

Wage Differentials for Immigrant Women in the United States: The Heightened Effect of Ethnic and Gender Interaction

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I. INTRODUCTION

Literature states that “the United States is one of only a handful of nations in which immigrant women outnumber immigrant men” (Vernez, 1999). Yet, there has been little systematic research on the work experiences of these women. Moreover, although 75 percent of immigrant women originated from Europe in 1960, today they come from increasingly diverse regions, such as North America, Latin America, Asia, Africa and the Middle East (Vernez, 1999). Clearly then, immigrant women have the potential to make a significant contribution to the U.S. labor force, not only in number, but also in ethnic diversity. However, the question of how gender and ethnicity interact with each other to affect the economic performance of female immigrants remains understudied. Most past studies focus on male immigrants, even though females are more likely to face cultural and social barriers in the U.S. labor force (Vernez, 1999). Even amongst the few studies that focus on women, only a limited number examine the existence of a double-negative effect on the basis of gender and ethnicity. There-

fore, this paper aims to expand the previous literature by providing some insight into the formerly neglected dimension of female immigrant performance, as it relates to wage differentials based on sex and nationality.

The significance of performing such research is made obvious by the existence of substantial earnings inequalities between different ethnic groups and genders. Table 1 emphasizes the presence of such wage gaps.

“Immigrant women have the potential to make a significant contribution to the U.S. labor force, not only in number, but also in ethnic diversity.”

Note the dissimilar concentrations across the groups. The highest percentages of all natives and native males are found in the over \$35,000 group, whereas the highest percentages of all foreign-born workers and foreign-born males are found in the under \$35,000 group. On the other hand, both native and

foreign-born females are most concentrated in the under \$35,000 group. Further, there are noteworthy differences even among the foreign-born workers. Latin American workers are most concentrated in the under \$35,000 bracket, but Asian workers are found mostly in the over \$35,000 bracket.

TABLE 1
Total Earnings of Year-Round Full-Time Workers by Sex and Region of Birth (March 2002)

Sex and Money Earnings ^{1, 2, 4}	Native	Foreign Born	Europe	Asia	Latin America	Other Areas
TOTAL with earnings ³						
\$1 to \$34,999	49.40	63.65	45.00	45.90	78.50	53.50
\$35,000 or more	50.60	36.35	55.00	54.10	21.50	46.50
MALES with earnings ³						
\$1 to \$34,999	40.55	59.80	35.80	38.55	76.10	47.10
\$35,000 or more	59.75	40.20	64.20	61.55	23.90	52.90
FEMALES with earnings ³						
\$1 to \$34,999	61.55	70.50	59.15	56.40	83.70	64.10
\$35,000 or more	38.55	29.50	40.85	43.60	16.30	34.90

NOTES: ¹ Those born in 'Other Areas' are from Africa, Oceania, Bermuda, and Canada.

² Age 15 years or older

³ Earnings from previous calendar year

⁴ n = 85,835

Clearly then, it is worth our time to study the impact of birthplace, gender, and ethnicity on economic performance.

The purpose of this paper is to examine the sources of the wage differentials between immigrant females, immigrant males, native females, and native males in the U.S. labor force, paying particular attention to inequalities in income created by the interaction of gender and ethnicity. Such research will suggest directions for policy changes aimed at reducing income disparities across immigrant and native groups.

The paper will proceed as follows. Section II discusses the theoretical framework, which is based on standard labor market and human capital theory. In doing so, it also reviews the most important literature on female immigration, race-based earnings gaps, and gender-based earnings gaps. Section III describes the IPUMS dataset and explains the regression analyses that are used in the empirical model. Section IV presents the regression results. Finally, Section V discusses policy implications and conclusions.

