Latino Business Ownership: Contributions and Barriers for U.S.-born and Immigrant Latino Entrepreneurs

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Executive Summary

An important contributor to economic inequality in the United States is the large and persistent racial and ethnic disparity found in business ownership and performance. Blocked opportunities for minorities to start and grow businesses create losses in economic efficiency, especially through their effects on limiting job creation, wealth accumulation, innovation, and local economic growth. This reports provides several new findings on Latino business ownership and success using the latest available Census Bureau data. Latinos are separated by U.S.-born vs. immigrant status to provide insights into the constraints faced in starting and running successful businesses.

For U.S.-born Latinos, the key findings are:

• Roughly 600,000 of the 12.2 million business owners in the United States are U.S.-born Latinos.

• Business ownership is lower among U.S.-born Latinos than non-Latino whites. The disparities are large for both men and women.

• Business income is substantially lower among U.S.-born Latinos.

• The industry distribution of U.S.-born Latino business owners is roughly similar to the industry distribution of whites. U.S.-born Latino men are relatively concentrated in construction, and U.S.-born Latina women are relatively concentrated in health care and social assistance.

• U.S.-born Latinos have relatively low levels of education and wealth, and are relatively young.

• The two most important factors limiting business ownership among U.S.-born Latinos are their relatively young age and lack of wealth.

• The most important factor limiting business income among U.S.-born Latinos is the low average level of education. The relatively young age of U.S.-born Latinos also contributes to lower incomes.

• Even with these constraints, U.S.-born Latino entrepreneurs make important contributions to the economy, generating $26 billion in business income.

For immigrant Latinos, the key findings are:

• Roughly 1.2 million of the 12.2 million business owners in the United States are immigrant Latinos.

• Business ownership is higher among immigrant Latinos than U.S.-born Latinos, and in fact, is comparable to business ownership rates among non-Latino whites.

• Business income, however, is substantially lower for immigrant Latino business owners than both U.S.-born Latino business owners and non-Latino white business owners.

• Immigrant Latino male business owners are highly concentrated in construction, and immigrant Latina female business owners are highly concentrated in other services (which includes beauty, laundry and cleaning services).

• Immigrant Latinos have lower levels of education and wealth than both U.S.-born Latinos and non-Latino whites.

• The largest factor holding back business ownership among immigrant Latinos is the lack of wealth. The largest constraint for business income is the low average level of education.

• Even with these constraints, immigrant Latino entrepreneurs make important contributions to the economy, generating $36.5 billion in business income.

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1. Introduction

Large and persistent racial disparities in business ownership and performance exist in the United States. These disparities are alarming because of their magnitude and the importance of business ownership as a way to make a living for many Americans. Roughly 1 in 10 workers, or 12 million people, in the United States are self-employed business owners. These 12 million business owners hold roughly 40 percent of total U.S. wealth (Bucks, Kennickell, and Moore 2006). Yet only 7 percent of Latinos own businesses compared with more than 11 percent of non-Latino whites. Similarly troubling is that Latino-owned businesses tend to have lower average sales and hire fewer employees than white-owned businesses, and the disparities have widened over the past couple of decades (Fairlie and Robb 2008; U.S. Census Bureau 2015; McManus 2016 Davila and Mora 2013).

Improving success among minority business owners in the United States is a major concern among policymakers. Although they are sometimes controversial, a variety of federal, state, and local government programs offer contracting goals, price discounts, and loans to businesses owned by minorities, women, and other disadvantaged groups (Boston 1999, Chatterji, Chay and Fairlie 2014, and Joint Center for Political and Economic Studies 1994). One of the goals of these programs is to foster minority business development, which may have implications for reducing earnings and wealth inequality (Bradford 2003). Self-employed business owners earn more on average than wage and salary workers (Borjas 1999), and disadvantaged business owners have more upward income mobility and experience faster earnings growth than disadvantaged wage and salary workers (Holtz-Eakin, Rosen and Weathers 2000, Fairlie 2004). It has also been argued that some disadvantaged groups historically facing discrimination or blocked opportunities in the wage/salary sector, such as Chinese, Greek, Italian, Japanese, and Jewish have used business ownership as a source of economic advancement.[1]

Another concern, which is often overlooked, is the loss in economic efficiency resulting from blocked opportunities for minorities to start and grow businesses.[2] Business formation has been associated with the creation of new industries, innovation, job creation, improvement in sector productivity, and economic growth (Reynolds 2005). If minority entrepreneurs face liquidity constraints, discrimination or other barriers to creating new business or expanding current businesses, there will be efficiency losses in the economy. Although it would be difficult to determine the value of these losses, barriers to entry and expansion that minority-owned businesses face are potentially costly to U.S. productivity, especially as minorities represent an increasing share of the total population. Barriers to business growth may be especially damaging for job creation in low-income neighborhoods (Boston 1999, 2006).

In this report, I use the latest available microdata from the U.S. Census Bureau to explore why Latino business ownership and income are relatively low. The report provides a comparison of the experiences of U.S.-born Latinos and immigrant Latinos shedding new light on the barriers faced by Latino Americans to successful business ownership. Because levels of business ownership and income are so different between men and women, they are also examined separately.

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[1] See Glazer and Moynihan (1970), Loewen (1971), Light (1972, 1979), Baron et al. (1975), Bonacich and Modell (1980), and Sowell (1981).

[2] Hsieh et al. (2016) find that falling occupational barriers for minority workers may explain one fourth of aggregate growth in per-capita GDP from 1960 to 2010.

I examine potential barriers created by human capital, wealth, demographic, geographic, and industry constraints. The analysis estimates the contribution of each barrier simultaneously to identify independent effects. This is important because many of these factors (e.g. education, wealth, age, geography) are correlated with each other, and thus a separate analysis could be misleading. I also focus on the current barriers faced by Latinos and do not examine trends over time.[3]

Several key questions are addressed in the analysis:

• What contributions do Latinos make to business ownership in the economy?

• What contributions do Latino business owners make to total U.S. business income?

• What are the separate contributions to business ownership and income from U.S.-born and immigrant Latinos?

• Do U.S.-born Latinos have different business ownership rates and income than non-minorities (defined here as non-Latino whites)?

• Do immigrant Latinos experience similar disparities in business ownership and income?

• What are the barriers faced by U.S.-born Latinos in successful business ownership?

• Are the barriers for immigrant Latinos similar?

These barriers limit the potential for Latino business ownership and success. This is an important concern with the high levels of racial and ethnic inequality existing today. Substantial inequality continues to exist in the United States and does not appear to be going away in the near future (Stanford Center on Poverty and Inequality 2017).

[3] For a comprehensive analysis of trends over time in Latino entrepreneurship in the 2000s see Davila and Mora (2013).

2. Literature Review

A growing literature examines the potential barriers limiting business ownership and performance among minorities. This section provides only a partial review of this expansive literature focusing on several broad categories of potential constraints.[4] Not all constraints discussed here can be tested in the empirical section because of data limitations. Although there are many more constraints I focus here on wealth disparities, access to financial capital, discrimination in lending, other types of discrimination, human capital, family business background, social capital, and access to technology. Many previous studies focus on constraints particular to African-American entrepreneurs with fewer studies focusing on constraints faced by Latino entrepreneurs.

Wealth Differences

The importance of personal wealth as a determinant of entrepreneurship has been the focus of an extensive body of literature. Most studies find that asset levels (e.g. net worth) measured in one year increase the probability of starting a business by the following year.[5] The finding has generally been interpreted as providing evidence that entrepreneurs face liquidity constraints. This is also consistent with observations that owner's wealth can be invested directly in the business or used as collateral to obtain business loans. Furthermore, investors frequently require a substantial level of owner's investment of his/her own capital as an incentive (i.e. "skin in the game").

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[4] For additional sources on minority and Latino entrepreneurship see, for example, Fairlie and Robb (2008); Bates (2011); Davila and Mora (2013); Stanford Latino Entrepreneurship Initiative (2015).

[5] For example, see Evans and Jovanovic (1989), Evans and Leighton (1989), Meyer (1990), Holtz-Eakin, Joulfaian, and Rosen (1994), Blanchflower and Oswald (1998), Dunn and Holtz-Eakin (2000), Fairlie (1999), Holtz-Eakin and Rosen (2005), Elitcha and Fonseca (2016), and Fairlie and Krashinsky (2012).

Do inequalities in personal wealth then translate into disparities in business creation and ownership? Wealth inequality is alarming high. Half of all black families have less than $9,211 in wealth, and half of all Latino families have less than $12,460. Wealth levels among whites are 11 to 14 times higher (U.S. Census Bureau 2017). Racial differences in home equity may be especially important in providing access to startup capital. Only 42 percent of blacks and 45 percent of Latinos own their own home compared with 72 percent of whites (US. Census Bureau 2017). Furthermore, for both blacks and whites who own homes, the median equity in their homes is much lower than for whites. Homes provide collateral and home equity loans provide relatively low-cost financing. Without being able to tap into this equity many minorities will not be able to start businesses (Fairlie and Robb 2008).

