Hispanics in the Michigan Labor Market

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#### Abstract

Despite being less educated, Hispanics (particularly men) display the highest employment and labor participation rates in Michigan. Based on Public Use Microdata Series (PUMS) 2015, a crosssectional micro analysis of the factors impacting the group's labor status reveals that foreignborn Hispanic males (and Mexicans in particular) have a robust and significant advantage of being employed relative to foreign-born Whites in every scenario considered (age, education, English proficiency, duration of stay since year of entry, and citizenship status). In contrast, there is no significant difference in the probability of being employed between female Hispanics (native or foreign-born; Mexican and Other) and Whites. The industry and occupational dissimilarity analyses show great job distribution differences between foreign-born and native groups, and these differences are higher for Mexicans than for other Hispanic groups (both men and women). The distribution of native Hispanics is similar to that of Whites and Blacks, but dissimilar from Asians across genders.


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## Introduction

According to Rubén G. Rumbaut ${ }^{4}$, the category of Hispanics or Latinos in the U.S. population comprises both recent immigrants and groups who "claim a history that precedes the establishment of the nation". This group includes individuals living in the U.S. from the 20 nationalities of Latin America and Spain itself. It is important to note that the label of Hispanics or Latinos is unique to the U.S. Elsewhere, these individuals are labelled by their countries of origin (e.g., Columbians, Mexicans, Portuguese, etc.).

Some political rhetoric, such as from the current Trump administration, might make one believe in ill stereotypes about Hispanics like: Latinos are majority immigrants and/or undocumented, they do not have jobs and "suck up" taxpayers' money, etc. We use the case study of Michigan to show that the above stereotypes are very far from the truth when looking at the labor market status of the State's Hispanic population by nativity (native or foreign-born), gender, and detailed ethnicity (Mexican, Cuban, etc.).

Data from the population censuses, intercensal population estimates, and the American Community Surveys show that between 1980 and 2015, the total population in Michigan increased from $9,262,100$ to $9,922,600$, or 7.1 percent. Although this is a modest growth over the 30 -year period, nearly half ( $48.7 \%$ ) of this expansion is attributed to the growth in the State's Latino population, which increased from 162,450 in 1980 (or about 1.8 percent of total population to 486,200 in 2015 (or 4.9 percent of the total); a 196-percent increase. During the first decade of this century (2000-2010), when the Michigan Hispanic population experienced a 35 -percent growth, the state's total population was virtually flat, inching downward by 0.3 percent.

Our estimates based on data from the American Community Survey (ACS) 1-Year Sample 2015, 1\% Public Use Microdata Samples (PUMS) indicate that only 25 percent of Michigan Hispanics are foreign-born and that the majority of the state's Hispanics are Mexicans (over 80 percent). For this reason, in our analysis, we create two sub-groups of Hispanics in Michigan (Mexicans and other Hispanics). ${ }^{5}$

[^1]The rest of the paper is organized as follows: In section 1, we show the questions to be answered about the labor market status of Hispanics in Michigan. We then proceed to a review of existing literature on the subject. In section 2, we first look at publicly available aggregated data from the U.S. Census Bureau and the Bureau of Labor Statistics to provide general descriptives of the state of the labor market of Hispanics in Michigan. In section 3, we use data from the American Community Survey 1-Year Sample 2015, 1\% Public Use Microdata Samples (PUMS), to estimate the human capital and demographic characteristics of Hispanics in Michigan relative to other racial groups. We do this by gender, detailed ethnicity, and nativity. In section 4, we continue to use ACS microdata to investigate the employment status of Hispanics in Michigan by gender, detailed ethnicity, and nativity. We first calculate the group's employment rates. Then, we estimate the Average and Marginal Partial Effects of the human capital and demographic covariates identified above, on the probability of being employed for Michigan's Latinos. In this section, we also look at the state of self-employment, the distribution of jobs across occupations and industries, as well as the type of employment (fullvs. part-time) for Latinos in the state. Section 5 is reserved to concluding remarks and possible extensions of the study.

## Section 1: Research Questions and the Review of Existing Literature

We analyze the labor market status of Hispanics in Michigan by looking at their rates of unemployment, employment, and labor force participation relative to other socio-economic groups in Michigan, Whites being the control group.

How does the size of the above rates look like for Hispanics compared to other groups? A quick investigation of the data reveals that since 2000, Hispanics in Michigan tend to display slightly above average unemployment rates but with same over-time pattern as for the general population. Hispanics' rates of employment and of labor force participation are several percentage points above state average. What contribute to such high rates of labor market participation of Hispanics in Michigan? Do the usual factors of demographics (age, citizenship, gender, nativity, years of stay), and of human capital (educational attainment, English proficiency) affect this group's chances of being employed relative to Whites non-Hispanic? In what type of employment (e.g., part-time vs. full-time, low vs. high-paying industries or occupation, self-employment) are Hispanics more likely to be employed?

Economics offers several theories to explain the decision of individuals to participate in the labor market. The classical theory suggests that individuals supplying labor services for pay must choose between work and leisure, based on three things: the opportunity cost of leisure, one's level of wealth (including government transfers), and one's preference between leisure and work. The individual maximizes his or her satisfaction by consuming every available leisure hour combined with the highest conceivable income (Ehrenberg, Ronald G. and Robert S. Smith,
2009). Job search models are based on the idea that a jobseeker maximizes a discounted sum of future utility flows, subject to a budget constraint and a random job offer process. For an unemployed individual, the budget is the sum of unemployment benefits plus other non-labor income (e.g., own savings, welfare, disability, etc.). Under several assumptions, there exists a unique reservation wage such that only wage rates above it are accepted (Bloemen, Hans G. (1997); Devine, Theresa J. and Nicholas M. Kiefer (1993); Van Den Berg, Gerard J. (1990)).

Several empirical studies have been done to explain the individual's decision to actively participate in the labor market in general, based on the individual's demographics and human capital investment. Some of these studies have looked at the specifics of foreign-born individuals in their decisions to participate in the labor market of the host country. Since 25 percent of Michigan's Hispanics are foreign-born, the later studies are of a particular interest.

Several studies have found that nationally, most of the gap in labor market outcomes between Hispanics and Whites is attributable to differences in human capital measurements, namely the educational attainment, English proficiency, and work experience ${ }^{6}$. For example, some of the above studies (Chiswick, 1978; Schoeni, 1997) have found that schooling and work experience acquired outside the U.S. by Hispanic immigrants are imperfectly transferrable into the U.S. labor market, because employers place a lower value to these skills acquired abroad. So, nativity affects labor market outcomes of Hispanics.

English proficiency is an important component of human capital, commonly defined as the wealth or net worth of capital investments embodied in an individual. Several studies have shown that becoming affluent in the language of the host country not only helps immigrants assimilate into the host country's culture but also affects their labor outcomes and consequently their poverty status (Gonzalez, 2010). Specific to the U.S. market, research has shown that immigrants with greater proficiency in English are likely to be more productive and exhibit greater participation in the labor market, and therefore are more likely to exhibit higher earnings (Hwang S., Xi J. and Cao Y., 2010; Kim J., 2003; Kossoudji S., 1988; Zhen, Ying 2012).

Several studies have also found a positive link between earnings, employment and labor force participation of migrants with time spent in the place of destination (Hovne 1961; Hanoch 1961, Gronau 1974, Mason 2016, Chiswick 1978, Tandon 1977, Zhen Y. 2012). Mason (2016) finds, for instance in the case of black immigrants, that "intergenerational improvement is an important source of wage convergence [...]. Unskilled immigrants who arrive in the USA as children and adolescents experience substantial wage assimilation, especially Caribbean-English

[^2]and African-English immigrants. But both unskilled immigrants arriving as adults and all skilled immigrants fail to catch up to the wage status of either native-born whites or native-born African-Americans." Chiswick (1978) and Zhen (2012) also investigate the effect of being a naturalized citizen on immigrants' earnings. All things considered, "aliens could earn less than naturalized citizens because of the wage effects of occupational segregation, direct discrimination in wages, or a lower quality of skills not reflected in the other variables in the analysis", reports Chiswick. In the U.S., citizenship opens job opportunities to immigrants (federal government jobs, for example) not attainable otherwise, regardless of other characteristics of the individual (e.g., educational attainment).

## Section 2: General Descriptives of the Current and Past Labor Market Status of Hispanics in Michigan

There are two ways to count the number of employed individuals: 1) by place of residence (also known as household employment) or 2) by place of work (also called industry or payroll employment) ${ }^{7}$.

While statistics on household employment come from household economic surveys such as the American Community Survey (ACS), information on payroll jobs is usually collected through employer surveys such as the Current Employment Statistics (CES) and/or through administrative payroll tax reports submitted by employers to the state's unemployment insurance agencies such as the Quarterly Census of Employment and Wages (QCEW).

Household Employment, Unemployment, and Labor Force Participation of Latinos in Michigan

Using data from the population censuses and the American Community Surveys (ACS), we describe the current (2016) and past (2000-2016, if possible) trends of the Latinos' labor market status in Michigan. Several metrics exist to gauge the state of the labor market of a population in a given location. In this analysis, we use the employment-population ratio (also called the labor absorption rate), the unemployment rate, and the labor force participation rate.

[^3]In the U.S., the civilian labor force reflects persons 16 years of age and older who are either employed or unemployed (that is, either working or actively looking for a job). This definition excludes persons on active duty in the armed forces or living in institutions such as a correctional, a residential nursing, or a mental health care facility ${ }^{8}$.

The size of the labor force is highly dependent on the total population and its structure. Higher shares of working-age adults imply potential higher current levels of the labor force. A younger population signals potential higher future levels of the workforce. The population of Hispanics displays both characteristics. During the 2000-2015 period, the Michigan Hispanic population experienced a 35 -percent growth (from 327,000 in 2000 to 486,200 in 2015), while the state's population as a whole was virtually flat, inching downward by 0.3 percent. The significant growth of Latino population in Michigan is a result of several factors, including but not limited to domestic and international migration, and a high fertility rate. ${ }^{9}$

Michigan Hispanic labor force followed the same pattern as the trend in the population, soaring by 25 percent (from 179,500 in 2000 to 224,700 in 2015). Over this period, the labor force of Whites, non-Hispanic contracted by six percent. Non-Hispanic Whites constitute over 70 percent of Michigan's total population at any given time.

One of the most commonly used indicators of a population's labor market status is the unemployment rate. The unemployment rate is the ratio of unemployed individuals to the civilian labor force, expressed as a percent.

[^4]Figure 1-1: Unemployment Rate Trend (2005-2016)


Source: U.S. Census Bureau, American Community Surveys 1-Year Estimates, 2005-2016
The unemployment rate of Hispanics in Michigan has always been above the overall-population jobless rate by between three and five percentage points. The unemployment rate of Michigan's Latinos rose faster than the increase in the average unemployment rate of the overall population during the 2009 recession (+7.3 vs. +5.2 percentage points, respectively). However, the recovery in Hispanics' unemployment has been faster than average after the recession, dropping by 12.3 percentage points versus 8.4 percent points for the overall population.

Another metric of the labor market status is the employment rate, which shows the percentage of the civilian population 16 years old and over that is employed.

Figure 1-2: Employment Rate Trend (2005-2016)


| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Populat | 16 yea | and ov |  | - | panic or | atino o | (of an | ace) |  |
|  |  | White | one, no | ispani | Latino |  |  |  |  |  |  |

The employment rate of Hispanics in Michigan has been above average over the 2005-2016 period. This is particularly true between 2012 and 2016 when the gap widened from two to over five percentage points.

Hispanics also display a higher-than-average participation in the labor force. The labor force participation rate is the percentage of the civilian population 16 years old and over that is either employed or unemployed.

