The Effect Of Place Of Origin On The Relative Earnings Of Immigrant Women

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ABSTRACT

This paper explores the earnings differentials between female immigrants from 14 places of origin when compared to each other and a number of other groups. The very large differences in average earnings between female immigrant groups are found to be largely due to human capital and family characteristic differences. The study employs OLS regression to make earnings comparisons between immigrant women from each of the 14 places of origin to three reference groups. We find that although female immigrants from most countries are doing well relative to female natives, they fall significantly behind native males and male immigrants, even after controlling for differences in human capital. Thus, some groups of immigrant women suffer a double disadvantage in the U.S. workforce, one due to gender and the other due to their relatively low levels of human capital.

Keywords: Immigration, earnings, immigrant earnings, female immigrants, economics of immigration

I. INTRODUCTION

mmigrants' place of origin has been the focus of considerable research in recent years and clearly is among the important determinants of labor market performance (Borjas 1994, 1999; Chiswick 1999; Duleep, Orcutt and Regets 1996). Place of origin influences the amount and quality of human capital and language skills that the immigrant brings to the United States, and affects the region or metropolitan area in which the immigrant is likely to settle (Borjas 1999). Place of origin also influences political and cultural backgrounds of immigrants and determines proclivities on how to partition time between market work and home production (Schoeni, McCarthy and Vernez, 1996).

This paper systematically compares the annual earnings of immigrant women from selected countries and regions of origin to native females, immigrant males, and native males. Immigrant women may suffer a double disadvantage in the labor market because of their gender and because of factors related to place of origin. This double disadvantage may be in part due to a complex set of interactions involving place of origin, gender, educational attainment and fertility. For example, years of education in the country of origin may yield lower returns for female immigrants than for native males and females. Another possibility is that immigrant women from some places of origin who have responsibilities for children under 5 may be at a significantly earnings disadvantage compared to other groups because resource constraints make it difficult for them to simultaneously work and care for children.

The literature on the economic performance of immigrant women in recent years focuses on labor force participation decisions and the wages of those who work (Reimers, 1985; Schoeni, 1998; Vernez, 1999; and Wright and Ellis, 2000). There is a lack of research on the total annual earnings of female immigrants even though there have been a number of studies that analyze the total annual earnings of male immigrants (Chiswick 1978; Daneshvary 1993). In his classic work on the assimilation of immigrant men, Chiswick (1978) used annual earnings as his dependent variable, but deleted all men from the sample who had zero annual earnings. While this omission might not be a problem for working age male immigrants, it could be a major source of bias for working age women, who are much less likely to be labor force participants.

When total earnings are used in immigration research, researchers often employ techniques that predict potential earnings for non labor force participants rather than simply assigning the value of zero (Shamsuddin 1999). While this approach is appropriate in estimating unbiased returns to human capital investments and experience, it is not appropriate if the purpose is to evaluate the actual earnings experience of immigrant groups. For example, if an immigrant has zero earnings, those earnings should be counted as zero if the purpose is to analyze the immigrant's actual labor market contribution.

There are several reasons to believe that the annual earnings of female immigrants might be significantly different from the annual earnings of male immigrants, female natives and male natives. First, female immigrants may often be "tied" movers who are following their spouses to the new country. Second, for cultural reasons, female immigrants from some regions may have acquired human capital that has limited applicability in the United States. Third, many female immigrants may find it difficult to acquire U.S. specific human capital after immigrants are likely to be at a considerable earnings disadvantage compared to other groups.

The paper will proceed as follows. Section II describes the sample of immigrants and natives drawn from the 2000 Census (IPUMS) data. It also defines variables to be used in the analysis and compares actual and predicted incomes for female immigrant groups. Section III uses OLS to estimate the marginal effect of being a female immigrant to the U.S. from selected places compared to three groups (male natives, female natives, and male immigrants). Section IV summarizes the main findings and discusses the implications.

II. DATA

All data are taken from the 5 percent sample of the 2000 IPUMS data set which provides information on approximately 5,663,214 household and 14,081,466 individuals (Ruggles and Sobek, 2003). A random sample of 200,000 immigrants and 100,000 natives were drawn for this paper. This sample was restricted to those between 25 and 60 years old in order to focus on working age individuals who had, for the most part, finished their formal education and had not yet reached normal retirement age. An immigrant is defined as a person born in a foreign country and residing in the U.S. at the time of the 2000 census. All others are classified as natives, including people born abroad to American parents.

It was necessary to omit 2449 cases because of missing data for key income variables, and another 9767 cases where individuals had immigrated to the U.S. too recently to have a full year of labor force experience in 1999. Thus, the usable sample is 287,784 individuals (98,625 natives and 189,152 immigrants).

Both working and non-working individuals are included in the sample. As explained earlier, this is important because our objective is to analyze the earnings experience of the entire group, not just those who are working. Exclusion of nonworking individuals would likely bias our estimates because women are more likely than men to withdraw from the labor market on either a temporary or permanent basis during their adult years (Blau, Ferber and Winkler, 2006).

