

# Immigrant Entrepreneurs and the Barriers They Face: An Academic Literature Review

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**Pioneer Institute develops and communicates dynamic ideas that advance prosperity and a vibrant civic life in Massachusetts and beyond.**

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## An Introduction

Massachusetts, and the United States generally, has long been a hotbed for business innovation. It has also depended on the contributions of immigrants and their entrepreneurial activity to help drive economic growth and development. Over multiple decades a bevy of literature has formed that dissects many aspects of immigration from how well immigrants assimilate, to their impact on labor supply and wages, to the industries and occupations that immigrants cluster in (Hirschman 2014).

In an economic sense much of the literature prior to 2000 centered on the theory that competition between natives and immigrants, many of whom are more willing to accept lower wages, raises unemployment among natives and depresses wages (e.g., Borjas 1989, 1994; Bouvier 1992; Briggs 1984; Brimelow 1995). Yet in the last two decades, as the immigrant population has grown significantly, a new generation of literature and studies has begun to increasingly examine immigrants in a more dynamic way, finding substantial evidence that they act as job creators, entrepreneurs, and innovators more than offsetting any effect they have as “job takers” (e.g., Azoulay 2021; Kerr and Kerr 2020; Bernstein et al. 2018).

Some of this new literature even directly contradicts past findings on unemployment and wages, concluding that immigrants are “imperfect substitutes” for natives of the same education level, experience, and gender “because they choose different occupations and have different skills”. An obvious example of these differences in skills can be found in language ability—unsurprisingly, natives have a more advanced grasp of the English language compared to immigrants of similar age and education. As a result, immigrants have been found to increase total native employment and wages while only having a small negative effect on U.S. born workers without a high school degree and immigrants already residing in the United States (Ottaviano and Peri 2011, Lee et al. 2017).

This entrepreneurially inclined immigrant population, while making up a little over 14 percent of the total population, form nearly a quarter of all new business ventures in the United States (Kerr and Kerr 2020) and, according to multiple studies form new businesses at a rate anywhere from 80–100 percent greater than native born citizens (e.g., Azoulay 2021; Wadhwa et al. 2007; Nepal and Ramón 2022). Further, “relative to natives and relative to their share of the population, immigrants found more firms of every size” in the United States (Azoulay 2021). In Massachusetts in particular, immigrants and immigrant entrepreneurs have been fundamental to the biotechnology industry, helping create businesses that collectively employ thousands of workers and produce billions of dollars in sales each year (Monti et al. 2007). Most notable among them is Moderna, which was co-founded by an MIT graduate originally from Lebanon and has been one of the primary vaccine manufacturers during the Covid-19 pandemic.

This review of the current literature aims to illuminate the immense economic benefits that immigrant entrepreneurs produce through new business ventures and innovation as well as many of the challenges they, and other entrepreneurs, face when starting and operating a new or small business.

## A Closer Look at Immigrant Innovators and Entrepreneurs

The entrepreneurial inclination of immigrants is particularly important as they tend to start businesses of all sizes at greater rates than natives, including a significant portion of venture capital-backed and high impact STEM firms (e.g., Amornsiripanitch et al. 2021; Hunt 2009). These firms have a tremendous effect on economic growth by generating hundreds of billions of dollars, creating tens of thousands of jobs, and producing groundbreaking innovations and technologies. High growth and large companies tend to be the major drivers of economic growth and innovation. As such, immigrants’ role in starting a high percentage of them has a tremendous effect.

In addition to these large and impactful companies, immigrants also have a huge impact through all the small “main street” businesses they create in their local communities. While not

**Immigrants form businesses at twice the rate of natives.**

as individually beneficial to the economy as businesses with high growth potential, businesses like gas stations, dry cleaners, grocery stores, and nail salons form the bedrock that many towns and cities rely on to sustain themselves. These small businesses “create a disproportionate share of new jobs in the economy, represent an important source of innovation, increase national productivity and alleviate poverty” (Fairlie and Lofstrom 2015). As most immigrant businesses are small, which is also true for natives, the benefits of these firms can be felt rippling out across much of the country.

The effect of immigrant firm creation, large and small, has continually grown in importance over time. This is true before and especially during the COVID-19 pandemic. From 1980 to 2017, the rate of all U.S. businesses less than a year old as a share of all businesses fell from 16 percent to 8.9 percent (NAE 2017), highlighting a potential decline in the dynamism of the U.S. economy and making entrepreneurial business creation and growth from immigrant entrepreneurs more vital than ever. During the pandemic, as thousands of businesses went under and new business creation was at its lowest point in 25 years, immigrants led a resurgence, nearly doubling the number of new businesses they created compared to pre-pandemic years in 2021 (Fairlie 2022).