These findings from the previous literature suggest that relatively low levels of wealth among blacks and Latinos and the existence of liquidity constraints may create a substantial barrier to entry for minority entrepreneurs. Indeed, a few previous studies provide direct evidence supporting this hypothesis. Using matched CPS Annual Demographic Files (ADF) data from 1998 to 2003, Fairlie (2006) finds that the largest single factor explaining racial disparities in business creation rates are differences in asset levels. Lower levels of assets among blacks account for 15.5 percent of the difference between the rates of business creation among whites and blacks. This finding is consistent with the presence of liquidity constraints and low levels of assets limiting opportunities for blacks to start businesses. The finding is very similar to earlier estimates reported in Fairlie (1999) for men using the Panel Study of Income Dynamics

(PSID). Estimates from the PSID indicate that 13.9 to 15.2 percent of the black/white gap in business start rates can be explained by differences in assets.

Fairlie and Woodruff (2010) examine the causes of low rates of business formation among Mexican-Americans. One of the most important factors in explaining the gaps between Mexican-Americans and non-Latino whites in rates of business creation is also assets. Relatively low levels of assets explain roughly one quarter of the business entry rate gap for Mexican-Americans. Lofstrom and Wang (2009) using SIPP data also find that low levels of wealth for Mexican-Americans and other Latinos work to lower self-employment entry rates. And more recently, Davila and Mora (2013) find barriers faced by Hispanic entrepreneurs in gaining access to financial capital. Apparently, low levels of personal wealth limit opportunities for Mexican-Americans and other Latinos to start businesses.

Financial Capital

Although previous research provides evidence that is consistent with low levels of personal wealth resulting in lower rates of business creation among minorities, very little research has focused on the related question of whether low levels of personal wealth and liquidity constraints also limit the ability of minority entrepreneurs to raise startup capital resulting in undercapitalized businesses. The consequence is that these undercapitalized businesses will likely have lower sales, profits and employment and will be more likely to fail than businesses receiving the optimal amount of startup capital. Evidence on the link between startup capital and owner's wealth is provided by examining the relationship between business loans and personal commitments, such as using personal assets for collateral for business liabilities and guarantees that make owners personally liable for business debts. Using data from the SSBF and Survey of Consumer Finances (SCF), Avery, Bostic and Samolyk (1998) find that the majority of all small business loans have personal commitments. The common use of personal commitments to obtain business loans suggests that wealthier entrepreneurs may be able to negotiate better credit terms and obtain larger loans for their new businesses possibly leading to more successful firms.[6] Cavalluzzo and Wolken (2005) find that personal wealth, primarily through home ownership, decreases the probability of loan denials among existing business owners. If personal wealth is important for existing business owners in acquiring business loans then it may be even more important for entrepreneurs in acquiring startup loans.

Estimates from Survey of Business Owners (SBO) and earlier Characteristics of Business Owners (CBO) data indicate that black and Latino-owned businesses have very low levels of startup capital relative to white-owned businesses (U.S. Census Bureau 1997, 2016; Fairlie and Robb 2008). Estimates from the 2012 SBO indicate that 2.2 percent of black firms start with $100,000 or more of capital compared with 8.5 percent of white, non-Hispanic firms. Only 3.5 percent of Latino firms start with $100,000 or more in capital. Even after imposing minimum work hours for business owners in the 1992 CBO microdata, Fairlie and Robb (2008) find large racial differences. For example, they find that less than 2 percent of black firms start with $100,000 or more of capital and 6.5 percent have between $25,000 and $100,000 in startup capital. Black-owned firms are also found to have lower levels of startup capital across all major industries. Davila and

[6] Astebro and Berhardt (2003) finds a positive relationship between business survival and having a bank loan at startup after controlling for owner and business characteristics.

Mora (2013) present evidence from the 2007 SBO showing lower levels of startup capital among Latino businesses than non-Latino businesses.

Focusing on startups, Fairlie, Robb and Robinson (2016) find that black-owned businesses start with less financial capital and continue to invest less in the early years of existence. The total funding gap then not only perpetuates, but gets worse over time. They also find that black startups obtain less funding from all major sources than white startups.

What are the consequences of these racial disparities in startup capital? Previous research indicates that the level of startup capital is a strong predictor of business success (see for example Bates 1997 and Fairlie and Robb 2008). In turn, low levels of startup capital are found to be a major cause of worse outcomes among black-owned businesses. Using earlier CBO data, Bates (1997) finds evidence that racial differences in business outcomes are associated with disparities in startup capital. More recent estimates indicate that lower levels of startup capital among black firms are the most important explanation for why black-owned businesses have lower survivor rates, profits, employment and sales than white-owned businesses (Fairlie and Robb 2008). They also find the opposite holds for Asian firms: Asian firms have higher startup capital levels and better business outcomes.

Minority and non-minority entrepreneurs differ in the types of financing they use for their businesses. Previous research indicates, for example, that black entrepreneurs rely less on banks than whites for startup capital. Only 6.6 percent of black firms received business loans from banking or commercial lending institutions (U.S. Census Bureau 1997). Nearly twice that percentage of white firms received bank loans for startup capital. Blacks are also less likely to use a home equity line for startup capital than are whites, which may be partly due to the lower rates of home ownership reported above. On the other hand, black business owners are more likely to rely on credit cards for startup funds than are white business owners. In a few studies using the 1987 CBO, Bates (1997, 2005) finds that black firms are found to be more likely to start with no capital, less likely to borrow startup capital and more likely to rely solely on equity capital than white firms. Bates (2005) also finds that loans received by black firms borrowing startup capital are significantly smaller than those received by white firms even after controlling for equity capital and owner and business characteristics such as education and industry.

Previous research also indicates that minority-owned businesses are more likely to use credit cards and less likely to use bank loans to start their businesses than non-minority owned businesses (U.S. Department of Commerce 2008). Davila and Mora (2013) find using the 2002 SSBF that Latino businesses were less likely to get approved for business loans, were more likely to not apply for loans because of fear of rejection, have smaller loan amounts, and pay higher interest rates on loans on average.

Minority firms also have trouble securing funds from venture capitalists and angel investors. Private equity funds targeting minority markets are very small relative to the total, which is problematic because these funds appear to be important for success (Yago and Pankrat 2000).[7] The disparity in access does not appear to be driven by performance differences. Bates and Bradford (2008) examine the performance of investments made by venture capital funds specializing in minority firms and find that these funds produce

[7] Minority angels comprise 3.6 percent of the all angel investors, and MBEs comprise 3.7 percent of firms presenting their business ideas to potential angel investors (Sohl 2008).

large returns. Venture capital funds focusing on investing in minority firms provide returns that are comparable to mainstream venture capital firms. Funds investing in minority businesses may provide attractive returns because the market is underserved.

Evidence of Lending Discrimination

A factor that may pose a barrier to obtaining financial capital for minority-owned businesses is lending discrimination. Much of the recent research on the issue of discrimination in business lending uses data from various years of the Survey of Small Business Finances (SSBF). The main finding from this literature is that Minority Business Enterprises (MBE) experience higher loan denial probabilities and pay higher interest rates than white-owned businesses even after controlling for differences in credit-worthiness, and other factors (Blanchard, Yinger and Zhao 2008; Blanchflower, Levine and Zimmerman 2003; Cavalluzzo, Cavalluzzo, and Wolken 2002; Cavalluzzo, and Wolken 2005; Coleman 2002, 2003; Mitchell and Pearce 2004, 2011; Bates and Robb 2016).

Cavalluzzo and Wolken (2005) found that while greater personal wealth is associated with a lower probability of denial, even after controlling for personal wealth, there remained a large difference in denial rates across demographic groups. They also found that denial rates for blacks increased with lender market concentration, a finding consistent with Becker's (1957) classic theories of discrimination. Using the 1993 National Survey of Small Business Finances (NSSBF), Cavalluzzo, Cavalluzzo, and Wolken (2002) found that all minority groups were more likely than whites to have unmet credit needs. Blacks were more likely to have been denied credit, even after controlling for many factors related to creditworthiness. In fact, denial rates and unmet credit needs for blacks widened with an increase in lender market concentration. The concern of denial or "giving up" often prevented some individuals from applying for a loan, even when they had credit needs. Blacks and Hispanics most notably had these fears. Bostic and Lampani (1999) include additional geographic controls and continue to find a statistically significant difference in approval rates between blacks and whites.

Blanchflower, Levine, and Zimmerman (2003) conducted a similar analysis with similar results. They found that minority-owned businesses were more likely to have a loan application denied, even after controlling for differences in creditworthiness, and that blacks paid a higher interest rate on loans obtained. They also found that concerns over whether a loan application would be denied prevented some prospective borrowers from applying for a loan in the first place. Owners often report not applying for loans because they feared rejection. After statistically controlling for differences in credit risks posed by firms needing but not applying for credit, Blanchflower, Levine and Zimmerman (2003) found gaps of 26 percentage points between blacks and whites and 15 percentage points between Latinos and whites.

More recently, Bates and Robb (2015) used data from the Kauffman Firm Survey (KFS) over the period 2008-2011 to examine the extent of unmet credit needs and outcomes of their applications among minority-owned businesses. Even after controlling for credit-risk factors, black-owned firms and Latino-owned firms were more likely to be discouraged borrowers and more likely to have their applications denied by banks than were white-owned firms, thus confirming the findings from earlier studies.

