



The Missing Pieces of the Economic Debate Over Immigration Reform

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ISSUE BRIEF

VOLUME 6

NUMBER 7

AUGUST 2018

Sweeping policy measures aimed at correcting the deficiencies of the U.S. immigration system have remained elusive for Congress over the last decade, despite several serious attempts at brokering compromise legislation.¹

One result of this policy limbo is the continuation of a debate that lawmakers and the national news media have now recycled several times over. Policymakers, pundits, and professors sometimes emphasize the effects of immigrants on crime and safety, while other times they argue about more qualitative ideals like human rights and fairness. Typically, however, an economic rationale for or against a particular policy will surface, even if the immigration debate at that moment is not explicitly predicated on the subject of economics. To the extent that the issue of immigration is one of economics, policymakers have focused narrowly on labor issues (i.e., jobs and wages). But to really understand the economic consequences of immigration, policymakers will need to start looking beyond its labor effects.

Lawmakers at all levels of government should think about and construct immigration policy solutions while considering all of the three core elements of economic growth—labor, capital, and innovation. These three components are interrelated and dynamic, so it is impossible to target policy changes in regards to one element without affecting the others. Further, in order to have an honest debate about how immi-

SUMMARY

- When policymakers discuss the economics of immigration, they focus on labor issues (i.e., jobs and wages). But to understand the economic effects of immigration, and thus develop sounder policies, they need to consider how immigration affects all three core components of economic growth—not just labor, but capital and innovation too.
- The consensus among economists is that, as a whole, U.S. natives benefit from immigration in the labor market. Research suggests that similar gains are true with respect to capital and innovation.
- Immigrants critically influence firms' investment and operations decisions, significantly increase bilateral trade flows with their home countries, and account for roughly a quarter of all U.S. entrepreneurs.
- Taking the full economic growth equation into account is important, as policies targeted to one component (like labor) can have unintended consequences for the other two.
- To better understand the relationship between labor, capital, and innovation, policymakers would do well to listen closely to firms, whose leaders are uniquely positioned to explain how they rely on immigrants—and not just for their labor.



gration truly affects labor, capital, or innovation, we need to talk about the role that firms play in each of those three relationships.

Much of the general debate over immigration in the United States is isolated from the mediating role played by firms. Firms hire workers (labor), make investments (capital), and originate the vast majority of new knowledge, products, and technologies (innovation). For their part, immigrants play an outsized role in firms: they are disproportionately represented as employees in some large industries, such as technology and engineering;² they drive substantial capital investments, especially from foreign firms;³ and they create more companies and earn more patents than the average native citizen.⁴ All of this gives firms not only the motivation but also the perspective to accurately inform immigration policy and demonstrate the myriad ways immigrants contribute to greater economic growth.

There is a lot we know about immigration's effects on labor, and these effects have been covered extensively in many publications. Briefly, though, quantitative evidence suggests a null or very small negative effect for low skill workers, but a fairly strong

positive effect for high skill workers.⁵ If any group is hurt most by low skill immigrants, it is other low skill immigrants. The consensus among economists is that, as a whole, U.S. natives gain from immigration in the labor market.⁶

Meanwhile, we have other compelling research on how immigrants affect innovation, such as the consistent finding that they account for roughly a quarter of all U.S. entrepreneurs, but this is virtually ignored in the public discourse.⁷ Finally, we are increasingly learning more about immigration's capital impacts. A growing body of research shows that immigrants critically influence firms' investment and operations decisions, and they significantly increase bilateral trade flows with their home countries.⁸ The mounting body of research on innovation and the capital effects of immigration shows that, on both fronts, immigrants seem to have a positive effect on the receiving economy.

The remainder of this Issue Brief will highlight a few of the research findings related to each of the two lesser-referenced components of growth (i.e., capital and innovation), followed by a short discussion on both the importance of crafting immigra-

tion policy based on the complete economic growth equation and the necessity of firm involvement in the immigration reform process.