In fact, the proclivity of immigrants to start new businesses has been rising steadily for decades. In 1996, immigrants only marginally outpaced natives in the rate of new entrepreneurs per 100,000 people, .36 percent compared to .31 percent, but by 2010 that gap had widened to .62 percent versus .28 percent and has stayed relatively constant since then (Fairlie 2022). These new entrepreneurs have had a sizable impact on firm creation, creating jobs at a rate greater than native firms during that time (Azoulay 2021). While the rates of business creation among natives has declined over the years, business creation has kept a steady upward pace in the U.S. because of immigrants.

This increasingly robust inclination of immigrants to start and own their own businesses has far-reaching economic effects. In the following section, this literature review will discuss the extent to which immigrants are creating new firms and producing innovations compared to their native counterparts, where it is most highly concentrated and impactful, and who these immigrant entrepreneurs are.

### Innovation Beyond Firm Creation

In addition to simply starting businesses, which they do at a rate greater than natives across the board, there is also significant evidence in the academic literature that immigrant entrepreneurs are more likely than their native counterparts to engage in almost all measured innovative activities. One way researchers have measured this innovation in the past is through patent creation. A study by Azoulay et al. (2021) using U.S. administrative data found that firms with an immigrant founder are 35 percent more likely to have a patent than firms with no immigrant founders, an effect seen at all business sizes and especially true for the largest firms. Another study, examining patent creation in STEM, found that between 1976 and 2012 immigrants accounted for over 22 percent of all patents created, a nearly 40 percent increase compared to their share of the U.S.-based innovator population, and those patents produced one quarter of the aggregate economic value from patents during that period (Bernstein et al. 2019). Amazingly enough, that same study found that when immigrants and natives partner to create a patent, a sudden death of the immigrant makes the patent much less likely to be finished. The same is not true for sudden native deaths.

Moreover, immigrant patents in publicly traded companies created an increase in economic value of 47 percent (Bernstein et al. 2019). Those high numbers did not come at the expense of quality, with immigrant patents receiving a similar number of citations in comparison to patents created by natives. However, there is a clustering of those patents in certain technological fields: computers and communications, drugs and medical sciences, electronics, and chemical technologies. In more traditional technologies immigrants accounted for a less robust 15 percent of all patents. These studies have been backed up by other academic literature on patent creation (e.g. Wadhwa et al. 2007, Hunt 2010, Brown 2020) which also noted that immigrants are twice

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as likely to patent as natives and that for every percentage point increase in immigrant college graduates' population share there is a 9–18 percent per capita increase in patents. This creation is also found not to crowd out natives and increases native patent creation as a positive spillover effect (Hunt 2008).

While the immigrant contribution to patent creation is quite significant, it is not the only way that immigrants are innovative and make businesses more dynamic. The businesses immigrants own also tend to benefit more from innovative employee contributions, a phenomenon often referred to as intrapreneurship (Antoncic and Hirsrich, 2003).

A study by Brown et al. (2020) found that in the U.S., high tech sector immigrant firms were statistically more likely than native firms to engage in 15 of 16 measures of innovation. The only exception was for copyrights and trademarks, arguably a measure that is more marketing-based and not as representative of innovative behavior as the other measures. The other 15 measures include product innovations, process innovations, and R&D. Some product innovations included selling a new good or service; improving a new good or service's performance by making changes in material, equipment or software; adding a new feature to a good or service; and making it easier for customers to use a good or service. Some process innovations include applying new approaches to purchasing, accounting, computing, maintenance, inventory control, or other support activity; reducing costs by changing the way a good or service was distributed; and upgrading a technique, equipment, or software to significantly improve a good or service. R&D innovations include developing prototypes, producing publishable findings, and working to discover scientific facts. A separate study found little difference between immigrant and native firms in terms of R&D (Hunt and Acs 2011), but that study only took into account relatively well performing firms. Brown et al.'s study provides data on the typical STEM immigrant and native firm. While the literature is thinner in this area, these additional measures help to paint an even larger picture of how immigrant entrepreneurship extends far beyond just the act of starting a new business.

This extraordinary amount of innovation does not stand alone, as innovative investments have repeatedly been found to have large spillover effects on the greater economy and high social returns (e.g., Hall et al. 2010, Bloom et al. 2013, Jones and Summers 2020). “Inventive firms bring productivity gains beyond the bounds of the firm” and new technology advances can play a huge role in driving up standards of living. In this line of thinking, immigrant entrepreneurship, by creating new businesses and innovating within them, can intuitively be thought to “further enhance productivity, wages, and per-capita income in the economy as additional benefits.” (Azoulay et al. 2021).