Other Discriminatory Barriers

Discrimination against minority businesses may occur before these businesses are even created. Previous research indicates that minorities have limited opportunities to penetrate networks, such as those in construction (Bates 1993, Feagin and Imani 1994, Bates and Howell 1997). If minorities cannot acquire valuable work experience in these industries then it will limit their ability to start and operate successful businesses. There is also evidence in the literature indicating consumer discrimination against minority-owned firms. Minority firms may have difficulty selling certain products and services to non-minority customers limiting the size of their markets and resulting success. Using microdata from the 1980 Census, Borjas and Bronars (1989) find that African Americans negatively select into self-employment, with the most able African Americans remaining in the wage/salary sector, whereas whites positively select into self-employment and negatively select into wage/salary work. These findings are consistent with discrimination by white consumers. Kawaguchi (2005) found that among African-Americans low earners are the most likely to enter into business ownership, whereas both low and higher earning whites are the most likely to enter self-employment. He notes that this finding is consistent with the theoretical predictions of consumer and credit market discrimination against African Americans

More generally, African American-owned firms may face limited market access for the goods and services that they produce (Bates 1997). This may be partly due to consumer discrimination by customers, other firms and/or the government, and redlining. But, it may also be due to the types, scale and locations of African American firms. Published estimates from the CBO indicate that African American-owned businesses serve smaller geographical areas than white-owned businesses on average (U.S. Census

Bureau 1997). African American firms are more likely than white firms to report that their neighborhood is the geographic area that best describes where the business's goods and services are sold. African American owners are less likely to report larger geographical areas as markets for their goods and services. Furthermore, they are much more likely to sell to a minority clientele than are white businesses, which may reflect more limited market access. As expected, market access or penetration is both a cause and consequence of success in business making it difficult to interpret racial differences in these measures. More successful African American firms are likely to expand to larger market areas. Although the research is much more limited on this topic for Latino-owned businesses, they might face similar discriminatory barriers.

Human Capital Barriers

Education has also been found in the literature to be a determinant of business ownership.[8] Low levels of education obtained by blacks and Latinos are partly responsible for their lower business ownership rates.[9] Using CPS data, Fairlie (2006) finds that 6.0 percent of the black/white gap in self-employment entry rates is explained by racial differences in education levels. Similar estimates from the The Panel Study of Income Dynamics are reported in Fairlie (1999). Mexican-Americans have even lower levels of education than blacks, which translate into a limiting factor for business creation. Estimates from the CPS indicate that education differences account for 32.8 to 37.9 percent of the entry rate gap for Mexican-Americans (Fairlie and Woodruff 2010).

[8] See van der Sluis, van Praag, and Vijverberg (2005), Parker (2004) and Moutray (2007) for recent reviews of this extensive literature.
[9] Minority business owners are found to be less likely to use technology which may be related to lower levels of human capital (Buckley 2002).

Lofstrom and Wang (2009) find that education is important in explaining differences is business creation rates between Mexican-Americans and whites, as well as the types of businesses entrepreneurs are likely to pursue. The high rate of business ownership by Asians is in part due to their relatively high levels of education (Fairlie 2006).

Previous research indicates a much stronger relationship between the education level of the owner and business performance. Businesses with highly educated owners have higher sales, profits, survival rates, and hire more employees than businesses with less-educated owners (Bates 1997, Buckley 2002, Astebro and Berhardt 2003, van der Sluis, van Praag, and Vijverberg 2004). The general and specific knowledge and skills acquired through formal education may be useful for running a successful business and the owner's level of education may also serve as a proxy for his/her overall ability or as a positive signal to potential customers, lenders or other businesses.

Although blacks have made substantial gains in education, racial disparities remain among business owners. Roughly one-third of white business owners are college educated whereas only one quarter of black business owners have the same level of education. These lower levels of education among black business owners translate into disparities in business performance (Fairlie and Robb 2008).

Relatively low levels of education contribute even more to why Latino businesses are less successful. Fairlie and Woodruff (2010) find that Mexican-American business owners have lower incomes than non-Latino white business owners, and that most of the difference is due to low levels of education among Mexican-American owners. Mexican-American business owners, especially immigrants, have substantially lower levels of education. The single largest factor in explaining why Mexican immigrants and U.S.-born

Mexican-Americans have lower business income than whites is education. Lower levels of education account for more than half of the gaps in business income.

Another measure of human capital relevant for Latinos is language ability. Limited English language ability may make it difficult to communicate with potential customers and suppliers, and learn about regulations. Indeed, Fairlie and Woodruff (2010) find that one of the most important factors explaining low business incomes among Mexican-American businesses is language ability. For Mexican immigrant men, limited ability speaking English explains roughly one third of the gap in business income.

Davila and Mora (2013) find that having a college education is important for the success of businesses, and that his holds for Latino businesses and non-Latino businesses. Given that Latino business owners are found to have lower levels of education it represents a limiting factor for the success of Latino businesses relative to non-Latino businesses.

Family Business Background and Social Capital

Research also indicates that the probability of self-employment is substantially higher among the children of the self-employed (see Lentz and Laband 1990, Fairlie 1999, Dunn and Holtz-Eakin 2000, and Hout and Rosen 2000). These studies generally find that an individual who had a self-employed parent is roughly two to three times as likely to be self-employed as someone who did not have a self-employed parent. There is evidence that this strong intergenerational link in business ownership is detrimental to disadvantaged minorities. Hout and Rosen (2000) note a "triple disadvantage" faced by black men in terms of business ownership. They are less likely than white men to have self-employed fathers, to become self-employed if their fathers were not self-employed, and to follow their father in self-employment. Fairlie (1999) provides evidence from the PSID that current racial patterns of self-employment are in part determined by racial patterns of self-employment in the previous generation.

Recent research indicates that family business backgrounds are also extremely important for the success of businesses (Fairlie and Robb 2007, 2008). More than half of all business owners had a self-employed family member prior to starting their business with many of these business owners working in those family businesses. Working in a family business leads to more successful businesses. Business outcomes are 15 to 27 percent better if the owner worked in a family business prior to starting his or her own business even after controlling for other factors. Black business owners have a relatively disadvantaged family business background compared with white business owners. Black business owners are much less likely than white business owners to have had a self-employed family member prior to starting their businesses and are less likely to have worked in that family member's business. Only 12.6 percent of black business owners had prior work experience in a family member's business compared with 23.3 percent of white business owners. This lack of prior work experience in family businesses among future black business owners, perhaps by restricting their acquisition of general and specific business human capital, limits the successfulness of their businesses relative to whites. This creates a cycle of low rates of business ownership and relatively worse business outcomes being passed from one generation of blacks to the next (Fairlie and Robb 2008).

In contrast, Robles (2012) notes the importance of family involvement among Latina-owned businesses. Survey results from the 2000 National Foundation for Women Business Owners indicate that three-fourths of Latinas report that family members help run their businesses, which was higher than for white women and substantially higher than for African-American women. Robles (2012) notes that family support for Latina entrepreneurs includes financial, managerial, growth and other general business advice.

Related to the family business background constraint, previous research also indicates that the size and composition of social networks are associated with self-employment (see Allen 2000 for example). If minority firms have limited access to business, social or family networks or have smaller networks then they may be less likely to enter business and create successful businesses. These networks may be especially important in providing financing, customers, technical assistance, role models, and contracts, but it is difficult to identify their contributions to racial differences in business performance. Limited networks manifest themselves in many of the factors listed below such as financial capital, discrimination, and human capital. For example, minority businesses are known to have limited networks in the investment community resulting in lower levels of capital use (MBDA 2004). Given these interactions and the inherent difficult of measuring networks, it is difficult to identify their effects of business performance.

There is also evidence on whether the Digital Divide (i.e., disparities in access to technology such as computers and the Internet) represents a barrier to minority business success. Previous research using earlier data indicated that personal computers were important for starting businesses especially among female entrepreneurs (Fairlie 2006). More recently, Davila and Mora (2013) find that there is a digital divide between Latino businesses and non-Latino businesses in terms of technology use in the 2007 SBO, but do not find evidence of a digital divide in 2004-5 from the SSBF.

3. Data

The dataset that will be used in the proposed study is the latest five-year sample of the American Community Survey (ACS), 2011-15. The ACS is a household survey and provides information on business ownership, income, and industries at the owner level. The ACS also provides information on immigration status. The ACS is one of the only nationally representative Census Bureau dataset that provides a large sample size of Latino business owners delineating by immigrant status and gender.[10]

The ACS includes over 9million observations for working-age adults (ages 20-64). Even after conditioning on business ownership, the sample size is very large, allowing one to explore the causes of differences in net business income. The ACS includes more than half a million observations for business owners. The ACS is also large enough to examine industrial concentrations for U.S.-born and immigrant Latino business owners by gender.

