

Immigrant Women's Labor Force Integration: Human Capital and Family Characteristics

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For submission to the Annual Meeting of the American Sociological Association,
Boston, Massachusetts August 1-4, 2008.

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Melissa Chiu and Sonya Rastogi¹

Even though there are over eight million foreign-born women age 25 to 64 in the United States labor force, we know little about their experience. Research on women and the labor market rarely incorporate foreign-born women, while research on immigrant integration in the labor market tends to focus on men. Using the 2006 American Community Survey, this paper evaluates the influence human capital and family characteristics have on labor force participation and full-time, year-round employment of foreign-born women compared to foreign-born men and native men and women.

Although foreign-born women are a considerable part of the United States labor force, numbering over eight million age 25 to 64, relatively little is known about their current integration in the United States labor market. The majority of studies in the United States that address immigrant labor market integration tend to focus only on immigrant men (Borjas 1994, Chiswick and Hurst 2000, Chiswick and Miller 2002, Chiswick et al. 1997, Duleep and Dowhan 2002). While important studies have illuminated our understanding of immigrant women's labor market integration, they either tend to be based on older data (Schoeni 1998a, 1998b, Waldinger and Gilbertson 1994) or they focus on specific immigrant women groups such as only Latin American (Hagan 1998, Hondagneu-Sotelo 1994, Stier and Tienda 1992) or Asian immigrants (Duleep and Sanders 1993). While older studies help us better understand immigrant women's labor market experience, economic changes and compositional shifts among immigrants necessitate contemporary analyses. In addition, studies on specific immigrant women groups have shed light on immigrant women's labor market integration, however, it is unclear if these results are specific to particular immigrant women or can be generalized to all immigrant women. This paper attempts to expand research on immigrant women's labor market integration

by examining labor force participation and employment status of all foreign-born women using data from the 2006 American Community Survey. Specifically, we analyze the influence of human capital and family characteristics on the labor force integration of foreign-born women.

Labor Force Integration: Participation and Level of Employment

In this paper, we examine two aspects of labor force integration: 1) labor force participation and 2) employment status. Labor force participation is used to examine overall labor market attachment and integration of foreign-born women. Full-time, year-round employment is used to measure the quality and stability of employment. Full-time, year-round work is often more stable and provides better wages and benefits compared to part-time and seasonal work (Kalleberg 2000). As employers turn to the immigrant labor pool to fill jobs that may be unattractive to natives (Waldinger 1997), immigrants are disproportionately employed in low skilled occupational sectors such as retail and food service (Catanzarite 2000, Zolniski 1994, Sassen 1991), which exhibit high levels of seasonal, unstable, fluctuating employment as well as reduced wages and benefits (Tilly 1990).

Human Capital

Human capital has an important influence on labor force integration. While educational attainment is one significant and widely used measure of human capital, additional dimensions must also be examined when studying the labor market experiences of immigrants. In particular, we consider English language ability, U.S. citizenship status, and length of residence in the United States all of which are highly relevant human capital factors for the foreign-born population.

¹ AUTHORS' NOTE: Authors are listed alphabetically to reflect the equal sharing of work.

Educational attainment is positively associated with labor force participation. However, the relationship between educational attainment and labor force participation and full-time employment may differ between natives and the foreign born. Numerous factors such as immigration policy, labor demand, and labor supply result in the concentration of the foreign born in low and high educational attainment categories. Many foreign born have economic motives for migrating to the United States at both ends of the educational distribution. Therefore, it is unclear if the relationship between foreign-born educational attainment and labor force participation will exhibit a positive association of the same magnitude as natives. While the positive influence of education in the labor market may be less pronounced for the foreign born, there may be considerable gender differences. Foreign-born men with low levels of educational attainment may have better access to jobs compared to foreign-born women, due to the composition and nature of male co-ethnic social networks (Hagan 1998). Higher levels of educational attainment may also help foster full-time, year-round employment for all groups. However, there is evidence that structural barriers often inhibit immigrants from translating their education into labor market outcomes at parity with Whites (Barringer et al. 1990, Waldinger and Gilbertson 1994). Therefore, educational attainment may be more pertinent for both foreign-born men and women than their native counterparts to obtain full-time, year-round employment.

Low levels of English proficiency may adversely affect the labor force participation and employment status for foreign-born men and women. However, the effects of poor language skills may differ by gender. Research suggests that foreign-born men have better access to social networks that facilitate labor market integration, while foreign-born women have access to sex segregated networks that are not only more competitive, but are also less conducive to labor market integration (Hagan 1998). These social network differences may mitigate the importance

of English language ability for foreign-born men relative to women, potentially facilitating labor force participation and more stable full-time, year-round employment for foreign-born men.

Overall, while lower levels of English proficiency will likely negatively affect both foreign-born men and women, we expect the influence to be especially great for foreign-born women.

Little research has analyzed the effects of naturalization on labor market integration (but see Chiswick and Hurst 2000 for foreign-born men), particularly for foreign-born women. However, it is likely that U.S. citizenship has an important influence on labor force participation, since citizens have greater access to jobs. For instance, federal employment is only open to citizens and visa restrictions on employment further hinder labor force participation among non-citizens. Moreover, employers who want to hire noncitizens legally must be capable of navigating the complex system for employment visas and many employers may be wary of inadvertently hiring unauthorized immigrants. Thus, citizenship status may have far-reaching effects on the labor force activities of the foreign born. However, citizenship status may have a greater impact on immigrant women's labor force participation. For instance, foreign-born men's social networks and labor market opportunities may diminish the importance of U.S. citizenship in determining labor force participation. In contrast to the potential gendered influence of U.S. citizenship on labor force participation, citizenship status may similarly affect foreign-born men and women's employment status. Specifically, obtaining U.S. citizenship may enable both foreign-born men and women to secure full-time, year-round employment.

Length of residence in the United States is also an important measure of migration-related human capital. Adhering to the assimilation perspective, Chiswick and Hurst (2000) argue the longer that immigrants live in the country the more United States specific skills and knowledge they amass, enhancing their labor market prospects. Overall, length of stay in the

United States positively influences labor market outcomes such as wages for immigrant men. The few studies on immigrant women that do exist find that length of stay in the United States has a positive effect on labor force participation and hours worked (Schoeni 1998a). However, we do not know how length of stay differentially influences immigrant men and women's labor force participation and full-time, year-round employment.

In sum, we examine the labor market effects of a standard measure of human capital, educational attainment, as well as human capital measures particularly important in the context of immigrant employment, English language ability, citizenship status and length of residence in the United States.

Family Context

In addition to human capital factors, family and household context are especially important for understanding women's labor market experiences. We examine the effects of marital status, presence of children in the household, and access to family resources on the labor market activities for foreign-born and native women. We expect to see labor force participation differentials by marital status. Never-married women, particularly those without children have high levels of labor force attachment. This may be more pronounced for foreign-born women because of selectivity issues. Specifically, never-married foreign-born women may migrate to the United States for jobs and therefore experience higher levels of labor force participation compared to never-married native-born women. In contrast, married foreign-born women may be less attached to the labor force compared to married native women. While many married foreign-born women also have economic motives for immigrating, many women who migrate may also face cultural barriers within the household to work.

Prior research overwhelmingly suggests a negative relationship between fertility and female labor force participation (Brewster and Rindfuss 2000). Since foreign-born women are, on average, younger and have higher fertility rates (Dye 2005), additional childcare responsibilities among the foreign born compared to natives may lower foreign-born women's labor force participation. If engaged in the labor force, women with many children in the household and women who have young, non-school age children in the household may choose non-standard work arrangements such as part-time work to accommodate domestic and child care responsibilities. The influence coresident children have on female labor force participation and employment status may be more marked for foreign-born women due to more defined gender roles in foreign-born families (Read 2004, Segura 1991).

Access to family resources is likely to influence labor force participation and full-time, year-round employment. While spousal income, an indicator of access to family resources, has become less important to women's attachment to the labor force (Cohen and Bianchi 1999) and the greatest labor force gains have been made by wives of middle and high earning men (Juhn and Murphy 1997), spousal income continues to have a depressive effect on women's labor force allocation (Cohen and Bianchi 1999). Access to family income presents the financial opportunity for an individual to choose to be in the labor market and the degree of market engagement. Among women whose financial situation is such that they *can* choose not to work, native women may have stronger labor force attachment and fewer cultural barriers than foreign-born women (Read 2004, Segura 1991), thus leading native women to more participation, as well as more full-time employment. Therefore, we will explore whether greater access to family income has an influence on labor force participation and full-time, year- round employment by nativity and gender. In sum, we take a multidimensional approach to studying family and

household context and expect to find differentials in their effects on native and foreign-born women's labor market experiences.

Data and Methods

To study the labor force experiences of women and immigrants, we employ the 2006 American Community Survey. The American Community Survey 2006, a nationally representative sample, collected data from persons in housing units and group quarters.² We restrict our sample to individuals ages 25 to 64 who are civilians living in housing units in the 50 U.S. states and Washington D.C., and who were not born at sea. We have two dependent variables of interest. Labor force participation measures whether an individual is currently engaged in the labor force (employed or unemployed) or is out of the labor force. Full-time, year-round employment is measured as having worked at least 35 hours a week *and* at least 50 weeks in the last 12 months, if the person worked at all in the last 12 months. These definitions are consistent with U.S. Census Bureau and Bureau of Labor Statistics measures.

