4 shows the impact of Mexican immigrant occupation concentration on

average wages, based on OLS estimates. The OLS results suggest a negative relationship between the presence of Mexicans in an occupation and average wages in the occupation, overall. The impact of an increase in Mexican immigrants on the wages of natives is significant for the most recent census year of 2000, but not for previous decades. Since Mexican immigrants tend to be disproportionately in low wage occupations, it is likely that the OLS estimates overstate the negative effect.

We turn our attention to whether "inflow" of "new" Mexican immigrants, post 1990—a proxy for the labor supply shock to an occupation—affected wages in the 1990s for natives. To that effect, we report both OLS and IV estimates in Table 5. The results are consistent in both OLS and IV estimates, that is, inflows of "new" Mexican immigrants appeared to have had a small negative impact on wages for natives. The fact that both the OLS and the IV are consistent suggests that the negative OLS coefficient is not entirely due to the fact that Mexican immigrants are disproportionately found in low-wage occupations.

In Table 5, we also condition the model specification on three different skill level to test whether the occupational composition of Mexican immigrants, impact differently wages of natives with different skill sets. We classify as "low skill" those occupations whose average wages of workers are less than high school; "medium-skill" consists of those whose average education of workers is high school; and "high skill" occupations are those with average workers having college education or college degrees. The results suggest that the inflow of post 1990 Mexican immigrants is significantly negatively correlated with wages for those in "medium-skill" occupations, that is, those with high school level education. We found no statistically significant impact on natives in "low skill" occupations, or those in "high skill" occupations.[7]

The finding that Mexican immigrants have no significant impact for the "low skill" occupations, where they have strong concentration, but have some significant

[7]We also considered a specification where we take the first difference of wages over 1990 and 2000 to test whether the inflow of Mexicans affected the rate of growth of wages for workers in different skill level occupations. The results suggest that there is a positive correlation between Mexican immigrants and wage growth for natives in "low-skill" occupations (with less than high school education), and those in "high skill" occupations. By contrast, the wages for "meidum-skill" natives, with an average high school education is negatively impacted by inflow of Mexican immigrants. None of these effects, however, were found to be statistically significant.

impact on "medium-skill" occupation groups where their relative concentration is much more smaller is again puzzling. As proposed in Card and Lewis, part of the explanations may be that Mexican immigrants are much closer substitutes to natives in those "medium-skill" occupation subsets. We submit that an additional possibility may be "spill over" effects from Mexican immigrants' inflow in "low skill" occupations. It is possible that native workers reallocate from "low-skill" occupations to "medium-skill" ones, resulting into crowding out or greater wage pressure in "medium skill" occupations. To begin (crudely) investigating this possibility, we considered an analysis of change in employment for natives. We ran an OLS model specification where we regress the growth in employment in each of the three occupation groups, respectively, for natives as a function of the entry of "new" Mexicans in the U.S. The findings suggest that employment of natives in "medium-skill" occupations where the average worker has a high school education increases in response to Mexican inflows from a previous period into the labor market in the U.S. We found no significant relation between the inflow of Mexican immigrants from a previous period and changes in employment of natives in "low-skill" occupations, or "high skill" occupations.

VI. Conclusion

In summary, the results suggest that the impact of Mexican immigrants has become more significant in more recent years, consistent with the increasing importance of Mexicans in the labor force. Contrary to what one would expect, Mexican immigrants have no significant impact on wages at the "low-skill" occupation groups, where they tend to dominate. We propose that one factor may be that greater task specialization among native and Mexican workers at the very low-skill level occupations mitigate the impact of Mexicans on wages at the very bottom of the occupation lather. We found consistent with previous research by Card and Lewis (2005), that Mexican immigrants have a significant (negative) impact on wages for natives in occupations with high school level education requirements. Native workers may be potentially readjusting their labor supply into "medium-skill" occupations, where they have a relative comparative advantage (in communication for instance). At this stage, of the analysis, it is however too tentative to suggest that the apparent wage pressures for natives in "medium-skill"

occupations is directly linked with Mexicans, given their relative low presence in those occupations. A combination of other factors is also likely to come in place. This remains an area ripe for future research.