IMMIGRANTS AND CAPITAL

Rarely do foreign firms explicitly cite co-national immigrant populations as a reason for why they choose to locate new plants or offices in the U.S. where they do, but immigrant demographics in the markets they enter do inform the business decisions and investments firms make abroad. The strong presence of Japanese immigrants in the Los Angeles area in the 1950's is why Honda elected to establish its U.S. operations there, for example.⁹ Immigrant populations also heavily influence how one of the country's fastest growing fast food chains, Pollo Campero, a firm from Guatemala, makes decisions about opening new restaurants. After starting in California, it has expanded throughout the country, establishing new stores in neighborhoods that have a density of Hispanic immigrants.¹⁰ Beyond influencing firms that sell consumer products, where immigrants may simply function as a niche customer base, immigrants also influence the investment decisions of companies in

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¹ Most notably, S. 744, introduced in the 113th Congress in 2013.

² William R. Kerr (2008), "The Ethnic Composition of US Inventors," Working Paper. ("The contributions of immigrants to US technology formation are staggering: while foreign-born account for just over 10% of the US working population, they represent 25% of the US science and engineering (SE) workforce and nearly 50% of those with doctorates.")

³ David Leblang (2010), "Familiarity breeds investment: Diaspora networks and international investment," *American Political Science Review*, 104(3): 584-600.

⁴ For "companies," see The Ewing Marion Kauffman Foundation, *The Economic Case for Welcoming Immigrant Entrepreneurs*, September 2015 (updated), available at <https://www.kauffman.org/what-we-do/resources/entrepreneurship-policy-digest/the-economic-case-for-welcoming-immigrant-entrepreneurs>. For "patents," see William R. Kerr (2013), "U.S. High-Skilled Immigration, Innovation, and Entrepreneurship: Empirical Approaches and Evidence," NBER Working Paper No. 19377.

⁵ The National Academies of Science, Engineering, and Medicine (2017), "The Economic and Fiscal Consequences

of Immigration," available at <https://www.nap.edu/catalog/23550/the-economic-and-fiscal-consequences-of-immigration>; Rachel M. Friedberg and Jennifer Hunt (1995), "The Impact of Immigrants on Host Country Wages, Employment and Growth," *Journal of Economic Perspectives*, 9 (2), Spring, 23-44.

⁶ Howard Chang of the University of Pennsylvania Law School explores the details of this consensus and summarizes the vast literature pertaining to immigrants' effects on the U.S. labor market in a previous Penn Wharton PPI brief. See Howard F. Chang (2016), "Walls or Welcome Mats?



other sectors, such as venture capital and information technology.¹¹

The U.S. is among the top receivers of immigration¹² and foreign capital,¹³ in both volume and variety. Research has documented a positive relationship between immigrant clusters in a receiving country and trade or investment at the country level.¹⁴ But even though existing research focuses on country-level effects, it is firms that are the primary vehicles of foreign exchange in goods and services. It is critical for policymakers to appreciate not only the fact that immigrants in the U.S. are attracting desirable foreign capital, but how and why—and this is where firms are crucial.

Knowledge plays a central role in the international expansion of firms, and research has demonstrated that obtaining and transferring knowledge across national boundaries is a non-trivial task. While the obstacles to successful knowledge exchange may partly be solved by getting information through market transactions such as contracting with local informants, research strongly suggests that purely arm's-length knowledge exchanges lack the richness and effectiveness of those based on more primal relationships and a "common code," like nationality.¹⁵ As parties in transna-

tional networks, immigrants bridge the cultural, economic, and institutional distances that inherently make new market entry challenging for firms.¹⁶ As such, they have information about specific resources or places that is particularly attractive to firms seeking to expand from the sending to the receiving location.¹⁷

If immigrants truly provide preferential access to knowledge, however, it is important to demonstrate the performance outcomes of co-locating with immigrants. Using a sample of 288 foreign investments into the United States made by 194 firms from 27 countries between 1998 and 2003 (matched with detailed state-level data on immigrants), I tracked the performance of these investments through 2011, and I discovered three key takeaways.¹⁸ First, if a foreign firm decides to locate its operations in a U.S. state, it is much more likely to choose a state that has more, rather than fewer, immigrants from its home country. For every 1 percent increase in the state population from the firm's home country, the likelihood of the firm choosing that state increased by nearly 50 percent. Second, the presence of immigrants is a very strong predictor of the likelihood of survival or longevity of the firm's investments,

leading to a nearly 8 percent increase in the odds of survival for each 1 percent increase in the co-national immigrant population. Third, these first two effects are especially strong for firms that have some kind of knowledge-related need—for instance, first-time investors in the U.S. who do not know how to do business here, firms in a high tech industry, or those that need to transfer knowledge from their home countries into the United States. Immigrants can thus be a powerful means of attracting first-time foreign investors into the U.S., as well as firms that bring valuable intangible assets.¹⁹