In the ACS microdata, business ownership is measured by using the class-of-worker question that refers to the respondent's main job or business activity (i.e., activity with the most hours) at the time of the interview. Business owners are individuals who report that they are 1) "self-employed in own not incorporated business, professional

[10] The 2012 SBO microdata also has a large sample of Latino immigrant businesses, but there is a high rate of missing information on the immigrant variable among Latino businesses.

practice, or farm," or 2) "self-employed in own incorporated business, professional practice, or farm." This definition includes owners of all types of businesses—incorporated, unincorporated, employer, and non-employer firms. The samples used in this analysis include all business owners ages 20-64 (i.e. working-age adults) who work 15 or more hours per week in their businesses. To rule out very small-scale businesses, disguised unemployment, or casual sellers of goods and services, only business owners with 15 or more hours worked are included.[11] Fifteen hours per week is chosen as the cutoff because it represents a reasonable amount of work effort in the business (roughly two days per week). Note that self-employed business ownership is defined as the individual's main job activity, thus removing the potential for counting side businesses owned by wage-and-salary workers. Also, estimates are reported with and without the 15 hour restriction to show the robustness of disparities in business ownership rates. Finally, the self-employment information is self-reported and not based on tax or business registration filings, and thus may capture a wide range of self-employment activities depending on the respondent.

Business income is calculated from survey questions about income sources. The main question used is "Self-employment income from own nonfarm businesses or farm businesses, including proprietorships and partnerships. Report NET income after business expenses." Most business owners report this type of income, but incorporated business owners report their earnings from the business as wage and salary earnings. For simplification and consistency in treatment the responses to self-employment income and

[11] Some unemployed individuals may report being self-employed if they sell a small quantity of goods or services while not working at their regular jobs.

wage and salary earnings are combined for all business owners. The questions refer to annual income and capture the past 12 months.

The ACS provides the most comprehensive data available on business owners by the race, ethnicity, immigrant status, and gender of owners.[12] Immigrants are defined as individuals who are born outside of the United States.[13] Individuals born in Puerto Rico, Guam, the U.S. Virgin Islands, Northern Marianas, or abroad of U.S. citizen parents are defined as U.S.-born. Among individuals born in Puerto Rico (and thus considered U.S born), 97 percent report being Latino. Three main groups are defined for comparison: U.S.-born Latinos, immigrant Latinos, and non-Latino whites.[14]

Where Do Latino Immigrants Come from?

The ACS contains information on the source country of immigrants in the United States. Latino immigrants were born in a wide range of countries. **Table 1** reports the top 15 source countries for immigrant Latinos. The estimates reported here capture the stock of immigrants currently residing in the United States and not annual immigration flows. The largest single source country is Mexico representing 61.7 percent of the total adult ages 20-64 immigrant Latino population. The next largest source country is El Salvador representing 7.0 percent of the total immigrant Latino population. Cuba, Dominican Republic and Guatemala each represent 4.8 percent of the immigrant Latino population.

[12] It is assumed that undocumented immigrants are captured in the ACS. The ACS immigrant population is compared to Department of Homeland Security data to estimate the size of the undocumented population in the United States (see Hoefer, Rytina and Baker 2012 for example).
[13] The ACS does not provide information on where parents are born, but there is a recent recommendation to include this information in future years (National Academies 2015).
[14] U.S.-born Latinos includes second generation and higher descendants of immigrants. There is some concern, however, over the subjective measures of ethnic self-identification used in surveys such as the ACS leading to an undercount of U.S.-born Latinos. Additionally, there is evidence that the attrition leads to underestimating socioeconomic outcomes (Duncan and Trejo 2011, 2012).

Immigrant Latinos come from a wide range of other countries.

Table 1

Largest Source Countries for Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	Adult Population	Percent
Mexico	9,752,166	61.7%
El Salvador	1,106,942	7.0%
Cuba	762,421	4.8%
Dominican Rep.	761,442	4.8%
Guatemala	757,442	4.8%
Colombia	536,959	3.4%
Honduras	464,144	2.9%
Ecuador	347,354	2.2%
Peru	334,429	2.1%
Nicaragua	206,312	1.3%
Venezuela	165,794	1.0%
Argentina	119,570	0.8%
Chile	67,916	0.4%
Panama	65,470	0.4%
Costa Rica	62,373	0.4%
All Other	291,792	1.8%

4. Business Ownership and Income

Estimates of the number of business owners, business ownership rates, and business income are first presented. All estimates are from the ACS (2011-15), which as noted above is the latest available household data from the U.S. Census Bureau on business ownership and income. **Table 2** reports estimates for U.S.-born Latinos, immigrant Latinos, non-Latino whites, and the U.S. total. There are 12.2 million business owners in the United States. Roughly 600,000 of these business owners are U.S.-born Latinos and 1.2 million are immigrant Latinos. There are nearly 9 million non-Latino white business owners in the United States.

Table 2

Total: Business Ownership and Income among U.S.-born and Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	U.S.-born Latinos	Immigrant Latinos	Non-Latino Whites	Total
Number of business owners	584,516	1,232,720	8,820,771	12,159,527
Percent of population	3.8%	7.8%	7.3%	6.4%
Number (15+ hours/week worked)	541,425	1,150,582	8,277,854	11,388,697
Percent of population	3.5%	7.3%	6.8%	6.0%
Percent of workforce (15+hrs.)	5.2%	10.5%	9.6%	8.7%
Avrg business income	$44,777	$29,590	$63,329	$57,357
Avrg bus. income (15+ hours)	$47,385	$31,005	$66,618	$60,375

Splitting immigrant and U.S.-born Latinos is important. U.S born Latinos are underrepresented in business ownership. As a percentage of the total working-age population only 3.8 percent of U.S.-born Latinos own a business. On the other hand, immigrant Latinos have a substantially higher business ownership rate at 7.8 percent. This rate is even slightly higher than the non-Latino white rate of 7.3 percent.

For comparison, business ownership rates are calculated for other major ethnic and racial groups (although not reported in the tables). The business ownership rate for Latinos combining U.S.-born and immigrant is 5.8 percent (representing 1.8 million business owners). The business ownership rate for African-Americans is 3.0 percent (800,000 business owners). Among Asian-Americans the business ownership rate is 6.6 percent (800,000 business owners). The business ownership rate is 4.8 percent for Native American/Alaskan Natives (representing 150,000 business owners). Thus, across the five major ethnic/racial groups Latinos represent the second largest number of business owners, but only the third highest business ownership rate.

Focusing on business owners with a work commitment of 15 or more hours worked per week, the total number of business owners is lower, but not substantially lower. There are 541,000 U.S.-born Latino business owners and 1.15 million immigrant Latino business owners after using this restriction. The total number of business owners in the United States that work 15+ hours per week is 11.4 million. As a percent of the population, business ownership is lower with the hours worked restriction, but not much lower. Business ownership rates remain lower for U.S.-born Latinos and higher for immigrant Latinos than non-Latino whites.

Another commonly-used measure of the rate of business ownership conditions on being in the workforce. The percent of the workforce that owns a business among U.S.-born Latinos is 5.2 percent, and the percent of the workforce owning a business among immigrant Latinos is 10.5 percent.[15] The non-Latino white rate is 9.6 percent. The similarity of these differences and the ranking across groups indicates that the relatively low rates of business ownership among U.S.-born Latinos and high rates of business ownership among immigrant Latinos are not due to higher or lower levels of unemployment or not being in the labor force.[16] Instead, the differences are driven by lower and higher propensities to own businesses.

Among business owners a few interesting patterns emerge for business income. Table 2 also reports estimates of business income across groups. Both Latino groups have substantially lower levels of business income than non-Latino whites. U.S.-born Latinos have average business income that is roughly $20,000 lower than the average business

[15] Although not directly comparable from using slightly different definitions, Davila and Mora (2013) find that the self-employment rate for Hispanics increased from 7.9 percent in 2000 to 9.1 percent in 2010.
[16] It is not clear how informal business activity, which is shown to be relevant (e.g. see Richardson and Pisani 2012) is captured in the ACS data, as self-employment, unemployment or some other labor force activity.

income among non-Latino whites. In contrast to the relatively high rates of business ownership, immigrant Latino business owners have lower levels of business income than U.S.-born Latinos. Among business owners working 15+ hours per week, U.S.-born Latinos have average income of $47,385. Average business income among immigrant Latinos is much lower at $31,005.

The finding that immigrant Latinos are much more likely to own businesses than U.S.-born Latinos has not been well documented. One exception is that Davila and Mora (2013) find using data from the 2007 SBO find that immigrants owned 56 percent of Latino owned businesses. There are some concerns, however, about high rates of missing values for immigrant status in the SBO. Additionally, the SBO does not provide data on non-business owners making it more difficult to estimate the percentage of owners relative to the population or workforce from the same data source. It is also not well known that the businesses owned by immigrant Latinos are much less successful on average than those owned by U.S.-born Latinos. Again, Davila and Mora (2013) provide an exception in the previous literature showing that immigrant Latino-owned businesses have lower average sales than U.S.-born Latino-owned businesses using data from the SBO. Immigrant Latinos appear to be more likely to start smaller scale businesses that have limited opportunities for growth (at least on average). I next explore whether the patterns in disparities in business ownership and income by race and immigrant status are similar when focusing on men and women separately.

Patterns among Latino Men and Latina Women

Tables 3 and 4 report estimates of business ownership and income for men and women, respectively. Overall, men have higher rates of business ownership and higher business income on average than women, but the focus here is on ethnic/racial differences and not on gender differences. The business ownership patterns are similar to the total for both men and women. U.S.-born Latinos are less likely to be business owners than are immigrant Latinos. Relative to non-Latino whites, both male and female U.S.-born Latinos are less likely to be business owners. For men, immigrant Latinos have similar business ownership rates as white men. For women, immigrant Latinas have higher rates of business ownership.