The dependent variable is the total pre-tax wage and salary income for 1999. Individuals who worked zero hours in 1999 are coded as receiving \$0 and remain in the analysis. All variables used in this analysis are defined in Appendix Table A-1. Using annual earnings rather than wage rates or labor force participation is desirable because annual earnings best approximates an individual's total labor market contributions.

III. OLS ESTIMATES

Recognizing the importance of place of origin on the economic performance of immigrants, we incorporate groupings by country of birth such that each group contains a significant share of the immigrant population, and each group contains countries that are geographically close to each other with common cultural traditions. Table 1 presents summary statistics for individuals who immigrated from selected countries and areas by sex. Our country grouping is a slightly less aggregated version of the groupings used by Schoeni, McCarthy, and Vernez (1996) in their study of immigrant women. The detailed country groupings are available from the authors by request.

Table 1 shows significant differences between average annual earnings of female and male immigrants

from the same place of origin. It also shows significant differences in earnings across countries and between natives and immigrants. For female immigrants, 1999 average earnings range from \$8,440 for female Mexican Immigrants to \$27,406 for female immigrants from the Philippines. By comparison, native women in our sample average \$20,477 and native males average \$38,058.

The descriptive statistics in Table 1 also show significant differences in individual characteristics across groups. For example, at one extreme we find that only 5 percent of female Mexican immigrants have a college degree compared to 50 percent of female immigrants from the Philippines. Total hours worked in 1999 ranged from 897 hours for female immigrants from Mexico to 1,530 for female immigrants from the Philippines. Table 1 clearly indicates that great differences exist in the average annual earnings of the various immigrant groups and that these differences appear to be correlated with differences in human capital and work experience.

Table 1: Summary Statistics							
Place	Mean Wage & Salary Income (1999)	Little or No English (%)	< 9 Years of Formal Education (%)	College Graduate (%)	Mean Number of Children	Mean Hours Worked (1999)	Ν
Mexico							
Male	\$20,055	47%	47%	4%	1.56	1,750	29,014
Female	8,440	55	47	5	1.95	897	23,770
Philippines							
Male	34,445	4	3	43	1.15	1,826	3,669
Female	27,406	4	4	50	1.21	1,530	5,303
China							
Male	41,662	24	9	58	0.98	1,874	4,083
Female	22,361	29	11	48	1.03	1,338	4,666
Japan							
Male	55,547	10	1	52	0.85	2,028	1,137
Female	18,465	11	1	38	0.95	1,131	1,500
India	,					,	·
Male	53,097	5	2	69	1.08	2,040	4,574
Female	21,066	13	5	61	1.35	1,124	3,756
Korea	y					7	- ,
Male	34.318	28	2	53	1.09	1.931	2.031
Female	16.055	28	5	38	1.09	1.211	2,994
Cent. Amer.	- ,					7	· · ·
Male	23.382	38	34	9	1.14	1.777	6.056
Female	11.635	41	32	9	1.41	1.152	6.079
Caribbean	,					,	,
Male	27,290	20	14	16	1.05	1,694	11,193
Female	17,479	22	14	16	1.31	1,229	12,862
S. America	,					,	
Male	33,498	18	9	26	1.14	1,908	5,812
Female	16,825	22	8	24	1.41	1,259	6,488
Europe							
Male	42,691	10	6	37	1.02	2.001	11.459
Female	19,699	10	6	31	1.04	1,285	12,608
Middle East	,					,	
Male	44,274	6	4	50	1.20	2,001	3,126
Female	18,109	14	8	39	1.45	1,015	2,236
Africa	- ,					,	,
Male	40.050	4	3	51	1.03	1.903	2.715
Female	21,129	7	4	39	1.37	1.327	2.247
Indochina	,					y	
Male	29,384	27	14	24	1.32	1.758	5.181
Female	16,493	36	22	19	1.48	1.291	5,505
UK/Canada	- 7			-		7 -	- ,
Male	57.052	1	2	46	0.87	2,137	4,356
Female	23,496	1	1	34	0.95	1.350	4,739
Native U.S.	- 7			-		7	y
Male	38.058	0	3	26	0.90	1.966	47.996
Female	20,477	0	2	26	1.04	1,396	50,629

Next, we compare female immigrant earnings to three reference groups: native females, male immigrants from the same place of origin, and male natives. Three OLS earnings regressions are run for the sample of 287,784 immigrants and natives. All respondents were included in the regressions, even if they had zero earnings in 1999. Not surprisingly, there were high levels of heteroskadasticity in the initial runs. We therefore, ran all regressions using heteroskadasticity-robust standard error procedure available in STATA (Wooldridge Chapter 8).

The analysis is based on two models. Model 1 is designed to estimate earnings when only sex, place of origin, marital status, and the presence of children under 6 years are controlled for. Model 1 also includes a number of interactions between these variables. This model can be thought of as the basic demographic model which does not control for differences in human capital endowments.

