



# Immigration for Innovation

How to Attract the World's Best Talent While Ensuring America Remains the Land of Opportunity for All

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Marshall Fitz January 2012

The fifth report in a series on U.S. science and economic competitiveness from the Doing What Works and Science Progress projects at the Center for American Progress

## About this series on U.S. science and economic competitiveness

The U.S. Congress in late 2010 asked the Department of Commerce to complete two studies as part of the reauthorization of the America COMPETES Act. The first, which was released on January 6th, 2012, at the Center for American Progress, focuses on U.S. competitiveness and innovation. The second, due to Congress in early 2013, offers specific recommendations for developing a 10-year national innovation and competitiveness strategy.

We applaud the commissioning of these reports but believe we cannot afford to wait that long to take action. That's why we convened in the spring of 2011 the group of experts listed on the following page. We spent two days in wide-ranging discussion about the competitive strengths and weaknesses of our nation's scientific endeavors and our economy, before settling upon the topics that constitute the series of reports we publish here. Each paper in the series looks at a different pillar supporting U.S. science and economic competitiveness in a globally competitive economy:

- “Rewiring the Federal Government for Competitiveness”
- “Economic Intelligence”
- “Universities in Innovation Networks”
- “Manufacturers in Innovation Networks”
- “Building a Technically Skilled Workforce”
- “Immigration for Innovation”

The end result, we believe, is a set of recommendations that the Obama administration and Congress can adopt to help the United States retain its economic and innovation leadership and ensure that all Americans have the opportunity to prosper and flourish now and well into the 21st century.

Many of our recommendations are sure to spark deep resistance in Washington, not least our proposal to reform a number of federal agencies so that our government works more effectively and efficiently in the service of greater U.S. economic competitiveness and innovation. This and other proposals are sure to meet resistance on Capitol Hill, where different congressional committees hold sway over different federal agencies and their policy mandates. That's why we open each of our reports with this one overarching recommendation: Congress and President Obama should appoint a special commission to recommend reforms that are packaged together for a single up-or-down vote in Congress. In this way, thorough-going reform is assured.

This new commission may not adopt some of the proposals put forth in this series on science and economic competitiveness. But we look forward to sharing our vision with policymakers as well as the American people. President Obama gets it right when he says, “To win the future, we will have to out-innovate, out-educate, and out-build” our competitor nations. We need to start now.

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# Introduction and summary

The United States is a nation of immigrant entrepreneurs. From the farmer and merchant entrepreneurs who first settled in the original 13 colonies to the multitudes of immigrant small business owners and startup founders today, our country is and always has been a place where creative and skilled people from around the world can come to realize their dreams. And we've benefited greatly from this.

Immigrants who come to the United States to study at our best universities and then go to work at our nation's leading companies contribute directly and immediately to our nation's global economic competitiveness. High-skilled immigrants who have started their own high-tech companies have created hundreds of thousands of new jobs and achieved company sales in the hundreds of billions of dollars.

Yet despite the critical importance of such immigrants to the nation's economic success in the increasingly competitive global economy, our current high-skilled immigration system is a two-fold failure: Arbitrary restrictions prevent American companies from effectively tapping the full potential of this talent pool, while inadequate safeguards fail to prevent against wage depression and worker mistreatment. The reforms outlined in this paper will help establish a 21st century immigration system that reaps the fruits of admitting the world's best and brightest to promote economic competitiveness, while upholding our responsibilities in a global economy.

Of course, our current immigration policies have failed the country on many fronts beyond the high-skilled policy arena. And the urgent need for comprehensive, systemic reforms is beyond question. The national debate has understandably focused up to this point on the most visible and most highly charged issue—ending illegal immigration. And a holistic strategy that combines enforcement with a requirement that current undocumented immigrants register, pay a fine, learn English, and pay back taxes will spur economic growth to the tune of \$1.5 trillion in cumulative GDP over 10 years. Overhauling our immigration system and restoring the rule of law is indisputably a national economic and security imperative.

But reforms to our high-skilled immigration system are not only important to enhance the coherence and integrity of our immigration policies, they are also an important component of any national strategy to foster innovation and competitiveness.<sup>1</sup> Science, technology, and innovation have been—and will continue to be—keys to U.S. economic growth. The United States must remain on the cutting edge of technological innovation if we are to continue driving the most dynamic economic engine in the world,<sup>2</sup> and U.S. companies must be able to recruit international talent to effectively compete in the international innovation arena.

To be certain, liberalizing our high-skill immigration policies should not be a substitute for investing in our homegrown workforce. Educating and training a 21st century U.S. workforce is a paramount national priority and the cornerstone of progressive growth. Improving access to top-flight education for everyone in this country will be the foundation for our continued global leadership and prosperity.<sup>3</sup> But while our university system attracts the best and brightest minds from around the world, immigrant students are faced with a tough choice upon graduation—go home or find an employer to sponsor their entry into what amounts to a lottery that might allow them to stay and work. While we subsidize the education and training of these foreign-born students, our immigration system prevents us from capitalizing on their collective genius.

We must continue to invest in education here at home, but it is shortsighted in a globalized economy to expect that we can fill *all* of our labor needs with a homegrown workforce alone. In fact, our current educational demographics point to growing shortfalls in some of the skills needed in today's economy.<sup>4</sup> And as global economic integration deepens, the source points for skill sets will spread—such as green engineering in Holland or nanotechnology in Israel—the breadth of skills needed to drive innovation will expand, and global labor pools must become more mobile.

Reforming our high-skilled immigration system will stimulate innovation, enhance competitiveness, and help cultivate a flexible, highly-skilled U.S. workforce while protecting U.S. workers from globalization's destabilizing effects. Our economy has benefited enormously from being able to tap the international pool of human capital.<sup>5</sup>

Even in today's stressed economic climate and flagging job market there is a need to access that capital. This is a counterintuitive assertion against the backdrop of the ongoing jobs crisis afflicting the country. But it bears remembering that we have dual unemployment rates in the United States: For people with a college degree or

higher, the unemployment rate is under 4.5 percent, and in the information technology professions, it is approximately 4 percent.<sup>6</sup> This is not to downplay the severe hardships facing unemployed Americans with college degrees. The nation's top priority for the foreseeable future must be creating jobs at all skill levels.

But facilitating access to international talent and putting Americans back to work are not mutually exclusive goals. The purpose of harnessing that talent is to fuel economic growth in industries that will create jobs. For example, a 2010 study by the University of Washington's Economic Policy Research Center found that every job at Microsoft supported 5.81 jobs elsewhere in the state's economy.<sup>7</sup>

Arbitrary limitations on our ability to access skill sets from across the globe are clearly self-defeating. Companies will lose out to their competitors making them less profitable, less productive, and less able to grow; or they will move their operations abroad with all the attendant negative economic consequences. And the federal treasury loses tens of billions of dollars in tax revenues by restricting the opportunities for high-skilled foreign workers to remain in the United States and contribute to the national economy.<sup>8</sup>

Georgia Institute of Technology's Stephen Fleming, executive director of the university's Enterprise Innovation Institute, has demonstrated that access to high-skilled foreign workers and budding entrepreneurs is a critical priority for many fast-growing and innovative businesses, as well as for our economic competitiveness and growth.<sup>9</sup> But facilitating such access triggers equally critical flip-side considerations, in particular the potential for employers to directly or indirectly leverage foreign workers' interests against the native workforce.

Current enforcement mechanisms are too weak to adequately prevent fraud and gaming of the system.<sup>10</sup> And current regulations tie foreign workers too tightly to a single employer, which empowers employers with disproportionate control over one class of workers. That control enables unscrupulous employers to deliberately pit one group of workers against another to depress wage growth.<sup>11</sup> Even when there is no malicious employer intent or worker mistreatment, the restriction of labor mobility inherently affects the labor market by preventing workers from pursuing income maximizing opportunities.

The end goal must be a system that inherently preferences the hiring of U.S. workers, but streamlines access to foreign workers with needed skills, welcomes entrepreneurs who can garner financial backing, and treats all workers employed in the



United States on a level plane. Reforms that enhance legal immigration channels for high-skilled immigrants and entrepreneurs must be complemented with reforms to ensure that a worker's immigration status cannot be used to manipulate wages and working conditions.

This paper digs deeper into the structural deficiencies and enforcement shortcomings in our high-skilled immigration system and offers a number of legislative solutions designed to:

- Target employer fraud and abuse of immigrant laborers.
- Enhance worker mobility for immigrants.
- Establish market-based mechanism to set H-1B levels for high-skilled immigrants.
- Raise green card caps and streamline process for all immigrants.
- Promote entrepreneurship with new visa program.
- Strengthen recruitment requirements for companies.
- Restrict job shops that import temporary immigrant trainees and then export American jobs.

The recommendations detailed in this report will enhance labor market mobility and promote economic growth while advancing workforce stability through enforceable labor standards and protections.

