Coming to Work?
The Hours of Work of Mexican and Central American Immigrants in America

Fernando A. Lozano*
Department of Economics
Pomona College
October, 2006

Abstract: In this paper I analyze the hours of work of immigrants from Mexico and Central America in the US. In particular I concentrate in workers supplying long hours of work -- 50 or more weekly hours. First, I document that immigrants are less likely than natives to work long hours, and surprisingly, these differences are greatest among college graduate, middle-age, salaried and high-income earners. I reject traditional labor supply models that predict positive responses in labor supply to wage increases as years in the US increase**.** Second, I analyze whether contemporaneous marginal incentives to supply an extra hour of labor explain these labor supply differences between immigrants and natives. I show that both groups face the same occupation based incentives, but immigrants are less responsive to these incentives. Finally, I explain these differences with immigrant's lower labor market attachment and because immigrants cannot be offered the same efficiency inducing "life-cycle" contracts as natives do.

***** fernando.lozano@pomona.edu. I want to thank participants at the Brown Bag Seminar at Claremont McKenna College and participants at the 2006 Society of Labor Economics Meetings in Boston MA for their helpful comments. All errors are mine

I. Introduction

Immigration from Mexico and Central America is shaping the United States labor market. Not surprisingly the labor market performance of immigrants from these countries has received considerable attention from economists (Borjas and Katz, 2005). Until now labor market research on immigration has focused on two broad categories: first, what is the effect of the foreign born on the outcomes of the native population, and second, whether the labor market performance of the foreign born converges to that of natives as years in the United States increase. The bulk of these studies have concentrated on one dimension of labor market performance: labor earnings. To have a better understanding of the performance of foreign born workers in the labor market, it is necessary to explore the performance of immigrants in the Economy, not only in terms of earnings, but also in other dimensions of labor supply, such as number of hours worked weekly and how immigrants respond to labor market incentives in their supply of labor.

While immigration is redefining the economy in the United States, there has been a number of changes in the domestic labor market as well. Among them, economists have paid considerable interest to the changes in the hours of American workers, particularly men's working hours. For example, Coleman and Pencavel (1993) report that average hours of work for American males have changed little between 1940 and 1988. However, highly educated workers are more likely to work longer hours than 40 years ago, while lower educated workers are less likely to work longer hours. Kuhn and Lozano (2005) observe the same dynamic for American males and explain changes in the number of hours of work supplied on changes in the worker's compensation, where the marginal incentives to supply an extra hour of work have increased during the last twenty years.

This paper has two goals: The first goal is to document any differences in the number of weekly hours of work between immigrants from Mexico and Central America and native born workers, and whether these differences disappear as an immigrant's years in the United States increase. Following Kuhn and Lozano (2005), I focus on one dimension of labor supply: workers supplying 50 or more hours per week (I will refer to these workers as those supplying *long hours* hereafter). Using the synthetic-cohort approach developed by Borjas (1985, 1995), and controlling for differences in cohort quality, I pay attention to the evolution of an immigrant probability of *working long hours per week* as years since arriving to the United States increase. This contrasts with the previous literature on immigrant labor supply, which either concentrates on family labor supply or annual hours of work. For example, in a recent account of economic outcomes of Mexican immigrants, Blau and Kahn (2005) document the supply of annual hours of works for male and female Mexican workers, their results indicate that annual hours of work increase with years in the United States. It can be argued that weekly hours of work is a different dimension in the margin of labor supply: annual hours are computed using weeks worked, and while weeks worked may be a better measure of labor market attachment and participation over an extended period of time, hours per week provides a better measure of the "quality and rhythm of family life" (Kuhn and Lozano, 2005). Also, by concentrating on workers supplying 50 hours or more, my analysis focuses on the upper tail of the distribution, which gives a better idea of a worker's tradeoff between leisure and labor market activity. Finally, this measure avoids problems due to clustering of responses around one number, like when respondents round their hours of work to 40 hours per week.

Differentiating between weekly hours of work and annual hours of work is important in the case of recent immigrants. It may very well be that immigrants (particularly recent ones) work in the United States for a number of months in a year, supply long hours per week during the months when there is high demand for their skills, and then return to their source country or move to where their skills are demanded (Massey and Durand, 2002). Also, it is important to consider the differences in the marginal incentives to supply an extra hour between two immigrants who work 1980 annual hours: one working 36 weeks at 55 hours per week, versus another immigrant working 40 hours a week for 50 weeks. Finally another advantage of using weekly hours is that the question for weeks worked in the Decennial Census or in the March Supplement of the Current Demographic Survey includes weeks of paid vacation and paid sick leave, and as Coleman and Pencavel (1993) claim "information of weeks work indicates firms' cost of employing workers more accurately than it does actual time worked."

The second goal of this paper is to analyze the interactions between labor market incentives to supply long weekly hours of work and the differences in hours of work between immigrants and native born workers. I use three measures of labor market incentives. In the first measure I follow Bell and Freeman (2001a, 2001b) who explain differences in hours of work between American and European workers with differences in the dispersion of earnings within occupation or industry. Heuristically, if worker's effort or hours of work predicts the position in the occupation/industry earnings distribution, greater inequality of pay should yield higher incentives to supply long hours. The second measure I use for labor market incentives follows Kuhn and Lozano (2005). I

calculate differences in the "long hours premium" between immigrants and native workers. The long hours premium is the difference in earnings in year $t+1$ between a worker supplying 50 or more weekly hours in year t and one supplying less than 50 hours – I also calculate this premium with a cross-section, the results are qualitatively the same. Finally, I analyze the role that job attachment (measured imperfectly with residential attachment) has on the probability of an immigrant working 50 or more weekly hours. Intuitively, if a worker perceives a stable relationship with his employer, then this worker will have the incentive to invest in firm specific capital (I am thinking of hours of work is the form of as such investment, but the intuition is the same as in training). Equivalently, if an employer perceives a stable relationship with an employee, this employer will offer dynamic incentives to this worker that will yield socially optimum contracts, for example in the form in deferred compensation (Lazear, 1979). If either the employer or the employee feels that the relationship will end soon, the worker has no incentive to supply long hours, and the employer has no incentive to offer first-best dynamic contract that will maximize worker's utility. Empirically, the age when the immigrant first arrives to the US will play a crucial role in analyzing whether an immigrant works 50 hours per week or not, and whether the worker can engage in a life-cycle dynamic contract.

My results suggest that immigrants from Mexico or Central America are les likely than native workers to supply long hours of work. These differences are not explained with positive responses to income as years in the United States increase. Instead these differences are partly explained with observable demographic characteristics (education attainment, salaried versus hourly status, and union coverage of membership). Also differences in the distribution of occupations explain part of the difference in working

long hours, as immigrants seem to work in occupations where long hours are less frequent. None of these differences are explained by the industry composition of the immigrant workforce. My results suggest that immigrant workers face similar contemporaneous marginal incentives to supply long hours as natives do, but that immigrants from Mexico and Central America do not respond to these incentives as natives do. I explain the differences in the response to the incentives to supply long hours with lower job attachment among immigrant workers and because they start their job tenure in the United States at an older age than natives do. These has as a consequence that immigrants will not be offered by their employers the same life-cycle contracts as natives do, in particular contracts with deferred compensation.

The rest of this paper is structured as follows: in section two I discuss the data used and document the evolution of annual hours of work for different immigrant groups. In section three I analyze the differences in working long hours due to demographic characteristics, and in section four I discuss the relationship between hours of work and the incentives to supply long hours. Section five presents a model that explains the differences in long hours of work between natives and immigrants. Section six discusses the results and presents possible explanations of them. Finally, section seven summarizes the results.

II. Data

The main dataset in this paper is the 1994-2003 NBER Collection of the Current Population Survey Outgoing Rotation Groups (CPS ORG hereafter). This is a special survey administered to all CPS respondents who are older than 16 years old who are in

the 4th and 8th rotations of each monthly CPS survey. This survey includes a battery of questions regarding the respondent's labor market activity, among them and exclusively in the Outgoing Rotations, usual weekly hours of work in the main job and weekly earnings. This survey has two added advantages: it is collected continuously during the year, which makes it less sensitive to seasonal variations in labor supply, also the number of observations it contains is three times greater than the regular CPS survey.

The sample in this paper is restricted to all males aged 24-65. I choose to focus this paper on males because immigrant women in the labor force are not randomly selected and their decision of number of hours of work will be sensitive to their partner's income. Also, it is hard to distinguish any increases in the labor supply of immigrant women due to national secular trends from other labor supply trends. I choose to restrict age to the 25-64 range since by this age range presumably most of the sample ended their investments in education. My control group trough out the paper is all US born males, without distinction to ethnic group. Further to avoid biases arising from including immigrant children in the sample, the immigrants sample is composed of those immigrants who arrived in the United States at age 16 or older[1]. All monetary units are in 1994 dollars.