II. THEORY AND LITERATURE REVIEW

Labor market theory states that as long as all firms are alike and all workers are equally productive, and both are able to freely enter and exit the marketplace, there should be a single wage in the economy (Borjas, 2000). However, Table 1 shows significant earning differentials across natives and immigrants by gender and ethnicity. According to labor market theory, in the absence of wage discrimination, such wage gaps should be explained by differences in job characteristics and worker characteristics (Borjas, 2000). Thus,

$$Wage = f(\text{job characteristics, worker characteristics})$$

In terms of job characteristics, employees have diverse preferences for work environments, and firms offer diverse working conditions. Hence, laborers attempt to match their needs with those of various businesses while deciding where to work. Likewise, firms perform a similar analysis while deciding whom to hire. In other words, the allocation of labor to firms is carefully determined by the above considerations (Borjas, 2000). In terms of worker characteristics, each person brings a unique set of

abilities and acquired skills, known as human capital, to the labor force. Most of these skills are developed through school as well as formal and informal on-the-job training programs. Developing such expertise often requires people to accept low earnings during the times that they are increasing their investments in human capital. However, additions to human capital stock are expected to improve economic status in the future due to the higher returns associated with higher levels of human capital. Workers choose to make trade-offs and investments that maximize their earning potential. Therefore, educational and training decisions have a significant impact on income (Borjas, 2000).

Job characteristics can be accounted for by looking at occupational, industrial, and regional groupings. Different occupations offer different work environments. "Some may provide the opportunity for upward mobility and a dignified standard of living, whereas others may offer low wages and tedious, hard, unstable work" (Wright, 2000). Vernez (1999) examined the occupational distribution of immigrant and native men and women by comparing participation in high-skill, intermediate skill and low-skill occupations. His groupings were created on the basis of the average years of schooling attained by individuals in each occupation. High-skill occupations included: executive, administrative, managerial, professional, and technical occupations; intermediate-skill occupations included: sales, clerical, administrative support, precision-production, craft, and supervisor occupations; and low-skill occupations included: laborers, machine operators, assemblers, personal service providers, and farm workers. Within the high-skill occupations, he found women more likely to dominate teaching and health professions rather than managerial professions compared to men. In intermediate-skill careers, women had a higher concentration in general. They were also more likely to hold clerical positions, whereas men were more likely to be craftspeople and supervisors. Low-skill jobs were divided into women performing primarily service work and men performing as laborers and farm workers.

Further dissimilarities may be seen between

immigrants and natives, with immigrant women more likely to fill the slow-growing, low-skill professions, and native-born women more likely to fill the fast-growing, high-skill professions. Since wages vary across occupations, and occupations appear to be segregated on the basis of nativity and gender, controlling for occupational differences should help to explain wage gaps.

Industrial divisions also create similar differences in working conditions. Vernez studies such divisions by grouping workers into high-skill, medium-skill, and low-skill industries on the basis of the average years of schooling of the individuals in each labor force. High-skill sectors included: communications, fire, health, education, other professional areas, and government; medium-skill included: durable manufacturing, transportation, utilities, wholesale and retail trade, business/repair, and entertainment; and low-skill sectors included: agriculture, construction, non-durable manufacturing, and personal services. He did not find any noticeable differences between men and women, but he did find sharp dissimilarities between natives, immigrants, and ethnicities. The variations existed on both inter-industry and intra-industry levels.

On an inter-industry level, immigrant women made up two-thirds of the labor force in household services. Additionally, there were increasing disparities in the educational attainments of immigrants and natives within the groups. Vernez's data showed much greater variance in the years of education completed by immigrants than by natives. While immigrants had significantly lower levels of education in the low-skill industries, interestingly, they held higher educational levels in the high-skill industries. Lastly, Vernez found increasing diversity in the racial/ethnic composition of the labor force. The most striking difference was between less-educated Hispanic immigrants, who had dramatically increased their participation in low-skill industries, and more-educated Asian immigrants, who had significantly increased their participation in high-skill industries. However, high-skill industries generally employed fewer immigrants and experienced much slower changes in their racial/ethnic compositions than other industries, despite the fact that there

was no difference in the average years of schooling attained by the immigrants and natives in this sector. In fact, immigrants were more likely to be college-educated.

On an intra-industry level, high-skill industries showed fairly equal distributions, but lower skill industries were divided into immigrants being more concentrated in “back-office” positions, and natives being more concentrated in “front-office” positions. This provides support for the effects of language proficiency and acclimatization skills on work choices, which will be discussed later in this section. Thus, nativity and ethnicity differences between and amongst industries probably have an important impact on wage differentials.