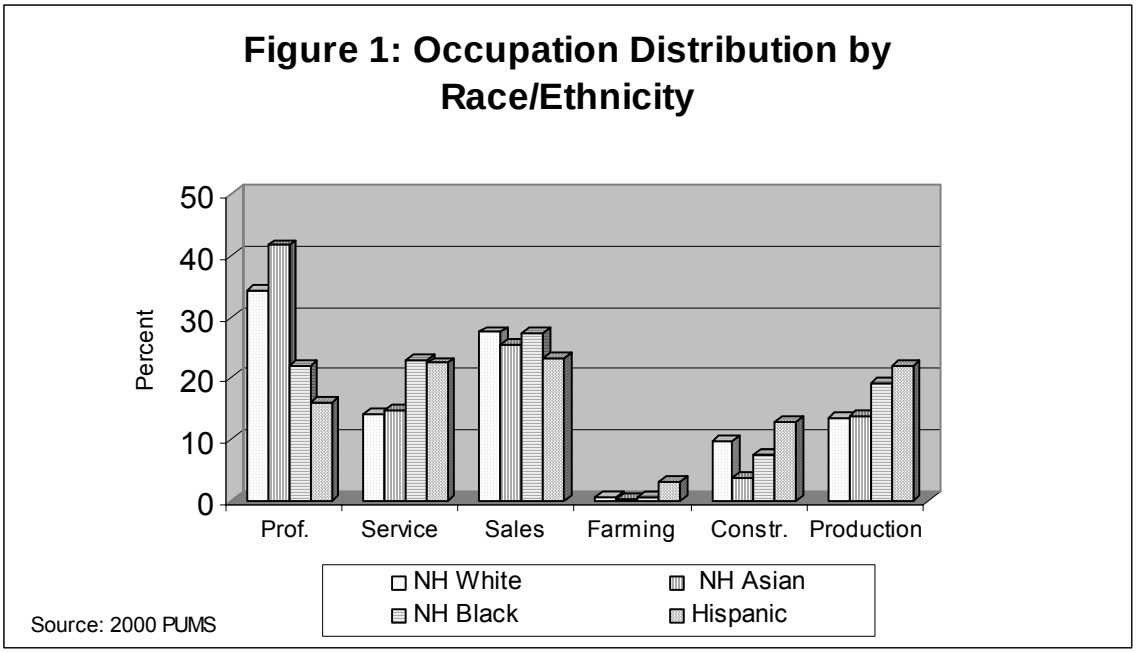
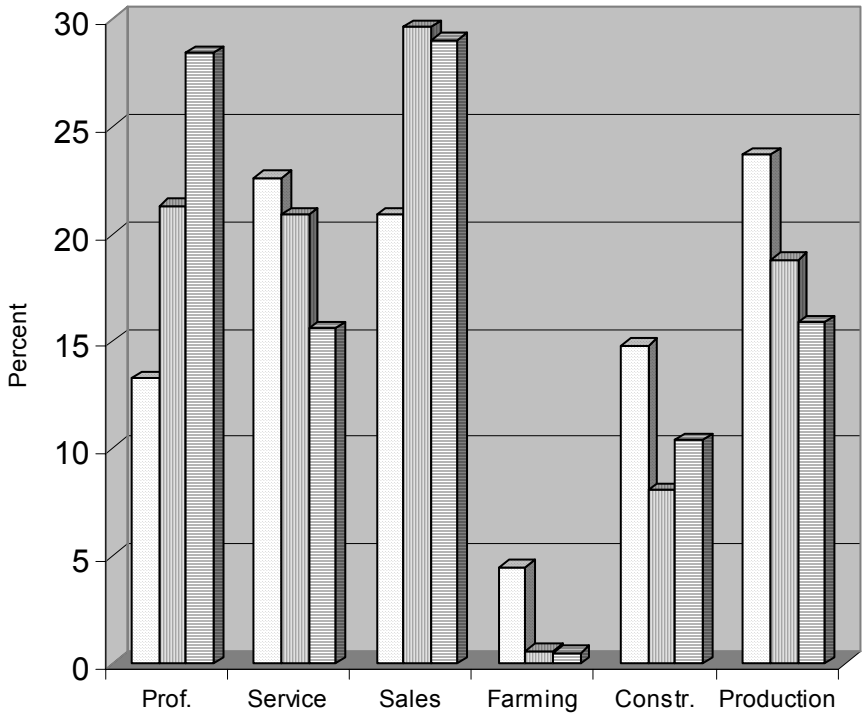