Table 1 presents the percentage of males in each group who work long hours. The third column represents the differences between natives and immigrants from Mexico and Central America. For every category in this table native workers are more likely to work longer hours than immigrants. Perhaps surprisingly, the categories where the differences are greatest are among middle aged, salaried paid and highly educated males. For

[1] My results are robust if I include immigrants who came to the United States as children or other demographic groups.

example, among high school dropouts, natives are 5 percentage points more likely to work long hours than immigrants from Mexico and Central America, while for college graduates, native workers are 19 percentage points more likely to work long hours relative to immigrants.

Table 2 presents the proportion of immigrants from Mexico and Central America and natives working long hours by wage quintile. Surprisingly again, immigrants who belong to the highest quintile of the wage distribution are 17 percentage points less likely to work long hours than native born workers in the same income category. In contrast, the difference between immigrants and natives who are in the lowest wage quintile is only 7.5 percentage points, almost half in magnitude than the difference for the highest quintile. Even though these positive responses between income and labor supply are common in the literature (Juhn, Murphy and Topel 1991 or Kuhn and Lozano, 2005), the fact that these responses are weaker among immigrants has been undocumented until now.

III. Differences Due to Demographic Characteristics

The first exercise in this paper is to analyze how much of the differences between immigrants and natives are explained by differences in demographic characteristics. Following the well known Oaxaca Decomposition (1973) I decompose what percentage of the differences can be explained by differences in the mean of each demographic characteristic between natives and immigrants, and what percentage is due to differences in the coefficients of running ordinary least squares regressions of Equation 1:

$$lh_{it} = \alpha + \sum_{k=1}^{4} \mu_k age_{it}^{k} {}_{it} + \sum_{g=1}^{3} edu_{it}^{g} + \sum_{j=1994}^{2003} \theta_j year_t + \sum_{f=1}^{45} \omega OCC_{it}^{f} + g_{it}' \phi + \varepsilon_{it} \qquad (1)$$

where lh_i indicates whether a worker supplies 50 or more hours per week or not, *age* indicates up to a quartic term in age; *edu* indicates a dummy variable for high school graduates, some college, or college graduates; *year* represents the survey year, and *OCC* represents a dummy variable for each two-digit occupation category. Finally the vector of variables *g* includes metropolitan status, Census region dummies, whether the worker is unionized, whether the worker is salary paid; and dummy variables for California, Florida, Illinois, New York-New Jersey or Texas[2].

The regression coefficients for Equation 1 and the sample means are presented in Table 3. The results from these regressions suggest the following: married and divorced native males are more likely to work longer hours, but their immigrant counterparts are not. The same is true for older males, natives are more likely to work longer hours, but immigrants are not. More educated males tend to work longer hours as well. Natives who live in metropolitan areas are more likely to work long hours, while immigrants that live in these areas are less likely to work long hours. All salary paid males are more likely to work long hours, and males who are unionized are less likely to work long hours. Focusing on the sample means, immigrants are more likely to be married and less likely to be divorced than natives. Immigrants are less likely than natives to have a college degree and more likely to be high school dropouts -- 68% of immigrants do not have a high school degree. While 34% of all natives live in the six states I control for, 70% of all immigrants live in these states. Finally, immigrants from Mexico and Central America are less than half as likely to be salaried paid than natives, and half as likely to be unionized.

[2] I chose these states since 70% of all immigrants live in them.

The Oaxaca decomposition results are presented in Table 4. It is worth noting that half of the total differences between immigrants from Mexico and Central America are explained with observed demographic characteristics. Among the explained differences, 1.7 percentage points are due to different education levels, 2.9 percentage points are due to being salaried or not, and another 1.6 percentage points are due to two-digit occupation mix differences. Still almost 6 percentage points in the difference between these two groups remain unexplained.

Next I explore whether using two-digit occupation controls fails to observe smaller differences in occupation composition between immigrants and natives. Instead, I use detailed three-digit occupation codes and perform a counterfactual analysis where:

$$lh_i^{jh} = \sum_{i=1}^{I} \theta_i^j \cdot lh_i^h \qquad (2)$$

where θ_i^j be the proportion of workers in group *j* that work in occupation *i*, also let lh_i^h be the mean of workers from group *h* that work long hours in occupation *i*; then the percentage of workers working 50 or more hours in occupation *i* from group *h,* if they have the same occupation distribution of group *j,* will be lh_i^{jk}. I calculate these counterfactuals for both 3-digit occupation and industry codes, and the results are presented in Table 5. The results in Table 5 indicate that if immigrants from Mexico and Central America have the same occupation mix as natives, 11% of them would work long hours (this explain less than ¼ of the total difference), but if native workers had the same occupation distribution as immigrants, they would be six percentage points less likely to work long hours than they are. These results suggest then that changing the occupation distribution of immigrants to that of natives will have little impact in the hours of work of

the foreign born. But changing the occupation distribution of natives to simulate that of immigrants will reduce the hours of work of natives by almost six percentage points. The differences in industry mix explain none of the differences between native and immigrant workers.

Before analyzing whether immigrant's average hours of work converge to that of native-born workers as time in the United States increases using Borjas (1985, 1995) well know cohort analysis, attention must be paid to demographic differences between the foreign-born and native sample. One issue to be addressed is that the age distribution between natives and immigrants is different. For example, the average age of a native male worker in my sample is almost 43 years old, while the average age of an immigrant from Mexico and Central America is 38 years. To control for these differences, and following Blau and Kahn (2005), instead of presenting raw means I present conditional means with controls for age and year. My baseline specification for working long hours $lh_{it,}$ for person *i* in year *t* is:

$$lh_{it} = \alpha + \sum_{h=1}^{5} \delta_k C_{it}^h + \sum_{l=1}^{4} \beta_l D_{it}^l + \sum_{k=1}^{4} \mu_k age_{it}^k {}_{it} + \sum_{j=1994}^{2003} \theta_j year_t + \varepsilon_{it} \qquad (3)$$

Where C_{it}^1 represents that observation *i* in year *t* arrived in the 1960 to 1969 cohort, C_{it}^2 represents the cohort that arrived between 1970 and 1979, C_{it}^3 represents those who arrived between 1980 to 1989, C_{it}^4 represents those who arrived between 1990 and 1996 and C_{it}^5 represents those who arrived between 1997 and 2003. The coefficients of interest are β_1 to β_4, and these are associated with dichotomous variables that represent an immigrant's duration in the United States: D_{it}^1 represents that immigrant *i* in survey *t* has been in the U.S. between 0-5 years, D_{it}^2 represents those who have been in the U.S.

between 6-10 years, D_{it}^3 represents those who have been in the U.S. 11-20 years, and D_{it}^4 represents those who have been in the U.S. more than 20 years. Note that that the estimates of $\hat{\beta}^l$ is the difference in hours of work between an immigrant that has been *l* years in the U.S. and a native-born worker.

As an alternative to Equation 3, I also estimate means for working long hours conditional on observed demographic characteristics:

$$lh_{it} = \alpha + \sum_{h=1}^{5} \delta_k C_{it}^h + \sum_{l=1}^{4} \beta_l D_{it}^l + \sum_{k=1}^{4} \mu_k age_{it}^k{}_{it} + \sum_{j=1994}^{2003} \theta_j year_t + x_{it}'\psi + \varepsilon_{it} \qquad (4)$$

where x_{it} is a vector composed of three education categories, a variable indicating whether the immigrant lives in a metropolitan area or not, dummy variables to whether the immigrant is married or has never been married, whether a worker is unionized or is covered by a union, as well as indicators for six states (California, Florida, Illinois, Texas and New York-New Jersey). In this specification I also include region fixed effects. Note that as Blau and Kahn (2005) point out, controlling for these demographic characteristics in *x* controls for any compositional effect on hours of work, and any differences between Equation 3 and Equation 4 are due to behavioral effects.

As I argued above, immigrants tend to work in occupations where long hours are less frequent, and to analyze the effect that these differences in occupation has over the relationship between working long hours and year since migration, I also estimate Equation 4 with three digit industry fix effects.

I estimate Equations 3 and 4 for salary paid and hourly paid workers separately. The results are presented in Table 6. The first three columns include natives and all immigrants who are salary paid, the fourth, fifth and sixth columns include all

immigrants who are hourly paid. Recall from table 3 that immigrants from Mexico and Central America are more likely to be hourly paid than salary paid, thus the immigrants sample in the last three columns is greater than the sample in the first two columns.