# Background

The United States is the home of many of the world's finest colleges and universities, and attracts a significant number of foreign nationals who come on temporary visas to pursue Bachelor's and advanced degrees. In some academic fields like computer and information systems, foreign students receive the bulk of advanced degrees issued from U.S. universities.<sup>12</sup>

## Foreign-born U.S. citizen Nobel Laureates

| Name                     | Year | Field                  | Country of origin |
|--------------------------|------|------------------------|-------------------|
| Charles Kao              | 2009 | Physics                | China             |
| Venkatraman Ramakrishnan | 2009 | Chemistry              | India             |
| Elizabeth Blackburn      | 2009 | Physiology or Medicine | Australia         |
| Jack Szostak             | 2009 | Physiology or Medicine | United Kingdom    |
| Yoichiro Nambu           | 2008 | Physics                | Japan             |
| Mario Capecchi           | 2007 | Physiology or Medicine | Italy             |
| Oliver Smithies          | 2007 | Physiology or Medicine | United Kingdom    |
| Anthony Leggett          | 2003 | Physics                | United Kingdom    |
| Riccardo Giacconi        | 2002 | Physics                | Italy             |
| Herbert Kroemer          | 2000 | Physics                | Germany           |
| Eric Kandel              | 2000 | Physiology or Medicine | Austria           |
| Ahmed Zewail             | 1999 | Chemistry              | Egypt             |
| Gunter Blobel            | 1999 | Physiology or Medicine | Germany           |

## High-skilled immigration basics

Our immigration system is a Byzantine patchwork of different visas designed to address specific needs or interests. Broadly speaking, our system is divided into temporary and permanent immigration categories. We have 70-plus different temporary visa categories and a couple dozen permanent resident categories.<sup>13</sup> Excluding temporary visas issued for people traveling to the United States on business trips and vacations, the Department of State issued around 1.8 million nonimmigrant visas in 2010.<sup>14</sup> And around 1.0 million foreign nationals obtained permanent resident status—colloquially referred to as “green card status”—in that year.<sup>15</sup>

The various types of employment visa categories makes any generic definition of “high-skilled immigration” inexact. For purposes of this report, “high-skilled immigration” encompasses programs authorizing individuals to work in the United States based on qualifications that include at least a bachelor’s degree or equivalent experience. Only 214,672 of the 6.4 million nonimmigrant visas issued in 2010 were issued to high-skilled professionals.<sup>16</sup> That number includes individuals who had already been admitted and were obtaining a new travel visa, as well as individuals who never entered. Only around 70,000 of the permanent employment-based visas issued in 2010 went to sponsored workers. In addition, 10,000 are set aside for low-skilled workers so the total number of high-skilled immigrants that were granted permanent residence in 2010 was around 60,000.<sup>17</sup>

An employer typically sponsors a worker for temporary employment in one of the many categories. Several of the most common examples for high-skilled workers include

- H-1B visas used to hire professionals
- L-1 visas for intracompany transferees
- O-1 visas for individuals with extraordinary ability
- J-1 visas for doctors, scholars, trainees, and researchers.<sup>18</sup>

Each category serves discreet interests, imposes separate requirements, and creates unique obligations and limitations on the visa holder (the worker) and the sponsor (the employer). Some of these categories—such as H-1B and L-1—authorize the employer to begin the process of sponsoring the visa holder for permanent residence.

When an employer sponsors their foreign national employee for permanent residence, this normally involves first testing the U.S. labor market to assess whether there are qualified U.S. workers to perform the position in question. The employer cannot proceed with the green card process for a foreign national worker if they can find a qualified U.S. worker. It is not a requirement to first test the labor market in a limited number of cases, such as transfers of high-level managerial personnel from operations abroad.

The employment-based green card process is subject to strict numerical limits that lead to lengthy, multi-year backlogs for applicants. The annual numeric caps limit the overall number of employment-based green cards as well as the number of green cards that can go to employees in certain types of jobs, with certain types of backgrounds, and from any one country.

Our current system requires Congress to create new channels each time a new need emerges, or restrict old channels if abuse is perceived. Congress, of course, is less than nimble, and it is no easy feat to legislate new visa categories into or out of existence. The consequence is an immigration system that responds glacially to changing national interest and economic needs.

This piecemeal mishmash of visa categories lacks a unifying vision. Multiplicity, rather than flexibility, is the hallmark of our system. Uncoordinated multiplicity leads to silos, which leads to rigidity and incoherence. Think “tax code” and you start to appreciate the immigration system’s complexity.

Many of these foreign students return abroad following completion of their studies, but others want to remain in the United States and seek a work-authorized visa following graduation. Indeed, these students often choose to study in the United States based in large part on the ability to pursue professional opportunities in this country

after graduation. Yet annual numeric limits on the number of available employment visas create roadblocks for students seeking to remain in the United States. As the President of Stanford University John L. Hennessy has recently argued:

*“More than 50 percent of our PhDs in engineering come from outside the U.S. Now 38 percent of our PhDs in the physical sciences come from outside the U.S. We spend between a quarter and a half a million dollars per student to educate somebody to the level of a PhD, and then you want to send them out after we’ve made this investment? This is a silly thing to do. We need to keep them in.”<sup>19</sup>*

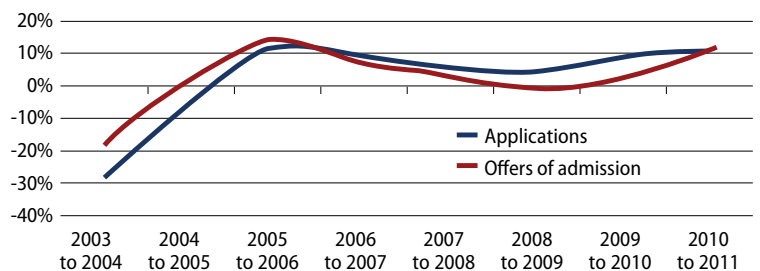
These roadblocks have created openings for universities and employers in other countries to recruit them. A number of competitor countries have streamlined their immigration policies to make it easier for their companies to recruit international talent.<sup>20</sup> That has, in turn, led some prospective students to pursue educational opportunities in other countries.

Foreign student interest in U.S. colleges and universities peaked in 2005 and has not reached those levels since then although applications and admissions are climbing again.<sup>21</sup> A Council of Graduate Schools report found that problems with obtaining work-authorized visas following graduation was one of the reasons for the decline in international enrollment.<sup>22</sup>

Any decrease in foreign student enrollment, particularly in advanced degree programs in the STEM fields, raises concerns because of the effect that high-skilled foreign nationals have had on innovation and job creation. A 2007 study by Duke University and University of California, Berkeley professors found that 25 percent of the technology and engineering companies started in the United States from 1995 to 2005 had at least one key founder who was foreign-born.<sup>23</sup> The study further reported that in 2005 these immigrant-founded companies produced \$52 billion in sales and employed 450,000 workers nationwide.

**FIGURE 1**  
**Year-to-year percent change in international applications and offers of admission**

2003 to 2004 through 2010 to 2011



Offers of admission data for 2011 are preliminary. All other data points reflect final figures.

Source: CGS International Graduate Admissions Survey, Phases II and III, 2004 to 2011

## Immigrant-founded companies

| Company Name            | Revenue          | Number of people employed |
|-------------------------|------------------|---------------------------|
| Comcast Corporation     | \$37.94 billion  | 102,000                   |
| Intel Corporation       | \$43.62 billion  | 82,500                    |
| Google Inc.             | \$29.32 billion  | 24,400                    |
| Life Time Fitness, Inc. | \$912.84 million | 19,000                    |
| eBay Inc.               | \$9.15 billion   | 17,700                    |
| Yahoo! Inc              | \$6.32 billion   | 13,600                    |

Source: The Wall Street Journal - Market Watch <http://www.marketwatch.com>

The legitimate objective behind limiting the supply of high-skilled visas is to prevent employers from using unfettered access to foreign workers to de-leverage U.S. workers. But restricting the supply of such visas potentially undermines another important goal: maximizing opportunities for economic growth by enhancing our competitiveness. This article proposes targeted reforms to ensure that our high-skilled immigration policies lift up economic growth and worker protection as twin goals rather than competing alternatives.

# Competing globally in the 21st century

Our high-skilled immigration policies fail to adequately promote and protect important national interests. Restoring the system's integrity and functionality through a combination of strong enforcement and structural reforms is a necessary component of our innovation agenda.

Arbitrary numeric limitations and other programmatic restrictions diminish economic efficiency and stymie growth while preventing labor mobility. They also lead companies to pursue workarounds that can warp business practices, precipitate offshoring, and limit the ability of U.S. workers to compete. Layered on top of a weak enforcement regime, these problems undermine the benefits provided by a robust and flexible high-skilled immigration system.

The recommendations in the following pages will help realign our high-skilled immigration policies with our responsibility to U.S. workers and our national interest in global competitiveness. They are designed to restore the integrity of the system while enhancing mobility for workers and flexibility for employers. The goal is to make the system more efficient, enable employers to be more competitive and productive, and empower workers to compete on a level playing field rather than being pitted against one another in a race to the bottom.

Several basic premises underlie the following recommendations. They are:

- Global economic integration will continue to deepen.
- This integration can have destabilizing effects on certain sectors of the workforce.
- Sustainable economic growth depends on our ability to remain on the cutting edge of technology and innovation.
- The global marketplace for international talent is expanding, not shrinking, and we refuse to shop there at our competitive peril.
- We must help our home grown workforce develop 21st century skills so changes to immigration policy are only one small response to the economic challenges we face.

Bearing these premises in mind, let's examine the problems and the solutions to our high-skilled immigration needs.

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### Problem: Fraud and gaming the system

As with any highly regulated government program, some participants seek to game the immigration system for competitive advantage. Given the complexity of the regulatory scheme, some employers run afoul of rules inadvertently, others find loopholes that make them compliant with the letter but not the spirit of the rules, and still others commit outright fraud.

Fraud is a serious problem in the system, even if the incidence is fairly low. Willful violations that go undetected and unpunished clearly undermine both the integrity and the policy objectives of our immigration programs for the highly-skilled. Workers are not provided the protections required by law, and legitimate employers must compete on an uneven playing field. Fraud undermines public confidence in visa programs whose proper functioning is a crucial component of the country's economic strength. And public and political revulsion at visa program abuses can lead to policy proposals that exceed the scope of the problem and run counter to national interests.

The Department of Homeland Security determined in an assessment of the H-1B program that violations are predominantly committed by small, new companies, rather than well-established companies.<sup>24</sup> It concluded that many of the identified violations are in areas where enforcement of existing rules could curb abuses, or where small changes to the rules would allow proper enforcement.