Regional differences are captured by the National Compensation Survey, which collects wage and salary data for about 450 occupations throughout the country. It has found generally higher earnings on the Atlantic and Pacific coasts than in the middle region of the country. Since wages often reflect working conditions, regional differences in payment imply important geographic dissimilarities in job characteristics as well. Daneshvary’s (1993) studies found that immigrants were more likely to reside in larger metropolitan areas in the Northeastern, Southern, and Western parts of the U.S. and were less likely to reside in the Midwestern part of the country. They were also more geographically concentrated overall than natives, because they tended to locate in areas with higher numbers of fellow countrymen.

Further, those immigrants located in the Northeast tended to receive higher wages, whereas those in the South received lower wages (Daneshvary, 1993). Thus, regional differences may contribute significantly to the existence of wage differentials.

The question of human capital is commonly addressed by considering formal schooling and on-the-job training (Blau, 2002). Earnings are expected to rise with additional education because of the productivity-enhancing effects of education. Schooling allows one to gain a variety of skills and knowledge that would potentially be useful on the job, such as reasoning ability, writing skills, time management, dependability, etc. Further, education may act as a

screening device for employers, allowing them to distinguish more productive applicants from less productive ones (Blau, 2002). Human capital theory also notes that significant productivity increases could be gained via important work skills acquired while on the job. Training could include formal programs or informal instruction, which enable job proficiency through the trial and error method (Blau, 2002). Any of these types of training would augment worker productivity and thus cause an increase in earnings (Blau, 2002). Educational attainment and labor market experience – often used as a measure of training acquired – differ significantly across gender, ethnicity, and source country-based differences. Therefore, they may help in explaining a significant portion of the wage gap.

Another important variable is language proficiency. In the U.S., there is a substantial payoff for verbal and written English proficiency and fluency (Schoeni, Assimilation, 1998). It opens up many opportunities because bilingual immigrants can look for jobs both inside and outside their ethnic enclave. English proficiency could also serve as a signal of a more able worker (Borjas, 1999).

Other common variables applied in studying immigrant performance include years since immigration and age at the time of arrival in the host country. These factors could be determinants of human capital as well. Immigrants who arrive early obtain more skills that are directly related to the U.S. job market and therefore, are more productive in the U.S. than later arrivals. Their age at arrival determines the amount of U.S. specific schooling that they were able to obtain. Traditionally though, the coefficients of these variables have served as measures of economic assimilation (Nielsen, 2003). Theories of assimilation claim that immigrant and native wages tend to converge over time. An initial difference is caused by the fact that newly arrived immigrants are typically less productive, but as time passes, they acquire language proficiency, cultural qualifications, and other more general human capital qualifications, which should enable them to catch up to natives. Therefore, “it is important to disentangle the assimilation effect from a potential dis-

crimination effect due to ethnicity” (Nielsen, 2003).

Significant female-specific factors include spouse’s wages and fertility. An increase in the husband’s wage could either have an income effect by decreasing the probability that a woman chooses to work, assuming that the wife’s leisure time is a normal good. Or, it could have a substitution effect by increasing the husband’s opportunity cost of time and making it more efficient for the family to substitute the wife’s time for the husband’s time in household production (Schoeni, Assimilation, 1998). Both effects result in a decrease in the wife’s labor force participation and therefore, reduce overall female earnings. Fertility, or number of children born, could also affect earnings (Schoeni, Outcomes, 1998). Traditionally, females have been given the responsibility of childrearing. Hence, higher numbers of children could require mothers to spend more time at home, therefore reducing their ability to acquire additional human capital and participate in the labor force. Employers could thus conceivably assume that women from larger families would be less productive. Clearly then, fertility would have a significant effect on female earnings. This is especially important for immigrant women from certain regions because they tend to have larger families. The effect may also be greater in the case of families with younger children.

Ethnicity has been addressed above in terms of industrial and regional differences. However, that may not be sufficient. Immigrants from different countries arrive with distinct levels of human capital, skills, and abilities, which probably affect the rate at which they advance in the U.S. economy (Schoeni, 1996). Therefore, it would be helpful to incorporate groupings by country of birth in order to explain wage differentials across ethnicities. Schoeni, McCarthy, and Vernez grouped countries on various pertinent criteria. They required each group to contain a significant share of the immigrant population; countries that were geographically close to each other; and individuals with common backgrounds and experiences (e.g. language) that would lead to similar experiences in the U.S. workforce. In doing so, they formed nine groups:

1. Mexico
2. Japan, Korea and China
3. Central America
4. Philippines
5. Europe
6. Middle East and all other Asian countries not listed
7. Africa, Caribbean, South America, and Oceania
8. Indochina and Vietnam
9. United Kingdom and Canada

Similar groupings would help to account for varying worker characteristics across countries in this paper as well.