The results suggest little variation in the probability of working long hours regarding cohort differences, and most of the differences in the probability of working long hours are due to years in the United States. In particular workers from Mexico and Central America are less likely to supply long hours and the magnitude varies little with yeas in the United States, and if any this magnitude increases as years in the Unites States increase. According to the results in column 1, when an immigrant has been in the United States between 0-5 years, this worker is 14.3 percentage points less likely to work long hours than a native. This difference increases to almost 21 percentage points for immigrants that have been here between 6 and 10 years. It increases again to 25.5 percentage points for immigrants that have been here for more than 10 years but less than 20. As can be seen in Column 2 and Column 3, the difference in the probability of working long hours conditional on number of years in the United States varies little even if controls are added to equation 4. Unlike salaried workers, the probability of an hourly paid immigrant working more than 50 hours per week is not different than natives, and it does not change as years in the United States increase[3].

The observed fall in the probability of working long hours as years in the United States increase among salaried immigrants presents interesting implications, as they suggest that as years in the United States increase with a concomitant increase of an immigrant's weekly earnings (Borjas 1985, 1995), immigrant workers are less likely to

[3] Note that my results differ from those in Blau and Kahn (2005) because most of the increases of *annual* hours of work among Mexican immigrants are due to more weeks worked, not hours per week.

supply long hours[4]. In other words, as an immigrant's income increases, he demands more leisure. Note that these are consistent with those in Antecol et al (2006) where assimilation of immigrants in the United States is by increases in prices, rather than quantities.

III. Differences Due to Incentives to Supply High Hours

There is evidence that on-the-job incentives may explain a worker's probability to work long hours. For example, Bell and Freeman (2001a, 2001b) use within industry and occupation wage inequality to explain why Americans work longer hours than Europeans. Also, Kuhn and Lozano (2005) use the marginal incentive to supply long hours, referred to as the "long hours premium," to explain why highly skilled American males have a higher probability of working 50 or more weekly hours. In this section I use these two measures of on-the-job incentives to analyze why immigrant workers born in Mexico and Central America differ in their labor supply responses from native workers. In what follows I explore any differences in the relationship between earnings and working long hours first, and then explore how occupation and industry pay dispersion affect the probability of working long hours.

Following Kuhn and Lozano (2005), I estimate the premium for working long hours by estimating the following equation[5]:

[4] I present in the appendix estimates of Equation 2 and 3 where the dependent variable is weekly earnings.
[5] Note that the weekly earnings question in the CPS is top-coded and potentially biases the estimates of β, if instead I estimate tobit regressions using as the upper limit the top coded value in 1997, the marginal effects between immigrants and natives are the same after controlling again for demographic characteristics. To avoid potential biases that arise from likelihood maximization estimation of models including fixed effects and loosing information by forcing the 1997 upper level in all other years, I choose to present here ordinary least squares estimates.

$$weekly\_earnings_{it} = \alpha + \beta hours_{it} + x_{it}^{'}\theta + \sum_{j=2}^{46} \lambda_j occ_{it} + \varepsilon_{it} \quad (4)$$

where β represents by how much weekly earnings increase for each hour of work that the worker increases. Note that when occupation fixed effects are used β represents the within occupation trade-off between income and hours of work. I estimate equation 4 for native workers and for immigrants from Mexico and Central America separately. Table 7 presents ordinary least squares estimates of β in equation (4) for salary and hourly paid workers separately. Before demographic controls and occupation fixed effects are used, the coefficients for each group are quite different. For example, for salaried workers an extra hour worked by natives imply 1.3% higher earnings, while for immigrants from Mexico and Central America this number is smaller than 1 %. This suggests that, before controls are added, a native worker receives a greater premium for working an extra hour than immigrants do. Once controls and occupation fixed effects are added, the coefficients for both groups are basically the same, suggesting that within each occupation and among salaried workers, the premium for working one extra hour is the same regardless of the worker's place of birth.

When I focus my attention on hourly workers, the results present a similar pattern as for salaried workers. For example, without any controls, there are differences in the estimates of β for each of the two groups: 2.6 % for natives and 1.8% for Mexican and Central Americans. After adding controls, these differences attenuate and become statistically indistinguishable between both groups: 2.4 % for natives, 2.0% for Mexican and Latin American immigrants.

Table 8 presents a similar exercise, but here I give more flexibility to the relationship between income and hours by adding up to a quartic hours term to Equation

4. The exercise here consists of comparing the predicted earnings of a worker who supplies 40 hours per week, with one who supplies 55 hours per week[6]. Again, I estimate equation 4 for both groups separately, first without controls and later with controls. The results in Table 8 present the estimated log weekly earnings for different hours of work. Once controls are added, the incentive to supply more than 50 hours is statistically the same for immigrants and for natives. While a native worker who works 40 weekly hours makes 6.53 log weekly earnings, one that works 55 weekly hours receives weekly earnings that 22% higher than a comparable worker working 40 weekly hours. This number is smaller (albeit not statistically significant) than that of a Mexican or Central American immigrant who works 55 hours, this worker makes 25% more than a comparable immigrant who works 40 hours per week.

Looking at the contemporaneous premium received for working long hours fails to explain why immigrants are less likely than natives to work long hours. Actually, once controls and occupation fixed effects are added to equation 4, immigrants face the same incentives to supply an extra hour of work as natives.

Next I test whether the differences in weekly long hours between immigrants and natives are better explained in a dynamic labor supply model where the rewards from supplying long hours are collected not contemporaneously, but in the future. Heuristically, think of these marginal incentives to supply long hours in year *t* as a higher probability of a promotion or increases in real wages in the future. Surveys who track individuals across time, like the Panel Survey of Income Dynamic or the National Longitudinal Survey of Youth, have a very small sample number of immigrant workers.

[6] In this section, to avoid problems that any outlier may cause, I drop all observations who worked longer than 60 weekly hours.

As an alternative, and following Madrian and Lefgren (2000), I take advantage of the longitudinal nature of the Current Population Survey to track individuals between year *t* and *t+1* between 1996 and 2002[7]. The CPS survey is dwelling based, and the interview is asked to the household currently living in that dwelling. If a household moves to a different dwelling, the dwelling's new occupant is the one responding to the survey.

When matching workers across CPS surveys, it is not clear why a worker is not matched between two consecutive years, it may be that a worker who moves to a new home, but keeps the same job, or that a worker moves to a new home and starts a new job. Using the CPS it is not possible to differentiate between one and another, and it may even be that someone who remains in the same house changes jobs. However, if a worker perceives lower job stability in year *t*, then he will have a lower incentive to supply long hours in year *t* because the incentive to invest in job specific capital is positively related to job stability. If this is true, hours of work in year *t* for this worker would be lower than for workers who perceive higher job stability, controlling for other observed characteristics.

My sample for these 7 years in total consists of 192,163 observations, who worked more than 30 hours per week (fulltime employed) and were not self-employed, 80% of them are matched from one survey to the other. Among all not self-employed, full time workers, immigrants are less likely to be matched between year *t* and year *t+1*. Table 9 presents the probability that an observation is matched in the CPS MORG between two consecutive surveys. Native workers are more likely than immigrants to match from one year to the other. For example the difference in the probability of match

[7] Due to a CPS sample redesign I am not able to link households from 1994 to 1995, and from 1995 to 1996.

in year *t* and *t+1* between an immigrant from Mexico or Central America who has been in the US for less than 6 years and a native worker is 33 percentage points. When an immigrant from Mexico and Central America has been in the United States between 6 and 10 years, his probability of a match is 15 percentage points lower than that of native workers, this difference attenuates to 7 percentage points when the immigrant has been in the US between 11 and 20 years, and immigrants who have been in the U.S. more than 20 years are 4 percentage points more likely than natives to match between two CPS surveys. Note that as the immigrant's years in the United States increase, the probability of matching between all immigrants and natives becomes statistically indistinguishable. The other feature in Table 9 is that regardless of matching or not, the weekly hours of work and the probability of working long hours remain quite constant with the immigrant and native groups.

Next I use the longitudinal nature of the CPS to test whether a worker who works long hours in year *t* perceives an increase in earnings in year *t+1*. To do this I estimate equation (5) below for both nativity samples (natives and immigrants from Mexico and Central America) interacted with 3 different categories (all workers, salaried workers, hourly workers):

$$\ln(weekly\_earnings_{i,t+1}) = \alpha + \beta hours_{it} + \phi \ln(weekly\_earnings_{it}) x_{it}^{'}\theta + \sum_{j=2}^{46} \lambda_j occ_{it} + \varepsilon_{it} \qquad (5)$$

I estimate equation (5) for each one of the 6 sub-samples mentioned above with two basic specifications: first with year and age controls and second with all other controls in vector *x* from equation (4). Table 10 presents the ordinary least squares estimates for equation (5), the first two columns refer to native workers, and the third and fourth column to workers born in Mexico and Central America. The estimate of β represents how much the

weekly earnings in year $t+1$ of a worker working more than 50 hours per week in year t rises relative to a worker who does not work long hours.