Surprisingly, the effect of immigrants on both location choice and firm survival is actually stronger (i.e., more responsible for favorable outcomes) than the presence of other firms from the same industry, which offer the possibility of knowledge spillovers from native industry employees who may choose to work for a new U.S. subsidiary of a foreign firm. It is even a lot stronger than the effect of other things that policymakers, in particular, typically think of as important for firms, such as incentives for foreign investors or corporate tax rates. Put simply, immigrants are more effective at attracting foreign direct

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Immigration and the Labor Market," Penn Wharton Public Policy Initiative Issue Brief, Vol. 4, No. 4, available at <https://publicpolicy.wharton.upenn.edu/issue-brief/v4n4.php>.

⁷ Sari Pekkala Kerr and William R. Kerr (2016), "Immigrant Entrepreneurship," NBER Working Paper No. 22385.

⁸ David M. Gould (1994), "Immigrant Links to the Home Country: Empirical Implications for U.S. Bilateral Trade Flows," *The Review of Economics and Statistics*, Vol. 76, No. 2, pp. 302-316. ("Immigrant links influence bilateral trade flows in two basic ways. First, immigrants tend to bring with them a preference for home-country products; second, immigrants

bring with them foreign market information and contacts that can lower the transactions costs of trade (e.g., negotiating and enforcing contracts through a shared language). [...] Immigrant links to the home country have a strong positive impact on exports and imports, with the greatest effects on consumer manufactured exports.")

⁹ Exequiel Hernandez (2014), "Finding a Home away from Home: Effects of Immigrants on Firms' Foreign Location Choice and Performance," *Administrative Science Quarterly*, Vol. 59, No. 1, pp. 73-108.

¹⁰ Ibid.

¹¹ Iriyama, Akie, Yong Li, and Ravi Madhavan (2010), "Spiky Globalization of Venture Capital Investments: The Influence of Prior Human Networks," *Strategic Entrepreneurship Journal* 4, no. 2: 128-45. See also Saxenian, A. L. (2002), "Local and Global Networks of Immigrant Professionals in Silicon Valley," Public Policy Institute of CA.

¹² According to the Census Bureau's 2017 Current Population Survey, immigrants and their U.S.-born children account for about 27 percent of the U.S. population, totaling over 86 million people.

¹³ UNCTAD (2006), *World Investment Report 2006*, New York: United Nations.



investment than government incentives, generally speaking. Although those who debate immigration policy may not think of immigrants as affecting foreign capital, the implication of my research is that they do.