Table 3

Male: Business Ownership and Earnings among US Born and Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	U.S.-born Latinos	Immigrant Latinos	Non-Latino Whites	Total
Number of business owners	367,125	767,103	5,683,362	7,720,540
Percent of population	4.8%	9.3%	9.4%	8.2%
Number (15+ hours/week worked)	349,465	740,837	5,503,856	7,451,838
Percent of population	4.53%	8.97%	9.07%	7.92%
Percent of workforce (15+hrs.)	6.4%	10.8%	11.9%	10.7%
Avrg business income	$51,719	$35,511	$75,744	$68,480
Avrg bus. income (15+ hours)	$53,567	$36,264	$77,593	$70,312

Table 4

Female: Business Ownership and Earnings among U.S.-born and Immigrant Latinas
American Community Survey 5-Year Estimate (2015)

Group	U.S.-born Latinas	Immigrant Latinas	Non-Latino Whites	Total
Number of business owners	217,391	465,617	3,137,409	4,438,987
Percent of population	2.8%	6.2%	5.2%	4.7%
Number (15+ hours/week worked)	191,960	409,745	2,773,998	3,936,859
Percent of population	2.48%	5.43%	4.56%	4.1%
Percent of workforce (15+hrs.)	3.9%	10.0%	6.9%	6.4%
Avrg business income	$33,053	$19,837	$40,838	$38,010
Avrg bus. income (15+ hours)	$36,129	$21,494	$44,842	$41,567

Focusing on business income, there are large differences between male and female business income for all groups with average business income for male owners being substantially higher than average business income for female owners.[17] U.S.-born Latino business owners have lower business income for both men and women, but the differences are even more striking when comparing immigrant Latinos to non-Latino whites. Given the sizeable differences between Latino men and Latina women in business ownership rates and income I split the sample by gender for all following analyses.

A key finding, however, is that the relative patterns within gender are roughly similar. Both U.S.-born Latinos and Latinas have substantially lower business ownership rates than non-Latino white men and women, respectively. In contrast, both immigrant Latino men and Latina women have relatively high rates of business ownership. For business income the patterns are also similar within gender. For both men and women,

[17] Davila and Mora (2014) find large gender and ethnic/racial differences in business exit rates with women having higher exit rates than men, and Latinos having higher exit rates than whites.

immigrant Latinos have very low levels of average business income and U.S.-born Latinos have low levels of average business income relative to non-Latino whites.

Industry Distributions of Business Owners

Examining the industry distributions of business owners provides useful information on concentrations of business owners and potentially where to target assistance. **Table 5** reports industry distributions for male business owners. U.S.-born Latino male business owners are concentrated in construction (27.3 percent) and professional services (21.4 percent). The distribution across industries is not substantially different than the distribution across industries for non-Latino white men. U.S.-born Latino business owners are more concentrated in construction, and accommodation, recreation and entertainment, but less concentrated in agriculture/extraction.

The largest industry concentration for male Latino immigrant business owners is also construction. Similar to both U.S.-born Latinos and non-Latino whites, Latino immigrant business owners are also concentrated in professional services. Relative to non-Latino whites immigrant Latino business owners are more likely to be found in construction and less likely to be found in agriculture/extraction and information/finance. But, it is important to note that male immigrant Latino business owners are found throughout the industry distribution and are not just located in a few industries.

Table 5

Male: Industry Distribution of Business Owners among U.S.-born and Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	US Born Latinos	Immigrant Latinos	Non-Latino Whites	Total
Number of businesses	349,155	740,701	5,500,308	7,447,639
Agriculture/Extraction	1.7%	1.6%	7.5%	5.9%
Construction	27.3%	38.6%	24.9%	25.1%
Manufacturing	2.9%	2.3%	4.4%	3.9%
Wholesale	2.5%	2.2%	2.9%	2.8%
Retail	6.8%	6.0%	7.1%	7.4%
Transportation	6.9%	7.8%	4.6%	6.0%
Information/Finance	8.6%	2.9%	9.6%	8.7%
Professional Services	21.4%	22.5%	20.9%	20.8%
Educational Services	1.1%	0.4%	1.0%	1.0%
Health Care and Social Assistance	3.7%	1.5%	4.8%	4.6%
Accommodation, Recreation, and Entertainment	6.7%	4.4%	5.5%	6.0%
Other Services	10.6%	9.8%	6.8%	7.8%

For women, U.S. Latina business owners are concentrated in health care and social assistance, other services, and professional services **(see Table 6).** Other services include beauty, laundry and cleaning services as well as other services. These three industries together account for 62.4 percent of all business owners. Immigrant Latina women are concentrated in the same three industries, but have a higher concentration in other services. Non-Latino white female business owners are also concentrated in these three industries, but not to the same degree. Across other industries, the U.S.-born Latina and non-Latina white distributions differ only slightly. Immigrant Latina business owners are also found across all industries, but are more concentrated in the top three industries.

Table 6

Female: Industry Distribution of Business Owners among U.S.-born and Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	US Born Latinos	Immigrant Latinos	Non-Latino Whites	Total
Number of businesses	191,917	409,728	2,773,079	3,935,844
Agriculture/Extraction	0.8%	0.5%	2.7%	2.1%
Construction	3.4%	1.9%	3.5%	3.0%
Manufacturing	2.3%	1.5%	2.9%	2.7%
Wholesale	1.6%	1.2%	1.6%	1.6%
Retail	8.6%	7.4%	8.9%	8.8%
Transportation	1.4%	1.2%	1.3%	1.3%
Information/Finance	9.7%	3.0%	10.7%	9.3%
Professional Services	18.8%	18.3%	23.3%	21.4%
Educational Services	2.4%	0.5%	3.2%	2.7%
Health Care and Social Assistance	19.6%	17.0%	15.6%	17.1%
Accommodation, Recreation, and Entertainment	7.3%	5.1%	7.7%	7.7%
Other Services	24.0%	42.5%	18.6%	22.4%

These findings are important because there are advantages and disadvantages to being concentrated in a few industries. On the one hand, it is easier to create business programs that could help minority business owners because they can be targeted towards those specific industries. On the other hand, it is more difficult to create general programs that allow minorities to create and grow businesses in whatever industry makes the most sense economically. Similarly, being concentrated in a few industries is advantageous if those industries grow rapidly, but not if they face economic contractions. For example, the concentration of immigrant Latino business owners in construction (for men) and other services (for women) could create a problem if those industries experience rapid structural changes (e.g. like the rapid impact of Uber on the taxi cab industry).

Although business income differs substantially across industries, the disparities between immigrant Latinos, U.S.-born Latinos and non-Latino whites are consistent for industries. **Tables 7 and 8** report average business income by industry for male and female business owners, respectively. U.S.-born Latino men have lower average business income in every reported industry than white men. Immigrant Latino men have even lower business income in every reported industry. The patterns are remarkably consistent across all industries. The patterns are a little less clear for women, but for almost all industries U.S.-born Latinas have lower average earnings than whites, and immigrant Latinas have the lowest average earnings.

Table 7

Male: Average Business Income by Industry among U.S.-born and Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	US Born Latinos	Immigrant Latinos	Non-Latino Whites	Total
Number of businesses	349,155	740,701	5,500,308	7,447,639
Agriculture/Extraction	$55,549	$42,457	$66,207	$65,023
Construction	$38,731	$28,595	$50,461	$45,717
Manufacturing	$58,970	$50,896	$78,275	$74,899
Wholesale	$55,564	$46,762	$93,712	$85,601
Retail	$42,551	$36,395	$65,223	$59,654
Transportation	$54,180	$47,847	$64,569	$56,653
Information/Finance	$72,851	$60,549	$102,176	$96,387
Professional Services	$60,915	$34,418	$97,883	$86,384
Educational Services	$41,460	$33,727	$50,066	$48,965
Health Care and Social Assistance	$152,878	$144,768	$191,079	$184,915
Accommodation, Recreation, and Entertainment	$46,415	$41,340	$59,476	$54,915
Other Services	$36,319	$28,845	$45,069	$40,425

Table 8

Female: Average Business Income by Industry among U.S.-born and Immigrant Latinas
American Community Survey 5-Year Estimate (2015)

Group	U.S.- Born Latinas	Immigrant Latinas	Non-Latino Whites	Total
Number of businesses	191,917	409,728	2,773,079	3,935,844
Agriculture/Extraction	$51,879	$31,887	$36,960	$37,208
Construction	$35,631	$31,815	$40,529	$39,605
Manufacturing	$32,881	$26,298	$42,973	$41,849
Wholesale	$47,148	$36,113	$57,055	$55,247
Retail	$30,873	$24,286	$36,194	$34,983
Transportation	$32,574	$28,441	$44,356	$41,444
Information/Finance	$50,160	$39,868	$60,325	$58,825
Professional Services	$45,907	$24,026	$57,080	$53,039
Educational Services	$35,482	$29,786	$34,298	$34,950
Health Care and Social Assistance	$39,091	$23,920	$53,476	$49,534
Accommodation, Recreation, and Entertainment	$36,830	$27,316	$36,646	$36,303
Other Services	$21,490	$15,498	$23,957	$22,198

The patterns across industries suggest that total income differences across groups cannot be explained by differences in industry concentrations alone. This is the case, but from these tables it is difficult to assess how important differences in industry concentrations are to the total gaps in business income. The decompositions presented Section 6 shed direct light on this question.

