KNOWLEDGE ECONOMY IMMIGRATION: A PRIORITY FOR U.S. GROWTH POLICY

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Abstract

The single most important policy reform that will boost long-term economic growth in the United States is to reduce the barriers facing highly skilled and highly educated immigrants. At least 50,000 workers with advanced degrees are sent out of the United States each year, although they have already passed security tests and become part of the productive fabric of the U.S. economy. In a world where the knowledge economy adds more value to national incomes than physical labor, the current U.S. stance of exiling many of the smartest people in the world imposes self-inflicted wounds on our currently troubled economy.
Introduction

There are countless policy improvements that can enhance economic growth in the United States—policies that will create jobs in the private sector, enhance wages, and fundamentally improve the health and welfare of the people. In this year when an economic recession is a pressing concern for a new Congress and Administration, attention is focused on fiscal and monetary policies, but the environment for legal and institutional policy reform is ripe as well. Of all the policies that could be changed, probably none would have a greater positive impact on long-term economic growth than removing barriers to the immigration of highly skilled and highly educated individuals.

Nearly all reform proposals have natural advocates who are active in lobbying the Congress. In contrast, knowledge economy immigration reform does not have a natural advocacy group to petition the government. Past immigrants who are now citizens have no personal stake in such reform and foreign interests (including immigrants) are unable to press their case with U.S. government leaders for legal reform. Furthermore, the benefits of high-skill immigration are predominantly widespread positive externalities, so no single constituency benefits enough to advocate on behalf of immigrants. Making the situation more difficult, legal knowledge economy migration is easily confused with “illegal immigration” and the larger issue of immigration reform in the United States, which is dominated by concerns over low-skill migrants from Latin America.

This predicament is unfortunate, and in these times when the economy is contracting rather than growing, something that must change. While debate, even among the experts, continues about the net economic and social impact of low-skill immigrants, the case for expanded immigration of highly skilled immigrants, or those seeking higher skills, is overwhelming. In this essay we outline both the economics and politics supporting the expanded immigration of skilled foreign immigrants, as well as those seeking skills. In so doing, we offer some concrete, common sense recommendations for welcoming more immigrants who are waiting to contribute to the growth of our increasingly knowledge-based economy.

The Benefits of Knowledge Economy Immigration

For the past two decades, the U.S. has been home to about half of all immigrants in developed countries who have more than a high-school education, maintaining a lead in the global competition for talent. However, in the wake of tougher scrutiny of immigrants in our post-9/11 world, the U.S. faces increasing competition for human talent from other countries.

America still has two key advantages in this race for talent: its universities, which continue to rank among the world’s best, and the world’s largest, most
technologically advanced economy, which still is hospitable to entrepreneurial activity. Immigrants have taken advantage of these opportunities to an unusual degree. According to research from Arlene Holen, "Over the five years 2003-2007, 143,391 bachelor’s degrees were granted in STEM fields in the United States to non-resident aliens, 255,267 master’s degrees, and 49,532 doctoral degrees." She further estimated that nearly 200,000 of these science, technology, engineering, or math (STEM) graduates would have stayed and worked in the U.S. but for constraints by the federal government that required them to leave. And so the American economy has lost out on the multiple benefits generated by knowledge economy immigrants, five of which are described here:

First, immigrants are responsible for a disproportionate number of successful high-growth companies. Among technology and engineering companies started in the U.S. during the 1995-2005 period, 25 percent had at least one immigrant key founder according to a 2007 study by Vivek Wadhwa of Duke University and his co-authors. In Silicon Valley, over 50 percent of the startups in that period had at least one immigrant key founder.1

Second, immigrant-founded companies generate jobs for native Americans. Amar Bhidé’s 2008 study (described in his book The Venturesome Economy) of 106 U.S. venture-backed businesses found that some “60 percent of the founding teams included immigrants.”2 Bhidé notes that the ratio of immigrants to natives declines as companies mature, indicating immigrants are creating opportunities for U.S. workers born here. The evidence bears this out. In 2006, the National Venture Capital Association (NVCA) estimated that since 1990 venture-backed firms owned by immigrants have created more than 400,000 jobs and collectively represented a market capitalization of roughly $500 billion.3

Third, immigrants to the United States are responsible for a disproportionate number of inventions. Foreign nationals account for 25 percent of international patent applications filed from the U.S.4

Fourth, contrary to the perception among some, skilled immigrants are not displacing native Americans in the U.S. market. Entrepreneurs widely report that perhaps the most significant constraint on their ventures’ growth is the

difficulty finding and attracting highly skilled workers.\textsuperscript{5} Indeed, \textit{by failing to attract and retain skilled knowledge workers from abroad, we will reduce jobs available for native Americans.} If we can't be successful in attracting foreign workers here, U.S.-based firms will have stronger incentives to locate new facilities or move existing ones off-shore in order to employ foreign, high-skill workers in their home countries.\textsuperscript{6} Better to bring those workers here, and thus keep U.S.-based facilities and the jobs they create at home.