Unsurprisingly, most employers (80 percent) fully comply with program requirements.<sup>25</sup> And many of those who are not in complete compliance have committed only minor and unintended violations of complex rules that do not reflect an intention to game the system (7 percent). Yet an evaluation of those employers (13 percent) who were identified as willful violators makes clear that more deliberate steps are necessary to restore the integrity of the system.<sup>26</sup>

For example, visa fraud by a small company in Iowa highlights the kinds of abuses that can occur and that need to be stopped.<sup>27</sup> The IT services firm Visions Systems Group was indicted on 10 federal counts involving submitting falsified documents in support of their workers' visa applications.<sup>28</sup> In addi-

tion, H-1B visa workers were allegedly placed in locations on the East and West coasts while claiming employment in Iowa where wage minimums would be lower, thereby violating existing wage laws. Vision Systems pleaded guilty to a felony charge and paid restitution of \$236,250.<sup>29</sup>

The prosecution of several recruiting companies in 2004 highlighted another vein of fraud and abuse. Starting in 2001, hundreds of teachers recruited from the Philippines on H-1B visas were falsely told they had jobs waiting for them and could gain permanent residence in the U.S. The recruiters allegedly confiscated their documentation and housed them in substandard housing, required them to seek permission to leave the premises, and barred them from having their own transportation. In spite of these circumstances, the most serious charges were dropped in a plea bargain and the companies were only sentenced to three months probation. We clearly need to prevent this type of fraud and abuse with more serious penalties for violators.<sup>30</sup>

More recently, one of the biggest users of H-1B visas, Infosys, is accused of misusing B-1 visas in order to get around H-1B limitations and of increasing the value of their stock by charging customers the higher H-1B pay rate for the labor cost of B-1 holders.<sup>31</sup>

### Solution: Target fraud and abuse

The government has already initiated and dedicated substantial resources toward a number of fraud detection initiatives.<sup>32</sup> The results of those efforts can help point the way toward a more robust and effective enforcement regime.

U.S. Citizenship and Immigration Services made public an H-1B Benefit Fraud and Compliance Assessment over a year ago. This assessment identified clear trends of fraud and other program violations, typified by such problems as:

- Nonexistent or “shell” petitioning employers.
- Employers not paying salaries they had promised—and been required—to pay.
- Employees not having the promised degrees or other qualifications.
- Employees not performing qualifying responsibilities.



The assessment concluded that violations were more common among smaller—more recent—more poorly capitalized employers. And it indicated that these violations were overwhelmingly susceptible to detection through site visits—a fairly straightforward and easily available form of investigation and enforcement.

In response to the assessment, USCIS has begun a more robust site visit program,<sup>33</sup> issued clarifying memoranda related to some of the findings, held a number of stakeholder meetings, and initiated training sessions.<sup>34</sup> But clearly there must be continued focus on the issue designed to result in better, more targeted enforcement policies.<sup>35</sup>

Enforcement policy reform should be based on lessons already learned. It should be forceful and targeted as closely as possible at identified problems so that it does not undermine responsible and careful program users. Congress can help protect all workers against abuse and good-faith employers against unfair competition. It should:

- Provide authority for the Department of Labor to do a more thorough, but still timely, review of the “labor condition application” that employers submit to initiate an H-1B petition.
- Eliminate unnecessary restrictions on DOL investigative authority and increase DOL enforcement resources.
- Require DOL to conduct investigations of employers whose workforce is made up of more than 15 percent H-1B workers.
- Require proof of payment of required wages before a visa can be renewed.
- Facilitate improved coordination among the relevant agencies, especially DHS and DOL, so that information provided to one agency in the process can be checked against that provided to another.
- Strengthen agency authority to impose effective penalties against violators.

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### Problem: Labor mobility restrictions

Other elements of the employment-based immigration system can also warp the labor market. A primary concern rests in the potential for a sponsoring employer to exert disproportionate leverage over foreign workers. When a worker is bound to a single employer, it affects other similarly situated workers employed by the same employer or competitors. Says chairman of the White House Council of Economic Advisers Alan Krueger:

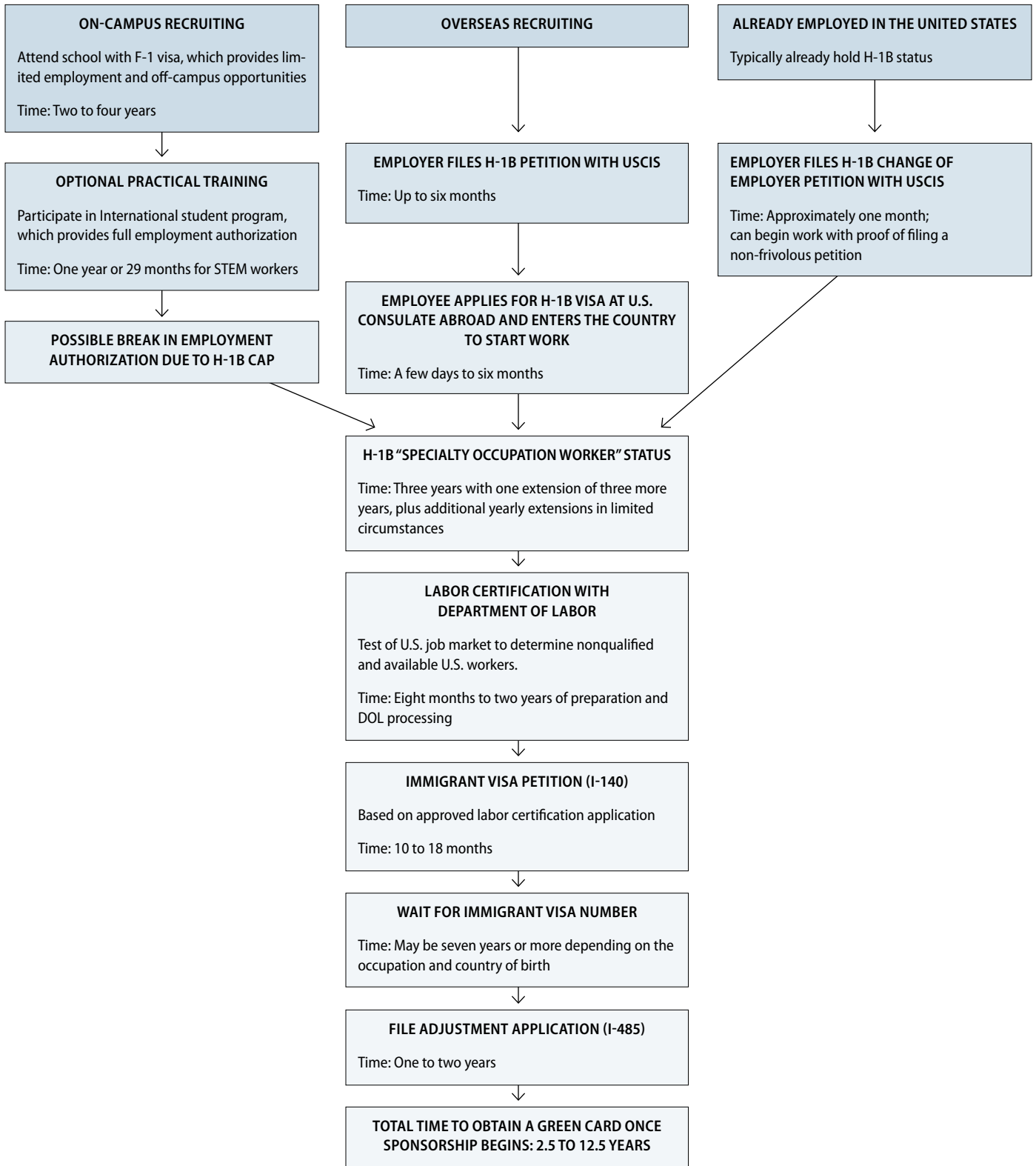
*“Job shopping is an essential protection against exploitation and inefficient allocation of-re source... If [temporary workers] do not have the opportunity to change jobs with minimal administrative burden, other workers in the United States will potentially suffer because employers will have some scope to exploit guest workers and lower labor conditions more generally.”<sup>36</sup>*

If an employer is able to significantly constrain a worker from exercising his or her rights or competing for the best job opportunity, it creates an advantage for the employer.

As noted above, the different visa categories carry different restrictions. Some employment visas permit more job mobility than others, but for the most part, a foreign worker is tied to a single employer until he or she receives legal permanent residence. For instance, an employer must sponsor a foreign worker on an H-1B visa to work in a specific position at a specific salary. In order for that worker to change jobs within the company, the employer must file a new H-1B petition with the government authorizing the change of position. In order for that worker to change employers, he or she must wait until the new employer files a petition on his or her behalf.

Two factors diminish the foreign worker’s mobility. First is the requirement that visa holders maintain their immigration status or be subject to long-term repercussions, including in some cases bars on re-entering the United States. An H-1B visa holder who quits his or her job or is terminated must secure immediate sponsorship from a new employer or risk falling out of status. If he or she fails to secure such sponsorship and does not leave in timely fashion, a subsequent petition filed by a new employer will be denied and other consequences may attach. In short, H-1B visa holders remain tied to their employers unless and until a new employer files a petition. This diminishes visa holders’ ability to assert their rights by walking away from an abusive employer.

# Immigration steps for most high-skilled workers



This is not a problem in most circumstances because most employers are not abusive and most workers will not leave a current job until a new one is lined up. But the extra steps that are required to obtain new sponsorship and the interim limitations on mobility do establish a dynamic in which employers possess greater influence over their employees than in traditional “at will” employment situations. That dynamic in turn hurts all workers and undermines employer competitiveness.

The second feature of the current system that diminishes worker mobility is the general requirement that an employer sponsor a foreign worker for permanent residence. The sponsorship process can take years because of the disparity between the number of temporary and permanent visas available annually. And in most cases, if the worker leaves to join another employer, he or she must start the green card process all over again.