Figure 1-3: Labor Force Participation Rate Trend (2005-2016)


Source: U.S. Census Bureau, American Community Surveys 1-Year Estimates, 2005-2016
Over the 2005-2016 period, Latinos in Michigan displayed an above-average labor force participation rate at a range of between five and seven percentage points. And while the participation rate of the overall population has steadily declined over this period, the rate for Hispanics has been flat for the most part and has been rising since 2012. This period also coincides with a substantial increase in the Hispanic population in the state. ${ }^{10}$

## Industry Employment of Michigan's Latinos

Household employment is typically higher than the payroll employment because it captures better the number of self-employed individuals and workers in the agricultural sector. In fact, the existing unemployment insurance tax law for the state of Michigan has different eligibility requirements for an employer of agricultural or domestic workers that lead to an underreporting of such workers to the Unemployment Insurance Agency. The law specifies that an

[^5]agricultural employer is legally liable for the unemployment insurance tax, if "(1) s/he pays a total of $\$ 20,000$ or more, in cash, to all its agricultural workers in a calendar quarter, or (2) employs 10 or more agricultural workers in at least 20 different weeks, in the current or preceding year. Agricultural employees furnished by a crew leader are employees of the crew leader. Agricultural workers include, in general, those who raise food or horticultural crops and those who raise or tend animals for use as a product source."11

Also, in order for the unemployment insurance tax liability and benefit eligibility to take place, an employer-employee relationship must first exist. Such relationship does not exist in the case of self-employment, including independent contractors and the like. ${ }^{12}$ Therefore, selfemployment is also undercounted in employment numbers reported to the Unemployment Insurance Agency.

Aside from the difference in the magnitude of reported numbers, Figure 1-4 below shows a similar pattern in both household and industry employment of Michigan's Latino population, dropping during the 2009 recession but rising significantly thereafter as the state's economy recovers.

Industry employment of Michigan's Latinos fell by 7.7 percent $(-10,973)$ during the 2009 recession. Since then, employment has grown by 40.7 percent ( $+50,913$ ), over three times faster than the rate of payroll employment expansion for non-Hispanic population.

Figure 1-4: Hispanic Household and Industry Employment Trend in Michigan (2005-2016)


[^6]Source: 1) U.S. Census Bureau, American Community Surveys 1-Year Estimates, 2005 - 2016; 2) U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Quarterly Workforce Indicators, 2005 - 2016 (Third Quarter)

One of the common misconceptions about the population of Hispanic descent is that they all are foreign-born and/or migrant workers. In Michigan, over 75 percent of Latinos in Michigan are U.S.-born and close to 86 percent of them are U.S. citizens.

The above facts have major implications on the distribution of jobs held by Hispanics across industries. Although the share of Hispanics in agriculture is three times the share of nonHispanics in this sector, it only reflects three percent of the total Hispanic employment in 2016 (Figure 1-5). Hispanics display a higher share of employment in manufacturing (19 percent) than do non-Hispanics (14 percent). However, Hispanics are under-represented than non-Hispanics in high-paying industries of healthcare and social assistance ( 11 vs .15 percent), professional and business services, and education (5 vs. 7 percent). Hispanics are over-represented in lowpaying sectors of accommodation and food services ( 13 vs .9 percent) and administrative support and waste management (10 vs. 7 percent) (Figure 1-5).

Figure 1-5: Employment Distribution by Industry


Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Quarterly Workforce Indicators, 2016 (Third Quarter)

## Section 3. Microeconomic Analysis of Hispanics' Labor Market Status in Michigan: Data, Methodologies, and Results

How do the different human capital and demographic variables affect Hispanics' employment status?

## Human Capital

- Educational attainment (years of schooling);
- English proficiency;
- Duration of stay since immigration.


## Demographics

- Citizenship status;
- Country of origin: Mexican and Other Hispanics (Cuban, Puerto Rican, etc.);
- Gender;
- Nativity (Foreign-born vs. U.S.-born);
- Race.

In this section, we follow the analysis done by Brian Duncan et al. (2006). Using Public Use Microdata Sample (PUMS) from the U.S. Census Bureau's American Community Survey (ACS) 2015, we first describe the state of human capital of Latino population in Michigan in comparison to the three main population racial groups in the state (non-Hispanic Whites, Blacks, and Asians). We then use the human capital and demographic variables in a series of regression analyses to estimate the impact of each these variables on the employment of Hispanics (Whites non-Hispanic being the control group).

The American Community Survey (ACS) ${ }^{13}$ Public Use Microdata Sample (PUMS) is a subset of the data collected through the ACS program. These data present person level responses, providing a one percent sample of the population on an annual basis. These data contain responses to most of the questions on the ACS instrument as well as several derived variables such as poverty levels and household income variables. The provision of these data by the U.S.

[^7]Census Bureau is an attempt to bring the flexibility of un-tabulated survey responses while maintaining the strict privacy protections provided by Title 13 to the U.S. code.

Part of the privacy protections built into the PUMS data are the use of Public Use Microdata Areas (PUMA), which represent the smallest geographic area for which the data are available. The PUMAs are statistical geographies made up of aggregations of Census Tracts whose combined populations equal or exceed 100,000 persons. These areas must also have a population that is expected to remain over 100,000 for the next decade. While many PUMAs or combinations of PUMAs may equal a county or approximate a municipal boundary, that is not a requirement for the areas' delineation. Given that, the only sub-state geography that can be identified consistently is the PUMA area, which may change as populations shift between decennial censuses.

## Point Estimation Methodologies

ACS micro data contain weighted estimates of the population (variable PWGT) for every available geography and can be averaged by specified socioeconomic criteria such as age, educational attainment, English proficiency, etc., using the appropriate survey command in STATA.

The estimates' margin of error will be calculated using methodology similar to the U. S. Census Bureau's methodology for calculating margins from the public use data. For an alpha of 0.1 for example, the margin of error is $1.645^{*} \operatorname{SE}(\mathrm{x}), \quad S E(x)=\sqrt{\frac{4}{80} \sum_{j=1}^{80}\left(x_{1}-x\right)^{2}}$

Where x is the point estimate and $x_{1}, x_{2} \ldots x_{80}$ are estimates produced from the 80 sample replicate weights, $p w g t p_{1}, p w g t p_{2} \ldots p w g t p_{80}$ and available in PUMS data (U.S. Census Bureau, pp. 25-26).

## Educational Attainment

Educational attainment is the most important and easiest observable dimension of human capital. In ACS, educational attainment is a categorical variable ranging from "No schooling completed" to "Doctorate degree". I use the methodology developed by Barro and Lee (1993 and 2013) and the UNESCO Institute for Statistics (UIS) to convert the above categories in actual years of schooling ${ }^{14}$.

[^8]Table 2-1: Average Years of Schooling, by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethnicity | All | U.S.- <br> Born | Foreign- <br> Born | All | U.S.- <br> Born | Foreign- <br> Born |
| Whites | 13.5 | 13.6 | 12.9 | 13.8 | 13.9 | 13.0 |
| Blacks | 12.6 | 12.5 | 14.4 | 13.3 | 13.2 | 14.3 |
| Asians | 15.9 | 15.1 | 16.2 | 14.9 | 15.6 | 14.7 |
| All Hispanics | 12.3 | 12.3 | 12.8 | 12.6 | 12.6 | 12.4 |
| Mexicans | 11.6 | 12.6 | 10.2 | 11.9 | 12.9 | 10.0 |
| All Other Hispanic/ Latino | 12.7 | 13.3 | 11.7 | 12.9 | 13.4 | 11.9 |

Note: See Appendix Table A2-1 for sample sizes and standard errors calculations.
Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

In Table 2-1, we use microdata from the U.S. Census Bureau's 2015 American Community Survey 1-year estimates, to report mean average years of schooling, by gender, race and ethnicity, and nativity, for individuals between 25 and 64 years of age ${ }^{15}$. Table 2-1 shows that the mean average years of schooling for Hispanics as an aggregate group is lower than for any other groups in comparison (Whites, Blacks, and Asians) and across all categories considered of nativity (U.S. or foreign-born) and gender (male and female).

In Michigan, close to 75 percent of Hispanics in Michigan are of Mexican origin. The other next two big groups of Hispanics in Michigan are Cubans and Puerto Ricans. For this reason and given the limitation of the sample size from the ACS microdata, we disaggregate Hispanics in two categories: Mexicans and All Other.

Table 2-1 indicates that Mexicans have the lowest average years of schooling across the board. On average, Mexican men have an educational attainment of a 12th grade no diploma, while Mexican women's average is about a high school diploma or a GED. Michigan's Mexican men who were born in the U.S. have an average educational attainment of around one year of college with no degree, while those born outside the U.S. have an educational attainment equivalent to a little over $10^{\text {th }}$ grade. Mexican women born in the U.S. have a little higher level

[^9]of education than their male counterparts (more than one year of college but no degree), while Mexican women born outside the U.S. have a similar educational attainment than their male counterparts (about a $10^{\text {th }}$ grade).

Other Hispanics living in Michigan and who were born in the U.S. have a higher level of education (a little over an Associate's degree) than their Black counterparts but lower than Whites, for both males and females. However, other Hispanics who were born outside the U.S. have a much lower educational attainment ( $12^{\text {th }}$ grade no diploma) than their Black and White counterparts for both genders.

Later on, we will examine the effects that the low levels of education of Hispanic groups have on their labor market outcomes (namely, employment and labor force participation). In fact, several studies (e.g., Chiswick, 1978; Schoeni, 1997) have found that schooling and work experience acquired outside the U.S. by Hispanic immigrants are imperfectly transferrable into the U.S. labor market, because employers place a lower value to these skills acquired abroad. So, nativity affects labor market outcomes of Hispanics.

## English Proficiency

English proficiency is an important component of human capital, commonly defined as the wealth or net worth of capital investments embodied in an individual. The American Community Surveys (and the economic questionnaires of the decennial censuses before that) contain self-reported information on individuals' abilities to speak English. All respondents were asked whether they "speak a language other than English at home," and only those who answered affirmatively were asked how well they speak English, with possible responses of "very well," "well," "not well," or "not at all." Table A2-2 in the appendix gives detailed percentages of these categories by gender, race and ethnicity, and nativity. ${ }^{16}$

[^10]Figure 2-1 Percentage of Men and Women Speaking English Less than Very Well, by Race, Ethnicity, and Nativity (Universe: Population 25-64 Years Old that Speak Another Language besides English)



Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Note: See Appendix Table A2-2 for the raw data on which this chart was built. Also refer to Appendix Table B2-2 for percentage distributions by gender, race and ethnicity, nativity and the detailed categories of English proficiency

Overall, Hispanics display much higher proportions of individuals that speak English less than very well than any other group being considered, for both men and women. This is even more pronounced for Mexicans. The share of foreign-born Hispanic men that speak English less than very well is about 10 percentage points higher than that of Whites in the same category, over 40 percentage points over Blacks, and about 18 points over Asians. The above pattern is also observed among women and is more pronounced. For example, the proportion of foreign-born

Hispanic women speaking English less than very well is about 18 percentage points above that of Whites in the same category, 52 points above Blacks, and 26 points above Asians. These differential gaps are also much higher for Mexicans relative to other Hispanic groups. With the proximity of Mexico, less educated individuals are more likely to migrate to the U.S. in search of low-skill jobs, while for other groups, only those with the means and those coming to the U.S. for advanced education can afford the journey.

## Duration of Stay since Migration and Citizenship Status

The American Community Surveys record the year of entry (yoep) and citizenship status (cit) for immigrants in the U.S. The duration of stay or years since migration (ysm) is the difference between the current survey year (2015) and the year the migrant entered the U.S. There are five categories of citizenship status: born in the U.S., born in Puerto Rico, Guam, the U.S. Virgin Islands, or the Northern Marianas, born abroad of American parent(s), U.S. citizen by naturalization, not a citizen of the U.S. The first three categories reflect those individuals born American citizens, and the last two categories apply to immigrants.