The variables discussed above provide some basis for the existence of wage differentials between natives and immigrants. According to labor market theory, those factors should account for a substantial portion of the wage gap. However, many past researchers controlled for similar variables but still find inequalities. Such disparities are often attributed to societal discrimination.

Based on the above discussion, this paper will hypothesize the following:

1. *Ceteris Paribus*, immigrants will earn less than natives. The differentials are greater for certain ethnicities.
2. *Ceteris Paribus*, females earn less than males. The above hypotheses may be expressed as follows:

$$\text{Hourly Wage} = f(\text{gender}^{(-)}, \text{country of birth}^{(-)}, \text{individual characteristics}^{(+,?)})$$

3. The negative effect on hourly wages associated with immigrants is more dramatic for females from certain ethnicities because of a double-negative effect caused by the interaction of gender and ethnicity. This may be expressed as follows:

$$\text{Hourly Wage} = f(\text{gender*ethnicity}^{(-)}, \text{individual characteristics}^{(+,?)})$$

There is little known research on the interaction variables described in the third hypothesis. Therefore, the effects of those variables should be particularly interesting. The question of whether or not perceived inequalities can be attributed to societal discrimination is beyond the scope of this paper, but it would serve as an interesting avenue for future research.

III. DATA AND EMPIRICAL MODEL

The proposed hypotheses are tested using a standard labor market and human capital equation with additional variables to account for nativity, gender, and ethnicity. Following the example of Schoeni (Outcomes, 1998), this paper utilizes the 2000 Integrated Public Use Micro Series created by Ruggles and Sobek at the University of Minnesota to create estimations. The dataset provides users with extensive microdata and serves the purposes of this analysis by enabling examination of the several different factors discussed above (Ruggles, 2003).

Data is taken from the 5 percent sample of the 2000 dataset, which provides information on approximately 5,663,214 households and 14,081,466 individuals. A random sample of 100,000 immigrants and 50,000 natives is used for this paper. In order to capture working-age people and to take into account departure for school and retirement, all analyses are restricted to individuals 25 to 60 years old. An immigrant is defined as a person born in a foreign country. People born abroad to American parents (e.g. born while their parents were temporarily stationed abroad) are considered to be U.S. natives.

The dependent variable is the natural log of wage per hour, which is calculated as follows:

$$\frac{\text{total earned income}}{\text{usual hours worked per week} * \text{weeks worked in previous year}}$$

The logarithmic form allows non-linearity relationships into the regression analysis and is consistent with human capital theory (Woolridge, 2003). Also, it allows coefficients to be interpreted as the percent changes in earnings, given some change in an independent variable.

For the first two hypotheses, the key independent variables examined include gender, country of birth, income from other family members, fertility, occupation, industry, region, educational attainment, on-the-job training, English language proficiency, years in the U.S., and age at the time of arrival.

Ethnicity is measured in terms of country of birth. The IPUMS allowed for a modified version of Schoeni, McCarthy, and Vernez's groupings. They are as follows:

1. Mexico
2. Japan, Korea and China
3. Central America
4. Philippines
5. Europe
6. Middle East and all other Asian countries not listed
7. Africa, Caribbean, South America, and Oceania
8. Indochina and Vietnam
9. United Kingdom and Canada
10. Indian Sub-continent
11. United States of America

The primary modifications are the inclusions of the Indian Sub-continent and the United States of America, as separate groupings. The former is justified because immigration from this area has grown exponentially since 1965 (IACPA). There were 12,715 Indians who immigrated to the U.S. in the year 2000 (Ruggles, 2003). Such a large group of people with distinct values and experiences should be observed separately. The latter allows for the incorporation of natives without creating a separate variable. This variable will be estimated by assigning a mutually exclusive dichotomous dummy variable with the value of 1 to respondents born in the concerned country, with the U.S. serving as the omitted group. Gender is studied as a dummy variable with male represented by 0 and female represented by 1.

