

Importing Innovators and Job Creators

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Two facts about the US economy are not widely known: (1) that between 1980 and the Great Recession, virtually all net new jobs were created by firms less than five years old; and (2) that immigrants have been responsible for founding or co-founding roughly 25% of successful high-tech startups (as well as launching businesses at rates above the national average). Since the recession, however, the number of new businesses has plunged from a pre-recession range of 550-600 thousand per year to about 400,000 annually, while the number of jobs created per startup has been falling for over a decade (more likely due to structural than cyclical forces). It should be clear then that the US economy will only have a sustained recovery or enjoy robust growth over the long run if it can restore its entrepreneurial mojo, and that one important key to doing that is to allow more immigrants, especially those with skills to launch new growth businesses that they are acquiring by attending US universities, to come and stay in this country. In this essay, I will highlight several what I believe to be sensible approaches to immigration reform – approaches that make economic sense and that are politically realistic.

Three of the worst words in the English language are “not invented here.” Companies suffer when they refuse to adapt and improve upon the ideas and technology developed by other companies. The same is true of countries.

For decades, the United States has been an innovation leader in the world. Most of the major innovations that define a modern economy originated and were commercialized by Americans or in the United States: the telegraph, the telephone, the automobile, the airplane, air conditioning, computers of all types, the integrated circuit, most of the software that runs them, and of course the Internet and Internet search.

The United States continues to pour out innovations, though not as quickly as many would like, hence the reason for this symposium. We no longer are the dominant innovator among countries that we once were. Other countries are inevitably catching up, but this is not a bad thing. Innovation is like science, where the great thinkers stand on the shoulders of previous giants. The United States can only benefit from innovations developed abroad, not only by importing them in the form of goods and services but by adapting and improving upon them in the same way that scientists build upon insights of others.

The main thesis of this essay is that one of the best ways to import ideas and those who implement them is to import the people from abroad who are most likely to develop and commercialize innovations. The United States does this through various provisions of our immigration laws that are far too stingy for the task:

- by granting visas to foreign students to attend our universities but who must then return

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- home after obtaining their degrees;
- to 65,000 skilled workers in the aggregate to work temporarily (for up to six years) at firms able to qualify for these workers on these “H1-B” visas, but who must then return home unless their visas are extended; and
- to up to 10,000 immigrant entrepreneurs who can demonstrate a commitment of \$1 million to a US enterprise (\$500,000 if that firm is located in an economically disadvantaged area), requirements that are far too stringent.

Various bills have been introduced in Congress and made some headway, as of this writing, to liberalize immigration of skilled workers and entrepreneurs. Action on these proposals is long overdue, especially given the demonstrated record of immigrants as innovators and job creators.

Up to now, action on these ideas has been held up by the political deadlock over more comprehensive immigration reform. With the likely completion of at least the first stage of the deficit reduction negotiations by early January 2013, the President and the Congress are expected to turn to immigration reform as one of their next objects of legislation. This essay argues for major liberalization of the immigration laws relating to skilled immigrants and entrepreneurs, ideally as part of a comprehensive immigration package, or if that somehow fails, as part of comprehensive “startup” legislation or, as a last resort, as a standalone initiative.

The Huge Contribution of Immigrants to U.S. Innovation²

It is commonly noted that America is a nation of immigrants and that this has historically one of our strengths, though often a contentious one.

Skilled immigrants and those who have become entrepreneurs have made especially valuable contributions.

The role of immigrants in advancing science and causes related to it is well known and shouldn't have to be rehearsed. But given the way the United States treats highly skilled immigrants today, discussed in the next section, it bears repeating.

To begin with the most obvious, it is a consensus of historians that the US military would have suffered hugely greater casualties in defeating Japan in World War II had the U.S. not developed and used the atomic bomb, which quickly ended that war. That project, in turn, would have not succeeded without the contributions of many immigrant scientists who fled Nazi controlled countries to come to this country. Many of these scientists had moral qualms about what they were doing, and the morality of dropping the bomb will continue to be debated as long as men and women inhabit this Earth. But millions of American families, their sons (including this author) and daughters and their children, would not be here today if brilliant immigrant scientists like Albert Einstein, Enrico Fermi, Leo Szilard, Edward Teller, Eugene Wigner, among many others, had not literally saved the lives of hundreds of thousands, and possibly a million, American servicemen who otherwise would have died fighting a conventional war against Japan.