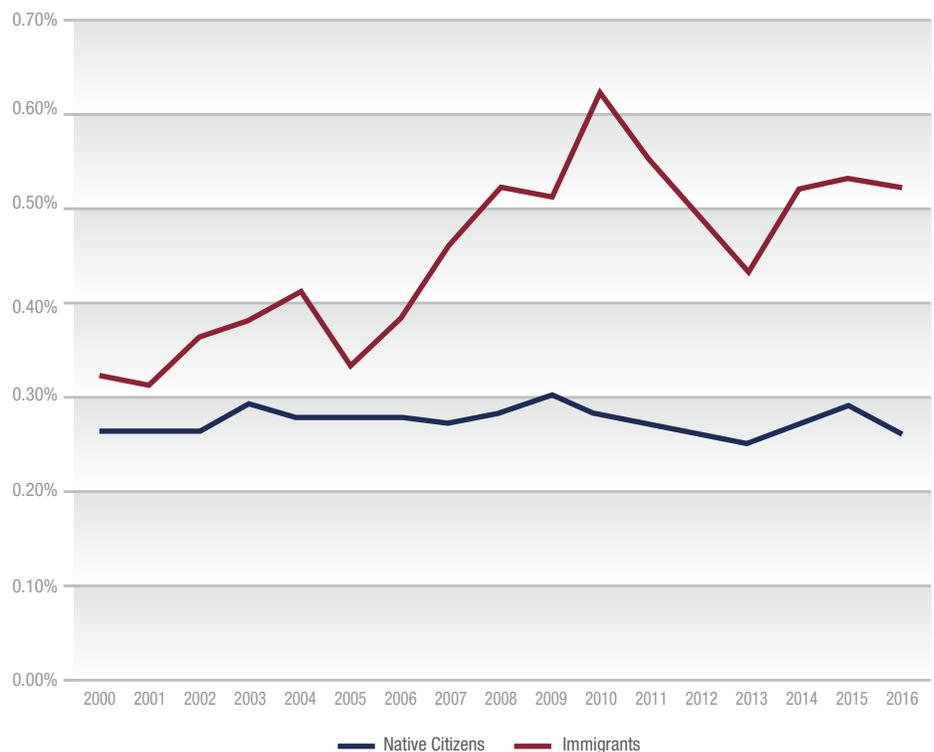
IMMIGRANTS AND INNOVATION

Sari Pekkala Kerr of Wellesley College and William R. Kerr of Harvard Business School have made some discoveries that policymakers cannot simply ignore when crafting immigration policy. For example, although immigrants constitute only 15 percent of the general U.S. workforce, they account for roughly 25 percent of U.S. entrepreneurs—defined as the top three initial earners in a new business—and 31 percent of all venture capital-backed founders. In fact, “35%–40% of new firms have at least one immigrant entrepreneur connected to the firm’s creation.”²⁰ Kerr and Kerr find that immigrants create smaller firms than those established by native citizens (4.4 initial employees compared to 7.0, respectively). However, “mixed founder teams,” comprising both immigrants and natives, launch firms with 16.9 workers, on average. Although immigrant-

founded firms fail more often than native-founded firms, those that do succeed grow faster in terms of employees, payroll, and new establishments. Finally, the researchers find that much of the growth and success of immigrant-founded firms depend on where they decide to establish their companies, in keeping with my own results.

Research from the Kauffman Foundation echoes these findings. Kauffman researchers report that immigrants were almost twice as likely to start businesses in 2012 as native-born Americans. In terms of hard jobs numbers, “Immigrant-founded engineering and technology firms employed approximately 560,000 workers and

FIGURE 1 ENTREPRENEURSHIP RATES AMONG NATIVES AND IMMIGRANTS, 2000-2016



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- ¹⁴ Gould (1994), *supra* note 8; and Nina Bandelj (2002), “Embedded economies: Social relations as determinants of foreign direct investment in Central and Eastern Europe,” *Social Forces*, 81: 409–444; and Claudia Buch, et al. (2006), “Where enterprises lead, people follow? Links between migration and FDI in Germany,” *European Economic Review*, 50: 2017–2036; and Beata Javorcik, et al. (2011), “Migrant networks and foreign direct investment,” *Journal of Development Economics*, 94: 231–241.
- ¹⁵ Kenneth Arrow (1974), *The Limits of Organization*, New York: Norton.
- ¹⁶ The processes by which firms obtain knowledge about a place

from co-national immigrants can be split between immigrant- and firm-initiated exchanges. The firm may directly contact co-nationals to assess the viability of the market or the availability of resources. Alternatively, immigrants may themselves contact the firm to promote activity in the host location.

- ¹⁷ Gould (1994), *supra* note 8.
- ¹⁸ Hernandez (2014), *supra* note 9.
- ¹⁹ For more information, see Yong Li, Exequiel Hernandez, Sunhwan Gwon (2018), “When Do Ethnic Communities Affect Foreign Location Choice? Dual Entry Strategies of Korean Banks in China,” *Academy of Management Journal* (forthcoming).

²⁰ Kerr and Kerr (2016), *supra* note 7; summary available at: <https://hbr.org/2016/10/immigrants-play-a-disproportionate-role-in-american-entrepreneurship>.

- ²¹ Kauffman Foundation (2015), *supra* note 4.
- ²² Additional analysis available at: <https://www.statista.com/chart/14065/countries-of-origin-of-immigrant-founders-of-billion-dollar-startups/>.
- ²³ Prithwiraj Choudhury and Do Yoon Kim (2018), “The Ethnic Migrant Inventor Effect: Codification and Recombination of Knowledge Across Borders,” *Strategic Management Journal*, forthcoming.



generated \$63 billion in sales in 2012.”²¹ And according to a report issued by the National Foundation for American Policy in 2016, “44 of 87 startups valued at more than \$1 billion as of January 2016 were (co-) founded by immigrants, creating an average of 760 jobs per company in the process.”²² Finally, as noted previously, immigrants constitute roughly one quarter of inventors, as determined by patent filings. The results of these new businesses and inventions are new technologies, knowledge, and products that collectively foster greater economic growth.