The main populations of interest are grouped by gender and nativity. Natives are measured as persons born either in the United States, the United States territories and island areas, or born abroad to United States citizen parents, the standard U.S. Census Bureau definition. The main independent variables of interest are human capital and family characteristics. Human capital is measured by education level (no high school diploma; high school diploma or equivalent, which is the omitted category; some college or associate's degree; bachelor's degree; graduate or professional degree), and, for the foreign-born, by having U.S. citizenship, length of United States residence (0 to 9 years; 10 to 19 years; 20 or more years is

² For more information about the ACS, please refer to <http://www.census.gov/acs/www/Downloads/ACS/accuracy2006.pdf>.

the omitted category), and English language proficiency (only English at home is the omitted category; otherwise speaks English very well; well; not well; or not at all). Family characteristics are measured by marital status (currently married is the omitted category; never married; widowed, divorced, or separated), the presence and age of related children in the household (none is the omitted category; any related child under age 6; only related children ages 6 to 17), and coresident family members' income in the previous 12 months (natural log of coresident family income minus own income; 0 if not a family household or negative value (1 percent of family households)). Additionally, we control for such factors as age and age squared, metropolitan residence, Hispanic origin and race if not Hispanic (single-race White is omitted; single-race Black; single-race Asian; and an other category that includes single-race American Indian and Alaska native, single-race Native Hawaiian and other Pacific Islander, single-race some other race, and two or more races).

Hypotheses are tested using separate logistic regression models of labor force participation and, for people who worked in the last 12 months, full-time, year-round employment status. All models include robust standard errors that adjust for complex survey sampling procedures and an additional standard error cluster correction for individuals living in the same household being in the same model. For each labor force outcome, comparisons by gender and nativity group are analyzed via separate models all including foreign-born women in the sample and separate interaction terms for foreign-born women.³ Specifically, we estimate separate models for foreign-born women and native men, foreign-born women and native women, and foreign-born women and foreign-born men. Independent variables and interaction terms are considered individually and in groups, such as human capital and family-related

³ Comparisons across models with different universes should not be made. Specifically, comparisons should not be made among foreign-born men, native men, and native women.

variables. However, the migration-related human capital variables (U.S. citizenship, length of United States residence, and English language proficiency) necessarily can only be analyzed for the foreign-born. Finally, with respect to variable and model selection, we examine individual variable coefficient p -values, then additionally consider the Akaike Information Criterion (AIC) statistic for additional information for model fitting.⁴

Results

Descriptive Results

Table 1 shows the overall levels of labor force participation by nativity and gender in this sample. Native and foreign-born men exhibit high levels of labor force participation, at 85 percent and 90 percent, respectively. Native women also show high participation at 73 percent, but foreign-born females show the lowest level of labor force participation at only 65 percent.

Table 2 shows the percentage of each group, by nativity and sex, that is employed full-time, year-round, among those who have worked in the last 12 months. Men show high percentages of full-time, year-round employment, with native men at 74 percent and foreign-born men at 73 percent in full employment. In contrast, women are less fully employed, with 58 percent of native women and 56 percent of foreign-born employed full-time, year-round.

⁴ A number of models were considered but are not shown in this paper. These models include a basic model, which incorporates the control variables, education, marital status, and foreign-born female main effect and interaction terms. Another model includes all variables in the basic model, but adds the extended family context variables (presence and age of related children in the household and coresident family members' income resources) and their foreign-born female interaction terms. A third model for the foreign born adds the migration-related human capital variables (U.S. citizenship, length of United States residence, and English language proficiency) and related foreign-born female interaction terms. Only the final selected models are shown in this paper.

Labor Force Participation

The modeling results for labor force participation are shown in Table 3, which displays variable coefficients, significance levels, and model statistics. Columns (1) and (2) display the results comparing foreign-born women to native men and women, respectively, for a model including control variables, education, marital status, and extended family context variables. The model in column (3), which compares foreign-born women to foreign-born men, also includes the migration-related variables. Additionally, selected exponentiated coefficients from the models shown in Table 3 are provided in Table 4 for reader convenience. The numbers for foreign-born women include the coefficients for the main variable and variable interaction terms, but not the main effect of being a foreign-born woman, which is shown in the first row only. Unless otherwise noted, all results discussed refer to Table 3.

The results show that not only are all variables of interest (human capital, family context, migration-related human capital) important for understanding labor force participation, but that in most cases, there are also significant differences by nativity and gender in how these variables relate to labor force participation. While education and family context both have strong associations to nativity and gender, education is more strongly associated to nativity compared to gender and family context is more strongly related to gender relative to nativity. There are gender differences in the effects of migration-related human capital as well.

Human Capital

Education is an important human capital variable which influences labor force participation for all groups. As expected, not having a high school degree negatively influences labor force participation, while higher levels of education increase labor force participation.

However, educational levels differentially influence labor force participation by nativity and gender.

Not having a high school degree relative to possessing a high school degree is negatively associated with labor force participation for all groups. The relative effect of low education is greater for both native-born men and women compared to foreign-born women. Specifically, native men and women without a high school degree are 54 and 60 percent less likely to participate in the labor force relative to their high school counterparts, while this same figure for foreign-born women is about 35 percent (Table 4). Interestingly, looking at models 1 and 2 in Appendix Table 1, we find that the opposite relationship is true between foreign-born women and men, where the relative negative effect of low education is significantly greater for foreign-born women. However, once migration-related variables are added to the model (Appendix Table 1 Model 3), we find that all foreign-born who do not possess a high school degree are less likely to be in the labor force compared to their high school educated counterparts, but there is no significant difference between foreign-born men and women without high school degrees.

Having some college, a bachelor's degree or a graduate degree increases the likelihood of labor force participation for foreign-born women, and native-born men and women. However, the magnitude of the coefficients is greater for both native-born men and women compared to foreign-born women, indicating that foreign-born women experience considerably less relative gain in labor force participation, due to education, compared to both groups. For instance, both native and foreign-born women with bachelor's degrees are 64 and 34 percent more likely to be in the labor force compared to their high school counterparts (Table 4). The coefficient for some college for foreign-born men is not significant, while foreign-born women with some college are more likely to participate in the labor force compared to their high school counterparts. Foreign-

born men and women with bachelor's and graduate degrees are more likely to be in the labor force. However, bachelor's and graduate education have a stronger positive association for foreign-born women's labor force participation. For example, foreign-born men and women with bachelor's degrees are 9 and 27 percent more likely to be in the labor force compared to those in high school (Table 4). However, the stronger positive association does not bring highly educated foreign-born women to parity with highly educated foreign-born men, due to the overall negative effect of being foreign-born female.

Overall, we find that the negative influence of having low levels of education is greater for both native men and native women compared to foreign-born women. The opposite pattern exists for higher levels of education, where native men and women receive greater returns to their educational attainment compared to foreign-born women. The foreign-born models show different patterns for low and high education levels. At low levels of education, all foreign-born are less likely to be in the labor force and gender differences are explained away by migration related human capital. However, at high levels of education the effect is stronger for foreign-born women's labor force participation compared to foreign-born men.

Family Context

With respect to family context, we find that marital status, the presence of related children in the household, and access to coresident family income are all important factors for understanding labor force participation. Moreover, the results for marital status and presence of related children in the household have strongly gendered implications, while also showing significant nativity differences. However, access to family income has a surprisingly similar effect across all groups.

The effects of marital status on labor force participation are as expected. Foreign-born and native men who have never married or who are divorced, widowed, or separated are substantially less likely to be in the labor force compared to those that are currently married, by, respectively, 32 and 35 percent for foreign-born men and 63 and 54 percent for native men (Table 4). In contrast, native and foreign-born never married, and divorced, widowed, or separated women are *more* likely to be engaged in the labor force compared to their married counterparts. This association is significantly stronger for foreign-born women compared to native women. For instance, never married foreign-born and native women are, respectively, 54 percent and 16 percent more likely to be in the labor force compared with those who are married (Table 4). Thus, labor force participation is significantly related to marital status in a distinctively gendered pattern, where being married is positively related to men's participation but being unmarried is positively related to women's participation. Though not as strong in magnitude as the gender pattern, a no less significant nativity difference exists as well, with foreign-born single women being particularly likely to participate in the labor force, compared to native women.

Similar to the results for marital status, we see strong gendered patterns in the relationship between coresident related children and labor force participation. Native and foreign-born men are *more* likely to be engaged in the labor force if any related child is in the household, whether there is any child under age 6 or only school age children age 6 to 17 in the household. The opposite is true for native and foreign-born women. Not only are both native and foreign-born women less likely to be engaged in the labor force if there are children present in the household, but this effect is even greater if there are children under age 6 in the household. Moreover, these negative associations are significantly stronger for foreign-born women

compared to native women. For example, foreign-born and native women with children under age 6 in the household are, respectively, 62 percent and 53 percent less likely to work than women living in households without any young children (Table 4). Thus, as with marital status, the presence of related children in the household shows a strong, gendered pattern as well as, to a lesser degree, a nativity-related pattern.