After the War, many of the same scientists continued to make contributions that contributed to the peaceful use of nuclear power, while others, most famously Werner Von Braun, helped make the U.S. space program, with both military and peaceful applications, possible. Igor Sikorsky, a

² This section draws heavily on Chapter 5 of *Better Capitalism*.

Russian immigrant, developed the first viable helicopter. The first nuclear submarine was built under the direction of Admiral Hyman Rickover, an immigrant from Poland.

The entrepreneurial contributions of immigrants have been equally impressive, and have a long history. Many iconic US companies (some since absorbed by other firms) were launched or co-founded by immigrants, including AT&T (Alexander Graham Bell), Levi Strauss & Co (Levi Strauss), US Steel (Andrew Carnegie), Dow Chemical (Herbert Dow), E.I. du Pont (the DuPont family), Pfizer (Charles Pfizer), Buick Motors (David Buick), H.J. Heinz (Henry Heinz), Kraft Foods (James Kraft), Proctor & Gamble (William Proctor and James Gamble), Annheiser-Busch (Eberhard Annheiser and Adolphus Busch), MGM (Samuel Goldwyn and Louis Mayer), Goldman Sachs (Marcus Goldman) and Chef Boyardee (Ettore Boiardi). One study computed that 18 percent of the Fortune 500 companies in 2010 had been founded by immigrants, and fully 40 percent were launched by immigrants or their children.³

Younger readers today, of course, are more familiar with other immigrant founders of more recently established tech companies. These include such prominent examples, with living founders or co-founders, as Google (Sergey Brin), Intel (Andrew Grove), Yahoo (Jerry Yang), PayPal, Tesla Motors and Space X (Elon Musk), YouTube (Jawed Karim), and Cascade Communications and Sycamore Networks (Gururaj "Desh" Deshpande).

Going beyond anecdotes to actual data, immigrants consistently have launched their own companies at almost twice the rate (510 firms per 100,000) as native-born Americans (300 firms per 100,000).⁴ Immigrants have been especially important in the tech sector in recent decades. Between 1995 and 2005, for example, immigrants founded or co-founded about ¼ of all successful high-tech companies, and were responsible for an equal share of U.S. and global patents.⁵ Those trends have not materially changed in more recent years, although there is disturbing evidence that skilled immigrants to the U.S., especially those with technology skills from India and China, are returning in greater numbers to their home countries rather than remaining to launch their businesses in the United States.⁶

Immigrant-founded companies are not only important to advancing innovation, but to creating jobs. One of the most widely cited studies reports that between 1995 and 2005, successful high-tech companies founded or co-founded by immigrants employed over 450,000 U.S. employers while generating an estimated \$52 billion in revenue.⁷

The Anemic and Short-Sighted U.S. Policy toward Skilled Immigrants

Despite this rather remarkable record of contributions by immigrants to science and technology and to the U.S. economy and society, skilled immigrants and immigrant entrepreneurs are given rather

³ Partnership for a New America, "The New American Fortune 500", June 2011.

⁴ Kauffman Index of Entrepreneurial Activity, available at the website of the Kauffman Foundation, www.kauffman.org.

⁵ Wadhwa et al, "America's Immigrant Entrepreneurs, Parts I and II," available on the Kauffman Foundation's website.

⁶ Vivek Wadhwa, *The Immigration Exodus* (Wharton Digital Press, 2012).

⁷ Wadhwa et al, "America's Immigrant Entrepreneurs", Parts I and II.

short shrift under current U.S. immigration policy.

With a labor force of roughly 150 million people, the United States allows only 65,000 skilled immigrants short-term (6 year) H1-B visas to enter the country each year, and then only to work for specific employers who can demonstrate a need for them.

These H1B visas, however useful they are to the firms benefit from them, have major drawbacks. From the immigrants' point of view, although the H1B visa affords an opportunity to earn higher wages than in their home countries, the visas are temporary and while theoretically can be renewed, there is no guarantee of this outcome. More importantly, the H1B visa is tied to the firm that sponsors the individual, who cannot leave for another job unless that employer gains approval for doing so. For all these reasons, the skilled immigrants who gain entry on an H1B are likely to be underpaid relative to their native-born counterparts, while effectively being unable to launch new firms in the United States.

H1Bs also do not do as much for the U.S. economy as permanent work visas (green cards). The H1B system all but eliminates labor mobility of those who hold the visa, preventing non-sponsoring firms to bid for the talent they need to launch and to grow.

