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Transmitting Occupational Niches From First to Second-Generation Immigrants: Are There Earnings Consequences From Being the "Copycat" Generation?

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Abstract

In recent years, the number of second-generation immigrants entering the labor market has been increasing at a rapid pace. Their parents had immigrated in large waves, with many joining niche occupations dominated by their ethnic groups. This study looks to determine the economic impact of first-generation niche occupations, the extent that the second-generation enters the same occupations, and the resulting consequences on the second-generation's income levels. In particular, the study investigates whether the second-generation will sustain the first-generation earnings advantage (or disadvantage) relative to natives. This research examines immigrants from China, India, the Philippines, Mexico, and Puerto Rico. Data from the Current Population Survey are empirically tested through two separate OLS regressions. Results differ between countries, but imply no exact set of occupations transmitted across generations. There is some evidence of the continuation of intergenerational income advantage (or disadvantage) within immigrant groups.

I.   Introduction

During the last decade, the number of second-generation immigrants entering the United States labor market has been increasing at a rapid pace. Their parents had immigrated in large waves during the mid to late twentieth century, and worked hard to integrate themselves into the workface, many joining niche occupations dominated by their ethnic groups. Although employment in niche occupations is a common phenomenon for first-generation immigrants, the continuation of these niches into the second-generation is not automatically expected due to the second-generation receiving education and other human capital investments in the United States that can prepare them for very different occupations. This study examines the first-generation and then move one step further to determine whether the second-generation immigrants are following the same occupational patterns, and if so, what the resulting economic consequences include. Entering pre-established niche occupations may be beneficial for the second-generation, or serve as a debilitating set of labor market choices if the occupations are in declining job markets or do not offer opportunities for advancement. The countries in this study include China, India, the Philippines, Mexico, and Puerto Rico, in order to capture a wide variety of immigrants in the United States. The niches that immigrants from these countries enter range from high-skilled, high-earning occupations to low skilled occupations with low wages. This study hopes to compare the labor market performance of first and second-generation immigrants relative to natives, namely to see how niches are changing and whether these changes are advantageous or disadvantageous to the second-generation cohort.

Economic theory suggests that niche patterns persist from the first-generation to the second-generation, causing advantages for immigrants in high-skill niches and disadvantages for immigrants in low-skill niches. It then follows that members of the second-generation will sustain

the earnings advantage (or disadvantage) relative to those that are employed in non-niche occupations (Eberharter, 2011; Smeeding et al., 2012; Van Ours & Veenman, 2004). To obtain a comprehensive view of the effects of occupation on first and second-generation immigrants, this study seeks to answer the following questions for each ethnic group:

1. What are the first-generation niches?

2. Is the second-generation entering the same niches as the first-generation?

   a. If not, what new niches are being created by the second-generation?

3. Are those in the second-generation that are entering the first-generation's niches sustaining the economic advantages or disadvantages that accompany the niche group?

4. Are those in the second-generation who carve out their own niches at an economic advantage or disadvantage in comparison to natives?

The structure of the paper is as follows. Section II consists of a review of the literature on the topics of immigration, niche formation, human capital, and intergenerational transmissions. Section III develops the structure of the empirical model used to test the strength of niches and the subsequent impacts on income. Section IV reviews the results of the study by looking at both the descriptive statistics of both generation's niches and the regression results. Finally, Section V outlines the conclusions from this study with a discussion of policy implications in regards to the transmission of human capital, intergenerational mobility, and the future of immigrants in the labor market.

II.   Literature Review & Theory

There is a considerable amount of academic literature on the topic of immigration, and specifically how immigrants in the United States fit into the labor market (Orrenius & Zavodny,

2010; Waldinger, 1994; Borjas, 2012). In particular, there is extensive research regarding why immigrants enter certain occupational niches, the long-standing trends of these niches, and how occupational niches are, in a sense, segmented from the rest of the labor market. Waldinger (1994) attempts to explain how and why immigrants enter occupational niches, revealing that the formation of niches is not based solely on network effects, but also depends on the relative supply of native workers and the structure of employment that leads to reduced competition between natives and immigrants.

Positive and negative selection of immigrants also plays a role in the formation of niches (Borjas, 1987). The main idea is that the specialized selection process that determines immigrant skills is dependent on the conditions in the country of origin. When negative selection occurs, conditions in the foreign country give potential immigrants with the lowest skills and educational attainment levels the greatest incentive to immigrate. This means that the flow of immigrants from these countries will often be competing for low-skilled routine jobs in the United States. The opposite effect occurs with positive selection, in which immigrants who arrive are above average quality in comparison to the natives in their home country. This makes them more apt to enter high skilled jobs in the United States. Therefore, it is possible for both people at the high end of the quality distribution (regarding skills) and those at the low end of the quality distribution to have the economic incentive to migrate. Borjas (1987) demonstrates that the so called 'quality' of immigrants is explained by a few variables that depict the economic and political conditions of their countries of origin, and that "the quality of immigrants in the United States depends entirely on the ratio of variances in the income distributions of the United States and the country of origin" (p. 335). Because of this theory of self-selection, it cannot be assumed that the United States draws

only the highest skilled workers from a given country. This is confirmed by the variation between worker types in the five immigrant groups of this study.

Maynard (2011) takes a closer look at a cohort of highly educated immigrants to determine the impact of their respective occupational niches on standards of living. Immigrants in her study are from the countries of China, India, and the Philippines. Previous research shows that these groups have clearly defined niches that require specific skill sets held by highly educated immigrants. Maynard (2011) hypothesizes that the job-specific human capital that these immigrants hold, along with networking effects within their ethnic groups, are likely to lead them into niches that have a significant impact on their standard of living. She concludes that out of the three groups studied, Chinese immigrants are the only ones in which holding a niche occupation is positively significant on the standard of living.