Model 1: EARNINGS =
$$\alpha_1 + \beta_1 F + \beta_2 M + \beta_3 K + \delta_1 (F^*M) + \delta_2(F^*K) + \sum_{i=1}^{14} \epsilon_i C_i$$

+ $\sum_{i=1}^{14} \eta_i (F^* C_i) + \sum_{i=1}^{14} \phi_i (C_i^*F^*K) + \sum_{i=1}^{14} \gamma_i (C_i^*F^*M)$

where F, M, K and C are dummy variables defined as: F = 1 if female, M = 1 if married, K = 1 if there are dependent children under 6, and $C_i = 1$ if the individual is from country i. Because the omitted place of origin is the United States, the 14 coefficients to place of origin variables are in reference to U.S. natives. All variables in the equation are dummy variables, including the interaction terms. For example, the variable ($C_i * F * M$) equals 1 if the individual is a married female from country i. All of the variables used in the analysis are defined in Appendix Table A1.

Model 2 includes all of the variables that are in Model 1 plus a set of variables that are routinely included in earnings functions (age at arrival in U.S., region of residence, whether in metropolitan area, self reported English speaking ability, age and educational attainment). Most of these variables are proxies for the human capital endowments.

The OLS regression results are presented in Appendix Table A-2. These results are used to estimate the marginal effect on earnings of being a female immigrant from a particular place of origin compared to each of the three reference groups. We do this under two sets of assumptions for the demographic characteristics. The first set of estimations assumes individuals are not married and have no children. The second set assumes that individuals are married and have children under 6 years of age.

Marginal Effects as Sum of Coefficients
$\epsilon_i + \eta_i$
$\beta_1 + \eta_i$
$\beta_1 + \epsilon_i + \eta_i$
$\epsilon_i + \eta_I \phi_i + \gamma_i$
$\beta_1+\delta_{1+}\delta_2+\eta_I\varphi_i+\gamma_i$
$\beta_1 + \delta_1 \delta_2 + \epsilon_i + \eta_I + \phi_i + \gamma_i$

Table 2: Marginal Effects of Being an Immigrant Female from Country i Relative to Three Reference Groups

Table 2 shows how each marginal effect is estimated as the sum of regression coefficients. Since all of the demographic variables shown in the Model 1 equation are dummy variables, the marginal effects are the summation of appropriate coefficients. The marginal effects are defined in Table 2 for individuals with no children and for individuals with children less than 6 years old. Each of these marginal effects can be interpreted as the earnings

advantage or disadvantage of a specific female immigrant group in comparison to another group. For example, the first marginal effect defined in Table 2 ($\epsilon_i + \eta_i$) is the estimate of the earnings difference between unmarried immigrant women from country i and unmarried native women. The fourth marginal effect defined in Table 2 ($\epsilon_i + \eta_i \phi_i + \gamma_i$) is the estimate of the earnings difference between married immigrant women from country i with children less than 6 years old compared to married native women with children less than 6.

Tables 3 through 5 present the estimated marginal effects of being a female immigrant from each of the fourteen places of origin under the assumptions of each of the three models described above. Table 2 compares female immigrants to female natives; Table 3 compares female immigrants to male immigrants; and Table 4 compares female immigrants to male natives. Each of the three comparisons will be discussed in turn.

Marginal Effects: Female Immigrant Groups Compared to Female Natives

The marginal effects of female immigrants in reference to female natives for all three models are given in Table 3. These marginal effects could be thought of as approximations of the disadvantages (or advantages) that female immigrants face as a result of their ethnicity. Model 1, which does not include human capital related control variables, shows that 8 of 14 female immigrant groups have an earnings advantage over native females. The greatest negative differential is experienced by immigrant women from Mexico, three other Latin American places of origin, India and Indochina. The greatest positive earnings advantage is for immigrant women from the Philippines and UK/Canada.

Tuble 5. What ginde Effects of Female Hinnighant VS. Female Mative							
Not Married and No Children Married With at least One Child < 5							
Place of Origin	Model 1	Model 2	Model 1	Model 2			
Mexico	-11914	3420	-10441	7000			
Philippines	5945	5572	6217	5370			
China	1410	3100	7306	7587			
Japan	1249	1638	-5170	-4467			
India	-2596	170	-4880	-3373			
Korea	1857	1484	227	-1490			
Central America	-9250	3310	-8019	6323			
Caribbean	-4655	2610	-876	5860			
South America	-3946	2493	-2996	2510			
Europe	878	2320	-1456	1287			
Middle East	1955	2837	-4653	-248			
Africa	759	2549	121	2603			
Indochina	-4775	4715	-1062	9463			
UK & Canada	7913	6811	-76	-963			

 Table 3: Marginal Effects* of Female Immigrant vs. Female Native

* The marginal effects reported in columns 2 through 5 (unmarried individuals) are the summation of coefficients for the following two dummy variables: C_i , [F*C_i]. Interaction variables are shown in brackets. The marginal effects reported in the last 3 columns (M with children under 6) are the summation of the coefficients to the following 4 dummy variables: C_i , [F*C_i], [F* C_i*K], [F* C_i*M]. Note that F, C_i, and K are dummy variables that assume the value of 1 for individuals who are females, from country i , and have children under 6 respectively. See Appendix Table A-1 for variable definitions and Appendix Table A-2 for regression results.