### International Students, STEM, and Entrepreneurship

One of the largest and most impactful immigrant populations are international students, many of whom stay in the United States after obtaining their degree and start highly successful businesses. Since they are in the United States to seek an education, international students tend to be far more educated than their other immigrant counterparts, which enables them to start businesses in lucrative industries. They are often high-level graduate students who dominate certain fields of education at universities. Immigrants make up a majority of all masters students in electrical engineering (74 percent), computer and information sciences (72 percent), and mechanical engineering (58 percent) just to name a few. Nearly 80 percent of international graduate-level students are in STEM programs.

These trends are also seen in undergraduate degrees where more than half of all immigrant students study STEM fields, rates that exceed natives at each degree level (Amornsiripanitch et al. 2021, NFAP 2021, Hunt 2008). Entrepreneurs with these types of degrees are disproportionately likely to be successful and to start multimillion-dollar companies as a result of their advanced technical knowledge (Hunt 2011, 2015; Brown et al 2020; Amornsiripanitch et al. 2021). In total, immigrants make up about 5 percent of all U.S. undergraduate students, 18 percent of all graduate students, and 13 percent of all doctorate-level students (Kerr and Kerr 2020, IIE 2021, Bound et al. 2021). Combine these advanced STEM educations with the entrepreneurial proclivities

**Immigrant firms were statistically more likely than native firms to engage in 15 of 16 measures of innovation.**



of immigrants and it is no surprise that they are responsible for some of the largest and most successful businesses in the country today.

One study by the National Foundation for American Policy (Anderson 2022) even found that an astounding 25 percent of private billion-dollar startup companies in the U.S. were founded by at least one individual who attended college in the U.S. as an international student. Those 143 “unicorn” companies have left quite a mark on the U.S. economy. They have created over 860 jobs each and were worth more than \$591 billion collectively. Twenty-five of those entrepreneurs were educated at a Massachusetts college or university.

Yet, like other immigrant entrepreneurs, these international students have more to offer than just firm creations. For example, for every percentage point increase in the share of immigrant college graduates, there is a corresponding 9–18 percent increase in the number of patents created (Hunt and Gauthier-Loiselle 2010). Similarly, for every 1,000 international Ph.D. students who attend school in the U.S. in a year, there is an estimated \$210 billion added to the expected value of patents (Palagashvili and Salmon 2022). Further, immigrant students and U.S. educated visa holders are also 22–28 percent more likely to publish academic books and papers frequently or start firms with 10 or more employees (Hunt and Gauthier-Loiselle 2010).

Additional research into venture capital-backed international student startups by Amornsiripanitch et al. (2021) further expands on how well states are at retaining entrepreneurial international students. The impact of venture capital-backed firms in the study was felt the most in states and areas that have high-level universities and access to capital. Three of the states that had the highest retention of venture capital backed entrepreneurs educated in-state were California, New York, and Massachusetts. Out of all venture capital backed entrepreneurs, 40 percent of native founders started their companies in the same state in which they received their post-secondary education. The number was 41% for immigrant founders who attended graduate school and 35 percent for immigrant founders who obtained an undergraduate degree.

In the 47 states the researcher deemed “non-hub”, 34 percent of founders were educated in the same state in which they started their company. “This number [was] even higher in venture [capital] hubs, (35% for New York, 45% for California, and 59% for Massachusetts)”. “The evidence suggests that the concentration of founders educated in the same state in which they start firms is common across all states, although this concentration is especially high in venture hubs”. Many of the top companies that generate venture backed immigrant entrepreneur startups are IT companies, especially those that are among the nation’s top H-1B sponsors (Kerr and Kerr 2020). These findings indicate that states can create economic growth by luring international students and that government policies that affect the flow of foreign students into the United States also likely affect the flow of entrepreneurial talent into the country (Amornsiripanitch et al. 2021).

### STEM Entrepreneurs and Fortune 500 Companies

As much of the literature has already made clear, many immigrants have graduate degrees and start a considerable number of high-value STEM companies. Some of these entrepreneurs become so successful that their companies eventually become represented in the U.S.’s Fortune 500 or they win a Nobel Prize for their academic research and achievements. These immigrants are truly the best and brightest who the U.S. shapes and for whom it provides opportunity.

Research by the National Foundation for American Policy finds that 319 of 582, or 55 percent, of America’s startup companies valued at \$1 billion or more have at least one immigrant founder (NFAP 2022). A June 2011 report by the Partnership for a New American Economy found that immigrant entrepreneurs established 18 percent of all Fortune 500 companies, including Big Lots, BJ’s Wholesale Club, and WellCare Health Plans, in addition to Yahoo! and Google. Combined, these businesses generated \$1.7 trillion in annual revenue and employed 3.7 million workers worldwide.