This lengthy process accords the employer another axis of leverage over the worker. The most obvious concern is that an unscrupulous employer can exert excessive control over the visa holder by lording permanent residence over his or her head. But even in the normal course, the inability to freely change employers—or even jobs with the same employer—and maximize earning potential during that time can have a depressing wage effect.

### The solution: Enhance worker mobility

Workers’ ability to change employers at will promotes efficiency in the labor market and helps prevent employer abuse. If employers underpay, overwork, or otherwise mistreat workers, the workers can leave and the employers eventually lose their workforce or cease their unscrupulous practices. The corollary, of course, is that when workers are not free to change jobs, their employers have undue leverage over wages and working conditions.

A central problem with current high-skilled immigration programs is that they bind workers too tightly to a single employer. Even though most employers do not intentionally misuse their leverage over these workers, the power differential it creates can affect both foreign workers and similarly situated U.S. workers. The net result can be a slight depression of wages.<sup>37</sup>

Enhancing the portability of foreign workers should be relatively uncontroversial for employers that hire based on who is best for the job and not based on who

they can exert the most control over. It is true that the employers have invested in the worker by paying the costs of sponsorship, but that should be considered part of the cost of hiring foreign workers, not a premium that allows the employer to exert special control over the worker.

To balance the playing field for workers and employers, Congress should:

- Establish a statutory grace period for fired workers to find a new job rather than maintaining the current rules, which make them immediately deportable and subject to additional penalties for unlawful presence.
- Revise the rules regarding the permanent residence process to allow sponsored workers to change to a different employer earlier in the process.
- Permit expanded categories of high-skilled temporary workers to self-petition for permanent residence.
- One possibility that Congress should consider is to authorize self-petitioning after a certain time, such as 18 months.<sup>38</sup> Another possibility is to authorize self-petitioning for individuals working in high-employment industries with, for example less than 2 percent unemployment.

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### Problem: H-1B visa caps

The most widely used high-skilled immigration classification for temporary workers is the H-1B visa. The availability of H-1B visas in our current system is regulated by a congressionally established annual numeric ceiling—or “cap” as it is commonly called. The current annual allotment of new H-1B visas is set at approximately 85,000, including 20,000 that are reserved for individuals with an advanced degree from a U.S. college or university.<sup>39</sup> That number was drawn from the political ether, not from any concrete policy analysis or any specific economic indicators. And the last decade has clearly demonstrated just how arbitrary these numbers are.

We have repeatedly seen over the last decade that demand in the H-1B program tracks the business cycle, and not in a way that would indicate that employers rely on the program to hire cheap labor. When the economy is humming and job growth is robust, demand for high-skilled foreign workers rises despite the additional costs and the time it takes to hire a worker permanently.

## From temporary worker to green card

| Fees  | Cost to employer |
|---|------------------|
| H-1B petition for FY 2010                                   | \$2,320          |
| H-1B application cost                                       | \$131            |
| Visa petition filed with USCIS                              | \$475            |
| H-1B extension  | \$1,820          |
| AC21 extension  | \$320            |
| Spouse's work authorization and visa application            | \$262            |
| Applications to adjust status to that of permanent resident | \$2,020          |
| Extend H-1B status  | \$320            |
| Legal fees  | \$10,000         |
| <b>Total</b>  | <b>\$17,668</b>  |

When the economy is in retreat and losing jobs, the demand for such workers declines significantly. If employers thought these workers were a good source of cheap labor, one would expect usage to rise during belt-tightening periods. The opposite appears to be true.

The current cap has clearly proven insufficient to meet employer demand in a booming economy. When the economy ran hot in recent years, there was so much demand for these foreign professionals that the cap was exceeded on the first day of the filing period.<sup>40</sup> For fiscal year 2008, some 150,000 petitions were filed on the first day, April 1, 2007, for 85,000 slots.

This supply-demand mismatch creates two problems, each economically self-defeating. First, when the H-1B supply is exhausted in April, no petitions can be filed for students who will receive bachelor's degrees in May or June. This excludes an entire year's worth of graduates from access to visas after four years of U.S. education.<sup>41</sup> We have invested in their education. We should at least have the *opportunity* to see a return on that investment.

Second, the immigration service had to create a lottery system to determine who can receive a visa due to the surge of petitions that were filed on the first day. The terms "sound economic planning" and "lottery" rarely fit well together. Requiring employers to organize their often-complex recruitment and hiring processes in order to file a petition on a specific day each year—six months in advance of a

potential hire, with no guarantee that they will actually be able to hire the person—creates obvious and enormous inefficiency. This artificial timeline and the attendant uncertainty of the lottery process render employers unable to hire foreign workers in real time to respond to real and changing needs.<sup>42</sup> That in turn may stall or kill business projects that could create jobs and economic opportunities, which is plainly contrary to our national interest.<sup>43</sup>

Weakness in the economy appears to serve as a reasonably effective governor on H-1B filings. As in prior economic downturns, there has been a precipitous drop off in H-1B filings during the recent recession. Nearly double the annual allotment of applications was filed on April 1, 2008, the first day of the fiscal year 2009 filing period. While the fiscal year 2010 cap<sup>44</sup> was not reached until eight months after the filing period opened up. It took even longer for the cap to be met in fiscal year 2011.<sup>45</sup> Still, even with significantly decreased demand, the annual allotment of visas has been reached well before the end of the fiscal year. That means that employers are barred from hiring new H-1B workers during an extended period, suggesting that the 85,000 figure may be insufficient to meet the needs of U.S. employers.

Of course, the linkage between demand for H-1B workers and the ebb and flow of the business cycle does not in itself prove the existence of skills shortages or that H-1B workers are not sometimes used to deleverage U.S. workers. It does, however, rebut the narrative that employers are only looking to these foreign workers as a source of cheap labor. It is undoubtedly true that some employers view the hiring of H-1B workers as a less permanent human resource investment and thus a preferable, less costly alternative even in a down economy. But it is equally true that many employers sponsor a large percentage of their H-1B employees for permanent residence,<sup>46</sup> layering substantial additional costs onto long-term worker investment and negating the “cheaper alternative” argument.

In short, while there is clearly a supply-demand disconnect, no general conclusions about the motivation for hiring H-1B workers can be elucidated from demand cycles. It appears more likely that employers pursue such workers for a multiplicity of reasons, some more consistent with our national interest than others. Instead of using an arbitrary annual cap that limits both good and bad program usage, we recommend a basket of reforms to ensure that employers using the program hire high-skilled foreign workers because they are the best recruits for their enterprise, not because they are a cheaper alternative.

## The solution: Establish market-based mechanism to set H-1B levels

Arbitrary numeric limitations in the H-1B program serve no clear national interest except to prevent the *possibility* of widespread employer abuse of the program. The federal government should adopt instruments to minimize the risk of misuse as described elsewhere in this paper, but the artificial visa ceiling should be adjusted to respond to the demands of the U.S. economy and avoid forcing those we educate in this country to compete with us abroad. Congress should:

- Establish a market-based mechanism that allows the H-1B supply to grow and shrink as the demand for additional workers fluctuates. Such a “market-based escalator” will not be perfect in that annual increases and decreases would lag slightly behind the demand curve, but it would establish a more realistic band of ranges. An annual floor and ceiling should be established—for example, between 60,000 and 120,000—that would not fluctuate absent further congressional action to serve as an additional check on excessive increases or decreases in supply.<sup>47</sup>
- Maintain exemptions for those with advanced degrees from U.S. universities and for those entering certain high-demand fields.
- Create a “pre-immigrant” visa for professionals whose employers intend from the start to sponsor them as permanent residents. This visa must be accompanied by wage and working condition requirements to protect U.S. workers, and must require the employer to begin the green card sponsorship process promptly. This visa would help diminish the artificial use of temporary visas.

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## Problem: Employment-based “green card” backlogs

A significant disconnect exists between the annual allocation of temporary and permanent employment-based visas. That disconnect has generated enormous dysfunction throughout the system. Only 140,000 employment-based permanent visas, or “green cards,” are available each year for workers *and* their spouses and children.<sup>48</sup>

Most employment-based green cards are granted to foreign professionals who are already here and working on a temporary visa. But the short supply, which has not been updated in nearly two decades, has created years-long backlogs. Employment-based green card numbers have been unavailable to professionals holding bachelor’s degrees during most of the past year, for example, no mat-



ter how long ago they started the green card process.<sup>49</sup> Even individuals with advanced degrees face multiyear backlogs if they hail from certain countries.<sup>50</sup>

These backlogs mean that sponsored workers can be stuck in the same job for years—in some cases as many as eight or nine years. Tied to a single sponsoring employer, these workers are prevented from asserting their right to pursue income-maximizing opportunities. That stagnation creates a depressing effect on the labor market, hurting all workers. Moreover, spouses of the sponsored principal are prohibited from working throughout the entire period. That obviously creates an unhealthy dynamic in which one spouse's career must remain in abeyance until the protracted green card process concludes.

Legitimate employers feel the effect as well. Because sponsored workers must typically remain in the position for which they were sponsored, employers are not able to move workers into more productive capacities.

Personal, company, and government resources are wasted as temporary visas, travel documents, and other similar items must be constantly renewed. And workers and their families face tremendous difficulties in securing loans to purchase homes, enrolling in universities as in-state residents, and pursuing career opportunities for spouses.

What this increasingly means is that highly talented, highly productive professionals who have been educated in U.S. schools take their brainpower elsewhere.<sup>51</sup> This ultimately harms the U.S. economy and the American worker.

### The solution: Raise caps and streamline the process

The annual allocation of permanent residence visas should be realigned to reflect the reality that many workers on temporary visas intend to remain in the country permanently. Enabling them to become permanent residents more quickly and with fewer attachments to a single employer enhances their productivity and minimizes their ability to be unfairly leveraged against U.S. workers. Congress should:

- Increase overall green card numbers to clear the existing multiyear backlog of high-skilled professionals awaiting permanent residence.