Finally, as expected, access to coresident family members' income is negatively associated with labor force participation for all groups, so that as family resources increase, people are less likely to participate in the labor force. The influence of access to family income is the same for foreign-born women compared to both foreign-born men and native women. Interestingly, however, the dampening effect of access to family income resources is significantly attenuated for foreign-born women vis-à-vis native men. For instance, native men with access to family resources of \$75,000 are 34 percent less likely to participate in the labor force, compared to native men without family income, while foreign-born women in this situation are only 25 percent less likely to participate, compared to foreign-born women with no family income (Table 4). That there is no significant difference between foreign-born women and foreign-born men or native women in the effect of family income is unexpected and will be elaborated upon in the discussion section.

Migration-related Human Capital

For the foreign-born population, we examine the effects of several additional human capital factors that are related to the migration process: U.S. citizenship, length of residence in the United States, and English language proficiency (see column 3 in Tables 3 and 4). Broadly speaking, these migration-related human capital effects work in the directions expected for

foreign-born women's labor force participation. In contrast, the migration-oriented human capital effects for foreign-born men are less important or do not operate in the expected way.

With respect to U.S. citizenship, being a citizen does not significantly affect foreign-born men's labor force participation, whereas U.S. citizenship significantly increases foreign-born women's participation by 44 percent (Table 4). Considering that foreign-born women are substantially (72 percent) less likely than their male counterparts to participate in the labor force overall (Table 4), the positive effect of naturalization for women still does not increase labor force participation to be at parity with either noncitizen or citizen foreign-born men.

Length of United States residence affects foreign-born women in the way expected, but not for foreign-born men. Among foreign-born women, compared to those who have been in the United States for 20 years or longer, the newest residents (0 to 9 years) are 22 percent less likely to participate in the labor force, while medium term residents (10 to 19 years) are 1 percent less likely, however this finding is not statistically significant (Table 4). Thus, the longer a foreign-born woman has resided in the United States, the more likely she is to participate in the labor force. Most of the negative effect of shorter residence occurs for those who have been in the United States for under 10 years, since medium-term and long-term residents are nearly the same in level of labor force participation.

Foreign-born men show a somewhat different pattern. Unlike for foreign-born women, being a new resident (0 to 9 years) does not have any negative effect on labor force participation for foreign-born men. In fact, there is no significant difference between foreign-born men who have lived in the United States under 10 years versus 20 years or more. Also contrary to the expected pattern, the effect of United States residence is not monotonic, since foreign-born men who have resided in the United States 10 to 19 years are 24 percent *more* likely than long-term

residents to participate in the labor force (Table 4). Thus, for foreign-born men, the group most likely to participate in the labor force are those who are medium-term residents, while for foreign-born women, the groups with highest labor force participation rates are women who are either medium-term or long-term residents.

The third migration-related human capital variable is English language proficiency, which is self-described and asked only of people who speak a language other than English at home. Vis-à-vis those who only speak English at home, the foreign-born who rate themselves as speaking English “very well” are 13 percent *more* likely to participate in the labor force (Table 4). There is no significant difference between men and women in the effects of speaking English “very well.” However, speaking English less than “very well” decreases the likelihood of foreign-born women’s labor force participation, and has no significant effects on foreign-born men. Foreign-born women who speak English “well”, “not well”, and “not at all” are, respectively, 12 percent, 29 percent, and 45 percent less likely than women speaking English only (at home) to participate in the labor force (Table 4).

Thus, for foreign-born women, the relationship between English language proficiency and labor force participation is as expected, generally speaking, with lower levels of proficiency having increasingly negative effects on labor force participation. However, the relationship is not entirely monotonic, as women speaking English “very well” are more likely to participate than women speaking only English at home. This high participation level for those speaking English “very well” is also exhibited among foreign-born men. However, men show a slightly different pattern in that men who speak English “well”, “not well” and “not at all” are not distinguishable from men who speak only English at home. Thus, while the group of foreign-born persons speaking English “very well” is distinctive among both men and women, women also exhibit

significant, increasingly detrimental effects of low English language proficiency on labor force participation.

Overall, these three human capital factors that are unique to the migration experience—U.S. citizenship, length of residence in the United States, and English language proficiency—work in some expected and some unexpected ways on labor force participation. These factors work in mostly the expected ways for women, with the highest levels of human capital having a positive effect on labor force participation. In contrast, for men, these factors either exhibited no significant differences (e.g., U.S. citizenship) or else only for selected groups with intermediate levels of human capital (e.g., medium-term United States residents and speaking English “very well”). Moreover, these gender differences were significant, with less benefit to women for residing in the United States longer or having higher levels of English proficiency, but more benefit to U.S. citizenship. However, the magnified positive effect of U.S. citizenship for women does not close the overall disparity between foreign-born men’s and women’s labor force participation. These patterns will be covered further in the discussion section.

Full-time, Year-round Employment

The modeling results for full-time, year-round employment in the last year are shown in Tables 5 and 6. These tables are analogous to the results tables for labor force participation. Table 5, the main table, displays variable coefficients, significance levels, and model statistics. Table 6 additionally provides selected exponentiated coefficients from the models for reader convenience. Again, the numbers for foreign-born women include the coefficients for the main variable and variable interaction terms, but not the main effect of being a foreign-born woman,

which is shown in the first row only. Unless otherwise noted, all results discussed refer to Table 5.

Similar to the models of labor force participation, the results show that all variables of interest (human capital, family context, migration-related human capital) are important for understanding the level of employment of those who have worked recently. However, while there exist differences by nativity and gender in how strongly these variables are associated with full employment, compared to the results for labor force participation, these differences are somewhat attenuated and, in some cases, not significant. For instance, there are no gender differences among the foreign born in the way education or English language proficiency relate to full-time, year-round employment. Still, there are significant differences by gender and nativity in the effects of education (when comparing to natives and foreign-born women), of family context, and of U.S. citizenship and length of United States residence (when comparing foreign-born men and women).

Human Capital

Similar to the labor force participation results, native men and women, and foreign-born women who do not have a high school degree are, respectively, 39 percent, 41 percent, and 26 percent less likely to be employed full-time, year-round compared to their counterparts who hold a high school degree (Table 6). The negative association is significantly stronger for native men and women relative to foreign-born women. However, comparing foreign-born men and women, the basic negative association of low education exists, but the gender differences exist only in the basic model and in a model including family context characteristics (Appendix Table 2, models 1 and 2). The gender difference changes once migration-related human capital is added

to the model (Appendix Table 2, model 3). Specifically, once we control for migration-related variables, we find that while all foreign-born who do not have high school degrees are less likely to participate in full-time, year-round employment, there is no significant difference between men and women. These results suggest that overall, the effect of education is related to both nativity and gender, but among the foreign-born, the gender differences in education effects can be accounted for by migration-related human capital factors.

Native men and women with some college are more likely to be engaged in full-time, year-round work relative to their high school counterparts, while foreign-born women with some college are less likely to be employed full-time, year-round. The basic foreign-born models reveal a different pattern of results, where foreign-born men with some college are less likely and foreign-born women with some college are more likely to be engaged in full-time, year-round employment (Appendix Table 2). This relationship holds true for the basic foreign-born model and when family context variables are added to the model. However, when migration-related variables are added to the model we find that all foreign-born with some college are less likely than their high school counterparts to be employed in full-time, year-round work but there is no significant difference between foreign-born men and women with some college.

Native men and foreign-born women with bachelor's degrees are 31 percent and 2 percent⁵ more likely to be engaged in full-time, year-round work than their counterparts with a high school education (Table 6). The association is much stronger for native men relative to foreign-born women. For native women, having a bachelor's degree is not associated with full-time, year-round employment. Foreign-born women with a bachelor's degree are more likely to work full-time, year-round relative to their high school counterparts and the difference is significant between foreign women and native women. In the basic model and the model with

family characteristics the coefficients are positive and significant for both foreign-born men and women (Appendix Table 2). The magnitude of the coefficient for foreign-born men is much greater, indicating that having a bachelor's degree is important for both foreign-born men and women, but the association is stronger for foreign-born men. As with not having a high school diploma, and having some college, having attained a bachelor's degree loses its significance for both foreign-born men and women when migration-related variables are introduced to the model.

Graduate degrees slightly enhance native men's full-time, year-round employment. The opposite is true for foreign-born women relative to native men. Both these findings are significant below the 0.10 level. Relative to their high school counterparts, graduate degrees do not increase the likelihood of full-time, year-round employment for native women. Compared to native women, foreign-born women with graduate degrees are estimated to be slightly more likely to be engaged in full-time, year-round employment compared to their high school counterparts, however this result is not statistically significant (Table 6). However, this does not bring foreign-born women with graduate degrees to parity with native women with graduate degrees. Turning to the foreign-born models, having a graduate degree is significant for both foreign-born men and women, however there is no significant difference between the two groups.

Family Context

Similar to the findings for labor force participation, the results show the importance of family context influences on full-time, year-round employment among those who have worked in the last 12 months. Also like for labor force participation, gender and nativity differences exist for both marital status and the presence of children in the household. However, the relationship

⁵ This finding is not statistically significant.

between gender and coresident family income resources on level of employment is significantly different only when comparing foreign-born women to natives, and not when comparing to foreign-born men.