Those percentages and revenues jump considerably higher if you also include firms started by the children of immigrants. Newer Fortune 500 firms are also more likely than older firms to have an immigrant founder (NAE 2011). Fortune 500 companies founded by immigrants span a

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great variety of different industries, including: aerospace, defense, internet, consumer products, specialty retail, railroads, insurance, electronics, hospitality, natural resources, finance, and many other sectors (NAE 2011). Many of these companies have been found to be clustered in a few locations, most notably California's Silicon Valley. Like other immigrant-owned businesses, they also are much more likely than similar native-run Fortune 500 companies to export goods (Saxenian 2002).

In addition to starting many of the behemoths of American innovation and growth, immigrants have also made major academic contributions throughout the years. Since 2000 immigrants in the U.S. have been awarded over 38 percent, or 40 of 104, of the Nobel Prizes won by Americans in chemistry, medicine and physics, according to an analysis by the National Foundation for American Policy (NFAP 2021). Considering that immigrants only make up 13 percent of the population, the expertise that immigrants bring to the U.S. and often cultivate in American universities is a truly amazing feat.

### Demographics and Trends

The faces of immigrants have changed a lot over the last few decades and these changes have also been seen when it comes to immigrant entrepreneurs, albeit to a lesser extent. Approximately 16 percent of the U.S. workforce was foreign born in 2009, a proportion that had more than doubled since its 7 percent share in 1980 (Lofstrom, 2009), and that trend has only continued into the present (Bureau of Labor Statistics 2021). Over the same period, self-employment grew strongly and immigrants continued to increase their share of business ownership. There was an increase of over seven million business owners from 1980 to 2010. During that time immigrants' share of self-employment increased from about 6.9 percent to 18.4 percent (Fairlie and Lofstrom 2015).

This population boom has also been felt at U.S. universities that have experienced a huge surge in international students, up to over 5 percent of all college students now, as opposed to 2 percent in 2000 (IIE 2021). This surge has been particularly notable among Chinese and Indian immigrants, who now account for the majority of all international students and total over 500,000 students enrolled at U.S. colleges and universities (Bound et al. 2021). This tremendous population increase has also corresponded to increased patent creation. Chinese and Indian ethnic inventors accounted for less than 3 percent of US patents in the 1970s. That grew to 12 percent by 2004, and more than 22 percent in 2018 (Kerr and Kerr 2020).

A basic analysis of immigrant entrepreneur demographics in the U.S. shows that they are much more diverse than the country as a whole. Forty-eight percent of immigrant entrepreneurs are white, 4 percent are Black, 11 percent are Asian, and 36 percent are Hispanic. White and Black immigrants are represented less than in native populations while Hispanics and Asians are represented more than they are in the U.S. generally. Immigrants also tend to be younger than natives and immigrate during their prime working years but, when it comes to highly educated immigrant entrepreneurs, they often start businesses later in life (Slivinski 2017, Bound et al. 2021, Amornsiripanitch et al. 2021). The education of immigrants also appears to be U-shaped, in the sense that they are typically found at the tail ends of the distribution. It is likely that this is partially due to how our immigration system is designed and the mix of immigrants—high-skilled immigrants vs. low-skilled asylum seekers and refugees—that it allows to enter the U.S. One in ten have a graduate degree while over half have less than a high school education (Slivinski 2017). Entrepreneurial proclivities also vary within the immigrant umbrella. For example, 13 percent of refugees own a business compared to 11.5 percent of immigrants generally and 9 percent of natives (NAE 2017). This is also true by other immigration statuses: immigrants that are not permanent residents and have not obtained a green card start businesses and patent at a rate higher than natives, while those with permanent resident status do not (Hunt 2008).

In Massachusetts, immigrants continue to play a vital role, making up 17 percent of the state's population. A fifth of the Massachusetts labor force is foreign-born, with immigrants supporting the state's healthcare, science, and service industries, among others. "As neighbors, business owners, taxpayers, and workers, immigrants are an integral part of Massachusetts's diverse and

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thriving communities and make extensive contributions that benefit all” (NAE 2022). Immigrants in Massachusetts tend to be more educated than on average, with over 40 percent having a college degree or more compared with 46 percent of natives in the state. These educated immigrants play especially significant roles in staffing biotechnology and other STEM companies that are crucial for the Bay State’s economic well-being.

In addition to working for those companies, 743 of these immigrants have also become venture capital-backed entrepreneurs, most of whom attended MIT or Harvard for their undergraduate or graduate education (Amornsiripanitch et al. 2021). Immigrants also run thousands of “Main Street” businesses in Massachusetts; nail salons, gas stations, privately owned grocery stores, restaurants, etc. that are fundamentally important to local communities.