- Raise or eliminate per-country quotas on employment-based green cards. It makes little sense to subject nationals from high-sending countries such as India to the same annual limitations as nationals from Liechtenstein.
- Exclude derivatives (family members) from counting against the annual cap. There is an annual cap of 140,000 on employment-based green cards, and only around 60,000 visas actually go to workers. The rest of the allocation is absorbed by derivative family members who count against that 140,000 ceiling.
- Exempt graduates of U.S. universities with advanced degrees in science, technology, engineering, and math, or STEM, fields from the annual green card cap.
- Provide employment authorization to spouses of principals who have been stuck in the green card backlogs for more than three years.
- End the requirement that foreign students may study here only if they can prove they intend to leave after graduation. Some may object to putting these foreign students on even footing with U.S. students in competing for jobs after graduation. But that competition already exists in one shape or form anyway, since companies are increasingly opening offices abroad.

The more difficult we make it for U.S. companies to compete for international talent, the more jobs will move beyond our borders. Putting all advanced degree graduates from U.S. universities on a more even footing ensures that native-born students can compete on a transparent playing field. The alternative is for American workers to try and compete in a warped talent market where businesses contort their operations to access talent in different parts of the world. Instead of bringing the workers to where the jobs are, companies will increasingly be forced to move the jobs to where the workers are.

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### Problem: Limited immigration channels for foreign job creators with new ideas

Many of the top young minds graduating from U.S. universities STEM fields are foreign nationals. In fact, nearly a quarter of all advanced degree graduates in these fields from our nation's universities are foreign students. For example, 66 percent of Ph.D.s in electrical engineering were issued to foreign nationals in 2009. And between half and two-thirds of all Ph.D.s went to foreign students in the following

fields: industrial engineering, civil engineering, mechanical engineering, materials engineering, chemical engineering, economics, physics, and computer science.<sup>52</sup>

More to the point, individuals with these STEM backgrounds are the primary drivers of technological innovation.<sup>53</sup> That innovation is the foundation for new business enterprises and a central ingredient in job creation strategies. This means that the next great idea, the next great scientific breakthrough that could eventually produce thousands of new jobs is likely to come from these young graduates. But when the holder of that idea is a foreign student or a foreign national who would like to develop the product or technology in the United States, there is no obvious way for them to do so. They may be able to find employment with a university or research facility that can sponsor them for an employment visa. And they may be able to collaborate in that setting on new research that leads to the issuance of important patents. Indeed, noncitizens make up an estimated one-quarter of all patent applications from the United States.<sup>54</sup> But their efforts in that regard will be constrained by the dictates of the employing entity rather than the inspiration of their creative minds.

A comparable native born innovator can pitch their big idea and, if persuasive, secure financial backing to develop it and launch a business around it. That we would prevent a foreign innovator from pursuing the same idea makes little sense. In most cases, that foreign national is not competing with an American inventor. But by driving them to pursue their idea and start their business in another country, our immigration system transforms them into a competitor. Instead of helping create jobs in the United States, our immigration system promotes the creation of those jobs abroad.

### Solution: Promote entrepreneurship with new visa program

Our byzantine immigration system provides visas for a wide array of activities, but there is no channel in the labyrinth for fledgling entrepreneurs with the next great idea. Many of these potential innovators and job creators are already in the United States on student visas or temporary work visas. But they are blocked from pursuing their great idea and we are prevented from reaping the potential fruits of that idea realized.

If someone has a business concept that can garner substantial capital investment and that will create jobs for U.S. workers, we should do everything possible to attract, not repel them.

Congress should:

- Pass legislation designed to facilitate the entry of foreign entrepreneurs who have business plans backed by capital investment.
- Enact the new entrepreneur visa and its renewal should be conditioned on meeting investment or revenue and job creation benchmarks.<sup>55</sup>

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### Problem: Workarounds

When no legal avenue exists to hire a specific worker, but there is a manifest need to do so, some employers will accept defeat and scale back their plans. That can mean forgoing development of a new product or delivery of a new service that could create more jobs. Other employers will search for workarounds to the hiring obstacle either by trying to push the limits of the law or by ignoring it altogether.

The workaround has been hiring undocumented workers on the low-skilled end of the spectrum where employers have confronted a shrinking U.S. workforce keyed to those jobs and virtually no legal channels to hire foreign workers.<sup>56</sup> The knowing hire of such workers is a clear and direct violation of the law. The more typical situation is that employers turn a blind eye to suspicions because the alternative is to leave positions unfilled.

Workarounds on the high-skilled end assume different forms. Some employers will try to shoehorn a worker into a visa category that has available slots, but doesn't really fit. That creates extra work for the government in the adjudications process and potentially dilutes those other visa categories from their actual purpose.<sup>57</sup> Other employers will conclude that the business impediments to hiring the necessary workforce are severe enough that they move some or all of their operations abroad.<sup>58</sup> There has been some debate about the economic impact of offshoring,<sup>59</sup> but it is difficult to argue that it does not hurt U.S. workers.

Still other employers are technically compliant with program rules but are conducting operations that contravene policy goals—such as high-volume job shops where most of the company's operations are actually abroad.<sup>60</sup> Companies are able to hire H-1B visa workers in the United States to serve as an on-site presence while they coordinate mainly offshore activities.<sup>61</sup> Nothing in the law stops companies who want to use H-1B visas as a training program for future outsourcing. Some U.S. companies have required laid off workers to train H-1B visa holders as

part of the company’s “knowledge transfer” operations and as a condition of their severance pay.<sup>62</sup> These workers subsequently return to headquarters in India and are farmed out to off-shored U.S. companies with their newfound skills.<sup>63</sup>

Offshoring of some jobs is inevitable in a global economy. But our national regulatory policy should not promote the practice. Making it too difficult to hire workers from the global talent pool and driving companies abroad is an anti-growth strategy that diminishes U.S. workers’ ability to compete. That is flatly contrary to our national interest.

### Top 10 H-1B employers

| Rank | Company                            | Number of H-1B visa petitions |
|------|------------------------------------|-------------------------------|
| 1    | Microsoft                          | 2,505                         |
| 2    | IBM                                | 1,263                         |
| 3    | Infosys Technologies               | 1,058                         |
| 4    | Deloitte Consulting                | 887                           |
| 5    | Fujitsu Laboratories of America    | 747                           |
| 6    | Cognizant Technology Solutions     | 645                           |
| 7    | Patni Americas                     | 540                           |
| 8    | CVS Pharmacy                       | 499                           |
| 9    | Qualcomm                           | 472                           |
| 10   | Larsen Toubro Infotech             | 418                           |
| 11   | Intel                              | 404                           |
| 12   | Wipro                              | 403                           |
| 13   | Goldman Sachs                      | 387                           |
| 14   | Oracle                             | 376                           |
| 15   | Barclays Capital                   | 366                           |
| 16   | Google                             | 355                           |
| 17   | Hewlett Packard                    | 340                           |
| 18   | National Institutes of Health, Hhs | 338                           |
| 19   | UST Global                         | 317                           |
| 20   | Tata Consultancy Services          | 311                           |

Source: My Visa Jobs, “Top 100 H1B Visa Sponsors -2011 H1B Visa Report,” available at <http://www.myvisajobs.com/Reports/Top-VisaSponsor-2011.aspx>

These workarounds—shoehorning and offshoring—are by-products of an inflexible system. And forcing companies to make a choice between forgoing opportunity

and engaging in workarounds harms our nation's economic interests. We obviously want businesses to seize growth opportunities. But forcing them to do so through workarounds is inefficient and warps the playing field for U.S. workers.

### Solution: Strengthen recruitment

Employers make a variety of nuanced but important judgments in their hiring processes that can't be distilled to a comparison of resumes. Employers must be prohibited from considering impermissible factors such as race, ethnicity, and gender in making hiring decisions. But the federal government also should not be placed in the untenable position of micromanaging judgments about who the best candidate is for a private sector job.

Requiring companies to hire "equally qualified" U.S. workers over foreign workers makes sense in principle. But putting such a requirement into practice transforms the real world hiring process into an artificial exercise. Employers would be in the position of having to justify to a government investigator—for years after the fact—why one individual was hired over every other applicant. Such a process would give employers an incentive to make a decision on who is best for the job and then build paper benchmarks as a bulwark to justify decisions against government scrutiny.

This doesn't mean that we shouldn't strongly encourage employers through incentives to train and hire U.S. workers. We definitely can and must.<sup>64</sup> The massive investment in jobs included in the American Recovery and Reinvestment Act of 2009 was just one example of the national commitment we need to continue growing jobs for U.S. workers.<sup>65</sup> Investment in clean energy presents another opportunity to advance the quality and range of jobs available to U.S. workers.<sup>66</sup> And the education and training revenues generated from the H-1B user fees should be augmented and leveraged to increase opportunities for U.S. workers to seize these new opportunities.<sup>67</sup>

What it does mean is that empowering the government to second-guess basic hiring decisions is inefficient and will undermine our pro-growth objectives without actually protecting U.S. workers. The solution is therefore to require employers who seek to hire high-skilled foreign workers to demonstrate that they truly are making meaningful and effective efforts overall to hire U.S. workers when filling open positions.

The Labor Department can effectively review whether an employer has an overall recruitment process that shows it is engaged in serious and sufficient labor market recruitment. If employers are mandated to show real recruitment that meets or exceeds industry standards, it will prevent a race to the lowest possible wage.