The results in the top panel of Table 10 suggest that the marginal incentives to work long hours do not vary much across nativity groups. For example, once controls are added, natives who work long hours in year t see increases in their earnings that are 12% greater than native workers who did not work long hours. This relationship is also positive among immigrant workers who work long hours, being their earnings 9% greater than those who do not work long hours.

Once that I divide the data in different sub-samples, there are still no major differences between natives and immigrants from Mexico and Central America. The second and third panel suggests that the marginal incentives to work long hours are greater among salaried workers than among hourly workers. Also, recall from Table 1, that it is among salaried workers where the difference in the probability to work long hours is greatest between natives and immigrants. The results in Table 10 show that before controls are added, the coefficients for natives who are salaried are greater in magnitude than the coefficients for immigrants from Mexico and Central America. For example, a native salaried worker who works long hours has earnings increases of 13% greater than workers who did not work long hours; for Mexican or Central American immigrants this difference is only 7.6% and not statistically different than zero. Once that I add demographic controls to equation (5) there is no difference in the magnitude of the coefficients for natives or immigrants where working long hours in year t is associated with earnings 12-13% higher in year $t+1$. The results for hourly workers are different, as natives do see a positive relationship between working long hours in year t, increasing

their earnings in $t+1$ by almost 10%, but immigrants from Mexico and Central America do not.

The results above suggest that to the extent that the specifications above do capture the marginal incentives to supply an extra hour of work, measured as either greater contemporaneous earnings or future earnings, there are no differences between immigrants and natives once I control for salaried and hourly workers. The estimated coefficients for two workers with demographically equivalent characteristics, but from different places of birth, are almost equal in magnitude, and any differences in these incentives are due to the fact that immigrants from Mexico and Central America are more likely to be hourly paid, where these incentives are weaker.

If within occupation differences in the incentives to supply long hours fail to explain why immigrants work less hours than natives, next I turn to differences across occupation. Bell and Freeman (2001a, 2001b) provide a model where increased wage inequality within an occupation increases a worker's incentive to work longer hours. Heuristically, this can be thought of as a tournament where the winner receives a higher payoff, and to the extent that working hours is related to the probability of winning the tournament, workers will have a stronger incentive to supply that extra hour of work. Figure 1 represents the within occupation distribution of earnings and the within occupation proportion of workers working long hours, as can be seen occupations with a high distribution of earnings also have a higher percentage of workers supplying more than 50 weekly hours. More formally, the model in this section is:

$$lhours_{ijt} = \alpha + \beta \mathbf{ln(} earnings_{ijt} \mathbf{)} + \xi sd\mathbf{(ln[} sdocc\_earnings_{jt} \mathbf{])} + x'_{ijt}\theta + \varepsilon_{ijt} \qquad (6)$$

where ξ measures by how much the probability of working long hours increases as the within occupation distribution of income increases. Again, I estimate equation 5 for each group of nativity separately, and for salaried and hourly workers separately as well.

The estimates for equation (6) are presented in Table 11. The top panel presents the case of salaried workers. Once I control for observable characteristics my results for native workers suggest that an increase in the standard deviation of weekly earnings within each occupation predicts a 73% higher probability to work long hours. When the sample is restricted to immigrants from Mexico and Central America the coefficient for occupation wage inequality is only 30%, suggesting that immigrant workers fail to respond to these inequality-based tournaments. If instead I focus on hourly paid workers, my results indicate that hourly paid immigrants and natives do not respond any differently to the within occupation dispersion of earnings.

Are the differences between natives and immigrants due to the fact that the foreign born work in occupations with a lower earnings' dispersion, and hence have lower incentives to respond to these incentives? Recall that the results suggest that any differences between natives and immigrants from Mexico and Central America are concentrated among salaried paid workers. Figure 2 presents the within nativity group distribution of workers for each occupation, as can be seen there are few differences in the occupation earnings distribution and if any, immigrants from Mexico and Central America are just a little bit more likely to work in occupations with high earnings dispersion. When the sample is restricted to these workers, higher occupation pay dispersion should predict greater number of hours worked by immigrants, but immigrant

workers only increase their probability of working long hours by half the magnitude that natives do.

IV. Immigrant Workers as Dynamic "Life-Cycle" Models

In this section I present my argument to explain why differences in hours of work between immigrants are natives are greatest among salaried workers. In particular I analyze the role that backward bending life cycle wage profiles have on these differences. My argument is based in Lazear's (1979, 1981) proposition that deferred compensation works as a solution to the dynamic moral hazard problem that arises when an employee's effort is not verifiable. Lazear shows that a scheme where a worker is underpaid when young, and overpaid when old generates an efficient mechanism that eliminates the worker's incentive to shirk. The differences in hours of work between salaried workers can then be explained because an immigrant will start his job tenure later than the native worker – potentially the year the immigrant comes into the United States. This is particularly relevant if an employer cannot differentiate in the compensation paid to an immigrant worker and the compensation paid to a demographically similar native worker – again effort is not observable.

For example, if a native worker starts his job tenure at age 25, and works for 40 years, the present value of his total compensation will be exactly the same as the present value of his lifetime productivity. An immigrant worker who instead starts at age 35 and only works for 30 years will face the same compensation as the native worker for the last 30 years if the employer cannot differentiate between both workers ex-ante, the, but will not be underpaid for the first 10 years as the native worker is. The result of this problem

is that an immigrant who arrived to the United States at a relatively old age will not be offered the same "life-cycle" incentive contract as a native worker. This is accentuated wit the fact that immigrants have lower labor market attachment than immigrants do, as evidenced in Table 9. Note that this type of compensation scheme is potentially more relevant among the population where the differences in hours of work are the greatest: highly educated workers.

Table 12 provides the average hours of work and the probability of working long hours for different samples of immigrant workers, and these are divided by those who arrived to the US before age 26 and those who arrived after 25 years of age. The intuition is that workers who arrived before 26 will start their job tenure at the same time as native born workers, and thus will face similar lifetime contracts. Conversely those immigrants who arrive to the US after age 25 will not be offered a backward bending life cycle contract, because if the firm cannot see effort ex-ante. The raw means in Table 12 show that workers who came to the United States when young are more likely to work long hours than workers who came at later age, and these differences are greatest among salaried and highly educated immigrants. More formally, I estimate the following equation:

$$y_{it} = \alpha + \beta_1 YI_{it} + \beta_2 I_{it} + \sum_{k=1}^{4} \mu_k age_{it}^{k}{}_{it} + \sum_{j=1994}^{2003} \theta_j year_t + x_{it}'\psi + \varepsilon_{it} \qquad (7)$$

where y_{it} represents either a dummy variable for working long hours or the number of weekly hours worked per week. YI_{it} represents whether an immigrant arrived to the US before 26 years of age and I_{it} represents whether the worker is an immigrant or not. The coefficient β_1 represents how more likely is an immigrant who arrived before age 26 to work long hours than an immigrant who arrived after 25 years of age.

The estimates of Equation 7 are presented in Table 13. The top panel includes all workers, and regardless of the choice of specification, immigrants who arrived before age 26 are between 0.9 and 1.8 percentage points more likely to work long hours than older immigrants. These immigrants will also work on average between 1/3 and 1/5 of an hour more than immigrants that came to the United States at older age. These numbers are statistically significant at the 5% confidence level in all specifications but one (when I use occupation fixed effects and the dependent variable is long hours, with a t-statistic of 1.80). In the middle panel I restrict the sample to salaried workers. Even though none of my estimates for immigrants who arrived before 26 years of age are statistically significant at conventional levels, the magnitude of the estimates is larger than those for the whole sample. When I restrict the sample to salaried workers, again none of my estimates are statistically significant, but now all of the point estimates for immigrants who arrived before 26 years of age attenuate to zero.

The results in this section are consistent with the model argued above where immigrants who arrived at a young age are more likely to work long hours because they can engage in life-cycle contracts just as natives do, while immigrants who arrived at a later stage do not. It is not surprising then that immigrants are less likely than natives to be salaried paid workers, as they do not face the same life cycle rewards and they have lower labor market attachment as evidenced in Table 9. It must be point out though, that these estimates cannot rule out unobserved endogeneity where more driven immigrants arrive earlier in their life to the United States and these same immigrants are more likely to work long hours, this is similar to the endogeneity observed in Abraham and Farber (1987) for job tenure and wages. What this model does rule out is any biases due to

Topel's (1991) endogeneity between earnings and higher seniority, as the coefficients for years in the US in Table 6 do not attenuate with time, it cannot be concluded that young immigrants work longer hours because they have been in the US for longer.