Income from other family members is used instead of spouse's wages, which is used in past research, because the latter proved to be hard to incorporate. The IPUMS does not have a direct

variable to account for it. Therefore, this analysis uses total family income minus responder's wage instead. Total family income is defined as the total pre-tax money income earned by the primary family of the household head from all sources. This proxy variable is appropriate, because increased family income is likely to affect a woman's decision to work in the same manner that increased spouse's income would. In fact, it may even provide a more effective estimate.

Fertility is measured in terms of the number of own children in the household, together with dummies for children under the age of 5. The number of own children is considered directly, but dichotomous dummies are used for the number of children under 5, with 0 children under 5 being the omitted group. This allows for the additional effects of having younger children being taken into consideration. This measure may exclude some children (e.g. adopted or guardian), but the dataset does not permit a better direct estimate.

Occupation is defined as the primary specific technical function performed by an individual at work. It is studied in three categories that are based on Vernez's groupings – high skill, intermediate skill, and low skill. Three mutually exclusive dichotomous dummy variables measure these categories. 1 denotes the chosen level of skill – high, intermediate low – while 0 represents otherwise. Unemployed people are used as the omitted group. Therefore, coefficients should be interpreted in comparison to being unemployed.

Industry is defined as the primary work setting and economic sector of the individual's place of employment. This variable is studied in a manner similar to occupation. Industry is also divided according to skill level and three mutually exclusive dichotomous dummy variables measure the skill levels – low, intermediate, and high. Unemployed people are used as the omitted group in this case as well.

Regional divisions are considered by using two variables. The first is a dummy variable for metropolitan status, with metropolitan area as 1, and 0 as otherwise. The IPUMS does not provide in-

formation on geographical areas with a population of less than 100,000, so the residences of a large number of people are classified as unknown. However, most metropolitan areas have populations greater than 100,000. Therefore, I assume that the unclassified people do not live in a metropolitan area. The second is a set of three mutually exclusive dichotomous dummy variables, each assigned to a particular region as follows: 1 if Northeast, 0 if otherwise; 1 if South, 0 if otherwise; and, 1 if West, 0 if otherwise. Midwest has been omitted because immigrant concentration is the least in that area.

The above-mentioned classifications for job characteristics and region have some limitations. They are rather broad and tend to generalize across several occupations, possibly overlooking several important differences. However, more detail would have complicated the analysis and reduced the focus on the more important variables describing gender and ethnicity.

Educational attainment is studied using dichotomous dummies. Nine groups have been formed as follows:

1. No education-preschool
2. Grades 1-4
3. Grades 5-8
4. Grade 9
5. Grade 10
6. Grade 11
7. Grade 12
8. 1-3 years of college
9. 4+ years of college

Each group is considered as a separate variable, with a value of 1 if the concerned individual falls into the group and a value of 0 if otherwise. The first group is the omitted category.

Labor market experience is measured using a proxy. Several human capital studies use potential work experience to account for this. It involves the approximation of time passed since an individual was last in school. The calculation performed for this paper is as follows:

$$\text{potential work experience} = (\text{age at the time of the survey} - \text{years of education} - 5)$$

However, this may result in the inclusion of unemployed people, or the exclusion of work experience gained while a person was in school. Unfortunately, data restrictions do not allow for a better proxy of this variable.

English language proficiency is studied in four categories, according to IPUMS groupings. Participants were asked to identify if they spoke English “very well,” “well,” “not well,” or “not at all.” Dichotomous dummy variables are used to identify the different classifications, with the group speaking English “very well” being omitted.

Years passed since the time of immigration is calculated by subtracting the year of immigration from 2000 (the year data was collected). This may result in a slightly biased approximation, because individuals could have traveled abroad during that time, but is almost impossible to get a perfect estimation of such a subjective variable.

Age at the time of arrival is measured by subtracting years spent in the U.S. from age at the time of the survey. This variable accounts for the effects of attaining a U.S. education versus a non-U.S. education.

The third hypothesis will be tested using several interaction terms. The gender variable is interacted with the 10 ethnic variables (excluding the U.S.), resulting in the use of 10 interaction variables. The significance level of the coefficients for these variables is a measure of the interaction effect. In other words, a negative coefficient for (female*country of birth) could be interpreted as follows: being female increases the negative effect on hourly wages caused by immigration from a certain country. Therefore, if the coefficients for birthplace and female are negative (hypotheses 1 and 2), then a negative coefficient for an interaction variable implies the existence of a double negative effect due to the interaction of gender and ethnicity. Table 2 presents some of the key variables that will be considered.