The Model 1 pattern of marginal effects is less favorable for married female immigrants than for unmarried female immigrants. Table 3 shows that only 4 of the 14 groups of married immigrant women have an advantage over married native women. It appears that married immigrant women suffer a relatively larger earnings disadvantages relative to married native women, before controlling for human capital.

Adding human capital related variables to the base model has a substantial effect on the estimated marginal effects for female immigrants from many places of origin. This is not surprising since there are large differences between groups in human capital related measures (Table 1). This can be best seen by comparing the Model 1

marginal effects to the Model 2 marginal effects in Table 3. In general, controlling for human capital (Model 2) causes the marginal effects of immigrant women to increase in magnitude compared to Model 1. The most remarkable change in estimated marginal effects was for female Mexican immigrants, a group that had a large negative marginal effect in the base Model 1, but a strong positive marginal effect when controls for human capital are included in Model 2. This large change is most likely due to the very low levels of human capital endowments of female Mexican immigrants relative to native females (see Table 1).

In general, comparing the change in marginal effects between Model 1 and Model 2 suggests that the earnings disadvantage of female immigrants from Mexico, other Central American countries, South America and Indochina are due to lower levels of human capital. Model 2 shows that when these deficiencies are controlled for, most female immigrant groups have an earnings advantage over female natives. In fact, controlling for human capital in Model 2 causes all 14 unmarried female immigrant groups to have a positive marginal effect over native females and a majority of married immigrant groups to have a positive marginal effect relative to native females.

Marginal Effects: Female Immigrant Groups Compared to Male Immigrants from the Same Place of Origin

Table 4 presents the marginal effects of female immigrants in reference to male immigrants from the same places of origin. Generally, there are very large negative marginal effects for female immigrants when compared to their male counterparts. Thirteen of fourteen of the Model 1 marginal effects were negative for unmarried female immigrants compared to unmarried male immigrants from the same place of origin. The one exception was unmarried women from the Philippines who had a slight earnings advantage over unmarried men from the Philippines.

	Not Married a	nd No Children	Married With at le	east One Child < 5rs
Place of Origin	Model 1	Model 2	Model 1	Model 2
Mexico	-1137	-2569	-19164	-17826
Philippines	2859	1646	-16368	-17394
China	-8186	-6872	-21789	-21222
Japan	-23358	-21186	-49276	-46129
India	-5007	-3167	-26791	-25547
Korea	-18817	-15501	-39946	-37313
Central America	-2806	-3891	-21074	-19715
Caribbean	-1853	-2287	-17574	-17874
South America	-6752	-6012	-25301	-24833
Europe	-10021	-10446	-31855	-30316
Middle East	-10820	-9466	-36927	-31387
Africa	-9115	-6118	-29253	-24902
Indochina	-2402	-1604	-18188	-15694
UK & Canada	-17687	-16923	-45175	-43534

 Table 4: Marginal Effects* of Female Immigrant vs. Male Immigrant

* The marginal effects reported in columns 2 through 5 (unmarried individuals) are the summation of coefficients for the following two dummy variables: F, $[F^*C_i]$. Interaction variables are shown in brackets. The marginal effects reported in the last 3 columns (married with children under 6) are the summation of the coefficients to the following 7 dummy variables: F, $[F^*M]$, $[F^*K_i]$, $[F^*C_i^*K_i]$, $[F^*C_i^*K_i]$, $[F^*C_i^*M_i]$. Note that F, C_i, and K are dummy variables that assume the value of 1 for individuals who are females, from country i , and have children under 6 respectively. See Appendiix Table A-1 for variable definitions and Appendix Table A-2 for regression results.

Adding the controls for human capital in Model 2 does not make much difference in the estimated marginal effects. This is probably because men and women from the same country have similar human capital characteristics (e.g., educational attainment, and English Speaking skills).

As expected, immigrant women with children under five have even larger negative effects relative to male immigrants with children under 5. This is consistent with labor supply studies that find married men with children working substantially more hours than married women with small children.

Marginal Effects: Female Immigrant Groups Compared to Male Natives

Table 5 presents the marginal effects of female immigrants from the 14 places of origin in reference to male natives. Not surprisingly, the estimated gross marginal effects from Model 1 in Table 4 are all negative and very large, ranging from -\$29,618 for Mexican women to -\$10,653 for women from the Philippines. When human capital control variables are added in Model 2 the disadvantage of female immigrants relative to male natives decreases substantially for some groups, but remains virtually unchanged for other groups. Note the relative gains made by women from Mexico, Central America, The Caribbean, and South America; all groups with relatively low levels of human capital.