The United States also permits foreign students to study at its great universities. Each year, 120,000 degrees are given to these students, roughly half of them in the "STEM" fields (science, technology, engineering and mathematics) that are especially critical to innovation. Foreign students gain valuable and highly marketable skills in the process, but except for the 20,000 additional H1-B temporary work permits that are provided annually only to those foreign graduates earning a Masters or PhD, all of the rest are sent back to their home countries after completing their studies in the United States.

As welcome as student immigration visas are, they too have severe shortcomings, which keep the United States from realizing the full potential of the skills, ambition, and creativity of individuals born abroad for the U.S. economy and society. Except for the lucky few who are allowed to stay on as temporary employees, student visas expire after immigrants complete their degrees, forcing the exit from this country of highly skilled individuals who could contribute to innovations developed in this country, both through companies they work for and firms they eventually found. In addition, since foreign students pay full tuition and do not receive financial assistance from U.S. sources, they effectively subsidize many U.S. students whose tuitions can be discounted because the tuitions of foreign students are not.

Finally, U.S. immigration laws permit a very limited number of immigrant entrepreneurs (and their immediate family members) to enter the country on the EB-5 visa. This visa is limited in numbers, since it is capped at only 10,000 per year, a quota that has never been filled. By comparison, until the recession, roughly 600,000 firms were launched in the United States each year. The EB-5 also is of limited utility because of the high financial thresholds that applicants must meet, as noted at the outset.

The fact the EB-5 quota has never been fully used is a powerful testament to its limited value. Moreover, again to this author's knowledge, the famous immigrant entrepreneurs listed in the previous section did not use the EB-5, or anything like it, to gain entry into this country.

Immigration Reforms to Spur Innovation and

Entrepreneurship

A number of proposals for liberalizing immigration quotas for both skilled individuals and entrepreneurs have made some headway in Congress in recent years. I draw on them in advancing two major immigration reforms in this section.

Substantially Increase Green Cards for Skilled Immigrants

The first reform is to automatically provide green cards for all STEM graduates of U.S. universities. This "green card-for-a-STEM degree" idea has many fathers, and can be implemented in different versions. The most liberal would give the green card upon receipt of a bachelor's degree in a STEM field, which given recent graduation rates, would provide about 60,000 visas per year. More restrictive versions would hand out the visa only to recipients of a Masters, or even more restrictively, just to those earning a PhD.

In late 2012, the House passed a version of the green card-for-STEM idea, sponsored by Rep. Lamar Smith, which would have created a new group of 55,000 visas for foreign-born graduates with advanced degrees from U.S. universities in STEM fields. On November 30, the House passed this bill but the Senate did not take it up.

The House bill had the political advantage, in the current anti-immigrant, climate of not creating additional immigrants, but instead would have offset the new STEM visas by eliminating the "greed card lottery" system established in 1990 for the purpose of creating greater diversity in the immigrant pool. The House bill also differed in this respect from the immigration provisions in the Startup Act 2.0, introduced in both the Senate and the House in late spring of 2012 by bipartisan sponsors in both chambers, and reintroduced in February, 2013 with essentially the same features as Startup Act 3.0. Under SUA 3.0, 50,000 new visas for foreign-born immigrants with advanced STEM degrees from U.S. universities would have been admitted on a one time basis over multiple years, but without an offsetting decline in another immigrant category.

A different STEM provision was included in two bipartisan immigration bills introduced in early 2013 and discussed below that provide a limited number of green cards for immigrants with PhDs and masters' degrees in STEM fields, while expanding the numbers of H1-B's, tied to the annual employer demand for them. The I-squared Act of 2013 (S. 169), in particular, also would allow, for the first time, dependent spouses of H1-B visa holders to work in the United States.

Tech companies and universities have strongly endorsed the green card-for-STEM idea, but it has languished because of insistence by Democrats and the Administration that skilled immigration not be considered separately from more comprehensive immigration reform that would create pathways to citizenship for the millions of illegal immigrants already living and working in this country, most of them surely low skilled.

Surprisingly, one of the staunchest researchers of skilled immigration, Vivek Wadhwa has expressed a different reservation about the STEM-green card notion, fearing that it could make it too easy for "diploma mills" in the United States to hand out advanced STEM degrees.⁸ This potential

⁸ Wadhwa, *Immigration Exodus*, chapter 7.

problem is easily addressed, not only by the annual visa cap, but also by inserting in any final legislative language that the STEM degrees must be earned from "accredited" U.S. universities (legislative history can recite the various accrediting bodies to remove any doubt as to who they are) or those that have received federal or state research monies.