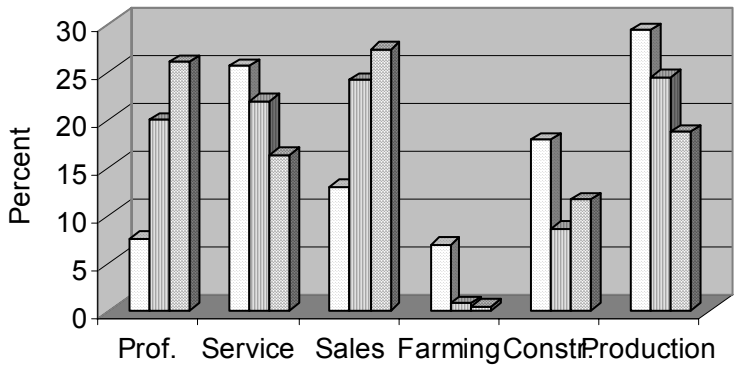
Figure 2: Occupation Distribution by Hispanic Ethnicity



Source: 2000 PUMS

Mexican | P. Rican | Cuban

Figure 3: Occupation Distribution by Immigrant Status



Source: 2000 PUMS

Mex.Imm. | PR Imm. | Cub.Imm.

Table 1: Concentration of Mexican Immigrants Relative to the Labor force			
Socioeconomic Index Score	**Occupation Categories**	**Percent of labor force**	**Percent of Mexican immigrants**
61	Education, Training and Library	5.3	1.3
54	Management	8.2	2.7
52	Business and Financial Operations	3.9	0.9
51	Computer and Mathematical Science	2.2	0.3
49	Life, Physical, and Social Science	0.9	0.2
49	Architecture and Engineering	1.9	0.4
45	Community and Social Services	1.4	0.4
44	Arts, Design, Entertainment, Sports and Media	1.9	0.6
42	Legal	1.0	0.1
39	Sales	11.5	6.1
37	Protective Services	1.9	0.5
36	Healthcare	4.2	0.6
33	Installation, Maintenance, and Repair	3.9	3.8
30	Office and Administration Support	15.5	6.9
27	Construction and Extraction	5.8	14.1
26	Production	8.8	19.5
24	Healthcare Support	2.1	1.2
24	Transportation and Material Moving	6.4	9.8
22	Personal Care and Service	2.9	2.3
18	Building and Grounds Cleaning	3.7	11.4
17	Food Preparation and Serving	5.6	10.1
14	Farming, Fishing, and Forestry	0.9	6.9