The transmission of occupational patterns between generations does not occur automatically, and one way the occupations of second-generation immigrants can be explained is through the intergenerational transmission of skills from parents and the broader ethnic community. This all leads to the development of human capital; the income enhancing skills or knowledge that an individual possesses. Parental capital is defined as contributions to a child's development that are passed on by their parents. An example of this is that if a particular parent has a graduate degree in engineering, their children are more likely to get help in math and science subjects. This could, in turn, encourage the children to pursue a similar set of subjects in college. Parental capital transmissions can also have a negative effect on children. When parental capital is low because of a lack of education and training, they will pass less knowledge on to their children, which will have a negative impact on future outcomes.

Education may be even more important for immigrants than natives, as shown by Bauer and Riphahn (2007) where they find that "the probability of low education given that either parent is of low education is higher for second-generation immigrants than for natives" (p. 131). They also conclude that the probability of high education among immigrant children with poorly educated parents is only one third of those with well-educated parents (Bauer & Riphahn, 2007, p. 146). Since education plays such a major role in future job opportunities, these facts point towards permanent earning disadvantages among certain groups. Van Ours and Veenman (2004) confirm the importance of education when examining the labor market experience of second-generation immigrants compared to natives in the Netherlands. In particular, economic data are collected for four ethnic minority groups: Turks, Moroccans, Surinamese, and Antilleans. They find that ethnicity does not have a major impact on labor market position, except in the direct measure of the employment rate. However, they also find that when leaving school the education level of the ethnic minority groups is lower than average and this does in turn have an effect on their futures in the labor market. This supports the notion of education as an important variable in determining labor market outcomes, and some of the struggles second-generation minorities are subject to if they hold lower educational attainment levels. Low-skilled and poorly educated immigrants do not have the resources to boost their children's schooling, and these children become a part of the next generation that is disadvantaged by the poverty and under education of their parents. Furthermore, studies demonstrate significant inequalities in school achievement between ethnic groups, which plays a major role in the subsequent differences in economic status (Bauer & Riphahn, 2004; Van Ours & Veenman, 2004).

Smeeding, et al. (2012) measures the intergenerational transmission of employers and paternal earnings for citizens in Denmark and Canada. Although the study does not specifically

research immigrants in the two countries, the authors make some interesting conclusions about

intergenerational relationships. Results indicate, "the incidence of sons ever having worked for an

employer that also employed the father follows a U-shaped pattern. Generally, the incidence is

lowest in the middle part of the father's earning distribution, and higher in the bottom and top 20

percent" (p. 447). The concept of the distribution being heavy in the tails is not relevant only for

employer persistence across generations: other studies confirm that there is high intergenerational

income persistence in the tails of the income distribution as well (Corcoran, 2001). This

persistence implies a continuation of economic inequality across generations, which reveals a

widening of the wealth gap. This widening of the wealth gap is a serious issue, as it implies

economic inefficiencies and costs to society. Exploration of the immigrant groups in this study

confirms the skewness in the income distribution that Corcoran finds, as many of the occupational

niches fall into relatively high or relatively low earnings categorizations.

     Ethnic capital is similar to parental capital, but the influence comes through the broader

ethnic community. Across the United States, there are many high-density immigrant communities

that second-generation immigrants are raised in. The strength of the impact of an ethnic

community on human capital depends primarily on the particular environment of the ethnic

community and how strong an affiliation one has with that community. According to Borjas

(1992), ethnic capital is important because significant differences and skills observed in the current

generation are likely to continue into future generations, playing a major role in workplace

productivity and subsequent earnings. Borjas (1992) asserts that ethnic neighborhoods "insulate

people of similar backgrounds and foster a set of cultural attitudes, social contacts, and economic

opportunities that affect workers throughout their lives" (p. 365). For example, in 1991, 23% of

unemployed workers in the Current Population Survey (CPS) consulted friends and relatives for

work (Patel, 2008). In immigrant communities, these friends and relatives are more likely to be of the same ethnicity and can direct fellow workers into established niche occupations.

However, the transmissions of parental and ethnic capital are not the sole determinants in the occupational outcomes of the second-generation. Immigrant groups often face a set of constraints that have a great impact on the transmission of capital. When there is a lack of capital to be passed from generation to generation or the transmission is prevented because of policy constraints, the second-generation struggles. Compared to other countries across the world, the United States differs in the transmission of capital and its subsequent impact on intergenerational income mobility. Eberharter (2011) finds that the United States has a higher intergenerational earnings persistence compared to Germany and Great Britain**.** This persistence may be especially pronounced for the immigrant groups studied. Eberharter (2011) also looks at the effects of social exclusion during one's childhood on their economic outcomes as an adult. Social exclusion occurs when immigrant groups are prevented access to opportunities and resources in the labor market that others receive without question. By using intergenerational income elasticity as a measure, the study finds that in the United States social exclusion features have a much bigger impact on intergenerational income elasticity compared to both Great Britain and Germany (Eberharter, 2011). Since some immigrant groups are clustered in specific neighborhoods, the high impact of social exclusion on intergenerational income elasticity is important.

Although studies on the immigrant labor market are vast, there are few comprehensive studies on the persistence of niches between generations in individual ethnic groups. Based on the parental capital and ethnic capital theories described earlier, it can be argued that if the first-generation incurs earning benefits from pursuing higher paying niche occupations, those benefits are likely to be passed on to the next generation. Similarly, if the first-generation incurs earnings

penalties from participation in lower paying niches, it seems likely for those penalties to be passed

on in the same way to the second-generation.