Figure 2-2 below shows that Hispanics have the lowest share of foreign-born individuals who are naturalized U.S. citizens ( 28 percent for men and 33 percent for women). Within this group, Mexicans display the highest proportion of 75 percent for both men and women who migrated to America but are not naturalized citizens. This is in contrast with foreign-born Whites (nonHispanics) whose majority is naturalized citizens (54 percent for men and 59 percent for women). Foreign-born individuals in the other two racial groups considered (namely Asians and

Figure 2-2 Percentage Foreign-born Naturalized Citizens by Gender, Detailed Ethnicity, and Race (Universe: Population 25-64 Years Old)



Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Note: Refer to Appendix Table B3-3 for percentage distributions by gender, race and ethnicity, nativity and the detailed categories of Citizenship

Blacks) are virtually evenly distributed between the two categories of naturalized and not U.S. citizens.

One of the reasons why Hispanic immigrants show a higher share of individuals who are not U.S. citizens could be a shorter period of stay since they migrated to the U.S. However, the data does not support this assumption. In Table 2-2, Asians display a shorter period of stay compared to Hispanics and everyone else. And yet, around 45 percent of them are naturalized citizens (relative to about a quarter for all Hispanics). Does this mean that the U.S. immigration services are tougher on Hispanics seeking citizenship or that Hispanics prefer to not seek citizenship for various reasons?

Table 2-2 Average Years Since Migration by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethnicity | All | U.S.- <br> Born | ForeignBorn | All | U.S.- <br> Born | Foreign- <br> Born |
| Whites | 21.9 | - | 19.9 | 21.8 | - | 19.7 |
| Blacks | 19.4 | - | 17.8 | 20.6 | - | 18.1 |
| Asians | 15.5 | - | 15.2 | 17.9 | - | 17.7 |
| All Hispanics | 19.3 | - | 18.3 | 19.3 | - | 18.5 |
| Mexicans | 18.5 | - | 18.2 | 17.9 | - | 17.6 |
| All Other Hispanic/ Latino | 20.9 | - | 18.6 | 21.6 | - | 20.6 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

How do the factors described above of educational attainment, English proficiency, citizenship, and years of stay since migration affect Hispanics' chances of securing a job in Michigan?

## Section 4. Microeconomic Analysis of Hispanics' Employment Status in Michigan

## Linear Probability Model (LPM) and Logit Regression Methodologies

Consider the following estimating equation of the probability of being employed:
$Y_{i}=\beta_{0}+\sum_{1}^{k} \beta_{k} H C_{i k}+\sum_{1}^{j} \gamma_{j}$ Demo $_{i j}+\mu_{i}$
The explained variable $\left(Y_{i}\right)$ is binary expressed as 1 if the individual is employed and 0 if not employed. It is assumed that Y is not the product of data censoring. $H C$ is a vector of Human Capital covariates, including educational attainment, age (to capture work experience), number of years since migration, and English proficiency. Demo represent a series of dummy variables representing demographic characteristics such as gender, race/ethnicity (white being the control group), nativity, and citizenship status. Ethnicity can further be divided into Mexican and other Hispanics.

Denote $y_{i}$ as a realization of a random variable $Y$ (participation in the labor force) such that $y_{i}$ takes the value 1 , with a probability $\pi_{i}$ and 0 , with a probability $1-\pi_{i}$. The random variable $Y$ follows a Bernouilli distribution of the form: $P\left\{Y=y_{i}\right\}=\pi_{i}^{y_{i}}\left(1-\pi_{i}\right)^{1-y_{i}}$ (2).

I am interested in explaining how the dependent variable $(\mathrm{Y})$ changes, in response to changes in a set of covariates $(X)$. In other words, we want to evaluate the effects of the covariates $(X)$ on the probability ( $\pi$ ) of the dependent variable (Y): P(y=1|X=$\pi(X)=\pi\left(x_{1}, x_{2}, \ldots . x_{k}\right)$ (3)

A linear Probability Model (LPM) would produce a good estimation of the average partial effect (APE). However, since we are interested in the marginal partial effects of $x_{i}$ on $\pi(X)$, the use of nonlinear probability models such as Probit or Logit is more appropriate (Wooldridge, 2016).

We would like the probabilities $\pi_{i}$ to depend on a vector of covariates $x_{i}$. Since the probabilities are between 0 and 1 , but $x_{i}$ can be of any value, a straight linear transformation would not guarantee that the predicted values will be in the correct range unless certain restrictions are imposed on the coefficients. The use of odds (rather than probability) removes the ceiling restriction of 1: $O d d s_{i}=\frac{\pi_{i}}{1-\pi_{i}}$ (4), while using Logit or Probit link functions removes the floor restriction; as the probability goes to zero, the odds approach zero and the Logit or Probit approaches $-\infty$.

## Employment Status

## Employment Rates by Gender, Detailed Ethnicity, and Nativity

Income determines a person's level of material wellbeing. In fact, income is the only metric used while determining poverty thresholds in the U.S. Over 65 percent (and as high as 76 percent in some years) of personal income reported to the Internal Revenue Services (IRS) by Americans come from wages and salaries ${ }^{17}$. Therefore, it is imperative to investigate the factors

[^11]that affect the employment status of Hispanic population in Michigan to better understand not only their contribution to the state's economy, but also to their own wellbeing.

Table 2-3 display employment rates (ratio of employed over total population) by gender, ethnicity and race, and nativity. According to our estimates from the 2015 American Community Survey 1-year, 1\% Public Use Microdata Samples (PUMS), foreign-born Hispanics men have the highest rate of employment in Michigan ( 88 percent), relative to all other groups being compared. The employment rate for foreign-born Mexicans is 90 percent. However, foreign-born Hispanic women display the lowest employment rate.

Table 2-3 Employment Rates by Gender, Detailed Ethnicity and Race, and Nativity (Universe: Population 25-64 Years Old)

|  |  |  |  | Men, by Nativity |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | U.S.-Born | Foreign- | Women, by Nativity |  |  |
|  |  | Born | All | U.S.-Born | Foreign- |  |
| Ethnicity | $77 \%$ | $77 \%$ | $83 \%$ | $68 \%$ | $68 \%$ | $53 \%$ |
| Whites | $56 \%$ | $55 \%$ | $86 \%$ | $61 \%$ | $61 \%$ | $74 \%$ |
| Blacks | $82 \%$ | $67 \%$ | $85 \%$ | $63 \%$ | $77 \%$ | $61 \%$ |
| Asians | $78 \%$ | $71 \%$ | $88 \%$ | $61 \%$ | $68 \%$ | $48 \%$ |
| All Hispanics | $80 \%$ | $73 \%$ | $90 \%$ | $60 \%$ | $67 \%$ | $46 \%$ |
| Mexicans | $73 \%$ | $67 \%$ | $82 \%$ | $65 \%$ | $71 \%$ | $54 \%$ |
| All Other Hispanic/ Latino |  |  |  |  |  |  |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Table A2-5 in the Appendix gives details on standard errors of the estimates and sample sizes.

Average and Marginal Partial Effects of Human Capital and Demographic Covariates on Employment

We are now going to investigate the factors that contribute to these employment rate differentials across groups. How important is the investment in human capital? Table 2-4 shows average employment probability differentials of the various ethnic and racial groups relative to Whites, by gender and nativity, while Table 2-5 shows odd ratios of being employed (Whites being the control group).

Generally speaking, foreign-born Hispanic males (and Mexicans in particular), have a robust and significant advantage of being employed relative to foreign-born Whites in every scenario considered (age, education, English proficiency, duration of stay since year of entry, and citizenship status), with p-values of 2 percent or less. For example, foreign-born Hispanic males are 5.8 percent ( 8.0 percent for Mexicans), or 1.6 times (twice for Mexicans) more likely to be
employed than foreign-born Whites, controlling for age only. These differentials jump to 10.0 percent (12.4 percent for Mexicans), or 2.2 (2.7) times, when education is controlled; 6.3 percent ( 8.4 percent) for English proficiency (or 1.7 and 2.1 times); 9.6 percent (12.0 percent) for duration of stay (or 2.1 and 2.7 times); and 11.4 percent ( 13.9 percent) for being a naturalized citizen (or 2.5 and 3.1 times).

In contrast, there is no significant difference in the probabilities of being employed between foreign-born male individuals in other Hispanic groups (Cubans, Dominicans, etc.) and Whites in every scenario considered. However, other U.S.-born Hispanic males have significantly lower probabilities of being employed than Whites, controlling for age, education, and English proficiency at $p$-values lower than 5 percent.

Furthermore, there is no significant difference in the probability of being employed between female Hispanics (U.S. or foreign-born; Mexican and Other) and Whites. The only exception is for foreign-born Mexican women (controlling for age only), which shows a probability of 9.4 percent lower than Whites, significant at a $p$-value of 7.5 percent (or 1.25 times less likely to be employed than White female).

Table 2-4: Employment Average Differentials* Relative to Whites, by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

| Male |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Controlled |  |  | Educ | cation | English P | Proficient | Duration of Stay | Citizen |
| Nativity <br> Race-Ethnicity | U.S.born | Foreignborn | U.S.- <br> born | Foreignborn | U.S.born | Foreignborn | Foreignborn | Foreignborn |
| Hispanics -All | -6.4\% | 5.8\% | -3.4\% | 10.0\% | -6.0\% | 6.3\% | 9.6\% | 11.4\% |
| Mexicans | -5.5\% | 8.0\% | -1.7\% | 12.4\% | -5.0\% | 8.4\% | 12.0\% | 13.9\% |
| Other Hispanics | -8.1\% | -2.0\% | -7.2\% | -0.7\% | -7.5\% | -1.5\% | -0.9\% | -0.2\% |
| Blacks | -23.0\% | 3.5\% | -18.8\% | 2.2\% | -23.0\% | 2.3\% | 2.0\% | 2.7\% |
| Asians | -14.0\% | 3.3\% | -20.2\% | 0.1\% | -13.5\% | 2.9\% | 0.5\% | 0.8\% |

Female

| Controlled Variables | Age |  | Education |  | English Proficient |  | Duration of Stay | Citizen |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nativity <br> Race-Ethnicity | U.S.- <br> born | Foreignborn | U.S.- <br> born | Foreignborn | U.S.- <br> born | Foreignborn | Foreignborn | Foreignborn |
| Hispanics -All | -3.2\% | -7.7\% | 0.3\% | -0.9\% | -2.4\% | -6.0\% | -1.4\% | 1.5\% |
| Mexicans | -4.5\% | -9.4\% | -0.5\% | -1.9\% | -3.8\% | -7.3\% | -1.7\% | 1.3\% |
| Other Hispanics | -0.2\% | -0.8\% | 1.9\% | 1.4\% | 1.2\% | -0.8\% | -0.3\% | 1.1\% |
| Blacks | -9.4\% | 19.0\% | -6.8\% | 17.2\% | -9.5\% | 19.7\% | 17.8\% | 18.8\% |
| Asians | 2.6\% | 4.9\% | -3.7\% | 2.3\% | 3.3\% | 4.5\% | 2.6\% | 2.9\% |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

* OLS regression coefficients show the average partial effects of the probability of being employed for the different race-ethnic groups relative to Whites. Table A2-6 in the Appendix gives details on the coefficients with standard errors of the estimates in () and $p$-values in [].