Congress should:

- Require employers to establish and document an overall system of recruitment that first targets U.S. workers and that meets or exceeds industry standards for recruitment of similarly situated workers.<sup>68</sup>
- Create a severe penalty scheme for employers who fail to pay the prevailing or actual wage for the position.
- Increase the H-1B education and training user fees and reassess allocation of such fees between the National Science Foundation and Department of Labor to ensure that the funds are maximizing opportunities for U.S. students and workers to compete for high-skilled jobs.<sup>69</sup>

### Solution: Restrict job shops

The basic goal of our high-skilled immigration regime should be to enhance the competitiveness of U.S. employers by enabling them to tap top-flight international talent and workers with specific skill sets. The goal is not to provide a limitless pool of entry-level workers who, in the aggregate, can drive down the native born workforce's wages. But companies who identify specific needs that they cannot fill with the native workforce should be able to access foreign workers while guaranteeing wages that protect against wage deflation for all workers.

One business model that comports with the letter of the law but not its spirit is the job-shop.<sup>70</sup> These businesses provide a staging ground for foreign workers to come to the United States, develop skills, and then go home to facilitate operations that compete with U.S. companies. In a sense, they help train foreign workers in the United States with skills needed to offshore information technology services and U.S. jobs.

Of course, individuals who come to the United States for education or experience will always be entitled to take that knowledge home and put it into practice in a way that leads to competition with the United States. There is nothing inherently

wrong with that. Indeed, it is in our interest that some individuals who train in the United States and are exposed to our country's values eventually return home to share that understanding. But it contravenes our national interest to explicitly permit a practice that trains foreign workers to replace U.S. workers.

Congress should adopt the following restrictions to ensure that the H-1B program promotes the goal of enhancing U.S. competitiveness:

- Prohibit the use of visas by staffing companies. Companies filing an H-1B petition should be required to attest that the H-1B worker will be supervised and controlled by the H-1B employer, thus preventing so-called “job shops” or “body shops” from participating in the H-1B program.
- Bar companies with more than 50 employees whose workforce is comprised of more than 50 percent foreign workers from the H-1B program unless they can establish to the satisfaction of the Department of Labor that they pay all of their employees more than 125 percent of the prevailing wage and can establish a recruitment program for U.S. workers that exceeds industry standards.
- Prevent temporary work visas, such as H-1B visas and L-1 visas, from being made available to foreign nationals who will use those visas to “shadow” U.S. workers in order to allow the jobs performed by those U.S. workers to be moved offshore.



# Conclusion

Talented immigrants have made crucial contributions to the development of next generation technologies and have founded some of the most innovative businesses in the United States. They have created thousands of American jobs, fueled productivity, and driven economic expansion. And as global economic integration deepens, sustainable growth will depend in part on our continued ability to attract the best and brightest innovators and entrepreneurs.

Simply put, enhanced labor mobility is a 21st century reality and ultimately an economic imperative. But as the global talent pool expands and becomes more fluid, it also creates instability in some sectors of our homegrown labor force. Our policymakers must endeavor to minimize those effects and prevent employers from pitting the interests of immigrant and native workers against each other. At the same time, as our economic future depends ever more on leveraging the knowledge, skills, and creativity of our people, we must ensure that we are not ignoring the important source of skilled, creative, and knowledgeable people represented by our immigrants.

As the nation emerges from the shadows of this great recession, we must embrace a progressive growth strategy that enhances our global competitiveness. The reforms to our high-skilled immigration policies outlined in this paper will help promote the nation's dual interest in growing the economy and protecting workers.

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## About the author

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## Endnotes

- 1 Tom Kalil and John Irons, "A National Innovation Agenda: Progressive Policies for Economic Growth and Opportunity Through Science and Technology" (Washington: Center for American Progress, 2007), available at [http://www.americanprogress.org/issues/2007/11/pdf/innovation\\_chapter.pdf](http://www.americanprogress.org/issues/2007/11/pdf/innovation_chapter.pdf).
- 2 Jonathan Sallet, Ed Paisley, and Justin Masterman, "The Geography of Innovation: The Federal Government and the Growth of Regional Innovation Clusters" (Washington: Science Progress, 2009), available at [http://www.scienceprogress.org/wp-content/uploads/2009/09/eda\\_paper.pdf](http://www.scienceprogress.org/wp-content/uploads/2009/09/eda_paper.pdf).
- 3 Louis Soares, "Working Learners," (Washington: Center for American Progress, 2009), available at [http://www.americanprogress.org/issues/2009/06/working\\_learners.html](http://www.americanprogress.org/issues/2009/06/working_learners.html); Louis Caldera, "Educational Tools for the 21st Century," Center for American Progress, July 28, 2009, available at [http://www.americanprogress.org/issues/2009/07/educational\\_tools\\_memo.html](http://www.americanprogress.org/issues/2009/07/educational_tools_memo.html).
- 4 65 percent of Computer Science PhDs, 57 percent of mathematics PhDs, 58 percent of physics PhDs, 68 percent of engineering PhDs and 32 percent of biological sciences PhDs from U.S. universities are foreign born, see <http://www.nsf.gov/statistics/infbrief/nsf08301/>.
- 5 Immigrants founded 1 in 4 of the publicly traded companies that were started from 1990-2005; Immigrant founded publicly traded US venture-backed companies generated more than \$130 billion and employed 220,000 U.S. workers; Prominent companies: Intel, Solectron, Sun, eBay, Inc, Yahoo, Google; Foreign nationals in U.S. were inventors or co-inventors of 25 percent of all patents filed in U.S. in 2006, see <http://www.sandhill.com/grafix/content/NVCA.pdf>, pg. 32.
- 6 United States Senate Committee on the Judiciary Subcommittee on Immigration, Refugees and Border Security, "Statement of Brad Smith, General Counsel and Senior Vice President, Legal and Corporate Affairs Microsoft Corporation," from the Hearing: The Economic Imperative for Immigration Reform – High-Skilled Immigration as a Driver of Economic Growth, July 26, 2011, available at <http://judiciary.senate.gov/pdf/11-7-26%20Smith%20Testimony.pdf>.
- 7 Theo S. Eicher, "The Microsoft Economic Impact Study," March 2010, available at [http://richardsdavis.typepad.com/files/ms-impact\\_public.pdf](http://richardsdavis.typepad.com/files/ms-impact_public.pdf).
- 8 See <http://www.techpolicyinstitute.org/files/the%20budgetary%20effects%20of%20high-skilled%20immigration%20reform.pdf>. In the absence of green card and H-1B constraints, roughly 182,000 foreign graduates of U.S. colleges and universities in STEM fields would likely have remained in the United States over the period 2003-2007. They would have earned roughly \$13.6 billion in 2008, raised the GDP by that amount, and would have contributed \$2.7 to \$3.6 billion to the federal treasury.  
  
In the absence of green card constraints, approximately 300,000 H-1B visa-holders whose temporary work authorizations expired during 2003-2007 would likely have been in the United States labor force in 2008. These workers would have earned roughly \$23 billion in 2008, raised the gross domestic product by that amount, and would have contributed \$4.5 to \$6.2 billion to the federal treasury.  
  
Similar results are obtained when analyzing legislation considered by Congress during the last few years. For example, under reasonable assumptions, the relaxation of green card constraints proposed in the Comprehensive Immigration Reform Act of 2006 could have increased labor earnings and GDP by approximately \$34 billion in the 10th year following enactment and had a net positive effect on the budget of \$34 to \$47 billion over 10 years.  
  
Relaxation of H-1B caps under the Comprehensive Immigration Reform Act of 2007 could have increased labor earnings and GDP by \$60 billion in the tenth year following enactment and improved the federal budget's bottom line by \$64 to \$86 billion over 10 years.
- 9 "Stephen Fleming Discusses Immigration and Competitiveness at a U.S. Chamber of Commerce Forum," Georgia Tech website, available at <http://www.gatech.edu/newsroom/release.html?nid=70418>.
- 10 U.S. Citizenship and Immigration Services, "H-1B Benefit Fraud & Compliance Assessment," (2008), available at [http://www.uscis.gov/files/natedocuments/H-1B\\_BFCA\\_20sep08.pdf](http://www.uscis.gov/files/natedocuments/H-1B_BFCA_20sep08.pdf); Patrick Thibodeau, "Grassley Seeks Proof of Jobs from H-1B Applicants," *Computer World*, September 29, 2009, available at [http://www.computerworld.com/s/article/9138674/Grassley\\_seeks\\_proof\\_of\\_jobs\\_from\\_H\\_1\\_B\\_applicants\\_?taxonomyId=60](http://www.computerworld.com/s/article/9138674/Grassley_seeks_proof_of_jobs_from_H_1_B_applicants_?taxonomyId=60); Senator Chuck Grassley of Iowa, "Grassley Works to Ensure Accountability in H-1-B Visa Program," Official statement, September 29, 2009, available at [http://grassley.senate.gov/news/Article.cfm?customel\\_dataPageID\\_1502=23410](http://grassley.senate.gov/news/Article.cfm?customel_dataPageID_1502=23410).
- 11 Debra Schiff, "Think Tank, House Eye H-1B Abuses," *EE Times*, January 2, 2006, available at <http://www.eetimes.com/showArticle.jhtml?articleID=175800119>; Kevin Fogarty, "Department of Labor Orders Globaltek to Pay Back Wages for H-1B Violations," *eWeek*, October 27, 2008, available at <http://www.eweek.com/c/a/IT-Infrastructure/Department-of-Labor-Orders-GlobalTek-to-Pay-Back-Wages-for-H1B-Violations/>.
- 12 These statistics, most recently reported for the academic year ending in 2007, show that foreign students made up: 57 percent of doctorals, 39 percent of masters, and 40 percent of all graduate degrees (combining the doctoral and masters numbers), see <http://nces.ed.gov/pubs2009/2009020.pdf> (tables 288 and 291); Arlene Holen, "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>, p. 28.
- 13 Ingrid K. Brey and William B. Schiller, "Employment-Based Immigration: The First Three Preferences," American Immigration Lawyers Association, reprinted from *Navigating the Fundamentals of Immigration Law 89* (2009), available at <http://www.aila.org/Content/default.aspx?docid=29972>.
- 14 U.S. Department of State, "Nonimmigrant Visas Issued by Classification," Fiscal Years 2006-2010, available at [http://www.travel.state.gov/pdf/FY10AnnualReport-TableXVI\\_B.pdf](http://www.travel.state.gov/pdf/FY10AnnualReport-TableXVI_B.pdf).
- 15 US DHS, Office of Immigration Statistics, "U.S. Legal Permanent Residents: 2010," March 2011, available at [http://www.dhs.gov/xlibrary/assets/statistics/publications/lpr\\_fr\\_2010.pdf](http://www.dhs.gov/xlibrary/assets/statistics/publications/lpr_fr_2010.pdf).
- 16 Including H1B, H1B1, H1C, L1, O1, and I Visas classes. "Nonimmigrant Admissions by Class of Admission," Fiscal Years 1999 to 2008, available at "Nonimmigrant Visas Issued by Classification," Fiscal Years 2006-2010, available at [http://www.travel.state.gov/pdf/FY10AnnualReport-TableXVI\\_B.pdf](http://www.travel.state.gov/pdf/FY10AnnualReport-TableXVI_B.pdf).
- 17 Congress authorizes 140,000 employment-based visas annually. Approximately 86 percent of those visas go to individuals who could be in high-skilled jobs minus 10,000 that are set aside for low-skilled immigrants. That figure includes dependents, however, which average more than 1 per high-skilled immigrant. So the total number of sponsored high-skilled workers receiving permanent visas was around 56,000.
- 18 8 U.S.C. Sections 101 (a)(15)(H), (L), (O), and (J)
- 19 John Hennessy, "Bloomberg Innovation and Econom Roundtable." Video available at <http://www.bloomberg.com/video/77316400/>.
- 20 EU passes legislation establishing "blue card," available at <http://www.diyexpat.com/news/bluecardpassed.html>; Canadian government efforts to greatly cut waiting times for high-skilled workers, available at <http://www.prlog.org/10066101-canada-continues-aggression-to-attract-skilled-migrants.html>.
- 21 Council of Graduate Schools, "Findings from the 2011 CGS International Graduate Admissions Survey" (2011), available at [www.cgsnet.org/portals/0/pdf/R\\_IntlAdm11\\_II.pdf](http://www.cgsnet.org/portals/0/pdf/R_IntlAdm11_II.pdf).