	Not Married a	nd No Children	Married With at least One Child < 6		
Place of Origin	Model 1	Model 2	Model 1	Model 2	
Mexico	-18958	-3625	-36985	-18882	
Philippines	-1099	-1472	-20327	-20512	
China	-5635	-3945	-19237	-18295	
Japan	-5796	-5406	-31714	-30349	
India	-9641	-6875	-31424	-29255	
Korea	-5187	-5560	-26317	-27372	
Central America	-16295	-3735	-34563	-19559	
Caribbean	-11700	-4435	-27420	-20022	
South America	-10991	-4552	-29540	-23372	
Europe	-6166	-4725	-28000	-24595	
Middle East	-5089	-4208	-31196	-26129	
Africa	-6285	-4496	-26423	-23279	
Indochina	-11819	-2330	-27605	-16419	
UK & Canada	868	-233	-26620	-26844	

Table 5: Marginal Effects* of Female Immigrant vs. Male Natives

*Note: The marginal effects reported in columns 2 through 5 (unmarried individuals) are the summation of coefficients for the following three dummy variables: F, C_i , [F*C_i] Interaction variables are shown in brackets. The marginal effects reported in the last 3 columns (married with children under 6) are the summation of the coefficients to the following 7 dummy variables: F, C_i , [F*C_i], [F*C_i], [F*M], [F*K], [F* C_i *K], [F* C_i *M]. Note that F, C_i , and K are dummy variables that assume the value of 1 for individuals who are females, from country i , and have children under 6 respectively. See Appendix Table A-1 for variable definitions and Appendix Table A-2 for regression results.

Adding a control variable for hours worked to the Model 2 regression reduces the marginal effects significantly. Although these marginal effects are not reported here, the regression results are reported as Model 3 in Appendix Table A-2. However, the descriptive reported in Table 1 show that immigrant women don't work nearly as many hours as male immigrants or native males. Thus, part of the earnings disadvantage of female immigrants relative to males appears to be linked to the fact that they supply significantly fewer hours of labor. Table 1 showed that average hours worked in 1999 ranged from 897 hours for women from Mexico to 1530 for Women from the Philippines. All fourteen groups of immigrant women worked fewer hours than their male immigrant counterparts and native males, and only women from the Philippines had hours worked that exceeded native women.

IV. DISCUSSION AND CONCLUSIONS

Two main conclusions can be drawn from the marginal effects presented above. First, although country of origin is an important determinant of female immigrant earnings, its influence is largely accounted for by differences in human capital endowments and personal characteristics across immigrant groups. Second, gender is an extremely important determinant of the earnings gaps between immigrant women and male comparison groups.

The marginal effects reported in Table 3 show that although many groups of immigrant women are at an absolute earnings disadvantage relative to native women (Model 1), the disadvantage disappears for most groups once human capital control variables are included (Model 2). It appears that for most immigrant groups, the gap in actual earnings between them and native women can be explained by differences in human capital and family related variables. The effect of place of origin on female immigrant earnings seems to occur through the influence of

country of origin on human capital endowments and family decisions. Thus, we don't see strong evidence of earnings discrimination against immigrant women because of their place of origin.

The importance of human capital variables is also seen in the marginal effects analysis of earnings of immigrant women in comparison to native males (Table 5). Controlling for human capital variables in Model 2 reduced the earnings disadvantage of several female immigrant groups that had relatively low absolute endowments of human capital. These groups tended to be from Latin American places of origin (Mexico, Central America, Caribbean, and South America), and from Indochina. Because many Latin American countries have very unequal distributions of income, it is likely that the process of immigration from these countries involves negative selection (Borjas 1987; Chiswick 1999). That is, less skilled, low income, persons from these countries who can earn a high income at home. Also, the cost of immigration is lower for those from Latin America then from Asia and Europe, thus, budget constraints to immigration are not as constraining to low skilled Latin Americans. Female immigrants from Indochina are more likely to be political refugees displaced by wars and civil unrest in countries like Vietnam and Cambodia. Since they often did not immigrate voluntarily, they may not have acquired U.S. specific human capital and thus have lower earnings. Thus, one of the greatest causes of low earnings for women from Latin American places of origin and Indochina are deficiencies in human capital. Many of these women would no doubt benefit from remedial education and ESL training.

We also conclude that gender is an extremely important determinant of the earnings disadvantage of immigrant women. This is easily seen in the marginal effects analyses that compare immigrant women to immigrant men (Table 4) and immigrant women to native men (Table 5). All marginal effects are negative regardless of the model and in most cases the effects are large. Since all 14 groups immigrant women in our sample suffer an earnings disadvantage because of their gender, programs that improve the earnings prospects of women generally are likely to have a positive effect on female immigrants as well.

The national origin of immigrants seems to operate most through its influence on the human capital content of immigrants. We showed that several groups of women suffer a disadvantage due to low levels of human capital. Remedial education and ESL programs would likely be especially beneficial for women from Latin American places of origin and women from Indochina. Women from these areas suffer a double disadvantage in the workplace, one from their gender and another from their skills. They are particularly vulnerable in the labor market.