Table 2-5: Employment Odd Ratios* Relative to Whites, by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

| Male |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Controlled Variables | Age |  |  | Education |  |  | English Proficient |  |  |  | Duration of Stay | Citizen |
| Nativity <br> Race-Ethnicity | U.S. born |  | Foreignborn | U.S.born |  | Foreignborn | U.S. <br> born |  | Foreignborn |  | oreign- <br> orn | Foreignborn |
| Hispanics -All |  | 0.7 | 1.6 |  | 0.8 | 2.2 |  | 0.7 | 1.7 |  | 2.1 | 2.5 |
| Mexicans |  | 0.7 | 2.0 |  | 0.9 | 2.7 |  | 0.8 | 2.1 |  | 2.7 | 3.1 |
| Other Hispanics |  | 0.7 | 0.9 |  | 0.7 | 0.9 |  | 0.7 | 0.9 |  | 0.9 | 1.0 |
| Blacks |  | 0.3 | 1.3 |  | 0.4 | 1.2 |  | 0.3 | 1.2 |  | 1.1 | 1.2 |
| Asians |  | 0.5 | 1.3 |  | 0.3 | 1.0 |  | 0.5 | 1.2 |  | 1.1 | 1.1 |


| Female |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Controlled |  |  |  | Education |  |  | English Proficient |  |  | Duration of Stay | Citizen |
| Nativity <br> Race-Ethnicity | U.S.born |  | Foreignborn | U.S.- <br> born |  | Foreignborn | U.S.born |  | Foreignborn | Foreignborn | Foreignborn |
| Hispanics -All |  | 0.9 | 0.7 |  | 1.0 | 1.0 |  | 0.9 | 0.8 | 1.0 | 1.1 |
| Mexicans |  | 0.8 | 0.7 |  | 1.0 | 0.9 |  | 0.8 | 0.7 | 0.9 | 1.1 |
| Other Hispanics |  | 1.0 | 1.0 |  | 1.1 | 1.1 |  | 1.1 | 1.0 | 1.0 | 1.0 |
| Blacks |  | 0.6 | 2.3 |  | 0.7 | 2.2 |  | 0.6 | 2.4 | 2.3 | 2.4 |
| Asians |  | 1.2 | 1.2 |  | 0.8 | 1.1 |  | 1.2 | 1.2 | 1.1 | 1.1 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

* Logistic regression coefficients show the marginal partial effects (odd ratios) of the probability of being employed for the different race-ethnic groups relative to Whites. Table A2-7 in the Appendix gives details on the coefficients with standard errors of the estimates in () and pvalues in [].


## Self-employment

Employment captures not only individuals who work for others, but also those who work in their own businesses or profession; worked on their own farm; or spent 15 hours or more as unpaid workers in an enterprise operated by a member of their family. This is referred to as self-employment.

How important is self-employment for Michigan Latinos? Table 2-6 shows the rates of selfemployment by gender, race/ethnicity, and nativity. Overall, Hispanics' display selfemployment rates that are about half of the rates for Whites and Asians. Hispanics' selfemployment rates are similar to the rates for Blacks. Also, overall, self-employment is higher for males, regardless of race/ethnicity and nativity. Among Hispanic subgroups, Other Hispanics (Cubans, Puerto Ricans, etc.) show higher rates of self-employment compared to Mexicans, irrespective of gender and nativity. Previous studies on Latinos' self-employment in the U.S. have found ${ }^{18}$ that geographic location and human capital accounts for little in explaining the differences in self-employment rates between Hispanics and Whites on one hand, or between Hispanics subgroups, on the other hand. Furthermore, theories that have been advanced to explain why self-employment rates vary across immigrants' national origin groups and across native ethnic groups all have trouble providing a consistent explanation for the differences observed over a wide range of groups (Fairlie and Meyer, 1996; Portes and Rumbaut, 1990).

Table 2-6: Self-Employment Rates by Gender, Detailed Ethnicity and Race, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethnicity | All | U.S.-Born | ForeignBorn | All | U.S.- <br> Born | ForeignBorn |
| Whites | 12\% | 11\% | 15\% | 7\% | 7\% | 9\% |
| Blacks | 5\% | 6\% | 3\% | 4\% | 3\% | 7\% |
| Asians | 10\% | 12\% | 9\% | 10\% | 8\% | 10\% |
| All Hispanics | 6\% | 7\% | 6\% | 3\% | 3\% | 1\% |
| Mexicans | 6\% | 5\% | 6\% | 1\% | 2\% | N/A |
| All Other Hispanic/ Latino | 8\% | 11\% | 4\% | 6\% | 6\% | 4\% |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

[^12]
## Occupational and Industry Employment

Two other metrics of a population labor market experience are the occupations and industries in which they work. Tables 2-7 and 2-8 below display the distribution of workers across occupational groups and industries, by gender, ethnicity/race, and nativity.

In general, Hispanics (and Mexicans in particular) have higher shares of workers in production and transportation and material moving occupations than do Whites and Asians for both genders. The portions are similar to those of Blacks. These occupations tend to pay lower than occupations in Management, Computer and mathematical, and Healthcare where Whites and Asians are more concentrated.

Table 2-9 (from which Table 2-7 is constructed) shows that about 56 percent of foreign-born Hispanics males are employed in four generally low-paying occupations of Construction and extraction ( 22.5 percent), Production (13.9), Building and grounds cleaning and maintenance (10.6), and Farming, fishing, and forestry (9.4). This percentage rises to 63.5 for foreign-born Mexican males.

Around 19 percent of U.S.-born Latina women are employed in Office and administrative support occupations, followed by 14 percent are in Sales, 11 percent in Health support, and 10 percent in Management, business, and financial occupations. These shares rise to 21, 14, 13, and 11 percent for Mexican women in Michigan.

The dissimilarity index provides a useful summary measure of the extent to which the distributions of two groups differ. It represents the percentage of either group that is needed to make the distributions identical. The index can range between 0 and 100 percent, with higher values indicating larger differences between the two distributions. ${ }^{19}$ For example, while comparing industry employment distributions for two groups of a population, the index is at maximum when each industry employs only one group (e.g., Hispanics); it is at its minimum when the shares of each group (e.g., Hispanics and Whites non-Hispanic) in total employment is same across industries.

Table 2-7 below shows the dissimilarity indexes by gender and nativity between Hispanics and the other three racial groups (non-Hispanic Whites, Blacks, and Asians). While the occupational employment distribution of Native Hispanics is somewhat similar to that of Whites and Blacks

[^13](below 25 percent), the reverse is observed when compared to Asians across both genders and nativities (between 39 and 60 percent).

Table 2-7: Occupational Dissimilarity Index between Hispanics and Other Racial Groups by Gender, Hispanic Sub-groups, and Nativity (Universe: Population 25-64 Years Old)

| Racial Groups | Men |  |  |  |  |  | Women |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hispanics |  | Mexicans |  | Other Hispanics |  | Hispanics |  | Mexicans |  | Other Hispanics |  |
|  | Native | Foreign | Native | Foreign | Native | Foreign | Native | Foreign | Native | Foreign | Native | Foreign |
| Whites | 18.9 | 32.1 | 21.6 | 38.9 | 24.7 | 22.1 | 16.9 | 42.4 | 16.8 | 53.0 | 21.8 | 28.7 |
| Blacks | 11.9 | 31.3 | 15.9 | 37.3 | 20.8 | 20.0 | 11.1 | 36.0 | 13.7 | 47.3 | 15.5 | 27.2 |
| Asians | 49.3 | 56.3 | 51.5 | 60.6 | 46.0 | 45.4 | 42.2 | 50.4 | 43.0 | 60.4 | 42.6 | 38.8 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Also, the occupational employment distribution of foreign-born Hispanics and sub-groups is quite different from that of Whites, Blacks, or Asians (between 22 and 60 percent).

The distribution of jobs across industries by gender, ethnic/racial groups, and nativity for Hispanics show some commonly known and not so commonly known facts (Table 2-10). For example, it is known that Hispanics display higher shares of employment in Agriculture, fishing and forestry. This is particularly true for foreign-born Hispanics. For example, at 11.3 percent, the share of foreign-born Hispanic males in Agriculture is seven and half time the share of Whites or native Hispanics. The share is even higher for Mexican Males (13.5 percent). Around 11.6 percent of foreign-born Hispanic females ( 13.6 percent for Mexican women) are in Agriculture, compared to only 0.5 percent for White females, 0.1 for Blacks, 0.5 for Asians, and 0.9 percent for native Hispanics.

What is lesser known is how Hispanics in Michigan are represented in other industry sectors. For instance, 21.9 percent of foreign-born Hispanic males are employed in Construction and mining ( 27.1 percent for Mexicans), compared to only 11.0 percent for Whites, 5.9 percent for Blacks, 0.7 for Asians, and 6.9 percent for native Hispanic males. Construction is a maledominated industry; the proportions of women in the sector are very low across all ethnic and racial groups.

Another lesser known fact is that the shares of Hispanics in Manufacturing are comparable to the shares of other groups and sometimes are even higher. For example, 33.8 percent of other foreign-born Hispanics men (Cubans, Puerto Ricans, etc.) are employed in Manufacturing, compared to 25.8 percent for Whites, 23.7 for Blacks, 31.2 for Asians, and 26.3 for native Hispanic males. Also at 30.2 percent, Mexican women display the highest proportion of manufacturing employment than any other group.

Finally, with the exception of foreign-born Mexican women, the distribution of other Hispanic women in Healthcare and social assistance services is similar to that of Whites, Blacks, Asians, and native Mexicans.

The industry employment dissimilarity index (Table 2-8) shows the same facts as for occupations: there is a great job distribution difference between foreign-born and U.S.-born groups and these differences are higher for Mexicans than for other Hispanic groups (both men and Women).

Table 2- 8: Industry Dissimilarity Index between Hispanics and Other Racial Groups by Gender, Hispanic Sub-groups, and Nativity (Universe: Population 25-64 Years Old)

| Racial Groups | Men |  |  |  |  |  | Women |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hispanics |  | Mexicans |  | Other Hispanics |  | Hispanics |  | Mexicans |  | Jther Hispanics |  |
|  | Native | Foreign | Native | Foreign | Native | Foreign | Native | Foreign | Native | Foreign | Native | Foreign |
| Whites | 7.6 | 25.9 | 8.4 | 32.9 | 22.4 | 23.4 | 10.1 | 34.7 | 11.1 | 44.4 | 17.0 | 22.9 |
| Blacks | 10.9 | 27.3 | 14.0 | 32.1 | 16.3 | 24.1 | 9.7 | 33.6 | 11.5 | 43.6 | 19.0 | 29.6 |
| Asians | 25.9 | 35.2 | 24.1 | 42.5 | 33.5 | 25.8 | 15.3 | 28.6 | 19.7 | 36.1 | 17.5 | 21.2 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Table 2-9: Occupational Employment Distribution (Percent) by Gender, Ethnicity/Race, and Nativity
(Universe: Population 25-64 Years Old)