The overall findings for marital status are as expected. Never married, divorced, widowed, and separated native and foreign-born men are *less* likely to be engaged in the labor force than their married counterparts, while foreign-born and native women are *more* likely to be in full-time, year-round employment. As in the labor force participation models, relative to native women, the marital status associations are significantly stronger for foreign-born women. For example, never married foreign born and native women are, respectively, 23 percent and 8 percent more likely to work full-time, year-round compared to their married counterparts (Table 6). Thus, the influence of marital status on employment level is strongly gendered, but also related to nativity status.

As with labor force participation, the presence of related children in the household is positively related to native men and foreign-born men's full-time, year-round employment, while foreign-born and native women's full-time, year-round employment is negatively associated with the presence of children in the household, in particular young children. In the labor force participation models, we find that the presence of children in the household has a relatively more inhibiting effect on foreign-born women compared to native women. Interestingly, for full-time, year-round employment, we find that the negative association is instead stronger for native women. For instance, foreign-born and native women who live with children under the age of 6 are 36 percent and 45 percent, respectively, less likely to be engaged in full-time, year-round employment relative to women who do not reside with young children (Table 6). It may be that among women who have worked recently, native women have more options than foreign-born

women in the degree to which they work. In sum, while the presence of children in the household is strongly gendered and secondarily related to migration, the relative reversal in the effect of nativity among women is unexpected and will be expanded upon in the discussion section.

With respect to coresident family member's income on level of employment, the results are broadly in line with expectations. There is an overall negative association between access to family resources and full-time, year-round work for all groups. However, the association is significantly stronger for both native men and women compared to foreign-born women. While there is a negative association between access to family income and full-time, year-round for both foreign-born men and women, the gender difference is not significant. This lack of gender difference for the foreign-born will be discussed further in the discussion section. In summary, there are nativity and gender differences in the effects of family resources when comparing foreign-born women to natives, but no gender differences when comparing to foreign-born men.

Migration-related Human Capital

As with labor force participation, in models of full-time, year-round employment for foreign-born persons who have worked in the last 12 months, we additionally examine the effects of migration-related human capital factors: having U.S. citizenship, longer length of residence in the United States, and more English language proficiency (see column 3 in Tables 5 and 6). All of these factors are significantly related, generally in the expected direction, to being fully employed. Overall, there are no differences between foreign-born men and women by level of English language proficiency. However, as with labor force participation, U.S. citizenship and length of residence in the United States operate differently for foreign-born women and men,

with more positive effects of U.S. citizenship and more negative effects of shorter length of residence for women.

Having U.S. citizenship is significantly positively related to being employed fully for both foreign-born men and women, with women showing an even greater positive relationship. Foreign-born men who are United States citizens are 15 percent more likely and foreign-born women are 24 percent more likely to be fully employed than their noncitizen counterparts (Table 6). The difference between women and men is also significant, meaning that U.S. citizenship is even more positive for women. Since the gender difference is significant and positive for labor force participation as well, this means that U.S. citizenship has a substantially greater positive effect on foreign-born women's labor force outcomes than on foreign-born men's. Still, this is not sufficient to bring U.S. citizen women's labor force outcomes up to parity with U.S. citizen men's.

Length of residence in the United States is related to full employment for the foreign born and is related differently for women vis-à-vis men. For foreign-born women, the effect of shorter length of residence is negative as expected: compared to their long-term (20 or more years) resident counterparts, medium-term (10 to 19 years) residents are only 5 percent less likely and short-term (0 to 9 years) residents are 27 percent less likely to be employed full-time, year-round (Table 6). The negative effects of shorter length of residence are also magnified for women, compared to men. However, for foreign-born men the effects are not monotonic as might be expected. Among foreign-born men, medium-term residents are 5 percent *more* likely to be fully employed than long-term residents, while short-term residents are 16 percent less likely to be fully employed than long-term residents (Table 6). This non-monotonic relationship between length of United States residence and full-time, year-round employment is also present in the

labor force participation models. Thus, shorter length of United States residence is related to labor force outcomes in the expected ways for foreign-born women, while for men, the relationship is significant but works in unexpected directions.

As expected, greater English language proficiency is significantly, positively related to full-time, year-round employment for the foreign-born. People with lower English proficiency are less likely to be fully employed than those who speak only English at home. This depression in the likelihood of full employment ranges from 5 percent for those who speak English “very well” to 24 percent for those who speak English “not at all” (Table 6). The negative effects of lower English proficiency are generally similar for foreign-born men and women. There is only one significant difference for females; for foreign-born women who speak English “well” the main effect is attenuated by about 5 percent (Table 6). Overall, however, for both men and women, the likelihood of being employed full-time, year-round increases with level of English language proficiency. In contrast, English proficiency is not strictly positively related to labor force participation, especially for foreign-born men. Thus, while English proficiency is a significant factor for understanding both labor force outcomes, the characteristics of the relationship vary and also differ only slightly by gender.

In summary, the human capital factors related to migration to the United States, U.S. citizenship, longer length of residence in the United States, and higher English language proficiency, prove to be important factors for understanding the full-time, year-round employment behavior of the foreign-born who have worked recently. The three factors tend to work in expected ways for the foreign-born, since those with higher levels of human capital are more likely to be fully employed, if they worked in the last 12 months. The only exception is that of length of United States residence for foreign-born men, for whom medium-term residents are

more likely than long-term residents to be fully employed. Also, effects on full employment differ significantly by gender for U.S. citizenship and length of residence, but not for English language proficiency. In contrast, men and women's labor force participation behavior differs significantly by all three factors. Also, for both models, none of the positive differences for foreign-born women bring women's labor force outcomes to parity with men's.

Discussion and Conclusions

There are some interesting and striking results for educational attainment. Not having a high school degree negatively affects all groups, however foreign-born men and women fare relatively better than native men and women with no high school. This could be due to a number of factors, for instance, natives with low education may have a higher wage threshold or job criteria for engaging in the labor market, thus depressing the rate of labor force participation and full employment. Other potential contributors for this result are that the foreign-born with low education may have extensive, immigrant-based networks that facilitate job attainment in the secondary employment sector and may also be recruited specifically by employers for jobs not requiring high education (see, for instance, Hagan 1998), thus leading to higher rates of labor force participation and fewer gaps in employment. In addition, there are no gender differences in labor force participation and full-time, year-round employment between foreign-born men and women with no high school degree once migration-related human capital is added to the models. This suggests that the gender disparity among the foreign-born with low education can be attributed to gender differences in the migration experience and the development of other types of human capital.

Generally, as expected, having more education has a positive influence on labor force participation for all groups. However, interestingly, the effects of having higher education are either not significant or lower in magnitude for full-time, year-round employment. Moreover, surprisingly, native females with a bachelor's or graduate degree are less likely to be engaged in full-time, year-round employment relative to their high school counterparts. Perhaps these women are choosing to work less. To further understand this finding, as a next step, we will investigate the type of work these women are going into (e.g. part-time, year-round employment versus full-time, part-year employment).

As expected, the effect of marital status is gendered, where native and foreign-born men are more likely to be in the labor force when married, while married native women and foreign-born women are less likely to be in the labor force and engaged in full-time, year-round work. This effect is stronger for foreign-born women for both dependent variables. This may be due to differential gender norms within foreign and native-born households. Qualitative literature suggests that married foreign-born women face relatively more gender-defined roles in the household (Read 2004, Segura 1991), which may inhibit labor force participation and full-time, year-round work.

The relationship between presence of children in the household and labor force participation for women also supports the hypothesis that foreign-born women may have more clearly defined gender roles in the household relative to native women. Specifically, the presence of children in the household negatively influences both native and foreign-born women's labor force participation, however, the effect is stronger for foreign-born women. Interestingly, for full-time, year-round work, we find the negative effect of the presence of children to be stronger for native women relative to foreign-born women. One reason for this

finding may be due to selectivity of the foreign-born women who are engaged in the labor force. Foreign-born women who do engage in the labor force may not face the same gendered norms as those who opt out or they may have overcome cultural barriers within the family, enhancing their full-time, year-round employment relative to native women. An additional factor could be that native women who are in the labor force and have children may have more options than foreign-born women and may be able to afford not to work full-time, year-round. Again, we intend to disaggregate the category of non-full-time, year-round work in order to understand better the relationship of family context to level and degree of employment.

We expected access to coresident family income to have a larger influence on women than men for labor force participation and full-time, year-round employment. However, while access to the resources of one's coresident family members negatively influences labor force participation for all groups, we find a significant difference only between native men and foreign-born women. Interestingly, the magnitude is greater for native men. The same relationship is true for full-time, year-round employment, however, we also find a significant difference between native women and foreign-born women. It may be that the variable we use for access to family income is also picking up a wealth effect, where natives have greater access to wealth compared to the foreign-born and are able to opt out of the labor force and full-time employment. Immigrant selectivity may also be operating, where immigrants who are coming to the United States are coming to work and therefore would be less sensitive to access to family income. Additionally, differential living arrangements and income pooling may be operating. For instance, a native woman who lives only with her husband may have access to her husband's income of \$75,000, while a foreign-born woman in an extended family, may have access to her

husband's income of \$50,000, but does not have access to her sister's income of \$25,000. More research is required to tease out these different relationships.