- 22 Council of Graduate Schools, "Findings from the 2009 CGS International Graduate Admissions Survey" 2009, available at [http://www.cgsnet.org/portals/0/pdf/R\\_IntlAdm09\\_II.pdf](http://www.cgsnet.org/portals/0/pdf/R_IntlAdm09_II.pdf).
- 23 UC Berkeley School of Information, "America's New Immigrant Entrepreneurs," (2007), available at [http://sites.kauffman.org/pdf/entrep\\_immigrants\\_1\\_61207.pdf](http://sites.kauffman.org/pdf/entrep_immigrants_1_61207.pdf), p.19.
- 24 U.S. Citizenship and Immigration Services, "H-1B Benefit Fraud & Compliance Assessment," p. 13-15. See also, Government Accountability Office, "H-1B Visa Program: Reforms Are Needed to Minimize the Risks and Costs of Current Program" (2011), available at <http://www.gao.gov/products/GAO-11-26>.
- 25 National Foundation for American Policy, "Analysis: GAO report finds H-1B Professionals are Paid Comparable to Similar U.S. Professionals, Important to Large and Startup Companies," January 2011, p.8, available at <http://www.nfap.com/pdf/H1BVisasandtheGAOReport-NFAPPolicyBrief-January2011.pdf>.
- According to the NFAP, the GAO inaccurately cites that the USCIS report "found 21 percent fraud in the H-1B program." The report alleged 13.4 percent fraud and 7.3 percent technical violations among the employers examined, but the baseline analysis does not take into account or provide the process available in practice for employers to defend themselves against the allegations. NFAP thus concludes that both the fraud and technical violations figures may not be completely representative.
- 26 *Ibid.*
- 27 Moira Herbst, "Visa Fraud Sparks Arrests Nationwide," *BusinessWeek*, February 13, 2009, available at [http://www.businessweek.com/bwdaily/dnflash/content/feb2009/db20090212\\_920784.htm](http://www.businessweek.com/bwdaily/dnflash/content/feb2009/db20090212_920784.htm).
- 28 *Ibid.*
- 29 Patrick Thibodeau, "Troubled H-1B fraud case ends quietly," *Computerworld*, May 16, 2011, available at [http://www.computerworld.com/s/article/9216694/Troubled\\_H\\_1B\\_fraud\\_case\\_ends\\_quietly\\_](http://www.computerworld.com/s/article/9216694/Troubled_H_1B_fraud_case_ends_quietly_).
- 30 American Federation of Teachers, "Importing Educators: Causes and Consequences of International Teacher Recruitment" (2009).
- 31 Steven Callegan, "Large-Scale Visa Fraud Alleged at Infosys," February 25, 2011, available at <http://www.courthousenews.com/2011/02/25/34452.htm>.
- 32 U.S. Citizenship and Immigration Services, "H-1B Benefit Fraud & Compliance Assessment"
- 33 Patrick Thibodeau, "H-1B Visa Program Under Increased DHS Scrutiny" (CIO, May 7, 2009), available at [http://www.cio.com/article/492001/H\\_1B\\_Visa\\_Program\\_Under\\_Increased\\_DHS\\_Scrutiny](http://www.cio.com/article/492001/H_1B_Visa_Program_Under_Increased_DHS_Scrutiny).
- 34 Donald Neufeld, "H-1B Visas: Designing a Program to Meet the Needs of the U.S. Economy and U.S. Workers," Testimony before the House Committee on the Judiciary, Subcommittee on Immigration Policy and Enforcement, March 31, 2011, available at [http://www.uscis.gov/USCIS/Resources/Congress/Testimonies/2011/testimony\\_2011331\\_H-1B\\_Neufeld.pdf](http://www.uscis.gov/USCIS/Resources/Congress/Testimonies/2011/testimony_2011331_H-1B_Neufeld.pdf).
- 35 Senate Judiciary Committee, Subcommittee on Immigration, Refugees and Border Security, "The Economic Imperative for Enacting Immigration Reform," July 26, 2011, statements available at <http://judiciary.senate.gov/hearings/hearing.cfm?id=3d9031b47812de2592c3baeba2beeb0>.
- 36 Alan B. Krueger, "Two Labor Economic Issues of Immigration Reform" (Washington: Center for American Progress, April 4, 2006), p. 1-3, available at [http://www.americanprogress.org/kf/krueger\\_immigration.pdf](http://www.americanprogress.org/kf/krueger_immigration.pdf).
- 37 Alan B. Krueger, "Two Labor Economic Issues of Immigration Reform" (Washington: Center for American Progress, 2006), available at [http://www.americanprogress.org/kf/krueger\\_immigration.pdf](http://www.americanprogress.org/kf/krueger_immigration.pdf), p. 1-3.
- 38 See Ray Marshall, Immigration for Shared Prosperity, A Framework for Comprehensive Reform, (2009) p. 43.
- 39 DHS, USCIS, "H-1B Fiscal Year (FY) 2012 Cap Season," October 31, 2011, available at <http://www.uscis.gov/portal/site/uscis/menuitem-5af9bb95919f35e66f614176543f6d1a/?vgnextoid=4b7cdd1d5fd37210VgnVCM100000082ca60aRCRD&vgnnextchannel=73566811264a3210VgnVCM100000b92ca60aRCRD>. See also INA Sections 214(g)(1)(A), 214(g)(5)(C).
- 40 The filing period opens on April 1, 6 months before the authorized start date. New annual visa numbers actually become available on October 1, the first day of the federal government's fiscal year.
- 41 A limited administrative fix to this problem has been established through an extension to the optional practical training program, but it is not a long-term solution to the problem. <http://www.uscis.gov/portal/site/uscis/menuitem.5af9bb95919f35e66f614176543f6d1a/?vgnextoid=9a3d3dd87aa191110VgnVCM1000004718190aRCRD&vgnnextchannel=68439c7755cb9010VgnVCM10000045f3d6a1RCRD>
- 42 See Norman Plotkin, "Time to Plan for the H-1B Visa Filing Deadline," Clean Tech Group, March 16, 2009, available at <http://cleantech.com/news/4270/time-plan-h-1b-visa-filing-deadline>.
- 43 See Eilene Zimmerman, "H-1B Visa Crunch: 'I Can't Grow My Business,'" *Fortune Small Business*, April 18, 2008, available at [http://money.cnn.com/2008/04/16/smbusiness/immigrant\\_visa\\_tech.fsb/index.htm](http://money.cnn.com/2008/04/16/smbusiness/immigrant_visa_tech.fsb/index.htm).
- 44 DHS, USCIS, "USCIS Reaches FY 2010 H-1B Cap," December 22, 2009, available at <http://www.uscis.gov/portal/site/uscis/menuitem.5af9bb95919f35e66f614176543f6d1a/?vgnextoid=153a1638367b5210VgnVCM100000082ca60aRCRD&vgnnextchannel=68439c7755cb9010VgnVCM10000045f3d6a1RCRD>.
- 45 DHS, USCIS, "USCIS Reaches FY 2011 H-1B Cap," March 29, 2011, available at <http://www.uscis.gov/portal/site/uscis/menuitem.5af9bb95919f35e66f614176543f6d1a/?vgnextoid=7fd9b9138c9cd210VgnVCM100000082ca60aRCRD&vgnnextchannel=68439c7755cb9010VgnVCM10000045f3d6a1RCRD> Miriam Jordan, "Slump Sinks Visa Program," *The Wall Street Journal*, October 30, 2009, available at [http://online.wsj.com/article/SB12567268735914549.html?mod=WSJ\\_hpp\\_MIDDLETopStories](http://online.wsj.com/article/SB12567268735914549.html?mod=WSJ_hpp_MIDDLETopStories).
- 46 MyVisaJobs, "Top 1000 H1B Visa and Green Card Sponsors, 2000-2009," available at [http://www.myvisajobs.com/Top\\_Visa\\_Sponsors.aspx](http://www.myvisajobs.com/Top_Visa_Sponsors.aspx).
- 47 A variant of this market based mechanism was contained in the SKIL Act bill, S. 1083, that was introduced in the Senate in 2007: <http://thomas.loc.gov/cgi-bin/query/D?c110:1-:/temp/-mdb9WxNO;> The SKIL Act bill, however, only provided for market-based increases in the annual number, not decreases. It also did not create a statutory ceiling.
- 48 US Department of State, "Employment-Based Immigrant Visas," available at [http://travel.state.gov/visa/immigrants/types/types\\_1323.html#3](http://travel.state.gov/visa/immigrants/types/types_1323.html#3).
- 49 U.S. Department of State, "Visa Bulletin," November 2011, available at [http://travel.state.gov/visa/bulletin/bulletin\\_5572.html](http://travel.state.gov/visa/bulletin/bulletin_5572.html).
- 50 *Ibid.*
- 51 Emily Bazar, "Opportunity Fuels Skilled Immigrants' Exodus," *USA Today*, September 21, 2009, available at [http://www.usatoday.com/news/nation/2009-09-20-brain-drain-home\\_N.htm](http://www.usatoday.com/news/nation/2009-09-20-brain-drain-home_N.htm); Emily Bazar, "More of the World's Talented Workers Opt to Leave USA," *USA Today*, September 21, 2009, available at [http://www.usatoday.com/news/nation/2009-09-20-brain-drain\\_N.htm](http://www.usatoday.com/news/nation/2009-09-20-brain-drain_N.htm); Vivek Wadhwa, "Is the U.S. Experiencing its First Brain Drain?" March 31, 2009, available at [http://www.soc.duke.edu/GlobalEngineering/pdfs/media/losingtheworlds/nam\\_us experiencing.pdf](http://www.soc.duke.edu/GlobalEngineering/pdfs/media/losingtheworlds/nam_us experiencing.pdf);
- 52 Stuart Anderson, "Keeping Talent In America," (Washington: National Foundation for American Policy, October 2011), available at [http://www.nfap.com/pdf/KEEPING\\_TALENT\\_IN\\_AMERICA\\_NFAP\\_October\\_2011.pdf](http://www.nfap.com/pdf/KEEPING_TALENT_IN_AMERICA_NFAP_October_2011.pdf).