| Occupational titles | Men, by Race/Etnicity and Nativity |  |  |  |  |  |  |  |  | Women, by Race/Etnicity and Nativity |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Whites Blacks Asians |  |  | Hispanics |  | Mexicans |  | Other Hispanics |  | Whites Blacks Asians |  |  | Hispanics |  | Mexicans |  | Other Hispanics |  |
|  | All | All | All | Native | Foreign | Native | Foreign | Native | Foreign | All | All | All | Native | Foreign | Native | Foreign | Native | Foreign |
| Management, business, and financial | 16.2 | 8.8 | 15.9 | 6.2 | 7.3 | 6.7 | 7.3 | 5.1 | 7.3 | 14.0 | 11.5 | 14.4 | 9.9 | 6.5 | 10.7 | 5.4 | 8.2 | 8.5 |
| Computer and mathematical | 3.3 | 1.4 | 13.3 | 3.4 | 2.3 | 3.2 | 3.2 | 3.9 | 0.0 | 1.3 | 1.5 | 5.9 | 0.7 | 0.7 | 0.9 | 1.1 | 0.4 | 0.0 |
| Architecture and Engineering | 4.4 | 1.7 | 15.0 | 1.5 | 1.9 | 1.5 | 1.2 | 1.8 | 3.7 | 0.8 | 0.6 | 5.2 | 0.2 | 2.8 | 0.2 | 1.6 | 0.3 | 5.0 |
| Life, physical, and social science | 0.8 | 0.1 | 3.8 | 0.7 | 0.4 | 1.1 | 0.6 | 0.0 | 0.0 | 0.6 | 0.1 | 1.9 | 0.4 | 0.6 | 0.6 | 0.7 | 0.0 | 0.5 |
| Community and social services | 0.8 | 2.4 | 0.5 | 0.5 | 1.0 | 0.3 | 0.7 | 1.1 | 1.8 | 2.1 | 3.1 | 0.6 | 2.7 | 3.9 | 2.5 | 0.9 | 3.2 | 9.3 |
| Legal | 0.9 | 0.2 | 0.1 | 0.5 | 0.0 | 0.3 | 0.0 | 1.0 | 0.0 | 1.0 | 0.4 | 0.6 | 0.6 | 0.5 | 0.1 | 0.8 | 1.7 | 0.0 |
| Education, training, and library | 2.8 | 1.5 | 8.0 | 1.5 | 2.9 | 0.6 | 1.5 | 3.6 | 6.4 | 9.6 | 5.4 | 8.5 | 5.5 | 5.3 | 5.8 | 3.5 | 4.9 | 8.8 |
| Arts, design, entertainment, sports, and media | 1.7 | 1.1 | 1.4 | 1.9 | 1.8 | 1.9 | 1.2 | 1.9 | 3.5 | 1.7 | 0.7 | 1.0 | 0.9 | 1.3 | 1.3 | 0.5 | 0.0 | 2.7 |
| Healthcare practitioners and technicians | 2.6 | 2.1 | 7.9 | 1.5 | 1.0 | 0.2 | 0.0 | 4.6 | 3.7 | 10.6 | 6.0 | 17.6 | 7.1 | 3.0 | 6.6 | 0.4 | 8.4 | 8.0 |
| Healthcare support | 0.4 | 1.2 | 0.2 | 1.5 | 0.0 | 1.9 | 0.0 | 0.6 | 0.0 | 5.0 | 7.7 | 2.7 | 11.2 | 4.4 | 12.7 | 3.9 | 7.7 | 5.3 |
| Protective services | 2.7 | 4.2 | 0.7 | 5.6 | 1.5 | 4.6 | 1.4 | 7.9 | 1.8 | 0.6 | 1.6 | 0.0 | 0.4 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 |
| Food preparation and serving | 2.9 | 6.1 | 5.2 | 5.2 | 6.1 | 4.7 | 6.0 | 6.4 | 6.3 | 5.3 | 4.4 | 5.8 | 4.8 | 6.2 | 4.2 | 7.8 | 6.2 | 3.3 |
| Building and grounds cleaning and maintenance | 4.2 | 7.3 | 1.0 | 4.8 | 10.6 | 4.7 | 11.0 | 4.9 | 9.6 | 2.9 | 5.0 | 1.5 | 4.8 | 8.0 | 4.3 | 9.9 | 5.9 | 4.5 |
| Personal care and service | 0.9 | 2.2 | 1.7 | 1.4 | 0.2 | 1.7 | 0.2 | 0.7 | 0.1 | 5.5 | 8.4 | 7.1 | 3.9 | 2.8 | 3.4 | 1.5 | 5.0 | 5.3 |
| Sales | 9.0 | 5.8 | 6.1 | 9.5 | 2.4 | 10.7 | 1.0 | 6.4 | 6.1 | 10.5 | 9.7 | 6.8 | 14.2 | 6.2 | 14.2 | 4.3 | 14.1 | 9.6 |
| Office and administrative support 1 | 6.0 | 6.4 | 5.5 | 7.3 | 3.3 | 6.7 | 2.6 | 8.7 | 5.2 | 19.8 | 18.5 | 8.8 | 19.3 | 6.0 | 21.2 | 6.0 | 15.2 | 6.2 |
| Farming, fishing, and forestry | 0.8 | 0.1 | 0.0 | 1.1 | 9.4 | 1.5 | 11.7 | 0.0 | 3.3 | 0.3 | 0.1 | 0.3 | 0.5 | 8.9 | 0.5 | 13.1 | 0.6 | 1.2 |
| Construction and extraction | 9.4 | 5.3 | 0.3 | 6.7 | 22.5 | 6.0 | 27.1 | 8.5 | 10.3 | 0.4 | 0.3 | 0.1 | 0.4 | 0.7 | 0.2 | 1.1 | 0.6 | 0.0 |
| Installation, maintenance, and repair | 6.8 | 5.5 | 1.3 | 6.5 | 3.6 | 6.9 | 2.9 | 5.3 | 5.6 | 0.2 | 0.3 | 8.9 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| Production | 13.0 | 18.1 | 8.7 | 18.1 | 13.9 | 22.0 | 13.8 | 8.8 | 14.1 | 5.2 | 8.5 | 0.8 | 8.9 | 14.0 | 7.1 | 16.1 | 12.8 | 10.0 |
| Transportation and material moving | 9.6 | 14.5 | 2.5 | 13.7 | 8.0 | 11.9 | 6.8 | 18.0 | 11.2 | 2.2 | 3.6 | 1.4 | 2.5 | 16.6 | 2.2 | 19.9 | 3.3 | 10.3 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)
Note: Individuals in the Military or those not participating in the labor force are not included in the counts

Table 2-10: Industry Employment Distribution (Percent) by Gender, Ethnicity/Race, and Nativity (Universe: Population 25-64 Years Old)

| Industry titles | Men, by Race/Etnicity and Nativity |  |  |  |  |  |  |  |  | Women, by Race/Etnicity and Nativity |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Whites <br> All | Blacks <br> All | Asians <br> All | Hispanics |  | Mexicans |  | Other Hispanics |  | Whites <br> All | Blacks <br> All | Asians <br> All | Hispanics |  | Mexicans |  | Other Hispanics |  |
|  |  |  |  | Native | Foreign | Native | Foreign | Native | Foreign |  |  |  | Native | Foreign | Native | Foreign | Native | Foreign |
| Agriculture, fishing, and forestry | 1.5 | 0.4 | 0.0 | 1.7 | 11.3 | 2.4 | 13.5 | 0.0 | 5.5 | 0.5 | 0.1 | 0.5 | 0.9 | 11.6 | 0.6 | 13.6 | 1.5 | 7.9 |
| Extraction and mining | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 1.4 | 0.0 | 0.0 |
| Utilities | 1.4 | 1.1 | 0.6 | 0.8 | 0.4 | 0.6 | 0.5 | 1.3 | 0.0 | 0.4 | 0.7 | 0.1 | 0.5 | 0.0 | 0.5 | 0.0 | 0.6 | 0.0 |
| Construction | 11.0 | 5.9 | 0.7 | 6.9 | 21.9 | 7.4 | 27.1 | 5.8 | 8.0 | 1.3 | 0.7 | 0.3 | 1.0 | 0.9 | 1.3 | 1.4 | 0.3 | 0.0 |
| Manufacturing | 25.8 | 23.7 | 31.2 | 26.3 | 24.5 | 29.5 | 21.0 | 18.6 | 33.8 | 10.2 | 9.2 | 17.2 | 11.9 | 28.1 | 11.4 | 30.2 | 12.8 | 24.1 |
| Wholesale trade | 3.7 | 1.2 | 2.9 | 3.3 | 2.6 | 3.2 | 0.0 | 3.6 | 0.0 | 1.6 | 0.8 | 0.3 | 0.9 | 2.2 | 1.1 | 3.5 | 0.5 | 0.0 |
| Retail trade | 9.7 | 8.3 | 3.9 | 9.2 | 2.3 | 10.6 | 3.6 | 6.0 | 4.0 | 11.5 | 9.1 | 6.6 | 12.9 | 8.4 | 12.4 | 7.7 | 14.1 | 9.6 |
| Transportation and warehouse | 5.2 | 7.3 | 1.3 | 5.4 | 0.0 | 4.4 | 1.7 | 7.8 | 3.0 | 2.0 | 3.8 | 0.4 | 1.3 | 0.3 | 1.3 | 0.0 | 1.4 | 0.8 |
| Information | 1.7 | 1.5 | 1.5 | 2.7 | 1.0 | 2.7 | 0.2 | 2.5 | 0.0 | 1.5 | 1.3 | 1.3 | 1.1 | 0.0 | 0.9 | 0.0 | 1.6 | 0.0 |
| Financial activities | 4.4 | 4.5 | 3.7 | 5.1 | 4.7 | 4.4 | 2.8 | 6.8 | 9.8 | 7.1 | 5.4 | 6.5 | 6.6 | 1.9 | 8.4 | 2.1 | 2.6 | 1.5 |
| Professional and business services | 10.5 | 12.8 | 18.0 | 9.6 | 12.5 | 10.7 | 12.8 | 6.8 | 11.6 | 9.2 | 10.4 | 13.6 | 11.4 | 11.3 | 7.9 | 13.2 | 19.0 | 7.8 |
| Educational services | 5.0 | 3.7 | 14.0 | 3.9 | 3.3 | 3.6 | 2.1 | 4.4 | 6.4 | 13.8 | 8.2 | 11.3 | 7.8 | 7.0 | 8.3 | 3.7 | 6.7 | 13.1 |
| Healthcare and social assistance services | 5.1 | 7.2 | 8.9 | 6.0 | 1.4 | 4.1 | 0.0 | 10.7 | 4.9 | 24.8 | 29.6 | 24.8 | 25.5 | 12.6 | 26.3 | 8.8 | 23.7 | 19.6 |
| Leisure and hospitality | 5.9 | 8.8 | 6.9 | 6.8 | 9.0 | 6.0 | 8.8 | 8.5 | 9.8 | 7.7 | 8.8 | 8.1 | 8.1 | 9.3 | 8.6 | 11.1 | 7.1 | 5.8 |
| Other services | 4.1 | 4.7 | 2.8 | 3.6 | 2.8 | 3.2 | 3.7 | 4.7 | 0.6 | 4.7 | 3.5 | 6.9 | 3.0 | 3.1 | 2.5 | 1.7 | 4.2 | 5.7 |
| Public administration | 4.0 | 4.3 | 2.6 | 6.4 | 2.3 | 4.2 | 2.2 | 11.8 | 2.6 | 3.3 | 5.3 | 1.0 | 6.2 | 0.9 | 8.0 | 0.0 | 2.2 | 2.6 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)
Note: Individuals in the Military or those not participating in the labor force are not included in the counts

## Full-time versus Part-time Employment

In the American Community Surveys, the number of hours worked refers to 12 months preceding the time when the question is asked. The variables "WKHP captures the "usual hours worked per week in the past 12 months"; and, "WKW" records the "weeks worked during the past 12 months". Combining these two variables allows us to distinguish full-time year-around workers from part-time employees. ${ }^{20}$

Table 2-11: Full-time, Year-round Employment Rates by Gender, Detailed Ethnicity and Race, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: |
| Ethnicity | All | U.S.-Born | $\begin{array}{c}\text { Foreign- } \\ \text { Born }\end{array}$ | All |  | U.S.-Born | \(\left.\begin{array}{c}Foreign- <br>

Born\end{array}\right]\)

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Native Hispanic men in Michigan displayed the highest share of individuals working full-time, year-round in 2015, according to estimates calculated from the American Community Survey 1Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS). This is particularly true for

[^14]- Full-time, year-round workers in (reference period): all people 16 years old and over who usually worked 35 hours or more per week for 50 to 52 weeks in the (reference period). It is important to note that this definition does not distinguish those who worked full-time, year-round at one job from those who did so at several parttime jobs totaling 35 or more hours of work each week of the year. This distinction could indeed have strong implication of the earnings of these individuals.
- Part-time, year-round workers in (reference period): all people 16 years old and over who usually worked 1 to 34 hours per week for 50 to 52 weeks in the (reference period).
- Part-time or part-year workers in (reference period): all people 16 years old and over who usually worked 1 to 34 hours per week or less than 50 weeks in the (reference period).
(https://www.census.gov/hhes/www/laborfor/faq.htmI\#Q7, retrieved 1/16/2018

Hispanic men other than Mexicans, with a ratio of 86 percent; three percentage points above Mexicans, four above Whites, six above Asians, and thirteen above Blacks. On the other hand, U.S.-born non-Mexican Hispanic women showed the lowest share in this category of full-time, year-round workers ( 54 percent, compared to 69 percent for Mexican women, 65 percent for Whites, 67 percent for Blacks, and 77 percent for Asians).