III.   Empirical Model

Data for this study are collected from the IPUMS current population survey (CPS), which

is provided by the Minnesota Population Center. The Bureau of Labor Statistics and the Bureau of

the Census work together to administer this survey on a monthly basis to households across the

United States.   This database provides a full range of economic, demographic, and occupational

information available for immigrants and their children for the five countries studied. For this

study, a cross section of data is examined between 2010 and 2012. All data from these years are

combined to provide an adequate sample size for testing. A cross section is used to approximate

intergenerational transmissions because occupational titles change over time to such an extent that

it is difficult to make comparisons over an approximately twenty-five-year period that separates

biological generations. Thus, the first and second-generation will be compared at the same point of

time, due to the ever-changing nature of occupational niches that may skew the study. Examples of

niche occupations that did not exist twenty-five years ago include those in the information

technology area, a prominent niche for immigrants from India that expanded drastically in the last

decade. This factor leads to the inability to compare a first-generation cohort a couple of decades

back to the current second-generation, because the defined niche may or may not have previously

existed.

To control for generational differences in an attempt to separate the parents from the children,

age will define two cohorts of the total sample. Classifications of the two generational groups are

based on the following conditions:

1. <u>First-generation immigrants:</u>

    - Born outside of the United States

    - Between the ages of 50 and 60 in either the 2010, 2011 or 2012 CPS surveys

    - Have an annual income > 0

2. <u>Second-generation immigrants:</u>

    - Born in the United States, but have at least one immigrant parent who was born outside of the United States.

    - Between the ages of 25 and 35 in either the 2010, 2011, or 2012 CPS surveys

    - Have an annual income > 0

The IPUMS CPS database is suitable for this study because one can specifically extract samples based on the mother or father's birthplace. This information is necessary when connecting the second-generation to the first-generation for each of the five immigrant groups studied. In addition, the database provides a multitude of other demographic variables that will be utilized as controls in the OLS regressions, including age, gender, educational attainment, and marital status. With these data, the niche occupations for each country of study are defined for both generations, with the objective of using these data to determine whether or not the second-generation is continuing in the same occupations. Next, the two OLS regressions are run to analyze the earnings of the first and second-generations in order to determine the impact of going into the niches as defined by the generation. This verifies whether intergenerational advantages or disadvantages continue relative to natives.

The following OLS regression is run for the first-generation cohort:

ln (Income) = $\alpha + \beta_1$ (Niche) + β_2 (Country) + β_3 (Education) + β_4 (Age) + β_5 (Age^2) + β_6 (Female) +

β_7 (Female x Country x Niche) + β_8 (Marital Status) + β_9 (Usual Hours Worked)

The following OLS regression is run for the second-generation cohort:

ln (Income) = $\alpha + \beta_1$ (Niche) + β_2 (Country) + β_3 (Country12Niche) + β_4 (Education) + β_5 (Age) + β_6

(Age^2) + β_7 (Female) + β_8 (Female x Country x Niche) + β_9 (Female x Country x Country12Niche)

+ β_{10} (Marital Status) + β_{11} (Usual Hours Worked)

The dependent variable is defined as the natural log of income, in order to see the effect

that the niche occupation has on the economic well being of a person. The major independent

variable examined is 'Niche' which is denoted in the form of a dummy variable; 1 if the person is

in the specified niche of their ethnic and generational group, 0 if not (see Tables 4-8 for the

specific occupations included in each dummy variable grouping). For the purposes of this study,

the 'Niche' variable is transformed into *China1Niche, China2Niche, India1Niche, India2Niche,*

etc., where *China1Niche* represents niche occupations for the first-generation, *China2Niche*

represents niche occupations for the second-generation, and so on. The 'Country' variable serves

as a control variable for effects that occur from the country of origin. Significance of this variable

could pick up discrimination effects, but also other omitted variables correlated with the country of

origin, such as English language ability. For the first-generation, the 'Country' variable is simply

the birthplace of the immigrant (*BP [Country]*), while for the second-generation; the 'Country'

variable is the country that their immigrant parent(s) are from (*[Country] 2Gen*). The other

variables of Education, Age, Gender, and Marital Status will be used as further controls for the

regression, with Age^2 included to capture the non-linearity of Age as a variable. The significance and the signs of β_1 for both regressions will be examined closely, as they determine whether being in the defined niche has a significant effect on earnings and whether this is a positive or negative effect. The OLS regression for the second-generation has a few additional variables as compared to the first in order to distinguish those in the second-generation who enter the niches established by the first and those who enter the niches carved out by their generation. The new variable of *Country12Niche* is a dummy that establishes those in the second-generation that enter the niche group defined by the first. Thus, a comparison of β_3 in the second regression and β_1 in the first regression is important. Following previous literature on the subject, it is predicted that if β_1 for the first-generation is positive and significant, β_3 for the second-generation will also be positive and significant. The opposite holds if β_1 is negative and significant for the first-generation. All together, this OLS regression shows whether entering niches as a second-generation immigrant has a significant positive or negative impact on earnings.

A three-part interaction variable is included in the regression to test the strength of gender. It is the multiplication of [Female x Country x Niche] and measures the impact of being a woman from a particular country who is participating in the defined niche for that country. Between the two regressions there are three of these interactions. For example, for the country of China, *FemaleIntChina1* measures first-generation women, *FemaleIntChina2* measures second-generation women in new second-generation niches, and *FemaleIntChina12* measures second-generation women who go into first-generation niches.