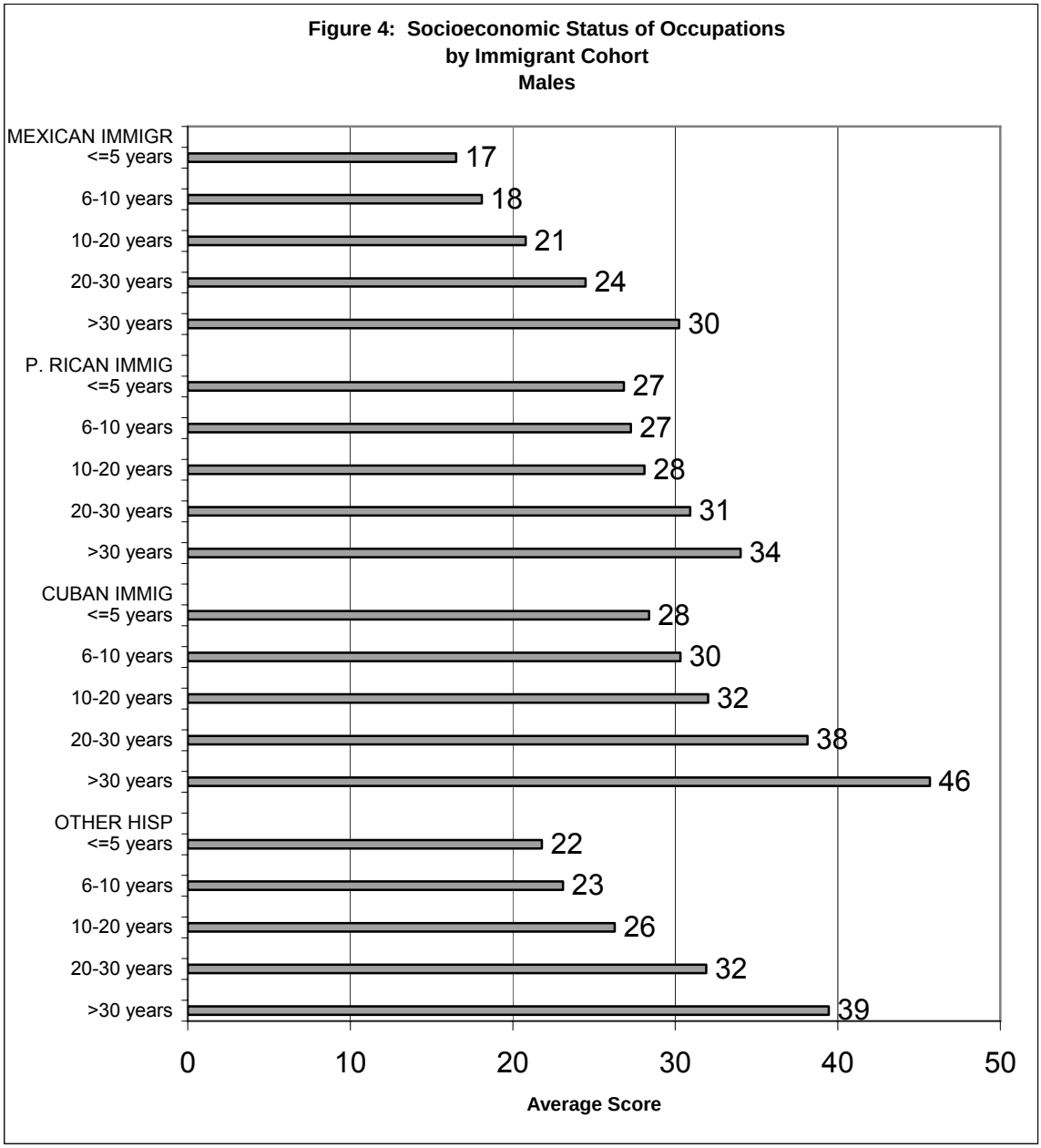


Figure 4: Socioeconomic Status of Occupations
by Immigrant Cohort
Males
MEXICAN IMMIGR
<=5 years
17
6-10 years
18
10-20 years
21
20-30 years
24
>30 years
30
P. RICAN IMMIG
<=5 years
27
6-10 years
27
10-20 years
28
20-30 years
31
>30 years
34
CUBAN IMMIG
<=5 years
28
6-10 years
30
10-20 years
32
20-30 years
38
>30 years
46
OTHER HISP
<=5 years
22
6-10 years
23
10-20 years
26
20-30 years
32
>30 years
39
0
10
20
30
40
50
Average Score