Economists have argued that the situation, where a greater share of men than of women participate full-time in employment, can be explained by the bargaining process that takes place within family households about who goes to work and who takes care of the household chores. Traditionally, child-bearing and caring has been a women's duty, while men supplied their labor for paid work. In fact, Table 2-11 above shows that the percentages of women fulltime, year-round workers are lower than those of men for every race, ethnicity, and nativity group considered in this analysis.

Anyone who works fewer than 35 hours a week or than 50 weeks a year is consider part-time. Part-time, year around employees work fewer than 35 hours a week for 50 weeks or more a year. Only two percent of Hispanic men fall in this category, compared to six percent White men, nine percent for Blacks, and five percent for Asians. It is important to note that foreignborn Hispanic men display a lower share of part-time, year-round workers than their U.S.-born counterparts. The situation is reversed for Whites and Blacks.

A much greater portion of women work part-time, year-round than men for all ethnic, racial, and nativity categories considered. This is even more true for Hispanics. Michigan's Latinas are over eight times more likely to work part-time, year-round than Latinos do ( 17 vs .2 percent). A higher proportion (19 percent) of foreign-born Mexicanas work part-time, year-round than do their U.S.-born colleagues ( 14 percent). The opposite is observed for non-Mexican Latinas (U.S.born: 25 percent; foreign-born: 11 percent).

## Section 5: Concluding Remarks and Study Extension

Hispanic population and labor force displayed significant growth since the 1980 population census and more so since the turn of the Millennium in 2000. Michigan's Latinos show higher rates of employment and labor force participation. However, because of lower levels of human capital investment and other unobserved factors (i.e., employment discrimination, ability, etc.), Michigan's Latinos tend to be employed in low-paying industries and occupations. They are also over-represented in part-time employment.

Despite the relative small size of Hispanic population in Michigan, its youthfulness and relatively high growth rate, compared to that of the Non-Hispanic population, are having important demographic and labor market impacts in the state.

The significant growth in Hispanic population has had direct impact on the current and potential labor force in Michigan. Hispanics represent new entrants into the labor force.

As a population with a history of migration in respond to agriculture and automotive industries' labor needs in the state (starting at the turn of the 20th century), Michigan Latinos are a very stable and long-established population in the state, with very high growth potential due to its relative youth.

We believe it is in the state of Michigan's interest to undertake the full integration of this population, to harness its market growth and develop its educational and labor market and entrepreneurial potential. Let's not let current anti-immigrant sentiments cloud the issue and recognition of the contribution of Latinos to Michigan's population and labor force growths. The consequence of not investing in the State's Latino population are of concern to Michigan as a whole, especially to those local areas where significant Hispanic populations live.

There are several possible extensions of the current analysis. One would be to investigate the impact (if any) that the 2009 economic recession and/or the current anti-immigration rhetoric have had on the labor market status of Hispanic population in Michigan. Data from independently pooled Public Use Microdata Series from the American Community Surveys could be utilized.

Other probable extensions ${ }^{21}$ include 1) an investigative study to understand the factors behind the migration of Latinos in or out of Michigan (e.g., local labor market conditions, labor market competition in surrounding states, Michigan's immigration laws and 287(g) agreements, etc.); 2) a comparative study of Michigan Hispanics' labor market status with other states in the Union (and particularly those in the Great Lakes region); and 3) the interaction between language proficiency, schooling, and the occupational and industry job distribution.

[^15]
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## Appendix of Detailed Tables

Appendix Table A2-1 Average Years of Schooling, by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

| Ethnicity | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | U.S.-Born | ForeignBorn | All | U.S.-Born | ForeignBorn |
| Whites | 13.5 | 13.6 | 12.9 | 13.8 | 13.9 | 13.0 |
|  | (0.02) | (0.02) | (0.18) | (0.02) | (0.02) | (0.15) |
|  | [21,788] | [20,883] | [905] | [21,923] | [21,025] | [898] |
| Blacks | 12.6 | 12.5 | 14.4 | 13.3 | 13.2 | 14.3 |
|  | (0.06) | (0.06) | (0.36) | (0.06) | (0.06) | (0.42) |
|  | [2,450] | [2,372] | [78] | [2,671] | [2,580] | [91] |
| Asians | 15.9 | 15.1 | 16.2 | 14.9 | 15.6 | 14.7 |
|  | (0.17) | (0.39) | (0.19) | (0.17) | (0.28) | (0.20) |
|  | [625] | [131] | [494] | [701] | [125] | [576] |
| All Hispanics | 12.3 | 12.3 | 12.8 | 12.6 | 12.6 | 12.4 |
|  | (0.15) | (0.14) | (0.70) | (0.12) | (0.11) | (1.22) |
|  | [814] | [515] | [299] | [799] | [552] | [247] |
| Mexicans | 11.6 | 12.6 | 10.2 | 11.9 | 12.9 | 10.0 |
|  | (0.19) | (0.14) | (0.39) | (0.16) | (0.15) | (0.35) |
|  | [540] | [325] | [215] | [548] | [376] | [172] |
| All Other <br> Hispanic/ <br> Latino | 12.7 | 13.3 | 11.7 | 12.9 | 13.4 | 11.9 |
|  | (0.37) | (0.35) | (0.74) | (0.27) | (0.23) | (0.72) |
|  | [274] | [190] | [84] | [251] | [176] | [75] |

Note: Standard errors in parentheses were calculated following the Successive Difference Replication for Survey Data; Samples sizes are in brackets.

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Appendix Table A2-2 Percentage Speaking English Less than Very Well, by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | $\begin{array}{l}\text { U.S.- } \\ \text { Born }\end{array}$ |  | $\begin{array}{c}\text { Foreign- } \\ \text { Born }\end{array}$ | All | $\begin{array}{c}\text { U.S.- } \\ \text { Born }\end{array}$ |
| Foreign- |  |  |  |  |  |  |
| Born |  |  |  |  |  |  |$]$

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Appendix Table B2-2 Percentage Speaking English Less than Very Well, by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethnicity | All | U.S.Born | ForeignBorn | All | U.S.Born | ForeignBorn |
| Whites |  |  |  |  |  |  |
| English only | 93.0 | 97.4 | 20.8 | 93.0 | 97.3 | 19.4 |
| Very well | 4.2 | 2.1 | 37.4 | 4.1 | 2.2 | 37.1 |
| Well | 1.8 | 0.3 | 26.6 | 1.5 | 0.3 | 22.3 |
| Not well | 0.8 | 0.1 | 10.8 | 1.0 | 0.2 | 15.3 |
| Not at all | 0.3 | 0.0 | 4.5 | 0.3 | 0.0 | 5.9 |
| Blacks |  |  |  |  |  |  |
| English only | 95.2 | 97.7 | 25.1 | 97.2 | 98.6 | 52.4 |
| Very well | 3.8 | 1.8 | 59.3 | 2.3 | 1.4 | 33.3 |
| Well | 0.7 | 0.4 | 8.8 | 0.3 | (x) | 11.8 |
| Not well | 0.4 | 0.1 | 6.8 | 0.1 | 0.1 | 1.9 |
| Not at all | (x) | (x) | (x) | 0.0 | (x) | 0.8 |
| Asians |  |  |  |  |  |  |
| English only | 22.4 | 63.3 | 12.3 | 26.5 | 66.5 | 19.1 |
| Very well | 45.5 | 33.6 | 48.5 | 41.1 | 26.6 | 43.7 |
| Well | 23.7 | 2.0 | 29.1 | 21.9 | 5.8 | 24.8 |
| Not well | 7.2 | 0.7 | 8.8 | 8.7 | 0.6 | 10.3 |
| Not at all | 1.2 | 0.4 | 1.4 | 1.8 | 0.5 | 2.1 |
| All Hispanics |  |  |  |  |  |  |
| English only | 44.1 | 68.0 | 9.9 | 44.8 | 65.0 | 5.9 |
| Very well | 28.4 | 24.6 | 33.9 | 27.1 | 27.5 | 26.5 |
| Well | 14.6 | 5.3 | 27.9 | 11.7 | 4.6 | 25.4 |
| Not well | 9.7 | 2.0 | 20.7 | 10.9 | 2.6 | 26.9 |
| Not at all | 3.3 | 0.2 | 7.7 | 5.5 | 0.4 | 15.3 |
| Mexicans |  |  |  |  |  |  |
| English only | 43.9 | 71.8 | 5.7 | 46.2 | 69.3 | 2.5 |
| Very well | 28.3 | 23.8 | 34.6 | 22.8 | 23.0 | 22.5 |
| Well | 14.9 | 2.5 | 31.8 | 12.3 | 4.4 | 27.2 |
| Not well | 9.9 | 1.9 | 20.9 | 13.4 | 2.9 | 33.2 |
| Not at all | 3.0 | (x) | 7.1 | 5.3 | 0.4 | 14.6 |
| All Other Hispanic/ |  |  |  |  |  |  |
| Latino |  |  |  |  |  |  |
| English only | 44.5 | 59.5 | 20.8 | 41.8 | 55.4 | 14.0 |
| Very well | 28.7 | 26.5 | 32.0 | 37.1 | 37.4 | 36.4 |
| Well | 13.9 | 11.4 | 17.8 | 10.2 | 4.8 | 21.1 |
| Not well | 9.1 | 2.1 | 20.2 | 5.1 | 2.0 | 11.5 |
| Not at all | 3.9 | 0.5 | 9.3 | 5.8 | 0.4 | 17.0 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Appendix Table A3-3 Percentage Naturalized Citizens by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethnicity | All | U.S.-Born | ForeignBorn | All | U.S.-Born | Foreign- <br> Born |
| Whites |  |  |  |  |  |  |
| Born in the U.S. | 93.5 | 99.1 |  | 93.6 | 99.1 |  |
| Born in U.S. Territories | 0.1 | 0.1 |  | 0.1 | 0.1 |  |
| Abroad to U.S. Citizens | 0.7 | 0.8 |  | 0.8 | 0.8 |  |
| Naturalized Citizen | 3.1 |  | 54.3 | 3.3 |  | 59.5 |
| Not U.S. Citizen | 2.6 |  | 45.7 | 2.2 |  | 40.5 |
| Blacks |  |  |  |  |  |  |
| Born in the U.S. | 95.9 | 99.4 |  | 96.6 | 99.5 |  |
| Born in U.S. Territories | 0.2 | 0.2 |  | 0.1 | 0.1 |  |
| Abroad to U.S. Citizens | 0.4 | 0.4 |  | 0.4 | 0.4 |  |
| Naturalized Citizen | 1.5 |  | 43.9 | 1.4 |  | 47.9 |
| Not U.S. Citizen | 2.0 |  | 56.1 | 1.5 |  | 52.1 |
| Asians |  |  |  |  |  |  |
| Born in the U.S. | 18.0 | 90.6 |  | 14.0 | 89.1 |  |
| Born in U.S. Territories |  |  |  |  |  |  |
| Abroad to U.S. Citizens | 1.9 | 9.4 |  | 1.7 | 11.0 |  |
| Naturalized Citizen | 35.7 |  | 44.6 | 46.4 |  | 55.0 |
| Not U.S. Citizen | 44.4 |  | 55.4 | 37.9 |  | 45.0 |
| All Hispanics |  |  |  |  |  |  |
| Born in the U.S. | 54.5 | 92.7 |  | 60.7 | 92.2 |  |
| Born in U.S. Territories | 2.9 | 4.9 |  | 3.7 | 5.5 |  |
| Abroad to U.S. Citizens | 1.4 | 2.4 |  | 1.5 | 2.2 |  |
| Naturalized Citizen | 11.6 |  | 28.1 | 11.2 |  | 32.9 |
| Not U.S. Citizen | 29.6 |  | 72.0 | 22.9 |  | 67.2 |
| Mexicans |  |  |  |  |  |  |
| Born in the U.S. | 56.5 | 97.7 |  | 64.4 | 98.7 |  |
| Born in U.S. Territories | 0.1 | 0.1 |  |  |  |  |
| Abroad to U.S. Citizens | 1.2 | 2.2 |  | 0.9 | 1.3 |  |
| Naturalized Citizen | 10.6 |  | 25.2 | 8.6 |  | 24.7 |
| Not U.S. Citizen | 31.6 |  | 74.8 | 26.1 |  | 75.4 |
| All Other Hispanic/ Latino |  |  |  |  |  |  |
| Born in the U.S. | 49.8 | 81.3 |  | 52.3 | 77.9 |  |
| Born in U.S. Territories | 9.7 | 15.8 |  | 12.0 | 17.9 |  |
| Abroad to U.S. Citizens | 1.8 | 2.9 |  | 2.9 | 4.3 |  |
| Naturalized Citizen | 13.8 |  | 35.6 | 17.3 |  | 52.6 |
| Not U.S. Citizen | 25.0 |  | 64.4 | 15.6 |  | 47.4 |