In the formation of the OLS regressions, the natural log of income is taken due to heteroscadasticity. Heteroscadasticity occurs when disturbances in the regression function do not have the same variance. It can emerge because of various reasons, but in the case of this study the

variable of income causes skewness in the distribution. The problem is more likely to appear in

cross-sectional models such as this one since there are so many independent variables working

together to predict one large dependent variable. Income as measured in this study is very large in

absolute terms and there is support that the distribution of income and wealth in many societies is

uneven, with the United States being no exception. Put together, the magnitude of the income

variable and the potential skewness of the distribution lead to the possibility of heteroscadasticity.

This transformation of the simple linear model into a log-linear model will reduce the possibility of

heteroscadasticity affecting the results. This change will also transform the interpretation of

results into an examination of the relative change on income by each of the independent variables,

rather than the absolute change.

IV.   Results

    A. <u>First-Generation Niches</u>

Not surprisingly, the first-generation in each of the five countries studied has a group of

prominent occupational niches (See Table 1). For the purposes of this study, two objective

conditions are fulfilled in order for an occupation to be classified as a niche. The first of these is

that the percentage of the employed immigrant population in the occupation must be higher than

the representation of the entire (native) population in that same occupation. The second condition

is that at least 2% of the entire immigrant group has to be employed in that particular occupation

(Maynard & Seeborg, 2012). The following occupations below are classified as first-generation

niches, ordered by the percentage of the immigrant population in the niche from highest to lowest.

Detailed tables with specific percentages of the total immigrant population in the subsequent

niches are found in the Appendix (Tables 4-8).

Table 1: First-Generation Niches

Immigrant Country	Occupational Niches
China	Cooks, variously defined Computer software developers Subject instructors (HS/college) Housekeepers, maids, butlers, stewards, and cleaners Nursing aides, orderlies, and attendants Cashiers Managers of food-serving and lodging establishments Textile sewing machine operators
India	Physicians Supervisors and proprietors of sales jobs Managers of food-serving and lodging establishments Computer software developers Accountants and auditors Cashiers Computer systems analysts and computer scientist Housekeepers, maids, butlers, stewards, and cleaners Not-elsewhere-classified engineers Machine operations, n.e.c
Philippines	Registered nurses Housekeepers, maids, butlers, stewards, and cleaners Nursing aids, orderlies, and attendants Janitors Cooks, variously defined Accountants and auditors Mail carriers for postal service Cashiers
Mexico	Janitors; Truck, delivery, and tractor drivers Cooks, variously defined Farm workers Housekeepers, maids, butlers, stewards, and cleaners Gardeners and groundskeepers Construction laborers Butchers and meat cutters Machine operators, n.e.c Packers, fillers, and wrappers Nursing aides, orderlies, and attendants Laborers outside construction
Puerto Rico	Nursing aides, orderlies, and attendants Janitors Secretaries Stock and inventory clerks Gardeners and groundskeepers Construction laborers

The data demonstrate that within the groups of China and India there is a range of high earning occupations (computer software developers, managers, etc) coupled with a group of lower earning occupations (cashiers, housekeepers, etc). Although at first glance this goes against the theories of positive selection of high-skilled immigrants from these countries, this sample is that of the whole immigrant population, thus accounting for the range in skill levels. This makes sense in the case of China, where although there are many high-earning immigrants from China, these particular people may be of a younger age and belong to the second-generation in terms of this study. For the Philippines, the first-generation holds a large number of registered nurses as well as a number of middle to lower income jobs. The data also show that first-generation Mexican and Puerto Rican immigrants fall into lower earning niches, such as janitors, construction laborers, and nursing aides.

   B. Second-generation in first-generation niches

The next component of the study is to confirm whether the second-generation is following a straight path and entering their parents' niches, or branching out and creating their own. Tables 4 through 8 in the Appendix provide a detailed list of the niche occupations for each generation. For second-generation Chinese immigrants, the only niche that persists is that of computer software developers (see Table 4). Additionally, a host of new second-generation niches are formed for this cohort including accountants and auditors, other financial specialists, computer systems analysts and computer scientists, pharmacists, vocational and educational counselors, lawyers, legal assistants, secretaries, graders and sorters in manufacturing, and HR personnel/labor relation specialists (see Table 4). The continuation of only one occupational niche for second-generation Chinese immigrants supports weak occupational transmissions across generations.

Second-generation Indian immigrants fare a bit stronger as far as continuing the niches established by the first-generation. For this cohort, five niches continue that include accountants and auditors, not-elsewhere-classified engineers, physicians, computer software developers, and supervisors and proprietors of sales jobs. However, like Chinese immigrants, the second-generation also assumes a host of new niches that include managers, financial specialists, lawyers, customer service representatives, among others (see Table 5).

Immigrants from the Philippines and their children follow a clearly different pattern. The second-generation continues the niches of accountants, auditors, and registered nurses. However, the percentage of second-generation immigrants who are registered nurses falls from 12.6% to 2.6%, indicating a dramatic shift in the strength of that occupational niche (see Table 6). In addition to the continuation of those two niches, second-generation Filipinos have assumed new niches in other high earning jobs, including many managerial, supervisor, and pharmaceutical positions (see Table 6).

For Mexico, first-generation immigrants occupy a large number of low earning blue-collar jobs. However, only one of these niches (truck, delivery, and tractor drivers) continues into the next generation. Second-generation Mexicans are carving out their own occupational patterns that include the jobs of retail sales clerks, secretaries, and customer service representatives (see Table 7).

Finally, second-generation Puerto Ricans are also contributing to a change in niche groupings, continuing only the two niches of secretaries and nursing aides/orderlies/attendants and adding seven new second-generation niches (see Table 8). At a glance, the new niches seem like they are moving upwards as far as annual income earned, however, average income levels are not tested in this study.