\textit{Fifth, high-skilled immigrants have a positive impact on the federal budget.} Preliminary analysis by Arlene Holen of the Technology Policy Institute\textsuperscript{7} finds that the gross loss of federal revenues from two groups—foreign graduates and H1-B workers—who were required to leave the U.S. during 2003-2007 was $2.7 to $3.6 billion and $4.5 to $6.2 billion respectively. These estimates are only for the losses that have already occurred. The lost opportunity representing migrants who have never been able to enter the U.S. may be several multiples higher. Moreover, Holen’s estimates do not take account of the long-term boost to our GDP and the growth in federal revenues from encouraging the permanent migration of skilled foreign residents or foreign residents who come to this country to obtain those skills and use them to start and grow new enterprises.

\textbf{Legal Barriers to Knowledge Economy Immigration}

Immigration into the U.S. adds significantly to the size of the U.S. labor force and is one of the signature differences between the relatively high rates of economic growth and demographic health of the United States relative to other advanced economies, notably those in Europe. In testimony before Congress in May 2007, Peter Orszag, then director of the Congressional Budget Office (and now Director of the Office of Management and Budget) said, \textit{“In 2006, 23 million workers—one in seven workers in the United States—were foreign born, and half had arrived since 1990. During the past decade, foreign-born workers accounted for half of the growth of the U.S. labor force.”}\textsuperscript{8}


\textsuperscript{7} Holen, Arlene, \textit{“The Budgetary Effects of High-skilled Immigration Reform,”} Technology Policy Institute, March 2009. Available at http://www.techpolicyinstitute.org/files/the%20budgetary%20effects%20of%20high-skilled%20immigration%20reform.pdf.

Despite the high numbers, increasing restrictions during the 20th century were effective primarily in keeping out rule-abiding high-skill migrants. Some, like Albert Einstein, made it into America and contributed mightily. Most others who hope to become Americans cannot.

America’s quota-based immigration system poses a challenge to increasing knowledge economy migrants. This system hinders recruitment of skilled foreign professionals by giving preferential treatment to family members of U.S. citizens. It has also contributed to the decline in the number of foreign workers in STEM fields, diminishing a vital talent pool for U.S. high-tech companies and, as indicated above, for the formation of new, high-growth businesses.

Much of the current debate centers on the H-1B visa, which since 2004 was capped at 65,000 visas per year. Unsurprisingly, in 2000, during the height of the U.S. tech boom, Congress raised the cap to 195,000 for three years, with the sunset provision that it fall back to 65,000 in fiscal year 2004. There are roughly half a million H-1B workers in the United States at any given time. According to Arlene Holen, roughly 125,000 H-1B visas expire on average each year (taking into account the initial three-year visa period and extensions to six years). Roughly 120,000 green cards are potentially available under existing caps each year to these workers. However, over the past few years more than half of these green card slots have been allocated to dependents (spouses and children) and about 15 percent to new arrivals.

Demand for H-1B visas has been increasing. In April 2007, the U.S. Citizenship and Immigration Services (USCIS) received enough H-1B petitions to meet the cap of 65,000 for fiscal year 2008 just one day after beginning the receipt of applications. This marked the fifth year in a row where the cap has been reached before the end of the fiscal year. It took nearly two months for the cap to be reached for fiscal year 2007. All told, USCIS received 150,000 petitions for an H-1B visa.

The debate over the adequacy of H-1B visa quotas obscures the need for giving skilled workers, especially those with STEM degrees, permanent work visas. Immigrants cannot become U.S.-based entrepreneurs or even work for them on sustained basis, after all, unless they can remain here indefinitely or certainly well past the six-year limit for the H-1B. Further, since high-growth companies increasingly will require at least one or more founders, or early

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entrepreneurial employees, to have backgrounds in science, technology, engineering, or math, it is vital to attract and retain immigrants with these skills.

Yet many immigrants do not come to the U.S. with STEM skills already, but want to acquire them here by studying in our universities. Indeed, more than 98 percent of immigrants who founded companies in the U.S. did not enter the U.S. with the intent to become entrepreneurs. On average, there is a thirteen-year lag between a key founder’s entry into the U.S. and firm formation which might be described as the high-skill entrepreneurship payoff.