IV. Discussion

Up to this point this paper has concentrated on labor supply factors, as the main focus of this paper in analyzing the relationship between incentives to supply long hours and the probability of working long hours. I have paid little attention to demand side differences explaining the gap in working long hours between immigrants and natives. It may be that this gap is a consequence of three potentially demand-side phenomena: the first one is that immigrants from Mexico and Central America are less likely to work long hours than U.S. born natives because immigrant's labor supply is more sensitive to weak labor market conditions. This seems plausible for hourly paid workers but not for salaried workers – particularly full-time salaried workers-- since arguably these last workers have more discretion over the amount of hours they choose to work. Also it strikes me that any effects from weak labor market conditions will be reflected in labor force participation or employment, not weekly hours of work. A similar explanation is that immigrants supply less hours of work because of unobserved non-market mechanisms like discrimination. If this is true, it strikes me that discrimination will also have an effect on the hiring decision of a salaried worker, not in the decision to demand long hours of work from him or not. Another argument against the discrimination and weak labor market condition

explanations is that an immigrant from Mexico is less likely to be unemployed than a native with similar demographic characteristics, as reported by Blau and Kahn (2005) [8].

Lastly, it may be that immigrants work shorter hours than natives because they are "constrained" in the number of hours they can work (Altonji and Paxson, 1988). Assume that each job is associated with a given number of hours and weekly earnings, and due to search costs and labor market frictions, the immigrant worker is not able to find a job that maximizes his utility on desired hours and earnings – that is, he is not over his labor supply curve. Assume that a worker is supplying less hours than he wishes to, this worker will be underemployed, which could result in the worker being : 1) more likely to switch jobs looking to find one where he maximizes his utility with desired hours/earnings; and 2) more likely to work shorter hours in the old job relative to the new job (Altonji and Paxson, 1988). Even though I am not able to follow people from one job to the other in the CPS, I can proxy for this by looking at the sample of workers that I can and cannot match in two consecutive years – as I did in section 3. Table 9 presents the average number of hours per week worked and the probability of working long hours for match and non-matched workers. There is evidence that immigrant workers are less likely to match and arguably more likely to move jobs, but there is no difference in the hours of work of match and non-match immigrant workers.

Also, if immigrant workers are constrained in the number of hours they can work in their main job, they may try to get around this by working more than one job or

[8] Results in which I replicate Equation 3 for the sample consisting of employed and unemployed, as well as controls for state/year unemployment rate and interactions between these state-unemployment controls with immigrant's years in the United States. My results indicate that immigrants, specifically those that have been in the United States for more than 20 years, are less likely to be employed during high unemployment periods, but there is no change between high and low unemployment periods with regards to the probability of working long hours. These results are available upon request.

moonlighting and working more hours in that extra job. Tabulating the percentage of workers moonlighting from the 1997 and 2001 May CPS Work Schedule Supplements I can see that immigrants are *less* likely to hold an extra job than natives, 7% of natives hold more than one job, while only 3% of immigrants from Mexico and Central America. If I look at the number of hours worked at these extra jobs, immigrants work 16 extra hours per week and natives work 11 extra hours per week in their second job. To the extent that constrained immigrant workers respond by working more than one job, immigrants do tend to work more hours on that extra job than natives do, but as only 3% of all immigrants from Mexico and Central America work more than one job. This number barely explains the gap in the probability of working long hours between natives and immigrants from Mexico and Central America[9].

VI. Conclusion

In this paper first I document the differences of hours worked between an immigrant from Mexico and Central America in the United States and a native worker. Analyzing the hours of work of immigrants is interesting in its own right, as it potentially represents the effort and dedication that a worker invests in his job. I concentrate my analysis on a particular measure of labor supply: the upper tail of the distribution of hours worked, represented by workers supplying 50 or more weekly hours. I find that immigrants are less likely to work long hours than natives, and that these differences are surprisingly greatest among college graduates or high-income earners. These results are interesting as immigrants show a much weaker labor supply response than natives due to

[9] Another issues that arises when looking at immigrant moonlighter is the accuracy of the response, as they might misreport their number of jobs.

rises in income. Second, I analyze how the probability to supply long hours of work changes as the number of years an immigrant has spent in the U.S. changes. The analysis suggests that even though immigrants from Mexico and Central America work fewer hours than natives, these differences do not change with the years the immigrant has been in the US. Actually it seems that weekly hours of work do not respond to the increases in earnings due to immigrant's positive assimilation profiles. It is also worth noting that any differences between immigrants and natives are greater among salaried workers than among workers who are hourly paid.

Finally, my last goal in this paper is to explain why immigrants are less likely to work long hours than natives. Demographic characteristics account for half of the difference between immigrants and natives. My results also suggest that immigrants tend to be employed in occupations where long hours are less frequent. If natives had the same occupation distribution as immigrants, the gap between immigrants and natives will fall by 5 percentage points, but if immigrants had the same distribution as natives there would be no change in the gap at all. I reject the hypothesis that immigrants face a different set of contemporaneous marginal incentives to supply long hours, and the results suggest that in occupations where a tournament is set for workers to supply long hours immigrants from Mexico and Central America do not respond to these incentives as natives do.

Instead the results presented in this paper are consistent with a model where an immigrant, particularly a highly educated salaried paid worker -- is less likely to work long hours because the mechanisms used in the labor market to reduce the moral hazard in an employer-employee relationship where effort is not ex-ante observed, cannot be used for immigrants. In particular I claim that life cycle contracts like the ones that use

differed compensation to eliminate the incentive to shirk cannot be offered to immigrants because they begin their job tenure in the US later than a native worker.

VII. References

Abraham, Katherine and Farber H. (1987), "Job Duration, Seniority and Earnings" *American Economic Review,* 77 pp. 278-297.

Altonji, Joseph G. and Christina H. Paxson (1988). "Labor Supply Preferences, Hours Constraints and Hours-Wage Trade Offs" *Journal of Labor Economics* Vol 6 No 2 (April 1988) pp. 254-276.

Antecol, Heather, Peter Kuhn and Stephen Trejo. "Assimilation via Prices or Quantities? Sources of immigrant Earnings Growth in Australia, Canada, and the United States," *IZA Discussion Paper* No. 802 (June 2003).

Bell, Linda and Richard Freeman. "The Incentive for Working Hard: Explaining Hours Worked Differences in the US and Germany" *Labour Economics* 8 (2) (May 2001a). 181-202.

Bell, Linda and Richard Freeman. "Working Hard". in Ging Wong and Garnett Picot, eds. *Working Time in Comparative Perspective* (vol. 1). Kalamazoo, Mich.: W. E. Upjohn Institute for Employment Research, 2001b.

Coleman, Mary T. and John. Pencavel. "Changes in Work Hours of Male Employees, 1940-1988". *Industrial and Labor Relations Review* 46(2) (January 1993): 262-283.

Baker, M. and D. Benjamin, "The Role of the Family in Immigrants" Labor Market Activity: An Evaluation of Alternative Explanations", *American Economic Review* 87 (September 1997): 705-727

Blau Francine D., Lawrence M. Kahn, Joan Moriarty and Andre Souza, "The Role of the Family in Immigrants' labor Market Activity: An Evaluation of Alternative Explanations: Comment," *American Economic Review* 93, no. 1 (March 2003).

Blau Francine D., Lawrence M. Kahn, "Gender and Assimilation Among Mexican Americans" NBER Working Paper 11512 (June 2005)

Borjas, George J. "Assimilation, Changes in Cohort Quality, and the Earnings of Immigrants." *Journal of Labor Economics* 3, no. 4 (October 1985): pp. 463-489.

Borjas, George J. "Assimilation and Changes in Cohort Quality Revisited: What Happened to Immigrant Earnings in the 1980s?" *Journal of Labor Economics* 13, no. 2 (April 1995):pp. 201-245.

Borjas, George J. and Lawrence F. Katz (2005). "The Evolution of the Mexican-Born Workforce in the United States" *NBER Working Paper* 11281 (April 2005).

Heisz, Andrew and Sébastien LaRochelle-Côté. 2003. "Working hours in Canada and the United States," *Statistics Canada*, Business and Labour Market Analysis Division, no. 209.

Juhn, Chinhui. "The Decline of Male Labor Market Participation: The Role of Declining Market Opportunities" Quarterly Journal of Economics 107(1) (February 1992: 79-121

Juhn, Chinhui, Kevin M. Murphy and Robert H. Topel. "Why Has the Natural Rate of Unemployment Increased over Time?" Brookings Papers on Economic Activity; 1991 (vol 2): 75-126.

Kuhn, Peter J., and Fernando A Lozano, "The Expanding Workweek? Understanding Trends in Long Work Hours Among U.S. Men, 1979-2004" *NBER Working Paper* 11895 (December 2005).

Lazear, Edward (1979). "Why is there Mandatory Retirement" *Journal of Political Economy* 87 pp. 1261-1284.