TRANSMISSION OF OCCUPATIONAL NICHES

The examination of occupational niches of first and second-generation immigrants does not support the idea that niche patterns directly persist from the first-generation to the next. While it is true that each cohort has occupational niches, these patterns do not carry over at a high rate and the second-generation is very apt to create its own niches.

C. OLS Regression Results

Next, the OLS regression results are presented for the five ethnic groups studied. Each of the five immigrant groups is discussed one at a time with an emphasis on the signs and significance of the niche dummy variable coefficients. The central focus will be on whether employment in niches has a positive or negative effect on immigrant earnings and whether there are differences between the first and second-generation. Table 2 represents the first-generation results, while Table 3 depicts the second-generation.

Table 2: First-Generation Regression Results

	β	Std. Error
(Constant)	5.185	1.063
China1Niche***	-.227	.014
BirthplaceChina*	-.089	.044
FemaleIntChina1**	.260	.103
India1Niche***	.089	.011
BirthplaceIndia***	-.163	.043
FemaleIntIndia1	.149	.114
Philippines1Niche***	.109	.012
BirthplacePhilippines***	-.117	.031
FemaleIntPhilippines1***	.383	.062
Mexico1Niche***	-.298	.012
BirthplaceMexico***	-.161	.019
FemaleIntMexico1***	.202	.043
PuertoRico1Niche***	-.059	.012
BirthplacePuertoRico*	.076	.044
FemaleIntPuertoRico1	.188	.124
HSgrad***	.210	.014
Somecollege***	.334	.015
Associate***	.410	.016
Bachelor***	.607	.015
Graduate***	.872	.016
Age***	.137	.039
AgeSQUARED***	-.001	.000
Female***	-.300	.007
Married***	.139	.011
SeparatedDivorcedWidowed***	.067	.013
Usual hours worked/week ***	.033	.000
N	54564	
Adjusted R Square	.368	.72355

Significance at 0.10 level*
Significance at 0.05 level**
Significance at 0.01 level***

Table 3: Second-Generation Regression Results

	β	Std. Error
(Constant)	7.422	.290
China2Niche***	.258	.011
China12Niche***	-.131	.014
China2Generation	-.002	.034
FemaleIntChina2***	.266	.099
FemaleIntChina12	-.093	.092
India2Niche***	.046	.012
India12Niche***	-.092	.011
India2Generation***	.141	.025
FemaleIntIndia2	-.028	.079
FemaleIntIndia12	.083	.083
Philippines2Niche***	.174	.013
Philippines12Niche	.003	.014
Philippines2Generation	.006	.027
FemaleIntPhilippines2	.129	.083
FemaleIntPhilippines12	.102	.079
Mexico2Niche***	-.142	.012
Mexico12Niche***	-.119	.011
Mexico2Generation***	-.060	.011
FemaleIntMexico2	.023	.055
FemaleIntMexico12*	.059	.034
PuertoRico2Niche	-.009	.010
PuertoRico12Niche***	-.088	.013
PuertoRico2Generation*	.053	.029
FemaleIntPuertoRico2	.082	.087
FemaleIntPuertoRico12	.082	.125
HSgrad***	.228	.012
Somecollege***	.318	.013
Associate***	.422	.014
Bachelor***	.602	.013
Graduate***	.778	.015
Age**	.049	.019
AgeSQUARED	.000	.000
Female***	-.210	.006
Married***	.114	.006
SeparatedDivorcedWidowed	.005	.011
Usual hours worked/week ***	.035	.000
N	60774	
Adjusted R Square	.374	.69646

Significance at 0.10 level*
Significance at 0.05 level**
Significance at 0.01 level***

i.   China

For Chinese immigrants, the first-generation is entering niches that put them at a disadvantage in society, as shown by the negative coefficient of *China1Niche* (see Table 2). As seen in Table 4, some of these occupations include cooks, housekeepers, computer software developers, subject instructors, and nursing aides, among others. Although at first glance it seems that this is a relatively wide range of occupations in regards to income levels, once together, the group of niches has a negative impact on wages. If someone in the sample is 60 years old, it can be estimated that they entered in the labor market around the year 1975, in which the situation for Chinese immigrants was in a transition phase from marginalized lower class occupations towards the middle class. In addition, some of the lower-paying jobs in the first-generation Chinese niche group (such as housekeepers, cooks, and textile sewing machine operators), may be due to the presence of undocumented workers. Even after legislation that prevented the immigration of Chinese workers was lifted, many immigrants continued entering the United States through assisted migration networks. These assisted migration networks are similar to those that prospered in the nineteenth century, generally leading into strictly undocumented work or fostering the overstay for those with legal documents (Sadowski-Smith, 2008).

Yet, even with the presence of these lower-paying occupations, there is evidence that a substantial group of post-1965 Chinese immigrants moved more quickly into the middle-class employment occupations (Ueda, 1994). This is seen through the group of Chinese first-generation occupations that include managers of food-serving and lodging establishments, subject instructors, and computer software developers (see Table 4).

The regression results point to the confirmation of a second-generation that is carving out their own niches and experiencing a positive impact on income. As seen in Table 4, some of these

new niches include pharmacists, lawyers, computer analysts, and accountants. The positive impact

is further confirmed by the coefficient of *China2Niche* (see Table 3). A large number of members

in this generation are growing up in middle-class families, and are more likely to obtain higher

educational attainment and have more occupational opportunities. Yet those that do follow their

parents' niches are experiencing a serious negative impact on wages and thus continuing the

disadvantages experienced by the first-generation, as seen by the negative coefficient of the

China12Niche variable (see Table 3).