IV. RESULTS

The key results of the regressions are summarized in Table 3.

The first two regressions allow for the testing of hypotheses 1 and 2; *ceteris paribus*, immigrants earn less than people born in the U.S. and females earn less than males. There were some initial problems with collinearity between occupation and industry, and between years spent in the U.S. and age at time of arrival, which is seen in the first regression. Dropping the variables for industry and age at time of arrival made the results clearer without significantly affecting the R^2 , which is seen in the second regression. Both regressions had R^2 values of .414. The coefficients of the variables should be interpreted as the percent

“All the immigrant groups earned less than U.S. natives. . .”

change in hourly wage, given a one-unit change in the independent variable. Most signs and magnitudes for both key and control variables are as expected and had high significance levels. Most variables with unexpected signs were not significant.

The ethnicity variables provided interesting results. All the immigrant groups earned less than U.S. natives, with significant differentials ranging from 27.4% for immigrants from the Middle East or certain other Asian countries to 13.7% for people born in Indochina or Vietnam. In other words, if a U.S. native were to earn \$30,000 per year as CEO of company A, then an equally qualified and equally productive Indochinese native would probably earn only \$25,890 per year as CEO of the same company. A Middle Easterner in the same situation would receive even less — a grand total of \$21,780 per year!

Most of the variables are significant at the 0.001 level. The only one that is not significant, even at the 0.05 level, is Philippines. Immigrants from this country still received less wages, but the magnitude of the differential is relatively small. The insignificance may imply these immigrants face little to no discrimination in the U.S. labor market.

Other specific ethnicity results are as follows: *ceteris paribus*, the hourly wage for people

TABLE 2
Variables and Descriptions

Variable	Description	Omitted/Comparison Group
Lnhwrg	Natural log of wage per hour	
Female (-)	Gender	Males
Mex (-)	Born in Mexico	Born in the United States
Jap (-)	Born in Japan, Korea, or China	Born in the United States
Cename (-)	Born in Central America	Born in the United States
Phil (-)	Born in the Phillippines	Born in the United States
Europe (-)	Born in Europe	Born in the United States
Mideas (-)	Born in the Middle East and all Asian nations not otherwise listed	Born in the United States
Africa (-)	Born in Africa, the Caribbean, South America, or Oceania	Born in the United States
Indoch (-)	Born in Indochina or Vietnam	Born in the United States
Ukcan (-)	Born in the United Kingdom or Canada	Born in the United States
India (-)	Born in the Indian Sub-Continent	Born in the United States
F.Mex (-)	Female*Mex	Female*Born in the United States
F.Jap (-)	Female*Jap	Female*Born in the United States
F.Cename (-)	Female*Cename	Female*Born in the United States
F.Phil (-)	Female*Phil	Female*Born in the United States
F.Europe (-)	Female*Europe	Female*Born in the United States
F.Mideas (-)	Female*Mideas	Female*Born in the United States
F.Africa (-)	Female*Africa	Female*Born in the United States
F.Indoch (-)	Female*Indoch	Female*Born in the United States
F.Ukcan (-)	Female*Ukcan	Female*Born in the United States
F.India (-)	Female*India	Female*Born in the United States