In addition to starting novel businesses directly, immigrants play a crucial role in mediating the transfer of innovative and economically valuable ideas from foreign countries into the U.S. that benefit local workers and consumers. A recent study by Prithwiraj Chouhdhury from Harvard Business School shows two important findings in this regard. First, immigrant scientists are the means by which knowledge originated in a foreign location is transferred and formally codified (e.g., patented) in the U.S. Second, once this knowledge is codified by immigrants, it is locals (i.e., Americans) that further develop that knowledge and recombine it with other ideas to generate novel technologies and products that benefit the public. Hence, immigrants not only bring new ideas, but allow natives to enhance their own innovativeness.²³ This is a good example of how migration enhances the stock of knowledge

in the receiving economy by making local labor more productive—two of the key elements of the economic growth equation.

THE FULL EQUATION

In this Issue Brief, I have already noted that immigrants greatly affect foreign capital investment in the U.S. and are more likely than native citizens to found a new business or invent something. These points are not as well known as the consensus finding that immigrants do not, in the aggregate, negatively affect the employment of natives. However, economic debates about immigration policy often remain mired in verifiably false rhetoric about jobs and wages, while ignoring the capital and innovation effects. Putting all three factors of the growth equation together illustrates how complex the policy issue of immigration really is from a strictly economic perspective.

It quickly becomes evident that legislating or crafting policy by targeting one growth component (like labor) to address a specific concern (like competition for low-skilled jobs) has much broader economic consequences beyond the stated goal of any legislation. For instance, an attempt to limit temporary visas at either the high (H-1B) or low (H-2A and H-2B) ends of the skills spectrum in order to boost native employment may result in less capital development from firms (foreign and/or domestic) and less innovation, as immigrants have

decreased access to U.S. resources for establishing new businesses or creating new knowledge, products, and technologies—all of which would translate into more jobs. These are generalities, of course, but the linkages between labor, capital, and innovation are tight. Tinkering with only one part of the equation has multiplier effects.

Unintended consequences from policies dealing with this dynamic growth equation are unavoidable, but they need to be taken into account and mitigated before laws are passed that undermine economic growth. Failing to understand the multiplicative relationship between labor, capital, and innovation will result in failed economic policy—a truth that extends beyond the issue of immigration, of course. But to effectively meet this challenge head on, policymakers must consider how firms—the engines of economic growth—affect and are affected by immigration. And firms themselves, with their unique benefit of knowing exactly how their businesses rely upon immigrants, must become more involved in future attempts at reworking the U.S. immigration system by sharing the insights that only they have. After all, they are the ones who make choices about hiring immigrants and natives (labor), who make investments in places where immigrants live (capital), and who hire many of the immigrant workers who produce novel technologies and products (innovation).



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Professor Exequiel (Zeke) Hernandez studies how formal and informal external relationships affect the globalization, innovation, and performance of firms. His research is motivated by a pervasive managerial challenge: firms do not own all the resources they need to be successful and thus have to reach beyond their organizational and national boundaries to get them. His research has been published by top tier journals such as *Administrative Science Quarterly*, *Management Science*, *Organization Science*, *Strategic Management Journal*, and *Academy of Management Journal*.

Professor Hernandez was recently selected as the winner of the Emerging Scholar Award by the Strategic Management Society (2018), the Strategic Management Division of the Academy of Management (2017) and the International Management Division of the Academy of Management (2016). These awards recognize “a relatively young or new scholar, who displays exemplary scholarship that promises to have an impact on future strategic management practice.” In addition to these career recognitions, he has received numerous awards for his research papers.

Professor Hernandez teaches the global strategy course in all of Wharton’s MBA programs (full-time, EMBA, and JD/MBA) and has trained executives from leading companies around the world. He has been recognized for teaching excellence by three different universities, most recently receiving the “Goes Above and Beyond the Call of Duty” (2018) and the “Teaching Commitment and Curricular Innovation” awards (2017) in the Wharton full-time MBA program.

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