5. Contributions of Latino Business Owners to the U.S. Economy

An important question is what is the contribution of U.S.-born and immigrant Latinos to the total entrepreneurial economy? One method of answering this question is to examine the total number of business owners who are U.S.-born and immigrant Latinos and compare that to the total number of all business owners in the United States. The Latino share of total business ownership has likely increased substantially over time due to population growth (Fairlie and Robb 2008; Davila and Mora 2013). **Table 9.A** reports the share of business owners relative to the U.S. total. U.S.-born Latinos represent 4.8 percent of all U.S. business owners and immigrant Latinos represent 10.1 percent of U.S. business owners. Thus, roughly 15 percent of business owners in the United States are Latinos. I include all business owners, both male- and female-owned, here to measure total ethnic/immigrant contributions.

Table 9.A

Business Ownership and Income among U.S.-born and Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	U.S.-born Latinos		Immigrant Latinos		Total
Number of business owners	584,516	4.8%	1,232,720	10.1%	12,159,527
Total business income (000s)	$26,172,807	3.8%	$36,476,572	5.2%	$697,427,911

Similar to the estimates of the Latino contribution to total business ownership in the United States, I estimate the contribution of Latino businesses to total business income in the U.S. economy. The Latino share of total business income provides another measure of the contribution of Latino entrepreneurs to the economy. **Table 9.A** also reports total business income and shares of the U.S. total for U.S.-born Latinos and immigrant Latinos. In total, Latino business owners have nearly $63 billion in business income. U.S.-born Latinos have $26 billion of business income and immigrant Latinos have $36.5 billion. These represent 9 percent of the total U.S. business income of roughly $700 billion.

Combining immigrants and U.S.-born there are 1.8 million Latino business owners (15 percent) and they have a total business income of $63 billion (9 percent). Published estimates from the 2012 SBO can also be used to measure the contributions of

Latino businesses to the U.S. economy. The SBO captures all businesses even if they are small scale and multiple businesses owned by the same person. Thus, the total number of businesses for Latinos and non-Latino whites are much higher than for business owners in the ACS (which focus on main job activity). **Table 9.B** reports estimates from the SBO.[18] The number of Latino businesses in the United States is 3.3 million which represents 12 percent of all identifiable businesses. These businesses generate a total of $473 billion in revenues (representing 4 percent of total revenues among identifiable businesses).

Table 9.B

Number of Businesses and Revenues among Latinos
Survey of Business Owners 2012

Group	Latino Firms		All Classifiable Firms
Number of businesses	3,305,873	12.2%	27,179,380
Total business revenues (000s)	$473,635,944	4.0%	$11,964,077,871

Includes all classifiable firms by gender, race, ethnicity and veteran status.

Clearly, both U.S.-born and immigrant Latino business owners make very large contributions to the entrepreneurial economy in the United States. Although these are large contributions they could be even higher as evidenced by the relatively low rates of business ownership among U.S.-born Latinos and low average business incomes among U.S.-born and immigrant Latino business owners. If business ownership rates were increased relative to white levels or business income was increased relative to white levels it would result in a substantial increase in the total contributions made by Latino

[18] The SBO delineates businesses by whether they are identifiable by gender, race, ethnicity and veteran status to rule out public corporations in which ownership status is difficult to identify. Also, the owner's immigrant status is not available for many Latino business owners so only the total is reported.

entrepreneurs to the U.S. economy. In the next section, I investigate the potential barriers to Latino business ownership and income.

6. Explanations for Differences in Business Ownership Rates and Income

To investigate what causes differences in business ownership rates I first examine differences in population characteristics. Differences in population characteristics such as education and wealth levels may explain why U.S.-born Latinos have much lower business ownership rates than whites. Furthermore, differences in these same characteristics among business owners might explain why U.S.-born Latinos and immigrant Latinos have lower business income. Some of these characteristics may be more important in contributing to the disadvantages for U.S.-born Latinos than for immigrant Latinos.

Differences in Education, Wealth and Other Characteristics

Table 10 presents differences in education, wealth and other characteristics for the male working-age population by ethnic/racial group. **Table 11** presents differences in the same characteristics for working-age women. For both the men and women, there are major differences in characteristics between U.S.-born Latinos and non-Latino whites. There are also major differences between immigrant Latinos and non-Latino whites, and in most cases these differences are larger.

Table 10

Male: Population Characteristics of US Born and Immigrant Latinos
American Community Survey 5-Year Estimate (2015)

Group	U.S.-born Latinos	Immigrant Latinos	Non-Latino Whites	Total
Age	35.84	40.04	42.53	41.33
HS dropout	17%	48%	7%	13%
HS graduate	33%	27%	29%	29%
Some college	35%	16%	33%	31%
College	11%	6%	21%	18%
Grad school	4%	3%	10%	9%
Home owner	52%	41%	70%	62%
House value	$238,703	$207,333	$267,175	$268,117
Interest income	$407	$292	$1,776	$1,336
Northeast	15%	14%	18%	18%
Midwest	9%	9%	27%	21%
South	35%	38%	35%	37%
West	41%	38%	20%	24%
Married	40%	61%	56%	53%
Children	0.84	1.24	0.62	0.71
Sample size	315905	305556	2970829	4475660

Table 11

Female: Population Characteristics of U.S.-born and Immigrant Latinas
American Community Survey 5-Year Estimate (2015)

Group	U.S.-born Latinas	Immigrant Latinas	Non-Latino Whites	Total
Age	36.38	41.06	42.92	41.83
HS dropout	14%	43%	5%	10%
HS graduate	27%	26%	24%	24%
Some college	40%	19%	36%	34%
College	13%	8%	23%	20%
Grad school	5%	3%	12%	11%
Home owner	52%	45%	71%	63%
House value	$240,837	$217,704	$268,117	$270,019
Interest income	$280	$190	$1,147	$853
Northeast	15%	15%	19%	18%
Midwest	9%	8%	26%	21%
South	35%	38%	36%	38%
West	41%	39%	19%	23%
Married	45%	64%	59%	55%
Children	1.10	1.43	0.71	0.84
Sample size	322439	297272	3026133	4610900

U.S.-born Latinos are younger on average than non-Latino whites. Immigrant Latinos are also younger on average than whites, but the difference is not as large. This pattern of a younger average age, which poses a disadvantage because business ownership has been found to be positively associated with age, holds for both men and women.[19]

U.S.-born Latino men are less educated: only 11 percent have a college degree (without a further degree) and 4 percent have a graduate degree, whereas 21 percent of white men have a college degree and 10 percent have a graduate degree. The percentage of high school dropouts among U.S.-born Latinos is 17 percent which is considerably

[19] Recently, Wilmoth (2017) found that the immigrant population has increased in age and that trend has contributed to higher self-employment rates among immigrants.

higher than for whites. Immigrant Latino men have even lower levels of education than U.S.-born Latinos. Among Latino immigrants only 6 percent have a college degree and 3 percent have a graduate degree.

Although education levels are slightly higher, U.S.-born Latino women also have lower education levels than white women. Among women, 18 percent of U.S.-born Latina women either have a college degree (only) and a graduate degree compared with 35 percent of white women. Among immigrant Latina women, 11 percent have a college degree or graduate degree.

Another major difference between U.S.-born and immigrant Latinos and non-Latino whites is wealth. The ACS includes information on home ownership, house values and interest/dividend income. Home values represent the largest component of wealth for most individuals. Interest and dividend income represents another good measure of wealth.[20] U.S.-born Latinos are much less likely than whites to own houses, and the houses they own have lower values on average. The disparities are substantial with only 52 percent of U.S.-born Latino men owning a house with those houses being worth $239,000 on average. In contrast, 70 percent of white men own a house and those houses are worth $267,000 on average. Immigrant Latino men have even lower rates of home ownership (41 percent) and home values (at $207,000). Both U.S.-born and immigrant Latinos have much less interest and dividend income than whites. Levels and differences are roughly similar for women for housing, but levels are lower for interest and dividend income.

[20] The survey question asks about income from "Interest, dividends, net rental income, royalty income, or income from estates and trusts. Report even small amounts credited to an account."

Another major difference between U.S.-born and immigrant Latinos and whites is their geographical concentrations across the country. Latinos are more likely to live in Western states and less likely to live in Midwest states than are whites. The regional patterns are similar for U.S.-born and immigrant Latinos.

Focusing on family characteristics in **Tables 10 and 11**, marriage rates are lower among U.S.-born Latinos than whites, but higher among immigrant Latinos than whites. The average number of children is higher among U.S.-born and immigrant Latinos than non-Latino whites.

Overall, there exist major differences in education, wealth, geography and other characteristics between U.S.-born, immigrant Latinos and non-Latino whites. Both immigrant Latinos and U.S.-born Latinos generally have disadvantaged socioeconomic characteristics, with immigrant Latinos have the most disadvantaged characteristics. Previous research indicates that many of these characteristics are important in determining business ownership and outcomes.[21] Also, as noted above in the literature review, previous research indicates that many of these factors represent barriers for Latino business ownership and outcomes.