> ii.   **India**

When reviewing the experience of immigrants from India with that of Chinese immigrants,

it becomes clear that differences begin with the first-generation. Even with the first-generation,

there are positive effects of being in the Indian niches as denoted by the coefficient *India1Niche*

(see Table 2). Many Indian immigrants migrated in the 1980s due to admissions policies that

favored highly trained immigrants, which increased the number of white-collar workers in the

United States. Some of these workers first entered the United States on temporary visas as

university students before becoming permanent residents and working in the labor force long-term.

Others were selectively recruited by specific occupational sectors. For both generations, the

numbers who enter occupations that fall under the Information Technology (IT) sector are very

high. This is fueled by the growth of H-1B visas, which are temporary visas sponsored by a

specific employer. The duration of the stay under the H-1B visa is capped at six years; however

employers sometimes sponsor a specific worker to obtain citizenship or longer permanent

residency after the initial period. The high frequency use of these visas in the IT sector to increase

the number of foreign workers demonstrates selective recruitment policies that bring in many high

skilled, professionally trained workers. Compared to other countries studied, there are a high

percentage of second-generation Indian immigrants that remain in their parent's niches, but there is also a group that assumes new niches. The regression results suggest that going into new niches (*India2Niche*) has a positive effect on income, but filling the niches prescribed by the older generation comes with a negative effect (*India12Niche*). All and all, many niches for Indian immigrants require secondary and college education, which confirms that groups who can successfully invest in education are maintaining or achieving high degrees of economic mobility. Although there is a group of second-generation Indians that is spreading out and obtaining new niches such as financial specialists and lawyers, they can only do so because of high levels of education and a lack of serious constraints on occupational mobility.

iii.   The Philippines

For the Filipino cohort, the regression results tell an interesting story with the positive significance of the *FemaleIntPhillipines1* variable (see Table 2), which again measures the effect of being female, Filipino, and in the first-generation niche group. This shows that Filipino women going into niches are experiencing an advantage relative to anyone else in the labor market in those same niches. A look back at the first-generation niches in Table 1 confirms that registered nurses have the highest percentage of Filipino workers, and the proportion of women in the healthcare profession is very high. Historically, these numbers can be explained by nurse recruitment policies in the Philippines, which emerged when the United States began experiencing nursing shortages in the 1970s. To overcome the problem, the government of the United States implemented policies that provided incentives to Filipino nurses. Some of these incentives included signing bonuses, immigration benefits, and easy visa applications. Resulting immigration increased drastically and up until the mid 1980s, Filipino nurses represented 75 percent of all foreign nurses in the United States workforce (Brush et. al, 2004). After that, they were joined by other foreign nurses, but still

held a high percentage of the total workers in the occupation. The incentive programs help explain

why Filipino nurses are going into the niches due to the advantages that they incur as a result, and

is confirmed by the positive variables of *FemaleIntPhillipines1* and *Philippines1Niche* (See Table

2).

Though the story for the second-generation Filipino workers is a little more complicated,

there is still support that those who are entering the niches experience benefits, as seen by the

positive coefficient of *Phillippines2Niche*. Nevertheless, *Philippines12Niche* is not significant,

proving that although economic advantages continue, the niches are still shifting and transforming.

iv.   Mexico

More than 70 percent of employed Mexican immigrants in the 1970s and 1980s were

laborers, farmers, and service workers (Ueda, 1994, p 64). As seen in Table 7, the data in this

study confirm the presence of these occupational strongholds in the first-generation. First-

generation Mexicans in their prescribed niches face a serious disadvantage in the labor market,

with *Mexico1Niche* having a very significant negative effect (see Table 2). These levels of

disadvantage are not alleviated with the second-generation, although they are assuming a host of

new niches. As seen in Table 3, the disadvantages continue in the second-generation with negative

and significant coefficients for both *Mexico2Niche*, and *Mexico12Niche*. This confirms that first-

generation Mexicans in niches, second-generation Mexicans in the first-generation niches, and

second-generation Mexicans in the new niches are all facing serious repercussions and the

continuation of disadvantage in the United States labor market. This continuation of disadvantage

can be in part attributed to the role of Mexican immigrants in the United States throughout history.

The large number of immigrants has always served as a sort of reserve supply of labor that was

recruited and sent away as necessary, causing an unstable relationship between the two countries

and much disruption to the lives of many Mexican immigrants. An example of this is the Bracero

Program, where Mexican farm workers signed short-term contracts that guaranteed work and

living arrangements. It began in 1942, and by the official end of the program in 1947, 4.8 million

Mexican laborers had entered the United States under its terms (Ueda, 1994, p. 34). The end of the

program however, did not end the lasting impacts that it had on the occupational status of Mexican

immigrants. In this study, 4.2% of first-generation Mexican immigrants are classified in the 'farm

workers' niche (see Table 7). Concepts of the program still continue under different official names,

as there are still many programs in the United States that recruit and support temporary and

seasonal workers.

<div align="center">

v.   Puerto Rico

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The results for Puerto Rican immigrants are not as significant as the other countries in this

study. However, like Mexicans, first-generation Puerto Ricans in niches experience a significant

disadvantage in the labor market (see *PuertoRico1Niche* in Table 2). They fall into many low to

middle class occupations, such as secretaries, janitors, nursing aides, and construction laborers (see

Table 8). The other significant variable is *PuertoRico12Niche,* and its negative sign implies that

those in the second-generation who go into the niches established by the first (specifically

secretaries and nursing aides), face a negative impact on earnings (see Table 3).