Migration-related human capital variables enhance our understanding of the foreign-born experience in the labor market and reveal some interesting gender implications for the foreign-born. In fact, the effects of U.S. citizenship, length of United States residence, and English language proficiency explain some of the differences between men and women in the effects of education. Foreign-born women with lower levels of human capital are less likely to be in the labor force and fully employed than men with equally low levels of human capital. Since foreign-born women derive more benefit from U.S. citizenship and higher education, this suggests that women may tend towards formal human capital routes to enter the labor market. Moreover, foreign-born men's employment opportunities and strong social networks may facilitate, more informally, both labor force participation and full-time, year-round employment relative to foreign-born women. Also, there may be selectivity differences between foreign-born men and women. For instance, for men we unexpectedly find that medium-term United States residents are more likely to be in the labor force and be employed full-time compared to long-term residents. This medium-term group arrived in the United States between 1987 and 1996, in the 10 years following the passage of the Immigration Reform and Control Act (IRCA) of 1986. During this time period, the legislation may have led to the migration of men who were particularly oriented towards work, but not necessarily for women in the same cohort. These and other factors appear to be mitigating for foreign-born men the labor market barriers of lower levels of migration-related human capital.

This paper examined the effects of nativity and gender on labor force integration in two ways. First, we studied differences in labor force participation and level of employment by

groups defined by nativity and gender. Second, we analyzed the differences in labor market behavior by classes of characteristics related to family and to migration experiences. These variables were added to more classic models using education and marital status as starting points for understanding labor market behavior. We found that all characteristics, including the family and migration-related human capital variables, are necessary for understanding labor market behavior. Moreover, we found that labor force integration differs by gender and nativity as well, with foreign-born women being the least integrated of the four groups considered in this paper. Finally, we laid out some paths for future research to understand further how gender and migration relate to labor market behavior.

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Table 1. Labor Force Participation of Civilians Age 25 to 64 by Nativity and Sex: 2006

Nativity and sex	Civilians age 25 to 64	In the labor force	
		Number	Percent
Total	155,307,464	122,150,680	78.7
Male	75,996,160	65,322,394	86.0
Female	79,311,304	56,828,286	71.7
Native	129,016,127	101,808,848	78.9
Male	62,622,038	53,348,614	85.2
Female	66,394,089	48,460,234	73.0
Foreign-born	26,291,337	20,341,832	77.4
Male	13,374,122	11,973,780	89.5
Female	12,917,215	8,368,052	64.8

Source: U.S. Census Bureau, 2006 American Community Survey

Table 2. Full-Time, Year-Round Status of Civilians Age 25 to 64 Who Worked in the Last 12 Months by Nativity and Sex: 2006

Nativity and sex	Civilians age 25 to 64 who worked in the last 12 months	Worked full-time, year-round	
		Number	Percent
Total	126,944,025	83,857,668	66.1
Male	67,058,921	49,507,092	73.8
Female	59,885,104	34,350,576	57.4
Native	105,865,301	70,008,035	66.1
Male	54,772,953	40,599,787	74.1
Female	51,092,348	29,408,248	57.6
Foreign-born	21,078,724	13,849,633	65.7
Male	12,285,968	8,907,305	72.5
Female	8,792,756	4,942,328	56.2

Source: U.S. Census Bureau, 2006 American Community Survey

Table 3. Labor Force Participation Model Coefficients for Civilians Age 25 to 64 by Nativity and Sex: 2006

	(1)	(2)	(3)
Variables	Native Men and Foreign-born Women	Native Women and Foreign-Born Women	Foreign-Born Men and Foreign-Born Women
Intercept	-0.944 ***	-1.431 ***	-1.787 ***
Metropolitan Residence	0.194 ***	0.046 ***	0.068 *
<i>Race-Hispanic Origin</i>			
White Alone, Non-Hispanic (Omitted)			
Hispanic	-0.166 ***	-0.004	0.337 ***
Black Alone, Non-Hispanic	-0.279 ***	0.106 ***	0.496 ***
Asian Alone, Non-Hispanic	-0.141 ***	-0.008	0.018
Other, Non-Hispanic	-0.434 ***	-0.189 ***	-0.139 *
Age	0.214 ***	0.170 ***	0.223 ***
Age ²	-0.003 ***	-0.002 ***	-0.003 ***
Foreign-born Female	-1.217 ***	-0.245 ***	-1.275 ***
<i>Education</i>			
No High School Diploma	-0.778 ***	-0.929 ***	-0.229 ***
High School Diploma or Equivalent (Omitted)			
Some College	0.288 ***	0.335 ***	-0.030
Bachelor's Degree	0.745 ***	0.496 ***	0.089 **
Graduate, Professional Degree	0.830 ***	0.838 ***	0.383 ***
<i>Foreign-born Female * Education</i>			
FB Female* No High School Diploma	0.377 ***	0.506 ***	-0.055
FB Female* Some College	-0.045 ^	-0.081 ***	0.160 ***
FB Female* Bachelor's Degree	-0.488 ***	-0.201 ***	0.154 ***
FB Female* Graduate, Professional Degree	-0.299 ***	-0.265 ***	0.132 **
<i>Marital Status</i>			
Never Married	-0.985 ***	0.151 ***	-0.391 ***
Widowed, Divorced, Separated	-0.767 ***	0.190 ***	-0.433 ***
Currently Married (Omitted)			
<i>Foreign-born Female * Marital Status</i>			
FB Female* Never Married	1.392 ***	0.279 ***	0.883 ***
FB Female* Widowed, Divorced, Separated	1.574 ***	0.499 ***	1.010 ***
<i>Related Children in Household</i>			
Any Child Under Age 6	0.267 ***	-0.759 ***	0.136 ***
Only Children Ages 6 to 17	0.290 ***	-0.181 ***	0.086 ***
No Related Children (Omitted)			
<i>Foreign-born Female * Related Children in Household</i>			
FB Female* Any Child Under Age 6	-1.419 ***	-0.203 ***	-0.932 ***
FB Female* Only Children Ages 6 to 17	-0.683 ***	-0.075 ***	-0.345 ***
ln(Family Income)	-0.038 ***	-0.030 ***	-0.033 ***
Foreign-born Female *ln(Family Income)	0.012 ***	0.001	-0.002

(CONTINUED)

Table 3. Labor Force Participation Model Coefficients for Civilians Age 25 to 64 by Nativity and Sex: 2006

Variables	(1)	(2)	(3)
	Native Men and Foreign-born Women	Native Women and Foreign- Born Women	Foreign-Born Men and Foreign-Born Women
<i>(CONTINUED)</i>			
Naturalized U.S. Citizen			-0.008
Foreign-born Female *Naturalized			0.375 ***
<i>Length of Residence in U.S.</i>			
20 or More Years (Omitted)			
10 to 19 Years			0.211 ***
0 to 9 Years			0.021
<i>Foreign-born Female *Length of Residence in U.S.</i>			
FB Female* 10 to 19 Years			-0.225 ***
FB Female* 0 to 9 Years			-0.272 ***
<i>English Language Proficiency: Speaks English ...</i>			
Speaks Only English at Home (Omitted)			
"Very Well"			0.125 ***
"Well"			-0.030
"Not Well"			0.054
"Not at All"			-0.016
<i>Foreign-born Female *English Language Proficiency</i>			
FB Female* "Very Well"			-0.014
FB Female* "Well"			-0.093 *
FB Female* "Not Well"			-0.396 ***
FB Female* "Not at All"			-0.583 ***
N	1156042	1243584	312882
DF	26	26	40
AIC	60482257	86659545	23568116
-2 LL	60482203	86659491	23568034

*** p -value $\leq .001$, ** p -value $\leq .01$, * p -value $\leq .05$, ^ p -value $\leq .10$

Source: U.S. Census Bureau, 2006 American Community Survey

Table 4. Labor Force Participation Exponentiated Model Coefficients for Civilians Age 25 to 64 by Nativity and Sex: 2006

Variables	(1)		(2)		(3)	
	Native Men and Foreign-born Women		Native Women and Foreign-Born Women		Foreign-Born Men and Foreign-Born Women	
	Native Men	Foreign-born Women #	Native Women	Foreign-born Women #	Foreign-Born Men	Foreign-born Women #
Foreign-born Female		0.30		0.78		0.28
<i>Education</i>						
No High School Diploma	0.46	0.67	0.40	0.66	0.80	0.75
High School Diploma or Equivalent (Omitted)						
Some College	1.33	1.28	1.40	1.29	0.97	1.14
Bachelor's Degree	2.11	1.29	1.64	1.34	1.09	1.27
Graduate, Professional Degree	2.29	1.70	2.31	1.77	1.47	1.67
<i>Marital Status</i>						
Never Married	0.37	1.50	1.16	1.54	0.68	1.63
Widowed, Divorced, Separated	0.46	2.24	1.21	1.99	0.65	1.78
Currently Married (Omitted)						
<i>Related Children in Household</i>						
Any Child Under Age 6	1.31	0.32	0.47	0.38	1.15	0.45
Only Children Ages 6 to 17	1.34	0.67	0.83	0.77	1.09	0.77
No Related Children (Omitted)						
<i>ln(Family Income)</i>						
ln(\$ 500)	0.79	0.85	0.83	0.84	0.81	0.81
ln(\$25,000)	0.68	0.77	0.74	0.75	0.72	0.70
ln(\$75,000)	0.66	0.75	0.71	0.72	0.69	0.68
Naturalized U.S. Citizen					0.99	1.44
<i>Length of Residence in U.S.</i>						
20 or More Years (Omitted)						
10 to 19 Years					1.24	0.99
0 to 9 Years					1.02	0.78
<i>English Language Proficiency: Speaks English</i>						
Speaks Only English at Home (Omitted)						
"Very Well"					1.13	1.12
"Well"					0.97	0.88
"Not Well"					1.06	0.71
"Not at All"					0.98	0.55

For each variable category, the exponentiated coefficients for foreign-born women include both the category main and interaction term coefficients but not the overall main effect for foreign-born women, which is shown in the first row only.