Decomposition Technique

The comparison of average characteristics across ethnic/racial groups identifies several potential barriers to business ownership and income. Although there are large differences in many of these characteristics we do not know how much they contribute

[21] See Hundley (2000), Zissimopoulos and Karoly (2003), van der Sluis, van Praag and Vijverberg (2005), Moutray (2007), and Fairlie and Krashinsky (2012) for few examples, and Parker (2007) for an overall review of the literature.

directly to business ownership and income disparities. To explore this question I perform a decomposition technique that allows one to estimate the separate contributions from differences between Latinos and whites in education, home ownership and other characteristics to the racial gaps in business ownership rates and income.

The advantage of this technique is that it allows for a precise estimate of how much a factor contributes to the disparity. For example, the technique can answer the question of what percentage of the gap in business ownership between U.S.-born Latinos and whites is due to education disparities.[22] Similarly, the technique can estimate this percentage for each of the other factors included in the multivariate regression model.

The decomposition technique is extremely useful for identifying causes of group disparities in outcome variables such as business ownership and income. Specifically, we "decompose" inter-group differences in a dependent variable into those due to different observable characteristics across groups (sometime referred to as the endowment effect) and those due to different ”prices” of characteristics of groups (see Blinder 1973 and Oaxaca 1973). The Blinder-Oaxaca decomposition of the white/minority gap in the average value of the dependent variable, Y, can be expressed as:

$$(1)\ \overline{Y}^{W} - \overline{Y}^{M} = \left[(\overline{X}^{W} - \overline{X}^{M})\hat{\beta}^{W} \right] + \left[\overline{X}^{M}(\hat{\beta}^{W} - \hat{\beta}^{M}) \right].$$

[22] An alternative decomposition technique, the Juhn, Murhpy and Pierce (1993), is used by Davila and Mora (2013) to analyze changes over time in the self-employment earnings penalty (i.e. self-employment earnings relative to earnings in the paid employment sector) for Latinos. The JMP decomposition technique focuses on explaining changes over time for Latinos instead of differences between Latinos and whites at a point in time (as done here). Davila and Mora (2013) find that the Latino self-employment earnings penalty dropped 3.7 percentage points from 2002 to 2007, and that changes in observable skills and other characteristics contributed the most to the change.

Similar to most recent studies applying the decomposition technique, I will focus on estimating the first component of the decomposition that captures contributions from differences in observable characteristics or “endowments.” I will not report estimates for the second or ”unexplained” component of the decomposition because it partly captures contributions from group differences in unmeasurable characteristics and is sensitive to the choice of left-out categories making the results difficult to interpret. I will also weight the first term of the decomposition expression using coefficient estimates from a pooled sample of all groups (see Oaxaca and Ransom 1994 for example).

The contribution from ethnic/racial differences in the characteristics can thus be written as:

$$(2)\ (\overline{X}^{W} - \overline{X}^{B})\hat{\beta}^{*}.$$

Where $\overline{X}^{j}$ are means of firm characteristics of race *j*, $\hat{\beta}^{*}$ is a vector of pooled coefficient estimates, and j=W or M for white or minority, respectively. Equation (2) provides an estimate of the contribution of ethnic/racial differences in the entire set of independent variables to the racial gap. Separate calculations are made to identify the contribution of group differences in specific variables to the gap.[23]

The Blinder-Oaxaca decomposition represented in equation (2) is used to identify the causes of differences in business income. For business ownership, which is equal to 0 or 1, an alternative non-linear decomposition technique is used (Fairlie 1999).

[23] In the Blinder-Oaxaca technique, the contribution estimates are insensitive to the choice of the left-out category. For example, the percent explained by education would be the same if the lowest education category is the left-out category in the underlying regressions or if the highest education category is the left-out category in the underlying regressions.

Decomposition Results for Business Ownership

Table 12 reports estimates from the procedure for decomposing the white/Latino gaps in business ownership into differences in characteristics for U.S.-born and immigrant Latino men and Latina women. The decompositions are calculated separately for men and women because of the large differences by gender. Column 1 reports estimates for the factors contributing to the difference in business ownership rates between non-Latino whites and U.S.-born Latinos. For convenience, the first two rows repeat group business ownership rates previously reported in **Table 1.** The U.S.-born Latino business ownership rate is 4.53 percent and the white rate is 9.07 percent forming a gap of 4.55 percentage points. The decomposition reveals that one the most important contributing factors is wealth. Relatively low levels of wealth among U.S.-born Latino men explain 16 percent of why business ownership rates are lower for this group. The most important factor, however, is age. The younger average age of U.S.-born Latino men in the working-age population contributes to why they have lower business ownership rates than whites. Business ownership increases with age as individuals gain experience and general skills. Interestingly, education disparities do not contribute to why U.S.-born Latinos are less likely to own businesses. This is because higher education is not found to be a strong predictor of business ownership rates. Family characteristics also do not contribute to the gap. It is important to keep in mind that these results hold for business ownership which for many individuals captures a form of "necessity" employment. Many individuals turn to business ownership when they cannot find a job in the wage and salary sector. The results are likely to differ for business income, especially for education (as we show below).

Table 12

Decompositions of Business Ownership Rate Gaps
American Community Survey 5-Year Estimate (2015)

	Male		Female	
	U.S.-born	Immigrant	U.S.-born	Immigrant
White business ownership rate	0.0907	0.0907	0.0456	0.0456
Latino business ownership rate	0.0453	0.0897	0.0248	0.0543
White/Latino gap	0.0455	0.0010	0.0207	-0.0087
Contributions from racial differences in:				
Age	0.0154	0.0080	0.0063	0.0025
	(0.0001)	(0.0001)	(0.0001)	(0.0000)
	34.0%		30.2%	
Education	-0.0012	-0.0014	0.0012	0.0037
	(0.0001)	(0.0002)	(0.0000)	(0.0001)
	-2.6%		5.6%	
Wealth	0.0073	0.0115	0.0026	0.0038
	(0.0001)	(0.0001)	(0.0000)	(0.0001)
	16.0%		12.7%	
State Distribution	-0.0031	-0.0031	-0.0028	-0.0028
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
	-6.9%		-13.3%	
Family Characteristics	0.0009	-0.0063	0.0002	-0.0009
	(0.0001)	(0.0001)	(0.0000)	(0.0001)
	2.1%		1.1%	
All included variables	0.0193	0.0086	0.0075	0.0062
	42.4%		36.3%	-71.5%

Notes: (1) All decomposition specifications use pooled coefficient estimates from the full sample of all races (and include a full set of race dummies in the logit models). (2) Sampling weights are used in all specifications. (3) Standard errors are reported in parentheses below contribution estimates.

Interestingly, U.S.-born Latinos live in “favorable” states that have higher than average business ownership rates. Evidence of this favorable geographical distribution across states is provided by the negative contribution. In a decomposition negative contributions imply factors that work in the opposite direction of those contributing to inequality. U.S.-born Latinos live in states that have relatively high rates of business ownership. If instead U.S.-born Latinos had the same geographical distribution across states as whites their business ownership rates would actually be lower than what they current are (which is implied by the negative contribution).

For completeness Column 2 of **Table 12** reports estimates for the factors contributing to the difference in business ownership rates between non-Latino whites and immigrant Latino men. There is no gap in business ownership rates between immigrant Latino men and white men. To avoid misinterpretation of the results I do not report percentage contributions because they could be misleadingly large (i.e. calculating the percentage of a very small difference). Although there is no gap in business ownership rates to explain, the decomposition might reveal offsetting factors that advantage or disadvantage immigrant Latino men in business ownership. The only factor that provides a non-trivial contribution to the gap is the wealth disparity. Lower levels of wealth among immigrant Latino men hold them back relative to white men in business ownership. In other words, the immigrant Latino male business ownership rate would be 1.12 percentage points higher than it currently is, and thus higher than for whites, if immigrant Latinos had wealth levels that were comparable to white levels. Similar for the results for U.S.-born Latinos, immigrant Latinos live in states that have relatively high rates of business ownership.

The decomposition results for U.S.-born Latina women are reported in Column 3 of **Table 12.** The gap between U.S.-born Latina women and white women in business ownership rates is 2.07 percentage points. Wealth is an important factor limiting business ownership among U.S.-born Latina women. Relatively low levels of wealth explain 13 percent of the gap in business ownership rates. A younger population among U.S.-born Latinas, however, provides the largest contribution to why this group has lower business ownership rates. Low levels of education among U.S.-born Latinas also explains part of the gap at 6 percent. U.S.-born Latinas live in "favorable" regions of the country with higher business ownership rates than white women, thus resulting in a -13 percent contribution to the gap. If U.S.-born Latinas had the same regional distribution as white women their business ownership rates would actually be lower than what they current are.

For immigrant Latina women, there is no gap in business ownership rates. Actually, immigrant Latina women have a slightly higher rate of business ownership than white women. But, similar to the findings for men there might be factors influencing the gap either positively or negatively. The decomposition technique is useful for revealing these types of examples. The results are somewhat similar to those for U.S.-born Latinas. I find that relatively low levels of education and wealth among immigrant Latinas contribute to lower business ownership rates. Immigrant Latinas are found to have a "favorable" regional distribution relative to white women for business ownership, but are younger on average which partly holds down business ownership rates.