TABLE 3
Regression Results for Lnhrwg

Variable	Regression 1	Regression 2	Regression 3
Constant	.200*** (8.586)	.194*** (8.347)	.201*** (8.538)
Female	-.330*** (-58.733)	-.322*** (-58.560)	-.336*** (-36.865)
Mex	-.201*** (-16.079)	-.201*** (-16.060)	-.194*** (-13.516)
Jap	-.228*** (-16.119)	-.235*** (-16.693)	-.277*** (-14.51)
Cename	-.204*** (-12.780)	-.205*** (-12.833)	-.180*** (-8.656)
Phil	-.010 (-.610)	-.012 (-.684)	-.060* (-2.388)
Europe	-.207*** (-16.231)	-.209*** (-16.406)	-.205*** (-12.490)
Mideas	-.266*** (-13.023)	-.274*** (-13.371)	-.294*** (-11.224)
Africa	-.227*** (-20.433)	-.227*** (-20.469)	-.275*** (-19.826)
Indoch	-.136*** (-8.222)	-.137*** (-8.336)	-.209*** (-9.514)
Ukcan	-.166*** (-9.813)	-.166*** (-9.857)	-.098*** (-4.301)
India	-.144*** (-8.585)	-.151*** (-8.996)	-.120*** (-5.442)
F.Mex			-.017 (-1.112)
F.Jap			.074** (3.168)
F.Cename			-.050 (-1.865)
F.Phil			.082** (2.623)
F.Europe			-.009 (-.456)
F.Mideas			.044 (1.133)
F.Africa			.091*** (5.624)
F.Indoch			.138*** (4.883)
F.Ukcan			-.134*** (-4.433)
F.India			-.072* (-2.303)
Adjusted R ²	.414	.414	.414
n	148,144	148,144	148,144

* indicates significance to .05 level
 ** indicates significance to .01 level
 *** indicates significance to .001 level

NOTE: t-statistic appears in parentheses

born in Japan, Korea or China is 23.5% less than that of people born in the U.S. It is 22.7% less for immigrants from Africa, Caribbean, South America, or Oceania. Europeans receive 20.9% less wage per hour. Central American immigrants earn 20.5% less. Mexicans are paid 20.1% less. Finally, those people from the Indian subcontinent earn 15.1% less. One might ask if these differences could be attributed to assimilation effects, but the mean number of years spent in the U.S. for this sample of immigrants is 11 years. Neilson (2003) finds it “reasonable to assume perfect wage assimilation for an immigrant with 10 years of experience in the host country.” Besides, number of years spent in the U.S. is included as a control variable.

The similarities between the differentials may suggest that there is very little labor market discrimination on the basis of race against immigrants. However, that does not imply the absence of all forms of prejudice against non-natives. While levels of inter-ethnic discrimination might be low, overall inequities may still be present.

Another noteworthy result is the fact that contrary to public opinion, white immigrants – immigrants from Europe, U.K., or Canada – do not face the least differentials. One possible explanation lies in the fact that immigration from these areas has declined considerably over the years. European birth rates are falling drastically. In fact, Italy has the lowest fertility rate in the world (Ellison, 2003). Fewer Europeans, in general, would lead to decreased immigration from that area, which, in turn, would lead to reduced earning potential.

Hourly wages for females are found to be 32.2% less than that of males, *ceteris paribus*. So, while a man may earn \$30,000 as an employee in some company, an equally educated and experienced woman would earn only \$20,340 in the very same work environment. Not only is the differential rather large, but it is also highly significant. Note that these results are for the year 2000. The popular belief that gender-based earnings differences are a problem of the past is therefore, unsubstantiated.

The first two hypotheses have clearly been proven to be true by the above statements. How-

ever, the variables that are of most interest in this paper were mentioned in the third hypothesis and aim at studying the existence of a double negative effect due to interactions between gender and ethnicity. Such interactions are found to be significant at least the 0.05 level in the case of females in the category *Jap* (born in Japan, Korea, or China), *Phil* (born in Philippines), *Africa* (born in Africa, Caribbean, South America or Oceania), *Indoch* (born in Indochina or Vietnam), *Ukcan* (born in United Kingdom or Canada), and *India* (born in the Indian subcontinent). However, most of the interaction variables do not have the expected negative sign. In fact, only females from *Ukcan* (United Kingdom and Canada) and *India* experience additional wage decreases due to the interaction. They earn 13.4% and 7.1% less respectively than males from their own countries. Females from the other countries received higher wages than males from those countries. Nevertheless, the overall disadvantage of being a female immigrant remained considerable for all ethnicities. The theory of a double negative effect, though modified, is still applicable. Table 4 brings these matters into focus.