The relationship between Puerto Rico and the United States has been pretty consistent since

it became a commonwealth in 1942. Puerto Ricans are classified as US citizens, giving them more

freedom in the labor market compared to other immigrant groups. Interestingly, this citizenship

does not seem to incur significant benefits in regards to earnings. It does, however, make

movement back and forth from Puerto Rico much easier. It is estimated that between 1950 and

1960, 25% of the Puerto Rican labor force migrated to the United States, with many settling in

New York City (Pfoh, 2006, p. 8). However, because of the constant flux of jobs available and ease of migration back to Puerto Rico, Puerto Rican immigrants have high incidences of return migration. There is evidence that many of the immigrants migrating back to Puerto Rico have higher paying jobs and more incentive to take their skills back home (Pfoh, 2006). If this incidence of return migration for higher skilled immigrants is true, it makes sense that those who remain are forming niches in low earning occupations.

V.   Conclusions

As the number of second-generation immigrants continues to increase in the United States, it is important to see how they are shaping the labor market. The second-generation can either follow in their parent's footsteps or branch out in their own occupational patterns. Theory supports the notion that their parents are strongly concentrated in niche occupation patterns, and that there is transmission of parental and ethnic capital from the first to second generations. If the strength of these capital transfers is high, then it is predicted that the second-generation will enter the same set of occupations, and sustain the earnings advantages and disadvantages confronted by their parents. By examining a set of five countries (China, India, the Philippines, Mexico, and Puerto Rico), this study tests the strength of niches in both generations to see the effects on earnings. Results vary as far as the strength of the continuation of niches and whether they have a negative or positive effect on income. China shows the most dramatic shift in niche groups between the generations, which coincide with the change in the effect of the niche on earnings. For the first-generation Chinese, going into the niche poses a negative impact on income, while the new niches of the next generation have a positive impact on income. India and the Philippines both show a continuation of positive effects of being in the niche, fueled by the number of highly

educated Indians and high proportion of Filipino nurses. On the other hand, results from Mexico and Puerto Rico depict the continuation of low earning niches that negatively affect income levels.

Looking towards the future, there is no strong support that second-generation immigrants are going to continue first-generation labor market patterns. This makes it hard to predict the occupational choices of future immigrant generations and create policies around them. However, the case of Mexico is a bit disturbing as far as the relative earnings disadvantage for both generations for those who enter occupational niches. Future efforts should be made to see why these continuing disadvantages are occurring and what can be done to relieve the inequalities.

The results in this study are consistent with Mayer and Lopoo (2005) regarding the correlation between occupational mobility and economic mobility. If the connection between these two is strong, then changes in the transmission of economic factors will likely lead to a strong transition away from defined niches. This is evident in the case of China, where the younger generation experiences an increase in both occupational mobility and economic mobility when assuming the new niches.

Niches are often formed by recruitment goals and policies initiated by a country's government. These goals are constantly shifting depending on the supply of native workers and the nature and missions of the economy as a whole. For example, it was shown earlier that many first-generation female immigrants from the Philippines went into nursing in response to the shortage in the United States and subsequent incentives implemented by the government. However, the economic downturn that occurred between 2007 and 2009 caused fewer foreign nursing jobs to become available, with the United States cracking down on visa applications and increasing the aptitude level necessary to pass the occupational proficiency exam. It is further

speculated that the demand for foreign nurses may rise again under the new health care act

commonly referred to as Obamacare, where the number of people estimated to seek healthcare is

greater. The long-term impact of these niches (even if formed out of temporary policy to meet a

certain demand) could have the potential to be transferred across to the second-generation in the

United States. This is seen by the continuation of the 'registered nurses' niche for Filipinos, albeit

at a lower percentage for the second-generation. Further research is necessary to examine this

idea.

The female interaction variables included in this study opens the door for future studies that

focus on gender effects in immigrant niches. The interaction measures the effect of being female,

of a particular country, and in one of the prescribed niche occupations for that country. As

mentioned earlier, the highly positive significance of *FemaleIntPhilippines1* can be attributed to

the high number of female Filipino registered nurses and the earnings advantages they incur when

entering that occupation. The *FemaleIntMexico1* variable is also interesting with its positive

significance (see Table 2). This implies that there are positive effects on wages for a female first-

generation Mexican worker that enters the niche. At first, this stands out as the range of niches for

first-generation Mexicans do not imply any sort of preference or leaning towards female

dominated occupations, nor are they high paying (see Table 7). However, the positive significance

could stem from females clustering in particular niche occupations that have higher incomes

relative to the entire distribution of niche occupations. Further research should examine the total

distribution of females in niches to confirm whether or not females or males in niches are at an

advantage or disadvantage, and how this changes throughout generations.

All in all, the five countries in this study show that there is no clear track of occupational

choice for any immigrant group in the United States. Therefore, niches cannot be simplified into

groupings that will continue indefinitely in immigrant groups. Descriptive statistics show that the

first-generation is apt to creating their own niches, and these niches vary across immigrant groups.

Some members of the second-generation enter these same niches, while others tend to move away

and craft their own. This confirms that in some instances the second-generation is influenced by

the first, which can be attributed to the transmission of parental and ethnic capital throughout

generations. However, the transmission of capital is not static and the second-generation entering

new niches are often doing so because of changing circumstances.