Source: U.S. Census Bureau, 2006 American Community Survey

Table 5. Full-Time, Year-Round Status Model Coefficients for Civilians Age 25 to 64 Who Worked in the Last 12 Months, by Nativity and Sex: 2006

Variables	(1)	(2)	(3)
	Native Men and Foreign born Women	Native Women and Foreign- Born Women	Foreign-Born Men and Foreign-Born Women
Intercept	-1.506 ***	-1.883 ***	-0.760 ***
Metropolitan Residence	0.112 ***	0.059 ***	0.152 ***
<i>Race-Hispanic Origin</i>			
White Alone, Non-Hispanic (Omitted)			
Hispanic	-0.034 **	0.130 ***	0.219 ***
Black Alone, Non-Hispanic	-0.156 ***	0.186 ***	0.130 ***
Asian Alone, Non-Hispanic	0.007	0.163 ***	0.056 ***
Other, Non-Hispanic	-0.361 ***	-0.046 *	-0.106 ^
Age	0.149 ***	0.125 ***	0.086 ***
Age ²	-0.002 ***	-0.001 ***	-0.001 ***
Foreign-born Female	-1.078 ***	-0.323 ***	-0.660 ***
<i>Education</i>			
No High School Diploma	-0.498 ***	-0.530 ***	-0.218 ***
High School Diploma or Equivalent (Omitted)			
Some College	0.091 ***	0.031 ***	-0.178 ***
Bachelor's Degree	0.270 ***	-0.010	-0.006
Graduate, Professional Degree	0.020 ^	-0.185 ***	0.058 *
<i>Foreign-born Female * Education</i>			
FB Female* No High School Diploma	0.192 ***	0.217 ***	-0.044
FB Female* Some College	-0.179 ***	-0.112 ***	0.031
FB Female* Bachelor's Degree	-0.249 ***	0.049 *	0.036
FB Female* Graduate, Professional Degree	-0.046 ^	0.191 ***	-0.052
<i>Marital Status</i>			
Never Married	-0.759 ***	0.078 ***	-0.155 ***
Widowed, Divorced, Separated	-0.612 ***	0.146 ***	-0.190 ***
Currently Married (Omitted)			
<i>Foreign-born Female * Marital Status</i>			
FB Female* Never Married	1.002 ***	0.130 ***	0.373 ***
FB Female* Widowed, Divorced, Separated	0.890 ***	0.119 ***	0.380 ***
<i>Related Children in Household</i>			
Any Child Under Age 6	0.052 ***	-0.596 ***	0.155 ***
Only Children Ages 6 to 17	0.111 ***	-0.369 ***	0.106 ***
No Related Children (Omitted)			
<i>Foreign-born Female * Related Children in Household</i>			
FB Female* Any Child Under Age 6	-0.479 ***	0.151 ***	-0.517 ***
FB Female* Only Children Ages 6 to 17	-0.303 ***	0.180 ***	-0.262 ***
In(Family Income)	-0.032 ***	-0.019 ***	-0.011 ***
Foreign-born Female *In(Family Income)	0.029 ***	0.016 ***	0.003

(CONTINUED)

Table 5. Full-Time, Year-Round Status Model Coefficients for Civilians Age 25 to 64 Who Worked in the Last 12 Months, by Nativity and Sex: 2006

	(1)	(2)	(3)
Variables	Native Men and Foreign born Women	Native Women and Foreign-Born Women	Foreign-Born Men and Foreign-Born Women
<i>(CONTINUED)</i>			
Naturalized U.S. Citizen			0.135 ***
Foreign-born Female *Naturalized			0.080 ***
<i>Length of Residence in U.S.</i>			
20 or More Years (Omitted)			
10 to 19 Years			0.051 **
0 to 9 Years			-0.179 ***
<i>Foreign-born Female *Length of Residence in U.S.</i>			
FB Female* 10 to 19 Years			-0.098 ***
FB Female* 0 to 9 Years			-0.129 ***
<i>English Language Proficiency: Speaks English ...</i>			
Speaks Only English at Home (Omitted)			
"Very Well"			-0.051 *
"Well"			-0.201 ***
"Not Well"			-0.140 ***
"Not at All"			-0.276 ***
<i>Foreign-born Female *English Language Proficiency</i>			
FB Female* "Very Well"			0.010
FB Female* "Well"			0.063 ^
FB Female* "Not Well"			-0.019
FB Female* "Not at All"			0.006
N	982582	944475	249612
DF	26	26	40
AIC	72357692	80093702	26058179
-2 LL	72357638	80093648	26058097

*** p -value $\leq .001$, ** p -value $\leq .01$, p -value $\leq .05$, ^ p -value $\leq .10$

Source: U.S. Census Bureau, 2006 American Community Survey

Table 6. Full-Time, Year-Round Status Exponentiated Model Coefficients for Civilians Age 25 to 64 Who Worked in the Last 12 Months, by Nativity and Sex: 2006

Variables	(1)		(2)		(3)	
	Native Men and Foreign-born Women		Native Women and Foreign-Born Women		Foreign-Born Men and Foreign-Born Women	
	Native Men	Foreign-born Women #	Native Women	Foreign-born Women #	Foreign-Born Men	Foreign-born Women #
Foreign-born Female		0.34		0.72		0.52
<i>Education</i>						
No High School Diploma	0.61	0.74	0.59	0.73	0.80	0.77
High School Diploma or Equivalent (Omitted)						
Some College	1.10	0.92	1.03	0.92	0.84	0.86
Bachelor's Degree	1.31	1.02	0.99	1.04	0.99	1.03
Graduate, Professional Degree	1.02	0.97	0.83	1.01	1.06	1.01
<i>Marital Status</i>						
Never Married	0.47	1.28	1.08	1.23	0.86	1.24
Widowed, Divorced, Separated	0.54	1.32	1.16	1.30	0.83	1.21
Currently Married (Omitted)						
<i>Related Children in Household</i>						
Any Child Under Age 6	1.05	0.65	0.55	0.64	1.17	0.70
Only Children Ages 6 to 17	1.12	0.83	0.69	0.83	1.11	0.86
No Related Children (Omitted)						
<i>ln(Family Income)</i>						
ln(\$ 500)	0.82	0.98	0.89	0.98	0.94	0.95
ln(\$25,000)	0.72	0.97	0.83	0.97	0.90	0.92
ln(\$75,000)	0.70	0.96	0.81	0.97	0.89	0.92
Naturalized U.S. Citizen					1.15	1.24
<i>Length of Residence in U.S.</i>						
20 or More Years (Omitted)						
10 to 19 Years					1.05	0.95
0 to 9 Years					0.84	0.73
<i>English Language Proficiency: Speaks English</i>						
Speaks Only English at Home (Omitted)						
"Very Well"					0.95	0.96
"Well"					0.82	0.87
"Not Well"					0.87	0.85
"Not at All"					0.76	0.76

For each variable category, the exponentiated coefficients for foreign-born women include both the category main and interaction term coefficients but not the overall main effect for foreign-born women, which is shown in the first row only.

Source: U.S. Census Bureau, 2006 American Community Survey

Appendix Table 1. Labor Force Participation Model Coefficients for Civilians Age 25 to 64, Foreign-born Men and Women: 2006

Variables	Model 1	Model 2	Model 3
Intercept	-2.625 ***	-1.978 ***	-1.787 ***
Metropolitan Residence	0.044	0.068 *	0.068 *
<i>Race-Hispanic Origin</i>			
White Alone, Non-Hispanic (Omitted)			
Hispanic	0.162 ***	0.239 ***	0.337 ***
Black Alone, Non-Hispanic	0.463 ***	0.527 ***	0.496 ***
Asian Alone, Non-Hispanic	-0.025	0.012	0.018
Other, Non-Hispanic	-0.134 *	-0.092	-0.139 *
Age	0.250 ***	0.233 ***	0.223 ***
Age ²	-0.003 ***	-0.003 ***	-0.003 ***
Foreign-born Female	-1.933 ***	-1.425 ***	-1.275 ***
<i>Education</i>			
No High School Diploma	-0.188 ***	-0.218 ***	-0.229 ***
High School Diploma or Equivalent (Omitted)			
Some College	-0.079 *	-0.043	-0.030
Bachelor's Degree	0.032	0.072 *	0.089 **
Graduate, Professional Degree	0.326 ***	0.364 ***	0.383 ***
<i>Foreign-born Female * Education</i>			
FB Female* No High School Diploma	-0.324 ***	-0.256 ***	-0.055
FB Female* Some College	0.387 ***	0.323 ***	0.160 ***
FB Female* Bachelor's Degree	0.378 ***	0.301 ***	0.154 ***
FB Female* Graduate, Professional Degree	0.377 ***	0.297 ***	0.132 **
<i>Marital Status</i>			
Never Married	-0.151 ***	-0.310 ***	-0.391 ***
Widowed, Divorced, Separated	-0.364 ***	-0.429 ***	-0.433 ***
Currently Married (Omitted)			
<i>Foreign-born Female * Marital Status</i>			
FB Female* Never Married	0.882 ***	0.780 ***	0.883 ***
FB Female* Widowed, Divorced, Separated	1.186 ***	1.043 ***	1.010 ***
<i>Related Children in Household</i>			
Any Child Under Age 6		0.217 ***	0.136 ***
Only Children Ages 6 to 17		0.113 ***	0.086 ***
No Related Children (Omitted)			
<i>Foreign-born Female * Related Children in Household</i>			
FB Female* Any Child Under Age 6		-1.103 ***	-0.932 ***
FB Female* Only Children Ages 6 to 17		-0.388 ***	-0.345 ***
ln(Family Income)		-0.034 ***	-0.033 ***
Foreign-born Female *ln(Family Income)		0.003	-0.002