The table makes it clear that immigrant females do suffer a double negative effect as compared to male natives. The consequent reduction in their wages is measured by adding the coefficients of the gender and ethnicity variables. So, going back to our earlier example, a typical Indochinese native would earn \$25,890 as compared to \$30,000 earned by a U.S. native. However, if the Indochinese immigrant were female and the U.S. native were male, the immigrant would earn 54.50% (-33.6% + -20.9%) less than the U.S. male – only \$16,350. As opposed to the third hypothesis though, this double negative effect is neither caused by nor amplified by interactions between ethnicity and gender. In fact, in the case of Indochinese people, the women actually have a 13.8% advantage over the men. This is the case with three other groups. As mentioned above, only two of the ten groupings – India and Europe – suffer a further disadvantage due to the interaction. Nevertheless, interaction effects do exist. They may be detrimental for women from some countries, insig-

TABLE 4
Disadvantages of Being a Female Immigrant in the United States

Comparisons	Mex	Jap	Cename	Phil	Europe	Mideas	Africa	Indoch	Ukcan	India
Female v. Male	-33.6%	-33.6%	-33.6%	-33.6%	-33.6%	-33.6%	-33.6%	-33.6%	-33.6%	-33.6%
Immigrant v. Native	-19.4%	-27.7%	-18.0%	-20.5%	-29.4%	-29.4%	-27.5%	-20.9%	-9.8%	-12.0%
Female Immigrant v. Male Native	-53.0%	-61.3%	-51.6%	-54.1%	-63.0%	-63.0%	-61.1%	-54.5%	-43.5%	-45.6%
Female Immigrant v. Male Immigrant (from same country)		7.4%					9.1%	13.8%	-13.4%	-7.19%
Total Disadvantage of Females	-53.0%	-53.9%	-51.6%	-54.1%	-63.0%	-63.0%	-52.0%	-40.7%	-56.9%	-52.8%

NOTES: Data taken from Regression 3 results
Omitted values are not significant

nificant for women from other countries, and beneficial for women from other countries, but they still provide noteworthy explanations that help in understanding wage differentials. Thus, the third hypothesis may be accepted.

The results suggest an interesting question; why do the interaction effects differ from the logically hypothesized results? In the case of the countries with insignificant effects, gender simply may not affect wages. Even though the results show that females earn 33.6% less than males overall, bear in mind that the analysis is carried out over the entire sample. Wages for certain groups within the sample may not be affected by gender.

The positive effects experienced by the other countries are harder to explain. One possible explanation may lie in the fact that women are not traditionally considered to be the bread-earners for the family. They typically have less incentive to remain permanently employed than men do. This may allow them to accept riskier positions with lower job security and therefore, higher pay. However, further re-

search is needed to shed more light on the subject.

Overall, the results are fairly conclusive. Gender and ethnicity clearly make significant contributions to the existence of wage differentials. Interactions between the two, however, have dissimilar results across different groups. A more detailed exploration of the reasons behind these inequalities will undoubtedly aid our understanding of disparities in earnings.

V. CONCLUSION

This paper aims at analyzing the existence of wage gaps between natives and immigrants, paying special attention to ethnicity and gender. The results support the hypotheses that immigrants and females earn less than U.S. natives and males respectively. Double-negative interaction effects are found for some countries, but insignificant and even positive interactions are found for others.

The results suggest that the U.S. government needs to improve its current policies on providing support to immigrants and females. First,

policies oriented towards the idea that all ethnicities have homogenous experiences in the U.S. labor market are clearly misdirected. Ethnic heterogeneity and inter-ethnic differences seem to be the norm. Therefore, employment practices should be based on these principles instead. The need to move away from the melting pot analogy and towards the tossed salad concept is obvious.

Second, the general disadvantage faced by immigrants and females needs to be addressed. Immigrants and women constitute an increasing share of the U.S. workforce and unequal wages may deter them from future participation. Society would thus lose valuable resources (Blau, 2002). Therefore, government intervention aimed at assuring equal treatment for all individuals in the labor force is justified.

The fact that hypothesis 1 and 2 are so clearly supported may imply the presence of discrimination. Although discrimination is illegal on paper, it may still be practiced. Future research on the subject is needed to provide a more comprehensive understanding of the situation.

Other avenues for future research include studying why some females in certain countries do better than their male counterparts, and why some other females do not experience significant effects. Developing more insights into these topics may provide the tools needed to create policies that ensure equal rights to all workers.

In general, the experiences of female immigrants are under-studied. The above suggestions provide some direction for increases in this area of immigration theory, but there are several other approaches to be considered as well. Past investigations have uncovered only the tip of the iceberg and further research is imperative.

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