## The Barriers They Face

The evidence that immigrants are more entrepreneurial than natives is substantial. Their tremendous impact on economic growth, innovation, new business and job creation is undeniable. These economic contributions have positive spillover effects that benefit productivity, wages, and employment for everyone in our society, including natives. Yet, these entrepreneurial immigrants may not be contributing as much as they could be. There are several cultural and structural barriers that get in their way, some that prevent them from ever gaining the opportunity to start a business in the first place. Many of these barriers also prevent natives from pursuing entrepreneurship.

The barriers range from financial, to regulatory and institutional, to cultural, affecting immigrants differently based on their economic status and academic background. They are often not isolated in that they compound in combination with other barriers. Consider, for example, that many first-generation immigrants tend not to speak English fluently. According to one study over 775,000 immigrant entrepreneurs identify as having limited to no proficiency in English (NAE 2020). This is a cultural barrier that makes it more difficult to get a job in a traditional workplace, possibly being a factor pushing these immigrants into entrepreneurship. Yet, it is also likely that language differences make it more difficult to navigate complex licensing and regulatory requirements for starting a business and from gaining access to financial institutions (Brettell and Alstatt 2007, Helena Barcellos et al. 2012). Language is but one barrier to employment and entrepreneurship for immigrants; others include access to capital and financial institutions, visa requirements and limitations, occupational licensing, and other regulations.

This section will further examine these barriers, the degree to which they play a role in stymying entrepreneurial proclivities, why immigrants become entrepreneurs in the first place, and what can be done to ensure that the greatest number of immigrants who want to start a business can do so.

## Why Do Immigrants Become Entrepreneurs?

Some would argue that the very act of picking up roots and moving to another country is an entrepreneurial act that requires an immigrant to take on a great deal of risk (Nepal and Ramón 2022). It is no inconsiderable feat to leave everything behind and move to a different country, especially one in which most residents speak a different language. In this way, other countries are not more likely to have risk-takers or entrepreneurial-minded individuals, but immigrants represent individuals who are more likely to self-select into entrepreneurship because of their personality traits. The higher-than-normal level of risk tolerance that propels immigrants to America also becomes a major driver for why they choose to start their own businesses (Jaegar et al. 2010, Brettell and Alstatt 2007). Some research has also argued that “individuals with high levels of skill and social capital are more likely to migrate, as they are better able to cover the costs of migration”. However, it’s not just their greater resources and tolerance for risk that compels them to immigrate and innovate; they also bring with them many other attributes that make them suited for entrepreneurship. These attributes include being open to new experiences, perseverance, creativity, opportunity recognition, being able to take initiative, and the need for achievement

**The higher-than-normal level of risk tolerance that propels immigrants to America also becomes a major driver for why they choose to start their own businesses.**

(Brettell and Alstatt 2007, Vandor 2021).

Immigrants also tend to have stronger family units and community resources than many native U.S. residents, which they lean on for support and for funding when beginning a new venture (Brettell and Alstatt 2007). “Many immigrants have access to high levels of social capital—which are social networks that exist in groups with similar backgrounds, values, or experiences—that allow them to locate resources and knowledge to start their own businesses” (Nepal and Ramón 2022). This social capital can provide immigrants with financial capital, know-how, and human resources, which are all vital to business formation. The “embeddedness” in a particular ethnic context further facilitates access to these community resources (Vandor 2021). This advantage is of particular importance because when barriers in the traditional labor market create the circumstances for which immigrants seek self-employment, without a diaspora community to fall back on they would likely be faced with the same types of barriers as before. This would make their situation especially tough and the success of their new venture unlikely. A lack of family resources specifically has been found to significantly increase the likelihood of an immigrant exiting entrepreneurship (Bird and Wennberg 2016).

Immigrants might also have a variety of unique incentives to start a business as opposed to their native counterparts. These incentives can be financial or necessity based, they can result from a lack of a proper fit in the traditional labor market, or they can be created by a desire for integration and possible transgenerational benefits. According to disadvantage theory, barriers in the traditional workplace drive immigrants towards self-employment (Rathod 2012). This can happen as a product of imperfect information in the labor market where either firms are poorly matched to workers or workers are poorly matched to tasks (Astebro, Chen and Thompson 2008). This is most true for immigrants at both tails of the ability distribution and for those without U.S. degrees (Kahn, La Mattina, and MacGarvie 2017). There may also be elements of discrimination resulting from cultural and language barriers (Vandor 2021).

Another factor is downward mobility. “Language barriers, differences in educational attainment, difficulties obtaining recognition for credentials and experience gained abroad, and problems accessing opportunities through social networks and other recruitment channels” can lead to downward mobility for immigrants and result in them being underutilized and less valued in the labor market (Papademetriou, Somerville and Sumption 2009). This alone makes it entirely understandable why an immigrant might choose to start their own business in their own community rather than face the traditional workplace. Entrepreneurship likely offers a more viable path to economic integration than employment (Vandor 2021).