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Appendix:

Table 4: China Niches

Generation 1				Generation 2	
Occupation	Percentage	Occupation	Percentage	Occupation	Percentage
		Continuation of 1st generation		**New 2nd generation niches**	
Managers of food-serving and lodging establishments	2.6%	Managers of food-serving and lodging establishments	0.9%	Accountants and auditors	2.7%
Subject instructors (HS/college)	4.5%	Subject instructors (HS/college)	0.9%	Other financial specialists	1.8%
Computer software developers	6.0%	Computer software developers	3.6%	Personnel, HR, training, and labor relations specialists	2.7%
Cashiers	3.0%	Cashiers	0.9%	Computer systems analysts and computer scientists	4.5%
Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	4.1%	Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	0%	Pharmacists	4.5%
Cooks, variously defined	10.9%	Cooks, variously defined	1.8%	Vocational and educational counselors	2.7%
Nursing aides, orderlies, and attendants	3.8%	Nursing aides, orderlies, and attendants	0%	Lawyers	6.3%
Textile sewing machine operators	2.6%	Textile sewing machine operators	0%	Legal assistants, paralegals, legal support, etc.	4.5%
				Secretaries	2.7%
				Graders and sorters in manufacturing	2.7%

** Highlighted occupations indicate niches that continue from the first to second-generation

Table 5: India Niches

Generation 1		Generation 2			
Occupation	Percentage	Occupation	Percentage	Occupation	Percentage
		Continuation of 1st generation		**New 2nd generation niches**	
Managers of food-serving and lodging establishments	4.0%	Managers of food-serving and lodging establishments	1.5%	Managers of service organizations, n.e.c	3.0%
Accountants and auditors	3.6%	Accountants and auditors	3.7%	Managers and administrators, n.e.c	5.9%
Not-elsewhere-classified engineers	2.2%	Not-elsewhere-classified engineers	2.2%	Other financial specialists	3.7%
Computer systems analysts and computer scientists	3.6%	Computer systems analysts and computer scientists	1.5%	Subject instructors (HS/college)	3.0%
Physicians	9.0%	Physicians	11.1%	Lawyers	5.9%
Computer software developers	4.0%	Computer software developers	3.0%	Customer service reps, investigators and adjusters, except insurance	2.2%
Supervisors and proprietors of sales jobs	5.4%	Supervisors and proprietors of sales jobs	2.2%	Police, detectives, and private investigators	2.2%
Cashiers	3.6%	Cashiers	0%		
Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	2.5%	Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	0%		
Machine operators, n.e.c	2.2%	Machine operators, n.e.c	0%		

** Highlighted occupations indicate niches that continue from the first to second-generation

Table 6: Philippines Niches

Generation 1		Generation 2			
Occupation	**Percentage**	**Occupation**	**Percentage**	**Occupation**	**Percentage**
		Continuation of 1st generation		**New 2nd generation niches**	
Accountants and auditors	2.3%	Accountants and auditors	2.2%	Managers and administrators, n.e.c	5.2%
Registered nurses	12.6%	Registered nurses	2.6%	Pharmacists	2.2%
Cashiers	2.0%	Cashiers	1.5%	Supervisors and proprietors of sales jobs	4.1%
Mail carriers for postal service	2.1%	Mail carriers for postal service	0%	Office supervisors	3.0%
Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	5.9%	Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	0%	Customer service reps, investigators and adjusters, except insurance	2.6%
Cooks, variously defined	2.6%	Cooks, variously defined	1.1%		
Nursing aides, orderlies, and attendants	4.7%	Nursing aides, orderlies, and attendants	1.1%		
Janitors	2.8%	Janitors	0.4%		

** Highlighted occupations indicate niches that continue from the first to second-generation

Table 7: Mexico Niches

Generation 1		Generation 2			
Occupation	**Percentage**	**Occupation**	**Percentage**	**Occupation**	**Percentage**
		Continuation of 1ˢᵗ generation		**New 2ⁿᵈ generation niches**	
Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	3.9%	Housekeepers, maids, butlers, stewards, and lodging quarters cleaners	0.3%	Retail sales clerks	2.3%
Cooks, variously defined	5.5%	Cooks, variously defined	1.8%	Secretaries	2.4%
Nursing aides, orderlies, and attendants	2.1%	Nursing aides, orderlies, and attendants	1.5%	Customer service reps, investigators and adjusters, except insurance	3.8%
Janitors	7.4%	Janitors	0.8%		
Farm workers	4.2%	Farm workers	0.3%		
Gardeners and groundskeepers	3.3%	Gardeners and groundskeepers	0.8%		
Butchers and meat cutters	2.3%	Butchers and meat cutters	0.5%		
Packers, fillers, and wrappers	2.1%	Packers, fillers, and wrappers	0.1%		
Machine operators, n.e.c	2.2%	Machine operators, n.e.c	0.6%		
Truck, delivery, and tractor drivers	5.5%	Truck, delivery, and tractor drivers	4.0%		
Construction laborers	2.5%	Construction laborers	1.8%		
Laborers outside construction	2.0%	Laborers outside construction	1.8%		

** Highlighted occupations indicate niches that continue from the first to second-generation

Table 8: Puerto Rico Niches

Generation 1		Generation 2			
Occupation	**Percentage**	**Occupation**	**Percentage**	**Occupation**	**Percentage**
		Continuation of 1st generation		**New 2nd generation niches**	
Secretaries	3.1%	Secretaries	5.1%	Accountants and auditors	2.5%
Stock and inventory clerks	2.3%	Stock and inventory clerks	0.7%	Supervisors and proprietors of sales jobs	4.3%
Nursing aides, orderlies, and attendants	5.8%	Nursing aides, orderlies, and attendants	4.0%	Receptionists	3.2%
Janitors	4.7%	Janitors	1.1%	Bookkeepers and accounting and auditing clerks	2.2%
Gardeners and groundskeepers	2.3%	Gardeners and groundskeepers	0%	Guards, watchmen, doorkeepers	4.0%
Construction laborers	2.3%	Construction laborers	0.7%	Health aides, except nursing	4.3%
				Truck, delivery, and tractor drivers	2.5%

** Highlighted occupations indicate niches that continue from the first to second-generation