If we want more skilled immigrants to start high-growth companies in the United States, therefore, there is one very simple way to do it: to give foreign students who graduate with a STEM degree (undergraduate or graduate) a green card automatically at graduation. This would provide a powerful magnet for the most talented foreign students with STEM inclinations to come here, and upon graduation contribute to our economy and society.

The Politics of Knowledge Economy Immigration

Many, if not most, debates in Washington involve two positions that divide the main political parties neatly into advocates and opponents. There is some degree of Republican votes for the “liberal/progressive” coalition and some degree of Democratic votes for the “conservatives,” but these are exceptions to the rule. Indeed, the consensus of congressional observers is that politics is becoming increasingly polarized.

Immigration is one of the rare exceptions, where deep differences appear on both sides of the aisle. For example, in 2006 and 2007, Republican President George W. Bush and Republican Senator John McCain teamed up with Democratic Senator Ted Kennedy to advance comprehensive immigration reform legislation that was passionately opposed by most Republican Senators and Representatives, many Democrats, and populists of all stripes. Conservative think tanks were vocally split. But the issue of illegal immigration is divisive in the Democratic party and among liberals as well, as some see cheap immigrant labor as a threat to high-paying union jobs and others citing humanitarian concerns. Even the labor movement is split, with Andy Stern, president of the two-million member Service Employees International Union (SEIU), the fastest-growing union in North America, favoring a more open approach to low-skill immigrants in contrast with other labor leaders.

The politics of immigration are so divisive because of the focus on comprehensive reform, a phrase that implies low- and high-skill migrants, but also implies the multiple components: economic, security, culture. Even culture warriors are split over migration, with many emphasizing the Christian faith of most Mexican migrants while others warn about the Spanish language and resistance to assimilation into American culture. More often than not, rightly or wrongly, the pro-globalization business concerns are pitted against arguments emphasizing homeland security. The politics of all this are a mess, with political strategists in the DNC and GOP seeking to frame immigration as a wedge issue. The danger is that opponents of immigration reform are motivated by keeping the issue unresolved for political gain. Comprehensive reform should be understood as optimizing all components—economic, security, and culture—with none advanced at the expense of the other, but it cannot be allowed to mean that no legislative action can be taken unless it addresses the universe of concerns all at once. Thus, comprehensive reform should not be abused to tie illegal immigration to all other kinds of immigration.

In stark contrast to the contentiousness over illegal immigration, there is a profoundly deep political consensus around high-skill immigration, what we call knowledge economy immigration. When it comes to enhancing the number of immigrating scientists and engineers, raising the cap on H-1B visas, allowing foreign graduates of U.S. universities a green card, it is difficult to find much opposition.

Consider the conservative Heritage Foundation which is one of the most active think tanks in Washington, D.C. on the issue of immigration reform, publishing two papers per month on the topic in 2008 alone. Most of these papers favor tightening border controls and describing the negative effects of illegal immigration. Yet when it comes to high-skill migrants, the Heritage Foundation vocally supports increases. Ed Meese, Chairman of Heritage’s Center for Legal and Judicial Studies and former Attorney General for President Ronald Reagan, wrote in 2007, “The legal immigration system should be altered so that it substantially increases the proportion of new entrants with high levels of education and skills in demand by U.S. firms.” In the first major report of Heritage’s Center for Data Analysis in 2008, analysts James Sherk and Guinevere Nell encouraged Congress to “act now to lift the cap on H-1B visas” in a paper titled More H-1B Visas, More American Jobs, A Better Economy. Many other papers by Heritage’s Kirk Johnson dating back to 2004 also call for higher H1-B limits.

Likewise, Hudson Institute scholar Diana Furchtgott-Roth, the former Republican appointed Chief Economist of the Labor Department in the Bush administration, wrote a column as recently as November 2008 calling on
President-elect Obama to act on immigration reform, citing H1-B caps in particular.\(^\text{13}\)

Similarly, the Cato Institute concludes in its 2000 white paper on immigration: “We advance neither U.S. workers nor the U.S. economy by denying our employers the ability to continue to bring to our shores the best professional talent available in the world. Sound policy dictates that Congress should abolish the caps and let the market determine the need for H-1B professionals.”\(^\text{14}\)

There is broad support from other quarters. Economist Matt Slaughter, writing for the Council on Foreign Relations, called on an elimination of the H1-B cap in 2008: “Skilled immigrants have long contributed to rising U.S. standards of living. They bring human capital, brimming with ideas for new technologies and new companies. They bring financial capital as well, with savings and resources to develop these new ideas. And they often bring connections to business opportunities abroad, stimulating exports and affiliate sales for multinational companies.”\(^\text{15}\)