Decomposition Results for Business Income

I now turn to discussing the decomposition results for business income. The business income gaps were consistently large. **Table 13** reports estimates from the procedure for decomposing the white-Latino gaps in business ownership into differences in characteristics for U.S.-born and immigrant Latino men and women. The included variables are the same as before with two important exceptions. First, wealth is not included in the models for business income because more successful business owners are likely to accumulate more wealth. Thus, this reverse causality would create a problem for estimating the effects of differences in wealth on differences in business income. Second, industry was not included in the models for business ownership because starting a business and its industry is a joint decision, whereas for business income the decision has already been made and there are important differences in income levels across industries as shown above. The decompositions include the same 12 industry classifications as listed in **Tables 5-8.**

Table 13

Decompositions of Log Business Income Gaps
American Community Survey 5-Year Estimate (2015)

	Male		Female	
	U.S.-born	Immigrant	U.S.-born	Immigrant
White log business income	10.5293	10.5293	9.9417	9.9417
Latino log business income	10.1994	10.0039	9.7717	9.4722
White/Latino gap	0.3300	0.5254	0.1700	0.4695
Contributions from racial differences in:				
Age	0.0367	0.0059	0.0385	-0.0097
	(0.0020)	(0.0017)	(0.0024)	(0.0016)
	11.1%	1.1%	22.7%	-2.1%
Education	0.0975	0.2254	0.0948	0.2490
	(0.0015)	(0.0046)	(0.0020)	(0.0070)
	29.6%	42.9%	55.8%	53.0%
State Distribution	-0.0349	-0.0392	-0.0517	-0.0693
	(0.0036)	(0.0034)	(0.0046)	(0.0046)
	-10.6%	-7.5%	-30.4%	-14.8%
Family Characteristics	0.0223	-0.0271	0.0089	0.0127
	(0.0014)	(0.0019)	(0.0020)	(0.0026)
	6.7%	-5.2%	5.2%	2.7%
Industry	0.0152	0.0392	0.0097	0.0528
	(0.0010)	(0.0017)	(0.0011)	(0.0030)
	4.6%	7.5%	5.7%	11.2%
All included variables	0.1368	0.2041	0.1002	0.2355
	41.5%	38.8%	59.0%	50.2%

Notes: (1) All decomposition specifications use pooled coefficient estimates from the full sample of all races (and include a full set of race dummies in the underlying regression models). (2) Sampling weights are used in all specifications. (3) Standard errors are reported in parentheses below contribution estimates.

Column 1 reports estimates for U.S.-born Latino men. The underlying regression models estimated for the decompositions use log business income which is common in working with earnings or income data because it improves the fit of the model and limits the influence of large outliers.[24] The log business income of U.S.-born Latino men is 10.20 which is 33 log points (or roughly 33 percent) lower than the white level of 10.53. The most important factor explaining the business income difference is education. Low levels of education among U.S.-born Latinos explain 30 percent of the gap in business income. The relative youth of U.S.-born Latino men also contributes to the gap in business income, explaining 11 percentage points of the gap. The geographical distribution is "favorable" for Latinos in terms of business income: Latinos are relatively more likely to live in high business income states. Industry concentrations and family differences only make small contributions to the gap. The finding for industry is important and confirms the finding above that U.S.-born Latinos have lower business incomes in all industries.

Among immigrant Latino men the business income gap is larger at 53 log points (53 percent), which is reported in Column 2. Similar to the results for U.S.-born Latinos education explains a very large part of the gap in business income. Immigrant Latino men have lower levels of education and this contributes to why they have lower average business income than non-Latino whites. It explains 44 percent of the gap. Industry differences also contribute to the gap explaining 8 percent of the disparity in log income.

[24] One problem, however, with using logs is that very small and zero income observations tend to overly influence the estimates. To address this issue I right and left censor the data at + or - $1,000. Thus, any business income value from 0 to 1,000 is given a value of log(1,000) and from -1,000 and 0 is given a value of –log(1,000). Negative values of income are reversed in sign prior to taking logs to avoid problems with taking logs of negative values (e.g. -10,000 would be –log(10,000) In no case do I remove any business income observations. The general idea is that a business owner with less than $1,000 in business income has business income that is indistinguishable from $0. I find that using alternative cutoffs does not change the results.

Immigrant Latino men are somewhat concentrated in lower paying industries, but the explanatory power is still under 10 percent of the gap.

Column 3 reports decomposition estimates for U.S.-born Latina women. The business income gap is 17 log points for this group compared to non-Latino white women. More than one half (57 percent) of the business income gap is due to U.S.-born Latino women having lower education levels than white women. The younger age of U.S.-born Latino women also contributes to the gap explaining 23 percent of the business income disparity. The negative contribution on region suggest that U.S.-born Latina owners have a "favorable" geographical distribution across states. For this group, the difference is large.

The results for immigrant Latina women indicate two important findings. First, relatively low levels of education among immigrant Latina business owners constricts their business income compared with white female business owners. This is the single most important factor explaining the majority of the gap (54 percent). Second, of all the groups for business income, the less favorable industry concentration of immigrant, female Latino business owners suppresses their business income the most. Industry concentrations explain 11 percent of the business income gap between immigrant Latinas and white women.

7. Discussion and Conclusions

The analysis of the latest available household microdata from the U.S. Census Bureau provides several new findings on Latino business ownership and success. Both U.S.-born and immigrant Latinos make large contributions to business ownership and income. Among the 12.2 million business owners in the United States roughly 600,000 are U.S.-born Latinos and 1.2 million are immigrant Latinos. Business owners who are U.S.-born Latino and immigrant Latino generate a total of $26 billion and $36.5 billion in business income, respectively. Published estimates from the 2012 SBO indicate that Latino-owned businesses as a whole contribute $474 billion to the U.S. economy.

Focusing on U.S.-born Latinos the analysis reveals that business ownership is substantially lower among U.S.-born Latinos than non-Latino whites. Business income is also found to be substantially lower among U.S.-born Latinos. Using a decomposition technique that simultaneously explores various potential barriers to Latino business success, I find that the two most important factors limiting business ownership among U.S.-born Latinos are relatively young age and lack of wealth. The most important factor limiting business income among U.S.-born Latinos is low levels of education. The relatively young age of U.S.-born Latinos also contributes to lower incomes.

Turning to immigrant Latinos, the results indicate that business ownership is higher among immigrant Latinos than U.S.-born Latinos, and in fact, is comparable to business ownership rates among non-Latino whites. Business income, however, is substantially lower among immigrant Latino business owners than among both U.S.-born Latino business owners and non-Latino white business owners. The largest constraint for even higher rates of business ownership among immigrant Latinos is low levels of wealth, and the largest constraint for business income is low levels of education. Limited wealth and human capital are clearly creating large barriers to success among immigrant Latino business owners.

This study reveals several interesting findings regarding the patterns and causes of differences in business ownership and income. But, with any analysis of quantitative data many questions remain and require further analysis. The evidence presented here, which is consistent with the findings in previous studies, indicates that financing constraints may severely limit Latino-owned business ownership. Policies to improve wealth, credit scores and the general financial health of Latino entrepreneurs, both U.S.-born and immigrant, may be helpful. Wealth inequality may be directly addressed through expanding asset building programs such as financial education programs, individual development accounts (IDAs), and first-time home ownership programs. Access to financial capital can be increased through government programs and community banks.

Policies to promote educational attainment in general and among business owners more specifically would also be helpful. Education is found to a major constraint to why Latino business owners, both U.S.-born and immigrant, have relatively low business incomes. Programs targeted at increasing educational opportunities for Latinos may result in better business outcomes among Latino business owners. These policies are also likely to have an indirect long-term effect on business ownership and success through reducing wealth inequality. Higher levels of education are associated with higher levels of wealth. More research on the impacts of specific educational programs, however, is needed. But, certainly any polices that increase high school and college graduation rates will not only be useful in increasing business income directly, but also indirectly through their impacts on wealth.

Age is found to be an important factor in the decompositions for U.S.-born Latinos. Older workers have more work and business experience which is valuable in business ownership and outcomes, and U.S.-born Latinos are young relative to whites. But, age differs from traditional constraints related to inequality such as financial capital and human capital. As the U.S.-born Latino population ages we are likely to see resulting improvements in business ownership and income.

In evaluating the potential effectiveness of specific policies, an important distinction is needed between the goal of increasing the number of Latino business owners and the goal of improving the success of Latino business owners. Although several constraints to Latino business ownership have been identified, it is difficult to know what the optimal level of business ownership would be given the risky nature of entrepreneurship. In fact, business ownership rates are just as high among immigrant Latinos as non-Latino whites. On the other hand, there is no disagreement over the importance of improving Latino business outcomes — better performing businesses unambiguously make Latinos better off. In this case, both U.S.-born Latino and immigrant Latino business owners have substantially lower business incomes. Thus, to address the problem of racial and ethnic inequality, we need policies that focus on relaxing the constraints to successful business ownership instead of simply increasing the number of business owners. Addressing these constraints will be important for future growth of the U.S. economy.

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