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Appendix Table A3-4 Average Years Since Migration by Gender, Detailed Ethnicity, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ethnicity | All | U.S.-Born | Foreign- <br> Born | All | U.S.-Born | ForeignBorn |
| Whites | 21.9 | 36.1 | 19.9 | 21.8 | 35.6 | 19.7 |
|  | (0.55) | (1.51) | (0.52) | (0.53) | (1.53) | (0.52) |
|  | [2,115] | [2,115] | [2,115] | [2,115] | [2,115] | [2,115] |
| Blacks | 19.4 | 29.2 | 17.8 | 20.6 | 34.6 | 18.1 |
|  | (1.48) | (3.76) | (1.59) | (1.98) | (5.55) | (1.67) |
|  | [196] | $[3,657]$ | [3,657] | [196] | $[3,657]$ | [3,657] |
| Asians | 15.5 | 25.3 | 15.2 | 17.9 | 28.3 | 17.7 |
|  | (0.17) | (6.22) | (0.64) | (0.50) | (4.95) | (0.50) |
|  | [1,094] | [1,094] | [1,094] | [1,094] | [1,094] | [1,094] |
| All Hispanics | 19.3 | 28.6 | 18.3 | 19.3 | 24.6 | 18.5 |
|  | (0.63) | (2.22) | (0.67) | (0.81) | (3.29) | (0.79) |
|  | [627] | [627] | [627] | [627] | [627] | [627] |
| Mexicans | 18.5 | 28.1 | 18.2 | 17.9 | 30.1 | 17.6 |
|  | (0.76) | (5.49) | (0.76) | (0.98) | (7.26) | (0.92) |
|  | [403] | [403] | [403] | [403] | [403] | [403] |
| All Other | 20.9 | 28.7 | 18.6 | 21.6 | 23.8 | 20.6 |
| Hispanic/ | (1.27) | (2.44) | (1.50) | (1.23) | (3.39) | (1.25) |
| Latino | [224] | [224] | [224] | [224] | [224] | [224] |

Note: Standard errors in parentheses were calculated following the Successive Difference Replication for Survey Data; Samples sizes are in brackets.

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Appendix Table A3-5 Employment Rates by Gender, Detailed Ethnicity and Race, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | U.S.-Born | ForeignBorn | All | U.S.-Born | Foreign- <br> Born |
| Ethnicity | 77\% | 77\% | 83\% | 68\% | 68\% | 53\% |
| Whites | (0.00) | (0.00) | (0.01) | (0.00) | (0.00) | (0.02) |
|  | [43,711] | [43,711] | [43,711] | [43,711] | [43,711] | [43,711] |
| Blacks | 56\% | 55\% | 86\% | 61\% | 61\% | 74\% |
|  | (0.01) | (0.01) | (0.05) | (0.01) | (0.01) | (0.06) |
|  | [ 5,121 ] | [ 5,121 ] | [5,121] | [ 5,121 ] | [ 5,121 ] | [5,121] |
| Asians | 82\% | 67\% | 85\% | 63\% | 77\% | 61\% |
|  | (0.02) | (0.06) | (0.02) | (0.02) | (0.04) | (0.03) |
|  | [1,326] | [1,326] | [1,326] | [1,326] | [1,326] | $[1,326]$ |
| All Hispanics | 78\% | 71\% | 88\% | 61\% | 68\% | 48\% |
|  | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.04) |
|  | [1,613] | [1,613] | [1,613] | [1,613] | [1,613] | [1,613] |
| Mexicans | 80\% | 73\% | 90\% | 60\% | 67\% | 46\% |
|  | (0.02) | (0.03) | (0.02) | (0.03) | (0.03) | (0.05) |
|  | [1,088] | [1,088] | [1,088] | [1,088] | [1,088] | [1,088] |
| All Other Hispanic/ Latino | 73\% |  |  | 65\% | 71\% | 54\% |
|  | (0.03) | (0.04) | (0.05) | (0.03) | (0.04) | (0.07) |
|  | [525] | [525] | [525] | [525] | [525] | [525] |

Note: Standard errors in parentheses were calculated following the Successive Difference Replication for Survey Data; Samples sizes are in brackets.

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Appendix Table A3-6Employment Differentials Relative to Whites, by Gender, Race/Ethnicity, and Nativity
(Universe - Population 25 to 64 Years Old)


These are OLS coefficients. Numbers in () represent the standard errors, while those in [] are the p-values. Columns (1) to (6) represent different controls: (1) only age; (2) age and education; (3) age and English proficiency; (4) age, education, and English proficieny; (5) age, education, and duration of stay since year of entry; and (6) age, education, and citizenship.
Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)
(Universe - Population 25 to 64 Years Old)

| Men |  |  |  |  |  |  | ears Old) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Women |  |  |  |  |  |
| Race/Ethnicity/ Nativity | (1) | (2) | (3) | (4) | (5) | (6) | (1) | (2) | (3) | (4) | (5) | (6) |
| Blacks |  |  |  |  |  |  |  |  |  |  |  |  |
| All | 0.34 | 0.39 | 0.34 | 0.39 | 0.90 | 0.39 | 0.69 | 0.75 | 0.69 | 0.75 | 2.19 | 0.75 |
|  | (0.018) | (0.021) | (0.018) | (0.021) | (0.353) | (0.021) | (0.036) | (0.038) | (0.036) | (0.038) | (0.653) | (0.038) |
|  | [0.000] | [0.000] | [0.000] | [0.000] | [0.788] | [0.000] | [0.000] | [0.000] | [0.000] | [0.000] | [0.009] | [0.000] |
| U.S.-born | 0.33 | 0.39 | 0.33 | 0.39 | N/A | N/A | 0.65 | 0.72 | 0.65 | 0.72 | N/A | N/A |
|  | (0.018) | (0.021) | (0.018) | (0.021) |  |  | (0.035) | (0.038) | (0.035) | (0.038) |  |  |
|  | [0.000] | [0.000] | [0.000] | [0.000] |  |  | [0.000] | [0.000] | [0.000] | [0.000] |  |  |
| Foreign-born | 1.30 | 1.16 | 1.19 | 1.11 | 1.13 | 1.21 | 2.34 | 2.21 | 2.43 | 2.27 | 2.31 | 2.40 |
|  | (0.584) | (0.520) | (0.545) | (0.503) | (0.516) | (0.555) | (0.763) | (0.704) | (0.787) | (0.720) | (0.731) | (0.757) |
|  | [0.564] | [0.742] | [0.709] | [0.818] | [0.784] | [0.682] | [0.009] | [0.013] | [0.006] | [0.010] | [0.008] | [0.006] |
| Asians |  |  |  |  |  |  |  |  |  |  |  |  |
| All | 1.13 | 0.75 | 1.00 | 0.74 | 1.04 | 0.57 | 0.71 | 0.59 | 0.71 | 0.64 | 1.09 | 0.65 |
|  | (0.169) | (0.119) | (0.151) | (0.117) | (0.199) | (0.098) | (0.069) | (0.066) | (0.076) | (0.077) | (0.167) | (0.085) |
|  | [0.398] | [0.073] | [0.984] | [0.055] | [0.858] | [0.001] | [0.000] | [0.000] | [0.002] | [0.000] | [0.584] | [0.001] |
| U.S.-born | 0.47 | 0.32 | 0.49 | 0.33 | N/A | N/A | 1.17 | 0.85 | 1.21 | 0.89 | N/A | N/A |
|  | (0.150) | (0.100) | (0.145) | (0.098) |  |  | (0.303) | (0.213) | (0.315) | (0.225) |  |  |
|  | [0.018] | [0.000] | [0.016] | [0.000] |  |  | [0.539] | [0.511] | [0.462] | [0.635] |  |  |
| Foreign-born | 1.27 | 1.02 | 1.24 | 1.03 | 1.05 | 1.08 | 1.22 | 1.10 | 1.21 | 1.11 | 1.12 | 1.13 |
|  | (0.270) | (0.222) | (0.269) | (0.222) | (0.224) | (0.234) | (0.185) | (0.172) | (0.182) | (0.172) | (0.176) | (0.177) |
|  | [0.254] | [0.917] | [0.332] | [0.897] | [0.809] | [0.720] | [0.186] | [0.529] | [0.217] | [0.518] | [0.483] | [0.429] |
| Hispanics |  |  |  |  |  |  |  |  |  |  |  |  |
| All | 0.94 | 1.39 | 0.88 | 1.37 | 1.77 | 1.34 | 0.66 | 0.88 | 0.66 | 0.94 | 0.93 | 0.94 |
|  | (0.096) | (0.171) | (0.096) | (0.180) | (0.395) | (0.179) | (0.063) | (0.089) | (0.066) | (0.100) | (0.164) | (0.100) |
|  | [0.543] | [0.008] | [0.231] | [0.016] | [0.010] | [0.029] | [0.000] | [0.220] | [0.000] | [0.561] | [0.668] | [0.564] |
| U.S.-born | 0.71 | 0.83 | 0.72 | 0.87 | N/A | N/A | 0.86 | 1.01 | 0.89 | 1.07 | N/A | N/A |
|  | (0.087) | (0.111) | (0.099) | (0.128) |  |  | (0.096) | (0.111) | (0.107) | (0.125) |  |  |
|  | [0.005] | [0.170] | [0.018] | [0.332] |  |  | [0.165] | [0.897] | [0.332] | [0.571] |  |  |
| Foreign-born | 1.58 | 2.17 | 1.66 | 2.18 | 2.12 | 2.50 | 0.73 | 0.97 | 0.78 | 0.98 | 0.95 | 1.08 |
|  | (0.355) | (0.530) | (0.371) | (0.539) | (0.522) | (0.641) | (0.130) | (0.183) | (0.140) | (0.185) | (0.186) | (0.203) |
|  | [0.042] | [0.001] | [0.024] | [0.002] | [0.002] | [0.000] | [0.080] | [0.869] | [0.172] | [0.917] | [0.802] | [0.696] |
| Mexicans |  |  |  |  |  |  |  |  |  |  |  |  |
| All | 1.03 | 1.63 | 0.97 | 1.61 | 2.73 | 1.57 | 0.61 | 0.86 | 0.62 | 0.90 | 0.93 | 0.90 |
|  | (0.131) | (0.246) | (0.130) | (0.256) | (0.703) | (0.246) | (0.070) | (0.104) | (0.073) | (0.113) | (0.207) | (0.112) |
|  | [0.791] | [0.001] | [0.828] | [0.003] | [0.000] | [0.004] | [0.000] | [0.206] | [0.000] | [0.407] | [0.732] | [0.407] |
| U.S.-born | 0.74 | 0.91 | 0.76 | 0.95 | N/A | N/A | 0.81 | 0.98 | 0.83 | 0.84 | N/A | N/A |
|  | (0.111) | (0.150) | (0.123) | (0.168) |  |  | (0.105) | (0.131) | (0.113) | (0.095) |  |  |
|  | [0.043] | [0.552] | [0.087] | [0.764] |  |  | [0.096] | [0.874] | [0.173] | [0.114] |  |  |
| Foreign-born | 1.99 | 2.74 | 2.06 | 2.72 | 2.66 | 3.06 | 0.68 | 0.93 | 0.74 | 0.95 | 0.94 | 1.07 |
|  | (0.503) | (0.740) | (0.521) | (0.745) | (0.716) | (0.875) | (0.147) | (0.209) | (0.162) | (0.213) | (0.215) | (0.244) |
|  | [0.007] | [0.000] | [0.004] | [0.000] | [0.000] | [0.000] | [0.077] | [0.756] | [0.174] | [0.821] | [0.803] | [0.760] |
| Other Hispanics |  |  |  |  |  |  |  |  |  |  |  |  |
| All | 0.77 | 0.94 | 0.72 | 0.92 | 0.74 | 0.90 | 0.80 | 0.96 | 0.83 | 1.04 | 0.96 | 1.05 |
|  | (0.101) | (0.168) | (0.099) | (0.165) | (0.203) | (0.172) | (0.124) | (0.147) | (0.132) | (0.166) | (0.228) | (0.167) |
|  | [0.049] | -[0.340] | [0.016] | [0.625] | [0.277] | [0.580] | [0.159] | [0.771] | [0.242] | [0.783] | [0.854] | [0.775] |
| U.S.-born | 0.66 | 0.69 | 0.68 | 0.72 | N/A | N/A | 0.99 | 1.10 | 1.06 | 1.18 | N/A | N/A |
|  | (0.115) | (0.137) | (0.123) | (0.145) |  |  | (0.191) | (0.198) | (0.211) | (0.222) |  |  |
|  | [0.017] | [0.060] | [0.034] | [0.102] |  |  | [0.962] | [0.608] | [0.769] | [0.388] |  |  |
| Foreign-born | 0.86 | 0.95 | 0.89 | 0.96 | 0.94 | 1.00 | 0.97 | 1.06 | 0.97 | 1.05 | 0.99 | 1.05 |
|  | (0.286) | (0.331) | (0.298) | (0.337) | (0.330) | (0.353) | (0.266) | (0.312) | (0.273) | (0.313) | (0.303) | (0.317) |
|  | [0.657] | [0.881] | [0.738] | [0.917] | [0.869] | [0.990] | [0.909] | [0.836] | [0.913] | [0.861] | [0.97B]a | 80, 8 A 4 |