- 53 Ibid.
- 54 Jennifer Hunt and Marjolaine Gauthier-Loiselle, "How Much Does Immigration Boost Innovation?" *American Economic Journal: Macroeconomics* 2 (2) (2010): 31-56, available at <http://ftp.iza.org/dp3921.pdf>. See also, Vivek Wadhwa et Al, "America's New Immigrant Entrepreneurs" (Kansas City: Kauffman Foundation, 2007), available at [http://people.ischool.berkeley.edu/~anno/Papers/Americas\\_new\\_immigrant\\_entrepreneurs\\_1.pdf](http://people.ischool.berkeley.edu/~anno/Papers/Americas_new_immigrant_entrepreneurs_1.pdf).
- 55 John Kerry, Richard Lugar, and Mark Udall, "S. 565: StartUp Visa Act of 2011," 112th Congress, U.S. Senate, March 14, 2011, available at <http://www.govtrack.us/congress/billtext.xpd?bill=s112-565>.
- 56 Only 5,000 permanent residence visas are available annually for low-skilled workers and that number includes any dependents. This category is so small that it is effectively useless as a business option.
- 57 Note that while some commentators have claimed that it is common practice for companies to use the L-1 category to circumvent the H-1B caps, a recent report by the Inspector General found no substantiation for the claim. See Department of Homeland Security, "Review of Vulnerabilities and Potential Abuses of the L-1 Visa Program," January 2006, available at [http://www.dhs.gov/xoig/assets/katovrsght/OIG\\_06-22\\_Jan06.pdf](http://www.dhs.gov/xoig/assets/katovrsght/OIG_06-22_Jan06.pdf), p. 10.
- 58 Patrick Brethour, "Canada: A UN of Tech Talent," *The Globe and Mail*, available at <http://www.theglobeandmail.com/news/technology/article796346.ece>.
- 59 Michael Mandel, "The Real Cost of Offshoring," *BusinessWeek*, June 18, 2007, available at [http://www.businessweek.com/magazine/content/07\\_25/b4039001.htm](http://www.businessweek.com/magazine/content/07_25/b4039001.htm); Some of the arguments Business week make can be found in a study by Susan Houseman from W.E. Upjohn Institute for Employment Research entitled "Outsourcing, Offshoring, and Productivity Measurement in U.S. Manufacturing," which can be found in the International Labour Review (Vol. 146 (2007), No. 1-2)—I attached a PDF of the report for your review. However, others are made independently by *BusinessWeek* itself.
- 60 Marianne Kolbasuk McGee and Chris Murphy, "Do Indian Outsources Misuse the H1-B Visa Program?" *Information Week*, May 19, 2007, available at <http://www.informationweek.com/news/global-cio/outourcing/showArticle.jhtml?articleID=199602025>.
- 61 Ron Hira, "Hoq Guestworkers Promote Outsources," *The American Prospect*, August 5, 2007, available at [http://www.prospect.org/cs/articles?article=how\\_guestworkers\\_promote\\_outsourcing](http://www.prospect.org/cs/articles?article=how_guestworkers_promote_outsourcing).
- 62 Ron Hira, "IT's Time To Overhaul H1-B Visas," *Business Week*, April 2, 2009, available at [http://www.businessweek.com/magazine/content/09\\_15/b4126063331942.htm](http://www.businessweek.com/magazine/content/09_15/b4126063331942.htm). This is an article by the San Francisco Chronicle from 2006 on Bank of America's practice of forcing employees to train their replacements as a condition of their severance pay, the article goes on to say that other companies have similar practices but does not provide a list. <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2006/06/09/BUGPJ-JA66348.DTL> This is a general article on the subject from USA Today (2004), it does not name any companies. [http://www.usatoday.com/money/workplace/2004-04-06-replace\\_x.htm](http://www.usatoday.com/money/workplace/2004-04-06-replace_x.htm)
- 63 In addition to these "job shops," other problems with recruitment of high-skilled workers have been identified. A 2009 report by the American Federation of Teachers, for example, described foreign teachers being placed at public schools without actually being public employees. These teachers were not only paid drastically below the prevailing wage and were without the safety nets afforded to most teachers, but they also could not be clearly held accountable for their actions. Even when these teachers were unionized and wage protected, the recruiters often exacted unscrupulously high premiums from the foreign workers in order to be placed. American Federation of Teachers, "Importing Educators: Causes and Consequences of International Teacher Recruitment" (2009).
- 64 Soares, "Working Learners."
- 65 Scott Lilly, "Pumping Life Back into the U.S. Economy" (Washington: Center for American Progress, 2009), available at [http://www.americanprogress.org/issues/2009/01/pdf/lilly\\_stimulus.pdf](http://www.americanprogress.org/issues/2009/01/pdf/lilly_stimulus.pdf).
- 66 Robert Pollin, James Heintz, and Heidi Garrett-Peltier, "The Economic Benefits of Investing in Clean Energy" (Washington: Center for American Progress, 2009), available at [http://www.americanprogress.org/issues/2009/06/clean\\_energy.html](http://www.americanprogress.org/issues/2009/06/clean_energy.html).
- 67 Linda Levine, "CRS Report for Congress," Congressional Research Service, January 23, 2007, available at [http://www.ipmall.info/hosted\\_resources/crs/RL31973-070123.pdf](http://www.ipmall.info/hosted_resources/crs/RL31973-070123.pdf).
- 68 Of course, "industry standards" is an amorphous concept that must be defined. The definition must be flexible enough to recognize different recruiting standards and practices for different sized companies in different industries.
- 69 Linda Levine, "CRS Report for Congress," Congressional Research Service, January 23, 2007, available at [http://www.ipmall.info/hosted\\_resources/crs/RL31973-070123.pdf](http://www.ipmall.info/hosted_resources/crs/RL31973-070123.pdf).
- 70 Indian outsourcing companies or "job shops" such as Infosys and Wipro rotate about 1,000 workers to and from the United States annually. The two largest receivers of H-1B visas, together they were granted almost 9,000 H-1B visas in 2006. Although there is anecdotal evidence of visa holders being paid less than the U.S. market rates, there is no evidence of pervasive wage depression and abuse. Infosys and Wipro argue that their practices still spur U.S. innovation and jobs by providing foreign talent, which U.S. consumers benefit from better customer service, and that cracking down on Indian outsourcing companies would be futile as U.S. outsourcing companies could easily engage in similar practices.

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## About Science Progress

Science Progress, a project of the Center for American Progress, is designed to improve public understanding of science and technology and to showcase exciting, progressive ideas about the many ways in which government and citizens can leverage innovation for the common good. Since its inception in the fall of 2007, Science Progress has helped shape the conversation about our country's investment in science.

science progress

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CAP's Doing What Works project promotes government reform to efficiently allocate scarce resources and achieve greater results for the American people. This project specifically has three key objectives:

- Eliminating or redesigning misguided spending programs and tax expenditures, focused on priority areas such as health care, energy, and education
- Boosting government productivity by streamlining management and strengthening operations in the areas of human resources, information technology, and procurement
- Building a foundation for smarter decision-making by enhancing transparency and performance measurement and evaluation

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