Lazear, Edward (1981). "Agency, Earnings Profiles, Productivity and Hours Restrictions" *American Economic Review,* 71 pp. 606-236.

Madrian, Brigitte C. and Lars John Lefgren. "An Approach To Longitudinally Matching Population Survey (CPS) Respondents," Journal of Economic and Social Measurement, 2000, v26(1), 31-62

Massey, Douglas S., Jorge Durand, and Nolan J. Malone, *Beyond Smoke and Mirrors: Mexican Immigration in an Era of economic Integration*, Russell Sage Foundation (2002)

Topel, Robert (1991) "Specific Capital, Mobility and Wages: Wages with High Job Seniority" *Journal of Political Economy* 99, pp. 95-109.

Figure 1. Pay Dispersion and Probability of Working Long Hours

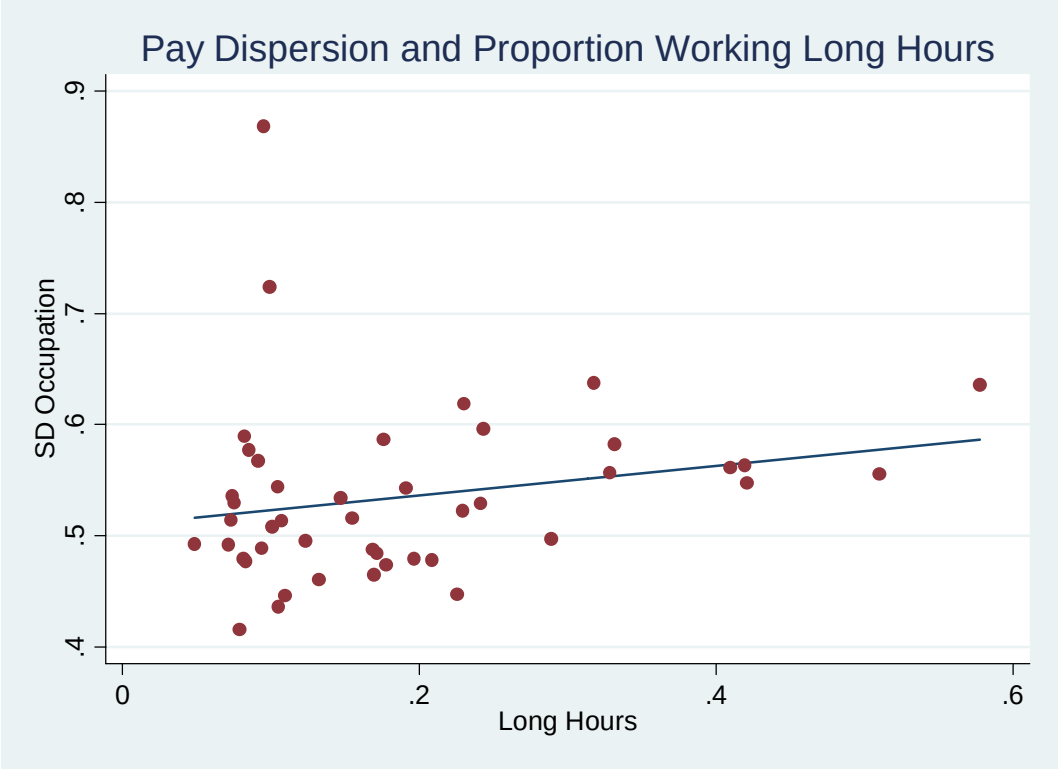
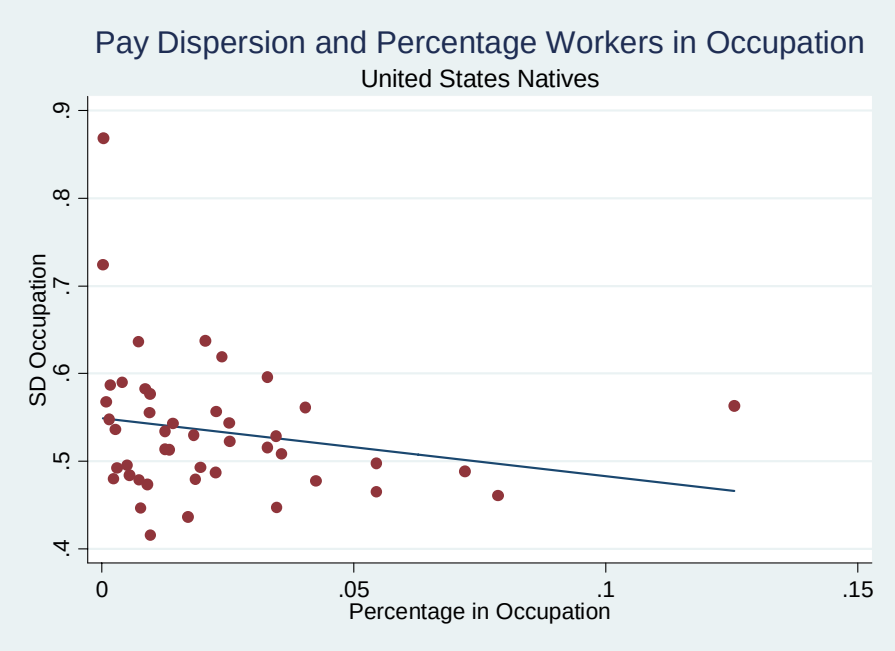


Figure 2. Pay Dispersion and Percentage in Occupation



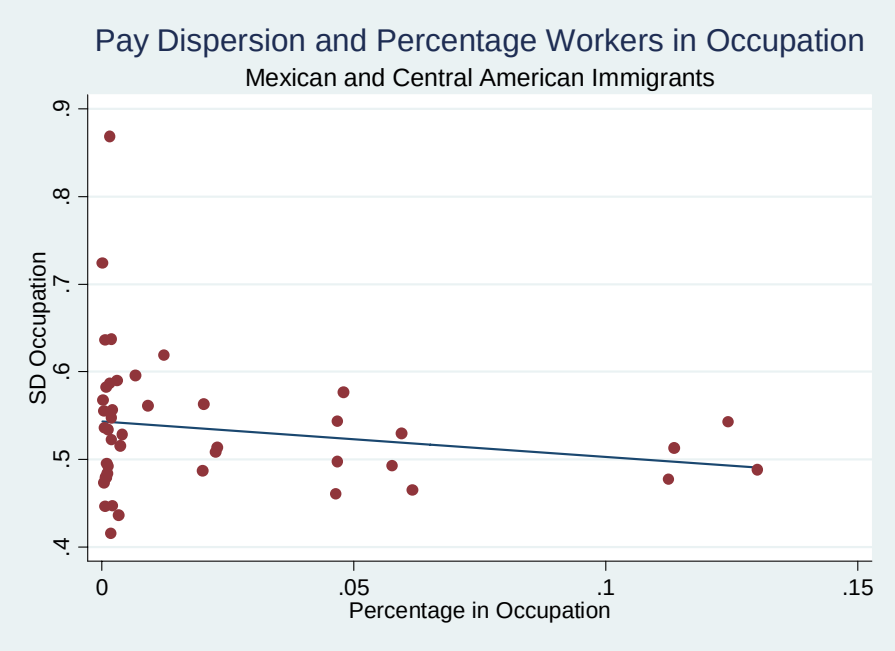


Table 1. Proportion Males Working Long Hours, by Demographic Groups

	(1) U.S. Natives	(2) Mexico & Central America	(1)-(2)
Employed	0.224	0.091	0.133
	(0.000)	(0.002)	(0.002)
Not Self-employed	0.197	0.082	0.115
	(0.001)	(0.002)	(0.002)
Fulltime Employed (29+ Hours)	0.252	0.101	0.152
	(0.001)	(0.002)	(0.002)
Hourly Paid	0.166	0.074	0.092
	(0.001)	(0.002)	(0.002)
Salaried Paid	0.309	0.155	0.153
	(0.001)	(0.005)	(0.005)
Union Member	0.121	0.049	0.072
	(0.001)	(0.004)	(0.005)
Age 25-34	0.204	0.093	0.111
	(0.001)	(0.003)	(0.003)
Age 35-44	0.240	0.092	0.148
	(0.001)	(0.003)	(0.003)
Age 45-54	0.237	0.083	0.154
	(0.001)	(0.004)	(0.004)
Age 55-64	0.200	0.089	0.111
	(0.001)	(0.007)	(0.007)
High School Dropout	0.134	0.082	0.052
	(0.001)	(0.002)	(0.003)
High School Graduate	0.172	0.101	0.071
	(0.001)	(0.004)	(0.004)
Some College	0.206	0.112	0.094
	(0.001)	(0.007)	(0.007)
College Graduate	0.318	0.131	0.187
	(0.001)	(0.009)	(0.009)

Sample: All males in the CPS ORG age 25-64 (1994-2003).