(CONTINUED)

Appendix Table 1. Labor Force Participation Model Coefficients for Civilians Age 25 to 64, Foreign-born Men and Women: 2006

Variables	Model 1	Model 2	Model 3
<i>(CONTINUED)</i>			
Naturalized U.S. Citizen			-0.008
Foreign-born Female *Naturalized			0.375 ***
<i>Length of Residence in U.S.</i>			
20 or More Years (Omitted)			
10 to 19 Years			0.211 ***
0 to 9 Years			0.021
<i>Foreign-born Female *Length of Residence in U.S.</i>			
FB Female* 10 to 19 Years			-0.225 ***
FB Female* 0 to 9 Years			-0.272 ***
<i>English Language Proficiency: Speaks English ...</i>			
Speaks Only English at Home (Omitted)			
"Very Well"			0.125 ***
"Well"			-0.030
"Not Well"			0.054
"Not at All"			-0.016
<i>Foreign-born Female *English Language Proficiency</i>			
FB Female* "Very Well"			-0.014
FB Female* "Well"			-0.093 *
FB Female* "Not Well"			-0.396 ***
FB Female* "Not at All"			-0.583 ***
N	312882	312882	312882
DF	20	26	40
AIC	24314035	23907052	23568116
-2 LL	24313993	23906998	23568034

*** p -value $\leq .001$, ** p -value $\leq .01$, * p -value $\leq .05$, ^ p -value $\leq .10$

Source: U.S. Census Bureau, 2006 American Community Survey

Appendix Table 2. Full-time, Year-Round Status Model Coefficients for Civilians Age 25 to 64 Who Worked in the Last 12 Months, Foreign-born Men and Women: 2006

Variables	Model 1	Model 2	Model 3
Intercept	-1.288 ***	-1.221 ***	-0.760 ***
Metropolitan Residence	0.148 ***	0.151 ***	0.152 ***
<i>Race-Hispanic Origin</i>			
White Alone, Non-Hispanic (Omitted)			
Hispanic	0.143 ***	0.158 ***	0.219 ***
Black Alone, Non-Hispanic	0.131 ***	0.152 ***	0.130 ***
Asian Alone, Non-Hispanic	0.041 **	0.049 **	0.056 ***
Other, Non-Hispanic	-0.088	-0.079	-0.106 ^
Age	0.102 ***	0.097 ***	0.086 ***
Age ²	-0.001 ***	-0.001 ***	-0.001 ***
Foreign-born Female	-0.907 ***	-0.659 ***	-0.660 ***
<i>Education</i>			
No High School Diploma	-0.248 ***	-0.262 ***	-0.218 ***
High School Diploma or Equivalent (Omitted)			
Some College	-0.141 ***	-0.126 ***	-0.178 ***
Bachelor's Degree	0.011	0.034	-0.006
Graduate, Professional Degree	0.067 **	0.088 ***	0.058 *
<i>Foreign-born Female * Education</i>			
FB Female* No High School Diploma	-0.109 ***	-0.075 *	-0.044
FB Female* Some College	0.084 **	0.057 ^	0.031
FB Female* Bachelor's Degree	0.094 **	0.048	0.036
FB Female* Graduate, Professional Degree	0.008	-0.039	-0.052
<i>Marital Status</i>			
Never Married	-0.144 ***	-0.130 ***	-0.155 ***
Widowed, Divorced, Separated	-0.185 ***	-0.160 ***	-0.190 ***
Currently Married (Omitted)			
<i>Foreign-born Female * Marital Status</i>			
FB Female* Never Married	0.447 ***	0.357 ***	0.373 ***
FB Female* Widowed, Divorced, Separated	0.466 ***	0.380 ***	0.380 ***
<i>Related Children in Household</i>			
Any Child Under Age 6		0.185 ***	0.155 ***
Only Children Ages 6 to 17		0.135 ***	0.106 ***
No Related Children (Omitted)			
<i>Foreign-born Female * Related Children in Household</i>			
FB Female* Any Child Under Age 6		-0.560 ***	-0.517 ***
FB Female* Only Children Ages 6 to 17		-0.269 ***	-0.262 ***
In(Family Income)		-0.009 ***	-0.011 ***
Foreign-born Female *In(Family Income)		0.004	0.003

(CONTINUED)

Appendix Table 2. Full-time, Year-Round Status Model Coefficients for Civilians Age 25 to 64 Who Worked in the Last 12 Months, Foreign-born Men and Women: 2006

Variables	Model 1	Model 2	Model 3
<i>(CONTINUED)</i>			
Naturalized U.S. Citizen			0.135 ***
Foreign-born Female *Naturalized			0.080 ***
<i>Length of Residence in U.S.</i>			
20 or More Years (Omitted)			
10 to 19 Years			0.051 **
0 to 9 Years			-0.179 ***
<i>Foreign-born Female *Length of Residence in U.S.</i>			
FB Female* 10 to 19 Years			-0.098 ***
FB Female* 0 to 9 Years			-0.129 ***
<i>English Language Proficiency: Speaks English ...</i>			
Speaks Only English at Home (Omitted)			
"Very Well"			-0.051 *
"Well"			-0.201 ***
"Not Well"			-0.140 ***
"Not at All"			-0.276 ***
<i>Foreign-born Female *English Language Proficiency</i>			
FB Female* "Very Well"			0.010
FB Female* "Well"			0.063 ^
FB Female* "Not Well"			-0.019
FB Female* "Not at All"			0.006
N	249612	249612	249612
DF	20	26	40
AIC	26281683	26216714	26058179
-2 LL	26281641	26216660	26058097

*** p-value <=.001, ** p-value <=.01, p-value <=.05, ^ p-value <=.10

Source: U.S. Census Bureau, 2006 American Community Survey



Immigrant Women's Labor Force Integration: Human Capital and Family Characteristics

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Research Questions

- Do labor force experiences differ for native and foreign-born men and women?
- How are human capital and family context differentially related to labor force experiences for these populations?



Literature

- Labor force integration research
 - Focus on immigrant men
 - Focus on women without immigrant perspective
 - Older studies on immigrant women
 - Qualitative or small scale studies on particular immigrant groups

Data and Methods

- American Community Survey 2006
- Sample restricted to individuals ages 25 to 64
- Logistic regression



Dependent Variables

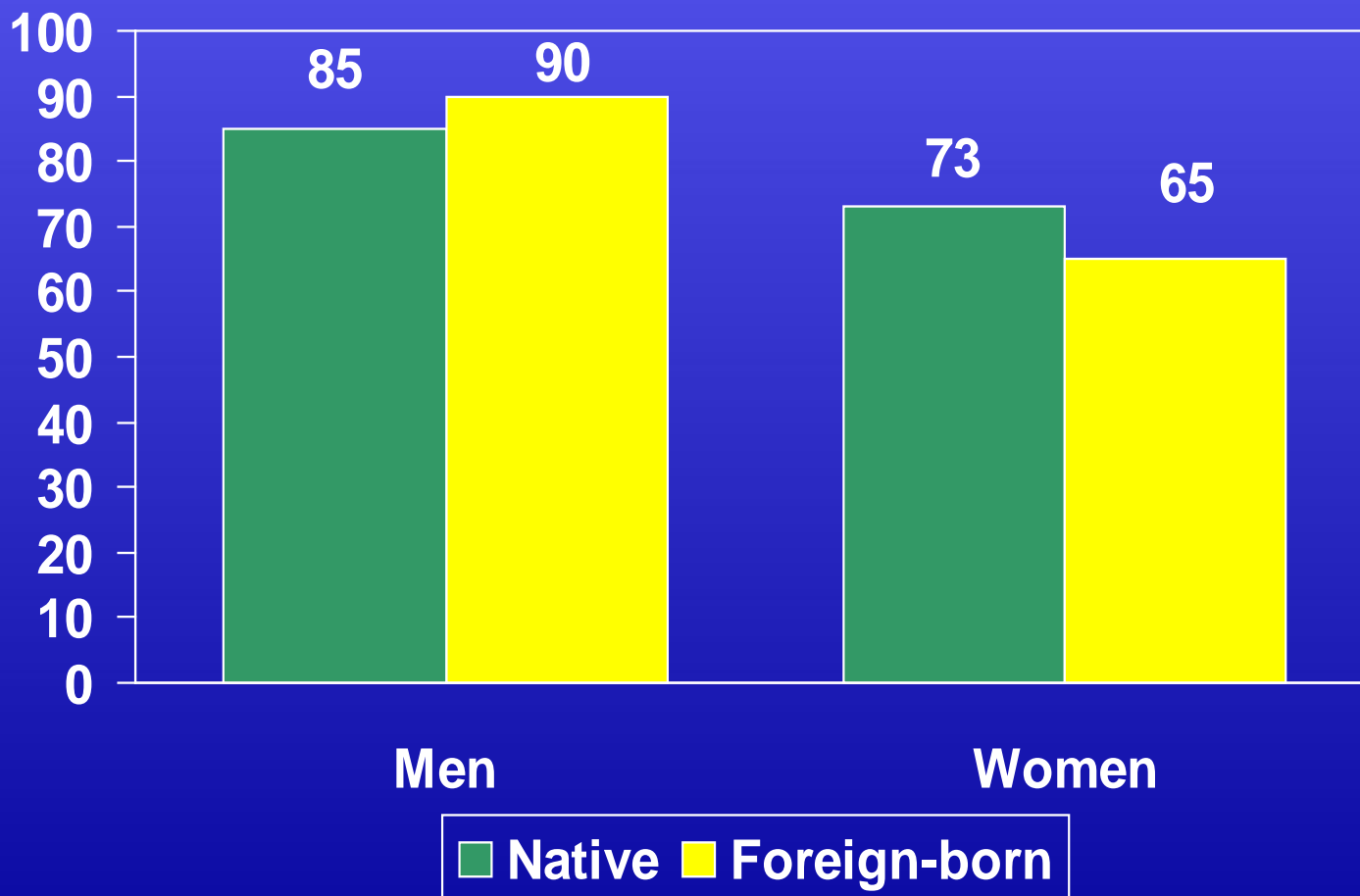
- Labor force participation
 - Currently engaged in the labor force, includes employed or unemployed
 - N=2,389,334
- Full-time, year-round employment
 - Worked at least 35 hours a week and at least 50 weeks in the last 12 months
 - N= 1,954,651