The Brookings Institution (where one of the authors of this paper also has been a long-time Senior Fellow) has held numerous events and published papers by proponents of lower U.S. barriers to high-skill immigrants, including a 2007 paper by senior executives of Intel Corporation.\(^\text{16}\)

And the Center for American Progress argued in June 2008: “We must continue to improve our economy and quality of life by investing in innovation, which means we need to build the workforce that includes the foreign students we have trained at our universities in order to keep up with our increasingly scientifically advancing world.” And “High-tech employers desire the expansion of the H-1B visa program that governs these overseas workers, but the number of permanent visas available must be increased first.”\(^\text{17}\) While the Center has offered nuanced suggestions that bear consideration, such as allowing job mobility among temporary visa holders, we note that one of its core six


Until now, President Obama has tied the issues of high-skilled and low-skilled immigration together. Obama favors increasing the H-1B visa cap, but cautions that it would only be a “stopgap measure” until Congress acts on comprehensive immigration reform. He’s right. Action on knowledge economy immigration should indeed be sensitive to economic, security, and cultural concerns, but it should not be delayed by or tied to resolving the much thornier issue of illegal immigration. Indeed, H-1B reform alone could have a hugely positive effect on the U.S. economy during a very tough time. But it should also be understood as a first step that could lead to resolution of much tougher immigration problems. Fortunately, Obama’s selection for the Department of Homeland Security, Arizona Gov. Janet Napolitano, supports boosting the H-1B cap. Napolitano, along with eleven other governors, voiced her support in a September 2007 letter to Congress encouraging an increase in H-1B visas.

The timing for an effort to strengthen the knowledge economy in the U.S. may never be better, so long as a plan can be crafted that will have broad political support. Moreover, given the nation’s current worry about the performance of our students in STEM subjects, now could not be a more propitious time to begin taking in more immigrants who have or want to obtain STEM skills.

Toward A New Policy for Knowledge Economy Immigration

The traditional culture of immigration to the Americas has yielded an unexpected and often unappreciated bounty. New migrants to the United States in particular included many of its most famous business titans (Levi Strauss, Andrew Carnegie, Andrew Grove, Charles Wang, Sergey Brin, Jerry Yang, Liz Claiborne), scholars (Enrico Fermi, Albert Einstein, Alexander Graham Bell, Hyman Rickover, Jonas Salk), and untold other innovative thinkers. Without intention, the world’s leading knowledge economy was being seeded with great entrepreneurs. The nation now has an opportunity to extend that tradition to a new generation of knowledge economy immigrants.

A broad reform of the U.S. quota-based system of immigration may be too comprehensive for legislation to be achieved quickly, let alone successfully. That’s why using a point system similar to Canada’s, which places a premium on high-skill applicants, is arguably too contentious for what is needed now. The kind of change that is achievable with immediate political consensus has to be simple, but not simplistic. But at a time when the decline in consumption demand is creating a pernicious feedback loop, the infusion of tens of

thousands of high-skill migrants would not only ignite long-term firm formation and job creation, but immediately enhance demand for durables like housing and automobiles, not to mention helping replenish tax coffers.

Given the existing consensus and timely need for enhanced knowledge economy immigration, we propose a new policy program—aiming to boost U.S. growth and innovation—that includes these three components:

1. Grant permanent residency (green card) status to foreign citizens who graduate with advanced or four-year degrees in mathematics, engineering, or the sciences from qualified U.S. institutions of higher learning. Allow residency status to be revoked for individuals who commit felonies or become terror suspects up to ten years after the grant (with a low threshold).

2. Eliminate caps on H1-B visas. To allay fears of negative effects of the program, initially eliminate the cap for a brief trial period of three years, with an automatic extension of seven years based on approval by the President. This action should be coupled with an allowance for job mobility of H-1B visa holders during their final eighteen months of a three-year stay.

3. Allow permanent H1-B extensions after the first two three-year periods, based on a criminal and conduct review by the Department of Labor.

Action on knowledge economy immigration is both economically powerful and politically achievable. Experience shows that high-skill immigrants to the United States create new companies, innovations, and jobs that are a tremendous benefit to the workforce and economy overall. And let us be clear: strong support for knowledge economy immigration already comes from policymakers and thinkers from opposing ideological camps on other issues, even other immigration issues. Legislation can be crafted in a truly non-partisan way with broad support, and done so with a sense of urgency because it is aimed at the one thing voters are concerned about in 2009: creating more and better-paying jobs.
References