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REFERENCES

- 1. Blau, Francine D., Marianne A. Ferber and Anne E. Winkler. *The Economics of Women, Men, and Work*. New Jersey: Pearson Education Inc., 2006.
- 2. Borjas, George. "The Economics of Immigration." *Journal of Economic Literature* 32.4 (1994): 1667-1718.
- 3. Borjas, George. *Heaven's Door*. New Jersey: Princeton University Press, 1999.

- 4. Borjas, George. "Self Selection and the Earnings of Immigrants." *The American_Economic Review* 77.4 (1987): 531-553.
- 5. Borjas, George, and Sephen G. Bronars. "Immigrants and the Family." *Journal of Labor Economics*, April 1991, 9(2), pp. 123-148.
- 6. Chiswick, Barry R. "The Effect of Americanization on the Earnings of Foreign Born Men." *Journal of Political Economy*, October 1978, 86(5), pp897-921.
- 7. Chiswick, Barry R. "Are Immigrants Favorably Self-Selected." *The American Economic Review*, May 1999, 89(2), pp.181-185.
- 8. Chiswick, Barry R. "Speaking, Reading, and Earnings among Low-Skilled Immigrants." *Journal of Labor Economics*, April 1991, 9(2), pp149-170.
- 9. Cobb-Clark, Deborah, and Marie D. Connolly. "A Family Affair: The Labor Market Experience of Immigrant Spouses." *Social Science Quarterly*, December 2001, 82(4), pp.796-811.
- 10. Daneshvary, Nasser. "Earning Differentials between Natives and Immigrants with College Degree." *American Economist* 37.2 (1993): 46-52.
- 11. Duleep, Harriet Orcutt, Mark C. Regets. "Earnings Convergence: Does It Matter Where Immigrants Come from or Why?" *Canadian Journal of Economics*, April 1996, 29(Special Issue), S130-S134.
- 12. Duleep, Harriet Orcutt, Mark C. Regets. "Immigrants and Human-Capital Investment." *The American Economic Review*, May 1999, pp. 186-191.
- 13. Hu, Wei-Yin. "Immigrant Earnings Assimilation: Estimates from Longitudinal Data." *American Economic Review*, May 2000, 90(2), pp. 368-372.
- 14. LaLonde, Robert J., and Topel, Robert H. "Immigrants in the American Labor Market: Quality, Assimilation, and Distributional Effects." *American Economic Review*, May 1991, 81(2), pp. 297-302.
- 15. Reimers, Cordelia W. "Cultural Differences in Labor Force Participation among Married Women." *American Economic Review.* May 1985, 75(2), pp. 251-255.
- 16. Ruggles, Steven and Matthew Sobek et al. *Integrated Public Use Microdata Series: Version 3.0.* 2003. Minneapolis: Historical Census Projects, University of Minnesota. 23 October 2003 <u>http://www.ipums.org</u>
- 17. Schoeni, Robert F. "Labor Market Assimilation of Immigrant Women." *Industrial & Labor Relations Review* 51.3 (1998): 483-505.
- 18. Schoeni, Robert. "Labor Market Outcomes of Immigrant Women in the United States: 1970 to 1990." *The International Migration Review* 32 (1998): 57-77.
- 19. Schoeni, Robert F., Kevin F. McCarthy and Georges Vernez. *The Mixed Economic Progress of Immigrants*. California: RAND, 1996.
- 20. Shamsuddin, Abdul F. "The Double-Negative Effect on the Earnings of Foreign-Born Females in Canada." *Applied Economics* 30.9 (1998): 1187-1202.
- 21. Vernez, George. *Immigrant Women in the U.S. Workforce: Who Struggles? Who Succeeds?* New York: Lexington Books, 1999.
- 22. Woolridge, Jeffery M. *Introductory Econometrics*. United States of America: Thomson South Western, 2003.
- 23. Wright, Richard, and Mark Ellis. "The Ethnic and Gender Division of Labor Compared Among Immigrants to Los Angeles." *International Journal of Urban and Regional Research* 24.3 (2000): 583-600.