Key Explanatory Variables

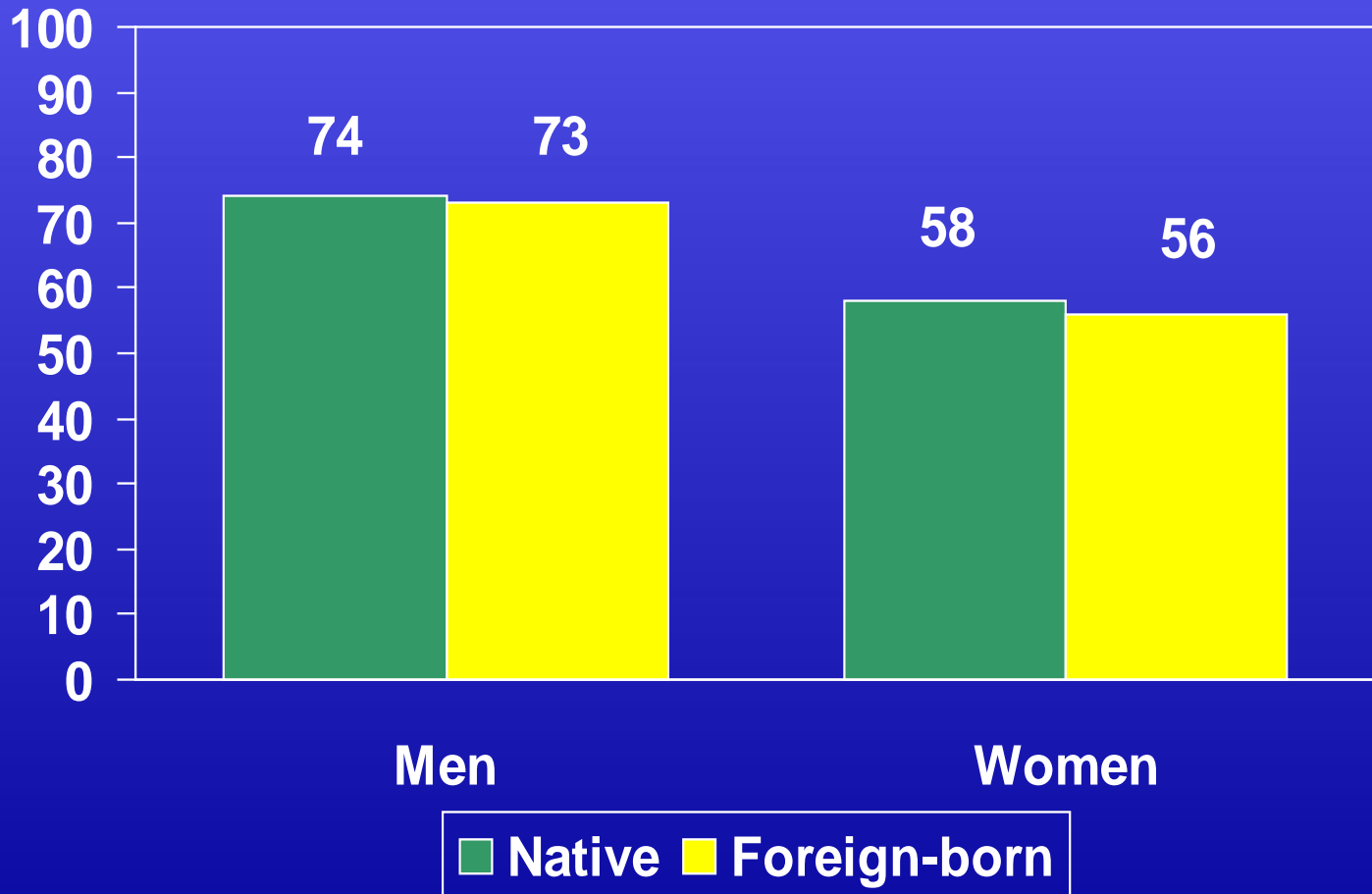
- Human capital
 - Education
- Family
 - Marital status
 - Presence and age of related children in the household
 - Access to family income (coresidents)
- Migration-related human capital (foreign-born only)
 - Citizenship
 - Length of U.S. residence
 - English language ability

Labor Force Participation





Full-Time, Year-Round Employment



General Results

- Foreign-born women less likely to participate in the labor force compared to:
 - Native men 70%
 - Foreign-born men 72%
 - Native women 22%
- Foreign-born women less likely to be employed full-time, year-round compared to:
 - Native men 66%
 - Foreign-born men 48%
 - Native women 28%



Human Capital - Education

- Low education decreases likelihood of participation and full-time employment for all groups
 - **Stronger association** for low education for native men and women relative to foreign-born women
 - **Larger effect** of low education for foreign-born women relative to foreign-born men

Human Capital - Education

- Migration-related human capital explains gender differences between foreign-born men and women in:
 - Low education effects for labor force participation
 - All education effects for full-time, year-round employment

Family Context – Marital Status

- Effects of marital status gendered
 - Unmarried **men less likely** to be in labor force and engaged full-time, year-round than married men
 - Unmarried **women more likely** to be in labor force and employed full-time, year-round than married women
- Effect also related to nativity
 - **Stronger for foreign-born** than native women
 - Never married foreign-born and native women **54%** and **16%** more likely to be in the labor force compared to married counterparts



Family Context – Coresident Related Children

- Effects of coresident related children gendered
 - **Men more likely** to be engaged in labor force and in full-time, year-round employment if any child in household
 - **Women less likely** in labor force and in full-time work if any child in household, especially inhibiting effect if child under age 6



Family Context – Coresident Related Children

- Also nativity effects of coresident children
 - Different patterns for labor force participation and full employment for women
 - Greater dampening effect on likelihood of
 - **foreign-born women's** labor force participation
 - **native women's** full-time, year-round employment



Family Context – Access to Coresident Family Income

- Access to family income **decreases** likelihood of labor force participation and full-time employment for **all** groups
- Significant differences between native men and women compared to foreign-born women
 - Greater downward effect for **native men** for both labor force participation and full-time employment
 - Same finding for **native women** for full-time employment



Migration-Related Human Capital – Citizenship

- Citizenship is important for foreign-born women
 - Not significant for foreign-born men's labor force participation
 - Increases foreign-born women's likelihood of labor force participation by 44%
 - Increases likelihood of being employed full-time, year-round for both foreign-born men and women, but greater effect for women

Migration-Related Human Capital – Length of Residence

- The **longer** foreign-born men and women are in the United States, the **more likely** they are in the labor force and employed full-time
- Stronger downward effect of short term residence for women than for men
 - **Women 22% less likely** to participate in labor force, **men same rate** of labor force participation compared to those residing in the U.S. longer term
 - **Men 16%** and **women 27%** less likely than long term residents to be employed full-time



Migration-Related Human Capital – English Language Ability

- Lower English language ability decreases likelihood of both labor force participation and full-time employment
- Foreign-born women experience significantly greater dampening effects on likelihood of labor force participation
- No significant gender differences for full-time year-round employment

Conclusions

- Labor force participation and full-time, year-round employment differ by nativity and gender
 - Foreign-born women lowest levels overall
- Human capital, family context, and migration-related human capital all factors in labor force participation and full-time, year-round employment
 - Marital status, family context more strongly gendered, but also related to nativity
 - Education more strongly related to nativity, but also gendered
 - Some migration-related human capital factors gendered