Table 2. Proportion Males Working Long Hours, by Earnings Quintiles

	(1) U.S. Natives	(2) Mexico & Central America	(1)-(2)
1st Quintile (Lowest)	0.168	0.093	0.075
	(0.001)	(0.003)	(0.003)
2nd Quintile	0.189	0.076	0.114
	(0.001)	(0.004)	(0.004)
3rd Quintile	0.207	0.092	0.115
	(0.001)	(0.006)	(0.006)
4th Quintile	0.220	0.100	0.120
	(0.001)	(0.009)	(0.009)
5th Quintile(Highest)	0.288	0.115	0.173
	(0.001)	(0.014)	(0.014)

Sample: All fulltime working males in the CPS ORG age 25-64 (1994-2003)

Table 3. Ordinary Least Squares Regressions/ Oaxaca Decomposition

Dependent Variable: Long Hours	Regression Coefficients		Sample Means	
	Natives	Mexico and CA	Natives	Mexico and CA
Married	0.052	0.000	0.690	0.748
	(0.002)*	(0.006)		
Divorced	0.034	0.008	0.127	0.057
	(0.002)*	(0.010)		
Age	0.120	0.042	40.959	37.643
	(0.017)*	(0.062)		
High School Graduates	0.010	0.011	0.335	0.200
	(0.002)*	(0.005)*		
Some College	0.025	0.025	0.280	0.082
	(0.002)*	(0.009)*		
College Graduates	0.071	0.010	0.304	0.049
	(0.003)*	(0.012)		
California	0.006	0.061	0.089	0.424
	(0.004)	(0.011)*		
Texas	0.035	0.034	0.071	0.178
	(0.004)*	(0.019)		
Illinois	-0.036	-0.036	0.045	0.063
	(0.003)*	(0.018)*		
Florida	0.016	-0.013	0.047	0.041
	(0.003)*	(0.013)		
New York-New Jersey	-0.022	0.138	0.085	0.051
	(0.003)*	(0.025)*		
Metropolitan Area	0.005	-0.055	0.779	0.889
	(0.001)*	(0.009)*		
Salaried Paid	0.138	0.074	0.480	0.212
	(0.001)*	(0.006)*		
Unionized Worker	-0.030	-0.018	0.210	0.094
	(0.001)*	(0.006)*		
Constant	-1.250	-0.333	-	-
	(0.169)*	(0.636)		
R-squared	0.123	0.057	-	-
Observations	526,775	20,221		

Sample: All fulltime, not self-employed, working males in the CPS ORG age 25-64 (1994-2003)
* Denotes the coefficient is statically significant at the 5% confidence level
Coefficients and means for higher terms of age, region, year and occupation are not shown.

Table 4. Oaxaca Decomposition Results

	Differences due to Means	Differences due to Coefficients
Age, Married	-0.003	0.834
Education	0.017	0.011
Year	0.001	-0.009
Region, State & Metro	0.004	0.045
Salaried	0.029	0.022
Union	-0.003	-0.002
2- Digit Occupation	0.016	0.073
Constant	0.000	-0.916
Total	0.061	0.058

Results calculated from means and coefficients in Table 3.

Table 5. Occupation and Industry Counterfactuals

	Native Means Native Mix	Immigrant. Means Native Mix	Native Means Immigrant Mix	Immigrant Means Immigrant Mix
All Workers				
By Occupation	0.198	0.106	0.133	0.082
By Industry	0.202	0.077	0.201	0.083
Salaried Paid Workers				
By Occupation	0.300	0.172	0.254	0.159
By Industry	0.305	0.138	0.349	0.162
Hourly Paid Workers				
By Occupation	0.096	0.062	0.084	0.061
By Industry	0.099	0.051	0.102	0.062

Sample: All fulltime, not self-employed, working males in the CPS ORG age 25-64 (1994-2003)

Table 6. OLS Estimates of the Probability of Working 50+ Hours and Years in the United States

Dependent Variables: Long Hours	(1)	(2)	(3)	(1)	(2)	(3)
	Salaried paid			Hourly paid		
Arrived 1960-1969	0.040	0.036	0.091	-0.001	-0.002	0.003
	(0.063)	(0.069)	(0.072)	(0.040)	(0.043)	(0.044)
Arrived 1970-1979	0.086	0.063	0.088	-0.024	-0.026	-0.018
	(0.058)	(0.064)	(0.067)	(0.039)	(0.042)	(0.043)
Arrived 1980-1989	0.068	0.053	0.118	-0.033	-0.036	-0.024
	(0.062)	(0.068)	(0.071)	(0.039)	(0.043)	(0.044)
Arrived 1990-1996	0.037	0.042	0.118	-0.032	-0.033	-0.023
	(0.065)	(0.072)	(0.075)	(0.040)	(0.043)	(0.045)
Arrived 1997-2003	0.001	-0.01	0.066	-0.04	-0.041	-0.026
	(0.072)	(0.079)	(0.082)	(0.041)	(0.045)	(0.046)
0-5 Years in US	-0.143*	-0.107	-0.152	-0.011	0.002	0.004
	(0.070)	(0.077)	(0.079)	(0.041)	(0.044)	(0.045)
6-10 Years in US	-0.206*	-0.165*	-0.201*	-0.016	-0.005	-0.003
	(0.064)	(0.071)	(0.074)	(0.040)	(0.043)	(0.044)
11-20 Years in US	-0.255*	-0.210*	-0.252*	-0.019	-0.007	-0.011
	(0.062)	(0.068)	(0.071)	(0.039)	(0.043)	(0.044)
20+ Years in US	-0.223*	-0.184*	-0.207*	-0.01	-0.002	-0.006
	(0.055)	(0.061)	(0.065)	(0.038)	(0.041)	(0.043)
Controls	Age, Year	All	All+Occs	Age, Year	All	All+Occs
Constant	-2.287*	-1.787*	-1.663*	-0.731*	-0.684*	-0.649*
	(0.295)	(0.327)	(0.311)	(0.170)	(0.187)	(0.185)
R-squared	0.005	0.028	0.129	0.003	0.008	0.048
N	236,662	236,662	236,662	270,264	270,264	270,264

Sample: All fulltime, not self-employed, salaried paid working males in the CPS ORG age 25-64 (1994-2002)
* Denotes the coefficient is statically significant at the 5% confidence level

Table 7. Ordinary Least Squares Coefficients of Weekly Hours on Weekly Earnings

Dependent Variable: Weekly Earnings	Natives		Mexico & Central America	
Salary Paid Workers				
Weekly Hours	0.013*	0.011*	0.009*	0.010*
	(0.000)	(0.000)	(0.002)	(0.001)
Controls	Age & Year	All+ Occupation	Age & Year	All+ Occupation
R-Squared	0.088	0.344	0.052	0.393
Observations	232,805		3,857	
Hourly Paid Workers				
Weekly Hours	0.027*	0.024*	0.018*	0.020*
	(0.000)	(0.000)	(0.001)	(0.001)
Controls	Age & Year	All+ Occupation	Age & Year	All+ Occupation
R-Squared	0.136	0.400	0.073	0.287
Observations	255,269		14,995	

Sample: All fulltime, not self-employed, working males in the CPS ORG age 25-64 (1994-2002) * Denotes the coefficient is statically significant at the 5% confidence level

Table 8. Predicted Earnings at Different Weekly Hours of Work with Quartic on Hours

	Natives		Mexico and Central America	
Salary Paid Workers				
40 Hours	6.514	6.531	5.822	5.813
45 Hours	6.679	6.652	5.986	5.968
50 Hours	6.773	6.720	6.054	6.047
55 Hours	6.815	6.755	6.055	6.068
Controls	Age & Year	All+ Occupation	Age & Year	All+ Occupation
Difference 55-40	0.301	0.224	0.233	0.255
Observations	232,805		3,857	
Hourly Paid Workers				
40 Hours	6.166	6.169	5.748	5.747
45 Hours	6.357	6.336	5.870	5.875
50 Hours	6.486	6.456	5.939	5.963
55 Hours	6.571	6.542	5.978	6.025
Controls	Age & Year	All+ Occupation	Age & Year	All+ Occupation
Difference 55-40	0.405	0.373	0.230	0.278
Observations	255,269		14,995	

Sample: All fulltime, not self-employed, working males in the CPS ORG age 25-64 (1994-2003)

Table 9. Probability of Matching on the CPS MORG in Two Consecutive Years

	Natives	Mexico & Central America
Probability of Match		
All	0.804	0.669
	(0.001)	(0.005)
	[184,363]	[7,800]
0-5 Years		0.469
		(0.012)
		[1,712]
6-10 Years		0.652
		(0.011)
		[1,946]
11-20 Years		0.732
		(0.008)
		[2,732]
20+ Years		0.845
		(0.010)
		[1,410]
Average Weekly Hours of Work		
Match = 0	43.728	41.372
	(0.043)	(0.117)
	[35,090]	[2,586]
Match = 1	43.782	41.669
	(0.020)	(0.083)
	[149,273]	[5,214]
Probability of Working Long Hours		
Match =0	0.219	0.083
	(0.002)	(0.005)
	[35,090]	[2,586]
Match =1	0.222	0.099
	(0.001)	(0.004)
	[149,273]	[5,214]

Sample: All fulltime, not self-employed, full-time working males in the CPS ORG age 25-64 (1996-2002) Standard errors in parenthesis and number of observations in brackets.