These are Logistic coefficients . Numbers in () represent the standard errors, while those in [] are the p-values. Columns (1) to (6) represent differentcontrols: (1) only age; (2) age and education; (3) age and English proficiency; (4) age, education, and English proficieny; (5) age, education, and duration of stay since year of entry; and (6) age, education, and citizenship.
Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

Appendix Table A3-8Self-Employment Rates by Gender, Detailed Ethnicity and Race, and Nativity (Universe: Population 25-64 Years Old)

|  | Men, by Nativity |  |  | Women, by Nativity |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | U.S.-Born | Foreign- <br> Born | All | U.S.-Born | ForeignBorn |
| Ethnicity | 12\% | 11\% | 15\% | 7\% | 7\% | 9\% |
| Whites | (0.00) | (0.00) | (0.01) | (0.00) | (0.00) | (0.01) |
|  | [43,711] | [43,711] | [43,711] | [43,711] | [43,711] | [43,711] |
| Blacks | 5\% | 6\% | 3\% | 4\% | 3\% | 7\% |
|  | (0.01) | (0.01) | (0.02) | (0.01) | (0.01) | (0.04) |
|  | [ 5,121 ] | [ 5,121 ] | [5,121] | [5,121] | [ 5,121 ] | [5,121] |
| Asians | 10\% | 12\% | 9\% | 10\% | 8\% | 10\% |
|  | (0.02) | (0.04) | (0.02) | (0.02) | (0.03) | (0.02) |
|  | [1,326] | [1,326] | [1,326] | [1,326] | [1,326] | [1,326] |
| All Hispanics | 6\% | 7\% | 6\% | 3\% | 3\% | 1\% |
|  | (0.01) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) |
|  | [1,613] | [1,613] | [1,613] | [1,613] | [1,613] | [1,613] |
| Mexicans | 6\% | 5\% | 6\% | 1\% | 2\% | N/A |
|  | (0.01) | (0.02) | (0.02) | (0.01) | (0.01) |  |
|  | [1,088] | [1,088] | [1,088] | [1,088] | [1,088] |  |
| All Other Hispanic/ Latino | 8\% | 11\% | 4\% | 6\% | 6\% | 4\% |
|  | (0.02) | (0.04) | (0.02) | (0.02) | (0.02) | (0.03) |
|  | [525] | [525] | [525] | [525] | [525] | [525] |

Note: Standard errors in parentheses were calculated following the Successive Difference Replication for Survey Data; Samples sizes are in brackets.

Source: U.S. Census Bureau, American Community Survey 1-Year Estimates 2015, 1\% Public Use Microdata Samples (PUMS)

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    Disclaimer: The opinions expressed in this article are those of the authors only and do not engage the institutions they work for, namely Michigan State University and the State of Michigan (Bureau of Labor Market Information and Strategic Initiatives).

[^1]:    ${ }^{4}$ Hispanics and the Future of America, Marta Tienda and Faith Mitchell, Editors. Panel on Hispanics in the United States.
    ${ }^{5}$ Disaggregating "other Hispanics" into smaller groups such as Cubans, Puerto Ricans, etc. makes the samples too thin to produce statistically meaningful estimates (too large margins of error).

[^2]:    ${ }^{6}$ See, for instance, Altonji and Blank (1999); Antecol and Bedard (2002, 2004); Bean and Stevens (2003); Bean and Tienda (1987); Bean, Trejo, Capps, and Tyler (2001); Carlson and Swartz (1988); Carnoy, Daley, and Hinojosa-Ojeda 1993); Chavez (1991); Chapa (1990).Cotton (1985); Darity, Guilkey, and Winfrey (1995); DeFreitas (1991); Duncan, Hotz, and Trejo (2006); Grogger and Trejo (2002); Gwartney and Long (1978); Mason (2016); McManus, Gould, and Welch (1983); Reimers (1983, 1994); Smith (1991, 2001); Trejo (1996, 1997, 2003).

[^3]:    ${ }^{7}$ Household or place-of-residence employment captures jobs that are held by the residents of an area, no matter where they work, including farming and self-employment, whereas payroll jobs refer to counts of jobs by place of work, no matter where workers live. In the household employment statistics, each person is counted once, regardless of how many jobs they hold. However, in the payroll employment, a person can be counted several times depending on the number of jobs they have.

[^4]:    ${ }^{8} \mathrm{~A}$ person is said to be employed if meeting the following criteria:

    - Did any work as paid employee, worked in own business or profession or farm, or worked 15 hours or more as unpaid worker in an enterprise operated by a member of their family, or
    - Was not working but had jobs from which he or she was temporarily absent, because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not he or she was paid for the time off or was seeking other jobs.
    To be counted as unemployed, persons must meet all three of the following conditions:
    - Must have had no earnings due to employment during the reference week
    - Must have made specific efforts to find employment sometime during a reference period (usually a fourweek period ending with the survey week that contains the 12th of the month).
    - Must have been available for work during the reference week, except for temporary illness.
    ${ }^{9}$ Population estimates, and its components, come from the U.S. Census Bureau, while information on the population's fertility is compiled by the Michigan Department of Human and Health Services.

[^5]:    ${ }^{10}$ In the next section on the microeconomic analysis of Hispanics labor market status, we will investigate the factors behind this higher-than-average labor force participation of this group of population in Michigan.

[^6]:    ${ }^{11}$ State of Michigan, Unemployment Insurance Agency, Department of Licensing and Regulatory Affairs, Employer Handbook, November 2014, p. 17
    ${ }^{12} \mathrm{Ibid}$, p. 22 and 148.

[^7]:    ${ }^{13}$ ACS is an ongoing survey by the U.S. Census Bureau since after the 2000 population census. The survey regularly collects information that used to be gathered through the long form of the decennial censuses, including but not limited to ancestry, nativity, educational attainment, employment, income, language proficiency, citizenship status, migration, date of entry in the U.S., disability, and others. According to Wikipedia
    (https://en.wikipedia.org/wiki/American Community Survey, retrieved 12/17/2018), the survey is sent to approximately 295,000 addresses monthly (or 3.5 million per year). The first data from this survey became available in 2005. "The Census Bureau selects a random sample of addresses to be included in the ACS. Each address has about a 1-in-480 chance of being selected in a given month, and no address should be selected more than once every five years." The response rate is approximately 95 percent (Wikipedia, 2018).

[^8]:    ${ }^{14}$ Barro and Lee used the official duration of schooling levels of the country, and for those with an incomplete level of schooling, that schooling level duration is divided by 2 in order to give a rough approximation to include in the measure. In this paper, I use the U.S. official average duration for each educational attainment category. For example, an individual with "No schooling completed" will have 0 years of schooling, Kindergarten and Preschool are equivalent to 0.5 years, Grade 1 equals 1 year, Grade 12 no diploma is 11.5 years, GED or alternative credential is same as High school (12 years), Some college but less than 1 year is equivalent to 12.5 years, 1 or

[^9]:    more years of college credit equals 13 years, Associate's degree (14 years), Bachelor's (16 years), Master's (18 years), Professional degree beyond a bachelor's degree (20 years), and Doctorate degree (22 years).
    ${ }^{15}$ Although the official legal working age in the U.S. is 16 and above, we set a lower limit of 25 to consider individuals that have all virtually completed their schooling beyond high school. We considered the upper age of 65 because this is the age when Americans become eligible for Medicare, whether or not they have filed for Social Security benefits. This age milestone has become a common full retirement age for many companies' retirement plans.

[^10]:    ${ }^{16}$ In Table 2-2 and Figure 2-1 below, we collapse the four responses above into two categories of "Very Well" and "Less than Very Well" similar to the U.S. Census Bureau's categorization.

[^11]:    ${ }^{17}$ Source: IRS, Table A. Selected Income and Tax Items for Tax Years, 1990-2014, in Current Dollars (https://www.irs.gov/uac/soi-tax-stats-individual-income-tax-returns-publication-1304-complete-report, retrieved June 2017)

[^12]:    ${ }^{18}$ See for example, Duncan, Brian, et al. (2006), pp. 238-9

[^13]:    ${ }^{19}$ The formula for the dissimilarity index is straightforward. Let's $D_{h w}$ represent the industry or occupational dissimilarity index between Hispanics and Whites non-Hispanic: $D_{h w}=\frac{1}{2} \sum_{i=1}^{n}\left|\frac{H_{i}}{H_{T}}-\frac{W_{i}}{W_{T}}\right|$, where
    $\mathrm{n}=$ number of industry or occupational groups
    $\mathrm{H}_{\mathrm{i}}=$ number of Hispanics employed in industry or occupational group i
    $H_{T}=$ Total number of Hispanics employed in all industry or occupational groups
    $\mathrm{W}_{\mathrm{i}}=$ number of Whites non-Hispanic employed in industry or occupational group i
    $W_{T}=$ Total number of Whites non-Hispanic employed in all industry or occupational groups

[^14]:    ${ }^{20}$ The U.S. Census Bureau defines:

[^15]:    ${ }^{21}$ These research extensions were suggested by Dr. Fernando Lozano, Professor of Economics at Pomona College, who discussed a draft of this paper at the Southern Economic Association Annual Conference (November 19, 2018 in Washington D.C.). We would like to express our gratitude for that.