Research has also shown that immigrants have more to gain in self-employment than do native workers. One study found a significant self-employment bonus for immigrants, whereas they could increase their earnings by as much as \$21,000 annually (1996 dollars) if they start their own business (Light and Roach 1996). Further, entrepreneurship has also been associated with transgenerational benefits since many entrepreneurs invest in building their children’s education (Vandor 2021). This powerful monetary incentive combined with barriers and roadblocks with traditional employment make self-employment a natural choice for many immigrants.

### Home Ownership and Access to Capital

A study by Fairlie (2012) examined in depth the similarities and differences in how immigrants and natives fund their business ventures. While it is often presumed that there must be a large difference in funding sources between immigrants and natives, this study finds that may not be the case. While immigrants were a bit less likely to get bank loans and access other financial services, natives and immigrants used most of the same sources of capital to start their respective businesses. Fairlie even found that immigrants have roughly the same, if not a bit more, financing on average than natives when starting a business. Yet, this is not the entire picture: average immigrant funding may be skewed higher as a result of highly skilled immigrants pulling in significant funding and there might be other disparities within the broader statistics.

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For lower income immigrant entrepreneurs with fewer assets and greater cultural differences, there can be several barriers to obtaining financing. “Many of the resources that help immigrants and refugees to learn about financial opportunities are often lacking or not readily available to them” (Lee and Black 2017). These immigrants are also less likely to use a wide variety of financial services offered to other small businesses, which may be due to several factors such as low income, language barriers, cultural differences, or lack of experience with financial institutions (Paulson and Osili 2008).

In addition, since immigrants tend to have fewer assets available for collateral and are more likely to fail than native-owned businesses, some evidence points to immigrant entrepreneurs facing discrimination from banks. In a study of immigrant entrepreneurs in Italy, it was found that immigrants were more likely to be denied credit or be charged higher interest rates than their native counterparts with similar characteristics (Albareto and Mistrulli 2010). Financial institutions evaluate risk when granting loans, and immigrants typically have shorter credit histories in the host country. There is also a lack of exchange between national credit registrars of other countries with the U.S. and return migration expectations for immigrants increase the perceived risk of lending. This only compounds with cultural barriers and financial institutions’ inadequate knowledge of this group of clients (Desiderio 2014, Helena Barcellos et al. 2012).

Limited English proficiency, lack of U.S. experience, and return migration expectations have also been related to immigrants’ financial participation with and trust in financial institutions, financial confidence, retirement planning, and retirement program participation (Helena Barcellos et al. 2012). While there is less literature on the extent to which these practices are taking place in the U.S., the gap between financial institution funding of natives and immigrants might indicate that it poses a significant barrier. These reasons, among others, are likely a major contributing factor to why many immigrant entrepreneurs rely so heavily on family wealth and resources in order to start their own businesses.

That reliance on family resources undermines those businesses’ ability to grow and expand outside of immigrant communities. It also provides a potential explainer to why many immigrant-owned businesses struggle to make the same types of revenues as native-started businesses and why immigrant-owned businesses have higher failure rates (Desiderio 2014). These immigrants end up creating significant numbers of jobs, businesses, and wage increases, as well as gains in productivity, innovation, and other positive spillovers (e.g., Azoulay 2021; Hunt 2009). Yet without the proper financial support, the businesses can’t possibly be as successful as they could be. Promoting access to capital could remedy the gaps between native businesses in revenue and failure rates, creating even greater economic growth from utilizing immigrants’ full potential.

Beyond typical financing sources, Fairlie (2012) found homeownership to be one of the largest differences between immigrants and natives. About half of immigrants own their home compared with 70.8 percent of non-immigrants. “These differences in home ownership have implications for business formation rates because regression estimates indicate that homeowners are roughly 10 percent more likely to start businesses than are non-homeowners”. This is largely due to the fact that homeowners have more assets that they can leverage for a potential new business venture. In fact, “native-born households have four times the total wealth and five times the financial wealth of immigrant households.” (Paulson and Osili 2008). Given what we already know about the extent to which immigrants are more likely to start a business than natives, it can only be presumed that if immigrant homeownership rates were to increase to the same levels as natives, their business formation rate would be even higher (Fairlie 2012).