Table 10. Earnings Growth and Working Long Hours

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: *t+1* Weekly	Natives			Mexico & Central America		
All Workers						
Long Hours (*t*)	0.154*	0.115*	0.117*	0.076*	0.077*	0.090*
	(0.008)	(0.005)	(0.005)	(0.034)	(0.032)	(0.031)
Controls	Age & Year	All	All+Occ	Age & Year	All	All+Occ
R-Squared	0.328	0.392	0.413	0.181	0.231	0.270
N	137,038	137,038	137,038	4,767	4,767	4,767
Salaried Paid Workers						
Long Hours (*t*)	0.131*	0.124*	0.120*	0.076	0.115*	0.130*
	(0.008)	(0.007)	(0.006)	(0.054)	(0.052)	(0.050)
Controls	Age & Year	All	All+Occ	Age & Year	All	All+ Occ
R-Squared	0.261	0.325	0.349	0.204	0.324	0.379
N	66,283	66,283	66,283	989	989	989
Hourly Paid Workers						
Long Hours(*t*)	0.069*	0.088*	0.100*	0.027	0.045	0.061
	(0.008)	(0.008)	(0.008)	(0.033)	(0.033)	(0.033)
Controls	Age & Year	All	All+Occ	Age & Year	All	All+Occ
R-Squared	0.277	0.317	0.34	0.185	0.209	0.245
N	70,755	70,755	70,755	3,778	3,778	3,778

Sample: All fulltime, not self-employed, working males in the CPS ORG age 25-64 (1996-2002) whose weekly earnings are observed, and who matched between sample in year *t* and year *t+1*.

* Denotes the coefficient is statically significant at the 5% confidence level

Table 11. Ordinary Least Squares Regressions of the Deviation of Earnings in Occupations

Dependent Variable: Long Hours	Natives		Mexico & Central America	
Salary Paid				
log(Weekly Earnings)	0.184*	0.193*	0.082*	0.101*
	(0.002)	(0.003)	(0.012)	(0.013)
Occupation SD of ln(Weekly Earnings)	0.711*	0.737*	0.360*	0.301*
	(0.015)	(0.015)	(0.095)	(0.090)
Controls	Age & Year	All	Age & Year	All
R-squared	0.064	0.079	0.026	0.072
N	232,805	232,805	3,857	3,857
Hourly Paid				
log(Weekly Earnings)	0.162*	0.185*	0.100*	0.111*
	(0.002)	(0.002)	(0.007)	(0.008)
Occupation SD of ln(Weekly Earnings)	0.153*	0.184*	0.176*	0.195*
	(0.011)	(0.011)	(0.039)	(0.039)
Controls	Age & Year	All	Age & Year	All
R-squared	0.064	0.076	0.029	0.04
N	255,269	255,269	14,995	14,995

Sample: All fulltime, not self-employed, working males in the CPS ORG age 25-64 (1994-2002)

Table 12. Average Hours of Work and Long Hours for Immigrants Relative to Age when Arrived to the US

	In US < 26	In US >25	
	(1)	(2)	(1)-(2)
Probability of Working Long Hours			
Fulltime Workers	0.095	0.083	0.012*
Salaried Paid Workers	0.190	0.177	0.013
Hourly Paid Workers	0.071	0.058	0.013*
No High School	0.090	0.082	0.008
High School Grad or More	0.103	0.084	0.019*
High School X Salaried	0.200	0.158	0.041*
Average Hours of Work			
Fulltime Workers	41.660	41.396	0.264*
Salaried Paid Workers	43.830	43.303	0.527
Hourly Paid Workers	41.113	40.886	0.227*
No High School	41.413	41.597	0.183
High School Grad or More	41.780	41.357	0.424*
High School X Salaried	44.001	42.753	1.248*

* Denotes the difference is statistically significant different than zero at the 0.05 confidence level.
Sample: Sample: All fulltime, not self-employed, working, foreign born males in the CPS ORG age 25-64 (1994-2002)

Table 13. Ordinary Least Squares Estimates of Age when the Immigrant Arrived in the US

	Dependent Variable: Long Hours			Dependent Variable: Weekly Hours		
All Workers						
Immigrant Arrived Before 26 Years Old	0.017*	0.012*	0.009	0.369*	0.254*	0.196*
	(0.004)	(0.005)	(0.005)	(0.092)	(0.101)	(0.099)
Immigrant	-0.140*	-0.069*	-0.053*	-2.427*	-1.062*	-0.704*
	(0.003)	(0.004)	(0.004)	(0.074)	(0.087)	(0.087)
Controls	Age & Year	All	All+Occs	Age & Year	All	All+Occs
R-Squared	0.005	0.095	0.161	0.005	0.082	0.168
Observations	506,926	506,926	506,926	506,926	506,926	506,926
Salary Paid Workers						
Immigrant Arrived Before 26 Years Old	0.016	0.021	0.014	0.516	0.509	0.459
	(0.013)	(0.014)	(0.014)	(0.284)	(0.307)	(0.305)
Immigrant	-0.169*	-0.143*	-0.116*	-2.601*	-2.290*	-1.871*
	(0.010)	(0.012)	(0.012)	(0.224)	(0.256)	(0.259)
Controls	Age & Year	All	All+Occs	Age & Year	All	All+Occs
R-Squared	0.005	0.028	0.126	0.004	0.021	0.143
Observations	236,662	236,662	236,662	236,662	236,662	236,662
Immigrant Arrived Before 26 Years Old	0.006	0.005	0.004	0.166	0.130	0.075
	(0.004)	(0.005)	(0.005)	(0.086)	(0.097)	(0.094)
Immigrant	-0.049*	-0.040*	-0.029*	-0.960*	-0.607*	-0.283*
	(0.003)	(0.004)	(0.004)	(0.070)	(0.084)	(0.082)
Controls	Age & Year	All	All+Occs	Age & Year	All	All+Occs
R-Squared	0.003	0.008	0.048	0.003	0.012	0.074
Observations	270,264	270,264	270,264	270,264	270,264	270,264

Sample: All fulltime, not self-employed, working males in the CPS ORG age 25-64 (1996-2002) whose weekly earnings are observed, and who matched between sample in year *t* and year *t+1*.
* Denotes the coefficient is statically significant at the 5% confidence level

Appendix 1. OLS Estimates of Weekly Earnings

	(1)	(2)	(3)	(4)
	Salaried paid		Hourly paid	
Arrived 1960-1969	-0.054	-0.009	-0.07	-0.047
	(0.178)	(0.187)	(0.081)	(0.092)
Arrived 1970-1979	-0.108	0.007	-0.185*	-0.117
	(0.165)	(0.175)	(0.079)	(0.090)
Arrived 1980-1989	-0.188	-0.062	-0.156	-0.113
	(0.169)	(0.179)	(0.080)	(0.092)
Arrived 1990-1996	-0.168	-0.021	-0.123	-0.067
	(0.172)	(0.183)	(0.081)	(0.093)
Arrived 1997-2003	-0.113	0.007	-0.068	0.003
	(0.179)	(0.189)	(0.082)	(0.095)
0-5 Years in US	-0.639*	-0.445*	-0.402*	-0.297*
	(0.175)	(0.186)	(0.082)	(0.094)
6-10 Years in US	-0.595*	-0.419*	-0.310*	-0.221*
	(0.171)	(0.182)	(0.081)	(0.093)
11-20 Years in US	-0.518*	-0.343	-0.253*	-0.169
	(0.168)	(0.179)	(0.080)	(0.092)
20+ Years in US	-0.574*	-0.360*	-0.234*	-0.142
	(0.164)	(0.174)	(0.079)	(0.090)
Controls	Age & Year	All	Age & Year	All
R-squared	0.071	0.25	0.079	0.223
N	236,662	236,662	270,264	270,264

Sample: All fulltime, not self-employed, hourly paid working males in the CPS ORG age 25-64 (1994-2003)

* Denotes the coefficient is statically significant at the 5% confidence level