Table 2: Detailed occupations where "new" Mexican immigrants go to

1980	1990	2000
Construction laborers	Miscellaneous agricultural workers	Miscellaneous agricultural workers
Miscellaneous agricultural workers	Chefs and head cooks	Production workers all other
Chefs and head cooks	Construction laborers	Construction laborers
Grounds maintenance workers	Grounds maintenance workers	Electrical electronics and electromechanical assemblers
Carpenters	Production workers all other	Chefs and head cooks
Dishwashers	Electrical electronics and electromechanical assemblers	Rail-track laying and maintenance equipment operators
Painters construction and maintenance	Dishwashers	Welding soldering and brazing workers
Production workers all other	Counter attendants cafeteria food concession and coffee shop	Dishwashers
Electrical electronics and electromechanical assemblers	Carpenters	Grounds maintenance workers
Drywall installers ceiling tile install-ers and tapers	Janitors and building cleaners	Carpenters
Roofers	Rail-track laying and maintenance equipment operators	Counter attendants cafeteria food concession and coffee shop
Carpet floor and tile installers	Painters construction and maintenance	First-line supervisors/ managers of production and operating workers
Janitors and building cleaners	Sewing machine operators	Sewing machine operators
Counter attendants cafeteria food concession and coffee shop	Roofers	Grinding lapping polishing and buffing machine tool setters operators and tenders
Rail-track laying and maintenance equipment operators	Drywall installers ceiling tile install-ers and tapers	Industrial truck and tractor operators
Rail-track laying and maintenance equipment operators	Waiters and waitresses	Packers and packagers hand
Metalworkers and plastic workers all other	Driver/sales workers and truck drivers	Painters construction and maintenance
Waiters and waitresses	Rail-track laying and maintenance equipment operators	Driver/sales workers and truck drivers
Automotive service technicians and mechanics	Driver/sales workers and truck drivers	Janitors and building cleaners

Table 3: First Stage Regressions

Determinants of Mexican Occupation Concentration and Penetration

	Dependent Variables			
Independent Variables	Mexican Density in occup in 2000		ln(New Mexican "inflow" in occup, post1990)	
Mexican density in occup, 1990	0.065***	(0.009)		
Mexican density in occup, 1980	0.048***	(0.13)		
lagged Mexican inflow: post1980			1.48***	(0.215)
Task intensity: manual-eye, hand,foot	0.205***	(0.76)	0.023	(0.033)
Task intensity: routine	0.149***	(0.47)	0.013	(0.023)
Task intensity: abstract	-0.345***	(0.45)	-0.051***	(0.024)

Table 4: OLS estimates of the Impact of Mexican Immigrants on average level of wages

	Average wages, all				**Average wages,natives**			
	pulled cross-section	2000	1990	1980	pulled cross-section	2000	1990	1980
Mexican Occup density	-0.001***	-0.03***	-0.013***	-0.006	-0.005	-0.002*	-0.003	0.001
	(0.0004)	(0.001)	(0.0003)	(0.01)	(0.005)	(0.01)	(0.004)	(0.001)
control for educ and age	yes	yes	yes	yes	yes	yes	yes	yes
control for year	yes	no	no	no	yes	no	no	no
Rsquare	0.5758	0.3926	0.402	0.3173	0.5686	0.3875	0.3849	0.3136
N	14745	4730	5186	4829	14745	4730	5186	4829

Table 5: The Impact of inflow of "new" Mexican Immigrants								
average Wages for all			OLS			2SLS IV		
			all skill	all skill		All skill	low skill	medium skill	high skill
ln(inflow of Mexican, post 1990)			-0.096***	-0.021***		-0.08	-0.07	-0.109***	-0.02
control for education, and/or age			no	yes		yes	yes	yes	yes
Rsquare			0.2202	0.6758		0.6688	0.4719	0.2663	0.4781
N			1904	1895		1207	439	567	201
Average Wages for Natives									
				all skill		All skill	low skill	medium skill	high skill
ln(inflow of Mexican, post 1990)				-0.011***		0.099	-0.131	-0.116**	0.125
				(0.004)		(0.073)	(0.106)	-0.061	(0.170)
control for education, and/or age				yes		yes	yes	yes	yes
Rsquare				0.6603		0.588	0.1904	0.2007	0.2187

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