**Lack of homeownership depresses business formation among immigrants, as homeowners are 10% more likely to start a business.**

### Visa Requirements and Constraints to Immigration

One of the primary barriers to immigrant entrepreneurship is likely visa restrictions and other general immigration constraints. If an immigrant can’t gain access to the country, they can’t start a business. This is a reality for thousands of immigrants every year, many of whom are summarily rejected without even having their visa request adjudicated. For example, 61 percent of employer-sponsored immigrant visas for prospective legal permanent residents are denied. Consulates

typically claim that there is an issue with the job offers they receive (Bier 2022). Employer-sponsored green cards typically require a permanent labor certification from the Department of Labor, a process that currently takes more than 500 days to complete at great expense and risk. Then employers submit a petition to the Department of Homeland Security requesting approval for the worker to apply, either domestically or abroad (Bier 2022). However, denials are rare for workers applying for green cards who are already in the U.S. (Kerr and Kerr 2020). This is likely a reason why so many immigrants funnel through the U.S. education system, where they gain access to the world's best higher education system and are far more likely to get temporary work authorization through an F1 visa, usually through the Optional Practical Training (OPT) or Curricular Practical Training (CPT) programs, and/or find work and gain permanent residency in the future (Bier 2022, Kato and Sparber 2013).

The OPT work authorization under the F1 student visa in particular has seen its number of acceptances skyrocket in the last decade, from 80,000 in 2004 to over 240,000 in 2016 (Ruiz and Budiman 2018). This has in large part been due to extensions of the STEM OPT that allow accepted immigrants to stay and work in the U.S. for three years after they graduate, up from one year. While the increase in visa authorizations has not been causally tied to the longer extensions, the correlation between the changes in extensions and the influx of new applicants can be potentially seen as connected. After the reforms, the OPT work authorization is a more viable way to seek longer-term employment in the U.S. in comparison to other visas, many of which have annual caps and longer waiting periods for acceptance, an impetus for more applications into the program.

Yet, even with these reforms, OPT is far more restrictive in the U.S. than in other countries. The U.S. caps the work authorization at a year for non-STEM immigrant students, requires an employer to be a sponsor, requires that the job be in the field in which the student studied, ends the program if the immigrant is unemployed for more than 90 days, requires a minimum of 20 hours worked per week, and has a processing time for work authorization of between 213 and 426 days. Countries like the United Kingdom, Canada, and Australia that compete with the U.S. for foreign talent are far less restrictive, process applications much quicker, and in some cases allow immigrants that work with OPT visas for a year to be eligible for permanent residence (Palagashvili and Salmon 2022). In the UK the average processing time is just 56 days, four times faster than in the U.S. These restrictions on F1 visas and OPT work authorizations are a fundamental reason why 83 of respondents in a 2018 Institute of International Education study cited visa delays and denials as a reason international students chose not to study in the U.S. (Baer 2018). An additional 60 percent cited the social and political environment in the U.S. as making international students less likely to study here.

Most work visas were created to fill labor roles in the U.S. outside of select visas that require investor status or extraordinary ability (Nepal and Ramón 2022), which leaves many prospective entrepreneurs with no clear path for how they should immigrate to the U.S. Other countries have created specific visas for entrepreneurs, but in the U.S. the only entrepreneur-specific visas require a significant amount of seed capital that most immigrants cannot afford (Kerr and Kerr 2020). For many immigrants, especially those who aren't international students or students who have lost F1 visa eligibility, the H1B visa has often been the best available option, but the program suffers from several drawbacks. These include a cap of 85,000 annually accepted applicants, down from 191,000 in 2003; employer sponsorship requirements; and high rejection rates. In fact, for FY 2023, over 70 percent of all H1B visa applications will be rejected before they are even adjudicated as a result of its lottery selection system. In total, over 80 percent of applications will ultimately be rejected, leaving tens of thousands of highly skilled immigrants on the sidelines of our economy (NFAP 2022), and if the U.S. fails to admit these immigrants, there is potential for other countries to scoop up this international talent.

The H1B visa also creates huge costs for businesses to bring in immigrant workers, with one study finding that it takes nearly \$30,000 to pay for the government fees and attorney costs an initial H1B application and an H1B extension require (NFAP 2022). Employer sponsorship

**61 percent of employer-sponsored immigrant visas for prospective legal permanent residents are denied.**

**For FY 2023, over 70 percent of all H1B visa applications will be rejected before they are even adjudicated.**



requirements can also be detrimental. An employer sponsorship narrows an immigrant's ability to start a business after coming to the U.S. on a work visa. H1B visas require that an immigrant work full time through their sponsor, creating a circumstance where if an immigrant starts a business, they can't be full employees of their new business without risking losing their legal status. This includes immigrants who would like to start a business as well as immigrants who would like to work at private contractors.

Backlogs also exist for traditional employment-based green card applications, specifically EB-2 and EB-3 applications, which are reserved for workers with bachelors and advanced degrees. These programs suffer from many of the inadequacies of previously mentioned visas: long wait times, significant restrictions, employer sponsorship, etc. Yet, the most restrictive visa restriction is country of origin caps. Since most immigrants seeking to work in the U.S. come from a few countries, especially China and India, these caps severely suppress inflows of high-skilled immigrant workers and entrepreneurs. For example, the wait time for an immigrant from India to get granted an EB-2 visa is so long—89 years—that over 200,000 applicants will likely die before their application is adjudicated (Bier 2020).