APPENDIX TABLES

Table A-1: Variable Definitions

Variable	Definition				
Wage Income (Dep. Variable)	Total pre-tax wage and salary income for 1999				
F	1 if female, 0 otherwise				
М	1 if married, 0 otherwise				
(F)(M)	Interaction variable: 1 if female and married, 0 otherwise				
K	1 if has child under six years old, 0 otherwise				
(F)(K)	Interaction variable: 1 if female and has child under 6, 0 otherwise				
Mexico	1 if individual emigrated from Mexico, 0 otherwise				
Philippines	1 if individual emigrated from Philippines, 0 otherwise				
China	1 if individual emigrated from China, 0 otherwise				
Japan	1 if individual emigrated from Japan, 0 otherwise				
India	1 if individual emigrated from India, 0 otherwise				
Korea	1 if individual emigrated from Korea, 0 otherwise				
Cent. America	1 if individual emigrated from Central America, 0 otherwise				
Caribbean	1 if individual emigrated from Caribbean, 0 otherwise				
S. America	1 if individual emigrated from South America, 0 otherwise				
Europe	1 if individual emigrated from Europe, 0 otherwise				
Middle East	1 if individual emigrated from Middle East, 0 otherwise				
Africa	1 if individual emigrated from Africa, 0 otherwise				
Indochina	1 if individual emigrated from Indochina, 0 otherwise				
UK/Canada	1 if individual emigrated from the United Kingdom or Canada, 0 otherwise				
(C_i) (F)	14 interaction Variables: 1 if Female from Place of Origin i, 0 otherwise				
	(Note: i indexes each of the 14 countries of origin listed above)				
(C_i) (F) (K)	14 interaction Variables: 1 if female with children under 6 yrs from Place of Origin i, 0				
	otherwise (Note: i indexes each of the 14 countries of origin listed above)				
(C_i) (F)(M)	14 interaction Variables: 1 if married female from Place of Origin i, 0 otherwise				
	(Note: i indexes each of the 14 countries of origin listed above)				
Age at arrival in U.S.	Age at which immigrant first arrived in the U.S., This variable is coded 0 for natives				
Northeast	1 if individual resided in the Northeast Region of the U.S. in 2000, 0 otherwise				
South	1 if individual resided in the South Region of the U.S. in 2000, 0 otherwise				
West	1 if individual resided in the West Region of the U.S. in 2000, 0 otherwise				
Not_Metro	1 if individual did not reside in a metropolitan area in 2000, 0 otherwise				
Speaks No English	1 if individual speaks no English, 0 otherwise				
Speaks Some English	1 if individual speaks some English, 0 otherwise				
Speaks English Well	1 if individual speaks English well, 0 otherwise				
Age	Age in years				
Age Squared	Age squared				
5-11 Yrs of Education	1 if individual obtained from 5 to 11 years of formal education, 0 otherwise				
12 Yrs of Education	1 if individual obtained 12 years of formal education, 0 otherwise				
1-3 Years of College	1 if individual obtained from 1 to 3 years of college education, 0 otherwise				
4 Yrs of College	1 if individual obtained at least 4 years of college education, 0 otherwise				
Hours Worked 1999	Total hours worked in 1999 (Computed as usual hours worked times weeks worked)				

Table A-2:	Regression Estimates Used to Compute Marginal Effects in Tables 4	-6
	(Absolute Value t Statistics in Parentheses)	