### Occupational Licensing and Regulations

The education levels of immigrants into the United States tends to be U-shaped, with many being very highly educated with professional degrees and a significant percentage holding less than a high school diploma (Slivinski 2017). Both tails of the immigrant population confront unique barriers that prevent innovation and entrepreneurship. One barrier that has a particularly harmful effect on unskilled immigrants with low education levels is occupational licensing. Occupational licenses tend to disproportionately affect the poor and erect barriers to entry that provide little to no quality or safety benefit (Pioneer 2019; Slivinski 2017). They are predominately implemented as a means of protecting vested interests from competition and raising profits for those already licensed. A Pioneer Institute study (Muresianu 2019) examined an array of academic literature and found that while public safety and business quality are two of the most frequently cited reasons for requiring certain occupations to obtain state licenses, many more studies found that licensing had no effect on public safety and quality. Some found that they even decrease public safety and/or quality.

While there is not a substantial amount of literature on this niche area, a 2017 study by Slivinski is quite illuminating. He demonstrates using data from the Kauffman Institute dating back to 1996 that most immigrant entrepreneurs tend to be low income and of low educational status. This leads these entrepreneurs to start childcare, beauty, landscaping, and construction companies, among others. These industries are also some of the most highly regulated and have some of the greatest occupational licensing burdens. He reasons that since immigrant entrepreneurs are more likely to self-select into these industries, there is a disproportionate effect on them compared to their native counterparts. He also finds that these barriers can have a huge impact on the number of immigrant-started companies. States with higher-than-average occupational licensing burdens have immigrant entrepreneurship rates 11 percent lower than average and states that have lower-than-average occupational licensing burdens have an immigrant entrepreneurship rate 14 percent higher than average. Another study that focused specifically on Vietnamese manicurists found a similar effect from occupational licensing on low-skilled immigrant entrepreneurs (Krynski and Harrington 2006).

These barriers are also experienced in Massachusetts, where a state license is required to access 167 professions. This number may be lower than some states, but Massachusetts' total licensing burden is 10<sup>th</sup> in the country. From 2012 to 2017 the Commonwealth expanded its licensing law burdens more than any other state except Maryland. These licenses cost \$309 and require 513 days in education and training and at least one exam on average (Muresianu 2019). These policies have far-reaching impacts, reducing labor supply by 17–27 percent, creating 22 percent wage premiums for license holders, costing the state \$411 million in lost economic activity, and misallocating \$7.889 billion in resources annually (Muresianu 2019).

States with higher-than-average occupational licensing burdens have immigrant entrepreneurship rates 11 percent lower than average.

Occupation licenses in Massachusetts cost \$309 and require 513 days in education and training and at least one exam on average.

A 2022 Institute for Justice study found the licensing process for new entrepreneurs to be exceptionally burdensome in Boston. For example, to start a food truck company an entrepreneur has to undertake 37 steps, complete 12 government forms, perform seven in-person activities, go through nine agencies, pay nine fees costing an average of \$1,536, and are subject to GPS tracking by the state. The requirements for restaurant, bookstore, barbershop, and home-based tutoring businesses were just as, if not more, onerous than those for food trucks.

## Conclusion

A review of the academic literature shows that immigrant entrepreneurs play a significant role in starting new businesses, innovating, and creating new jobs. These immigrants are impactful across the board, generating many of the small businesses that make up the backbone of the American economy in addition to a high percentage of impactful STEM and Fortune 500 companies. Immigrants bring pioneering ideas and provide a dynamism not easily matched by native U.S. citizens.

In a time of labor shortage, arguably brought on by pandemic-era restrictions on immigration, legislators and other government officials should promote policies that will make it easier for entrepreneurially inclined immigrants to immigrate to and work in the United States, as well as create new businesses. Future federal reforms could cover a number of issues, including loosening requirements on H1B visas and OPT work authorizations that prevent immigrants from starting their own business, increasing or eliminating quotas, streamlining the application process, and creating a specific visa for immigrant entrepreneurs (Kerr and Kerr 2020). At a more local level, states and localities should seek to ease barriers by creating a centralized website portal for forms and steps when starting a new business, consolidating the number of agencies involved in a new business license approval, by reducing occupational licensing barriers that disproportionately affect low skilled immigrant entrepreneurs, as well as through further promoting the recruitment of international students to U.S. colleges and universities.



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- \*Note: Partnership for a New American Economy changed its name to New American Economy and then merged with the American Immigration Council under the Council's name.

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