¥7 · 11	(Absolt	<u>ite value i Stat</u>				2
Variable	Model	<u> </u>	Model	2	Model	3
F	-7045	(24.52)	-/695	(28.3)	-5111	(20.6)
M	13289	(58.37)	11010	(50.5)	/159	(34.8)
(F)(M)	-15497	(47.30)	-14821	(47.9)	-8219	(29.2)
K	507	(1.62)	1211	(4.0)	825	(2.9)
(F)(K)	-4002	(8.96)	-3366	(7.9)	1236	(3.2)
Mexico	-17821	(71.72)	-1056	(3.4)	-2852	(9.6)
Philippines	-3959	(6.75)	-3118	(5.1)	-2062	(3.6)
China	2552	(3.21)	2927	(3.7)	3063	(4.1)
Japan	17563	(8.92)	15780	(8.3)	14875	(8.1)
Korea	-4633	(4.18)	-3708	(3.4)	-4013	(3.7)
India	13629	(14.91)	9940	(10.9)	9342	(10.6)
Cent. America	-13489	(30.89)	156	(0.3)	-1349	(3.0)
Caribbean	-9846	(24.85)	-2148	(5.0)	-1226	(3.0)
S. America	-4239	(7.02)	1461	(2.4)	496	(0.9)
Europe	3855	(7.37)	5721	(10.9)	4428	(8.8)
Middle East	5730	(5.35)	5258	(5.0)	4440	(4.4)
Africa	2830	(2.71)	1622	(1.6)	2143	(2.2)
Indochina	-9417	(18.30)	-726	(1.4)	-412	(0.8)
UK/Canada	18555	(17.80)	16690	(16.9)	14424	(15.1)
(F)(Mexico)	5908	(16.11)	4476	(12.8)	7041	(21.5)
(F)(Philippines)	9904	(9.59)	8691	(8.8)	5952	(6.5)
(F)(China)	-1142	(0.96)	173	(0.2)	371	(0.4)
(F)(Japan)	-16314	(6.57)	-14142	(5.9)	-11806	(5.3)
(F)(Korea)	2037	(1.39)	3878	(2.8)	4899	(3.7)
(F)(India)	-11772	(7.19)	-8456	(5.5)	-6480	(4.6)
(F)(Cent. America)	4239	(7.19)	3154	(5.6)	3746	(7.1)
(F)(Caribbean)	5191	(9.26)	4758	(9.1)	5446	(11.2)
(F)(S. America)	293	(0.35)	1032	(1.3)	1393	(1.8)
(F)(Europe)	-2976	(4.09)	-3401	(4.9)	-2760	(4.3)
(F)(Middle East)	-3775	(2.21)	-2421	(1.5)	-3	(0.0)
(F)(Africa)	-2071	(1.48)	926	(0.7)	236	(0.2)
(F)(Indochina)	4642	(5.94)	5440	(7.4)	5335	(8.0)
(F)(UK/Canada)	-10642	(7.60)	-9879	(7.4)	-9911	(7.8)
(F)(Mexico)(K)	1286	(3.30)	1606	(4.2)	1162	(3.5)
(F)(Phil)(K)	-1902	(1.83)	-2695	(2.8)	-2356	(2.9)
(F)(China) (K)	6310	(4.69)	2064	(1.6)	1496	(1.3)
(F)(Japan)(K)	-2494	(1.55)	-3695	(2.4)	-2481	(2.1)
(F)(Korea)(K)	-168	(0.14)	-4853	(4.0)	-584	(0.6)
(F)(India)(K)	-1660	(1.36)	-3138	(2.7)	-1479	(1.5)
(F)(C Amer)(K)	509	(0.89)	1384	(2.5)	893	(1.8)
(F)(Caribb)(K)	1416	(2.20)	360	(0.6)	-968	(1.9)
(F)(S Amer)(K)	449	(0.46)	-968	(0.0)	-295	(0.4)
(F)(Furope)(K)	-244	(0.32)	-1599	(1.0)	-555	(0.9)
(F)(MidEast) (K)	-244	(1.23)	-1350	(0.9)	796	(0.5)
(F)(A frica)(K)	-1446	(0.92)	-945	(0.5)	-1412	(0.0)
(F)(Indochina)(K)	3086	(3.31)	1524	(0.0)	1602	(1.1)
(F)(UK/Canada) (K)	_1345	(0.07)	_3007	(1.7)	-1650	(1.5)
$\frac{(\Gamma)(UK)(Callada)(K)}{(E)(Maxico)(M)}$	-1343	(0.57)	-3907	(6.2)	-1039	(1.3)
(F)(Dilippings) (M)	2174	(0.30)	2402	(0.2)	710	(7.6)
(F)(China) (M)	<u>21/4</u> <u>414</u>	(2.10)	2492	(2.0)	67	(0.0)
$\frac{(\Gamma)(\text{Clillia})(\text{W})}{(F)(\text{Langen})(M)}$	-414	(0.40)	2423	(2.3)	0/ 940	(0.1)
(F)(Japan) (W)	-3925	(2.25)	-2410	(1.5)	-849	(0.0)
$(\Gamma)(\text{Korea})(M)$	-2116	(1.81)	1510	(1.2)	18	(0.0)
(F)(India)(M)	30	(0.02)	164	(0.1)	56	(0.0)

Table A-2 (Continued):	Regression Est	timates Used to	Compute Marginal	Effects in Tables 4-6
			T	

(Absolute Value t Statistics in Parentheses)								
Variable	Model	1	Model	2	Model	3		
(F)(C.Amer.)(M)	722	(1.39)	1629	(3.3)	2073	(4.6)		
(F)(Caribb) (M)	2363	(4.68)	2890	(6.1)	272	(0.7)		
(F)(S. Amer) (M)	501	(0.68)	985	(1.4)	1315	(2.0)		
(F)(Europe) (M)	-2090	(3.43)	567	(1.0)	1163	(2.3)		
(F)(MidEast)(M)	-4604	(2.90)	-1734	(1.2)	-441	(0.3)		
(F)(Africa) (M)	808	(0.58)	999	(0.7)	1460	(1.2)		
(F)(Indochina) (M)	627	(0.85)	3214	(4.5)	-312	(0.5)		
(F)(UK/Canada) (M)	-6644	(5.95)	-3866	(3.6)	-1267	(1.3)		
Age at arrival in U.S.			-196	(21.7)	-155	(18.4)		
Northeast			1547	(6.6)	2515	(11.6)		
South			-885	(4.6)	-538	(3.0)		
West			-360	(1.8)	981	(5.2)		
Not metro			-5873	(35.0)	-5429	(34.7)		
Speaks No English			-5614	(25.5)	-2518	(12.2)		
Speaks Some English			-6174	(33.4)	-4436	(25.9)		
Speaks English Well			-4816	(25.9)	-4029	(23.3)		
Age			2103	(38.9)	1282	(25.7)		
Age Squared			-22	(34.0)	-12	(19.4)		
5-11 Yrs of Education			866	(5.1)	120	(0.8)		
12 Yrs of Education			3908	(23.1)	831	(5.3)		
1-3 Years of College			9347	(49.6)	4497	(25.8)		
4 Yrs of College			27292	(108.7)	20921	(90.8)		
Hours Worked 1999					13	(200.8)		
Constant	29435	(136.06)	-25586	(23.6)	-30318	(30.2)		
R Squared		0.11		0.19		0.30		
N		287,784		287,784		287,784		