The only substantive criticism of the STEM-green card idea, in any form (including Wadhwa's extended student visa idea), is that it allegedly would depress the wages and incomes of skilled native-born individuals (below levels that would otherwise exist) or even reduce the number of jobs available for skilled native-born Americans. A survey of studies of the wage compression hypothesis finds little support for it.⁹ There is a good reason why. Additional skilled labor enhances the growth and profitability of both the firms that employ them as well as those firms and their employees who provide goods and services to immigrant-hiring firms. In other words, more skilled labor enlarges the entire economic pie, with many winners beyond the immigrants themselves.

This isn't to deny that in the short-run, some native born skilled workers may suffer the loss of income or job opportunities, just as would be the case with any technological advance that reduces the demand for a particular kind of skill. But one of the hallmarks of the U.S. economy is its labor mobility. People move to new kinds of jobs in new locations in response to market signals. To oppose the addition of more skilled labor, independent of their impact on forming new firms, a topic addressed next, is akin to opposing technological progress more broadly because of the short-run dislocations it may cause. That runs against the grain of everything the United States has stood for since its founding.

Substantially Increase Conditional Visas for Immigrant Entrepreneurs

Given the drop in new firm foundation and yet the clear entrepreneurial record of immigrants, generally and in high tech, there is also a strong (I would say open and shut) case for greatly expanding the numbers of entrepreneurs' visa beyond the EB-5 annual quota of 10,000, as well for liberalizing the conditions attached to those visas.

In principle, I would favor a system that grants immigrant entrepreneurs a temporary visa for some limited period, say two years, to allow them to form their business and hire at least one non-family member on a full-time basis, and then a permanent green card sometime later, perhaps within five years, if they can show that their current enterprise has hired some larger number, say three or five, non-family members. My ideal system would not impose a minimum financial investment requirement, but rather would concentrate on tying immigrant status to job creation. Such a system would make crystal clear that immigrant entrepreneurs are not taking anyone's job, and instead are only creating them.

This ideal system is not going to happen, however, because of a fear, which could have some merit, that the temporary entrepreneur immigrant status would be too easy for immigrants intent on entering the United States and staying after the temporary period illegally to abuse. Imposing some minimum financial commitment to the enterprise is a good way of reducing this risk.

A number of proposals have surfaced in Congress in the past two years that would establish such a system. Two of the first proposals were co-sponsored by Senators Richard Lugar and John Kerry,

⁹ Francine Blau and Lawrence Kahn, "Immigration and the Distribution of Incomes," NBER Working Paper #18515, November 2012.

who are now no longer in the Senate (Lugar was defeated in a 2012 primary, while Kerry has since been appointed Secretary of State).

In its initial version, introduced in Congress in 2010, the Kerry-Lugar Startup Visa Act would have granted a temporary EB-6 visa to immigrant entrepreneurs who could demonstrate receiving at least \$250,000 in outside financing and had hired at least one non-family member. The visa status would turn to a green card five years later if the firm employed at least five non-family members and was earning revenue of at least \$1 million. In addition to the highly restrictive equity and revenue thresholds, the numbers of the EB-6 also were very limited: their quota was to be subtracted from the unused portion of the very low EB-5 visa, guaranteeing that fewer than 10,000 individuals would receive the new EB-6 each year.

In 2011, the two Senators introduced a liberalized version of the Startup Visa Act that significantly relaxed the financial conditions, but nonetheless kept the severe limitations on the numbers of the EB-6 visa intact. In particular, the updated version of the Startup Visa Act offered three "doors" for immigrant entrepreneurs to enter the United States: one tied to third-party investment of at least \$100,000; a second for immigrants already in the United States on an H1B visa or as a STEM graduate of an American university and meeting either a minimum income threshold of \$30,000 or asset requirement of \$60,000, with a minimum third-party investment of at least \$20,000; and a third method of entry for foreign company owners whose business had generated at least \$100,000 in U.S. sales. Permanent residence in the United States was conditioned on meeting a minimum job generation threshold of at least two non-family employees within two years of entry on a temporary EB-6 visa.

The second version of Kerry-Lugar was a major improvement on the first in offering multiple methods of entry, with lower financial requirements. But it still suffered from the major flaw of the initial proposal: the number of EB-6 visas was still set at the unused portion of the EB-5 visa, which made even the second version very limited in scope.

The Startup Act 3.0, previously mentioned, also would require \$100,000 in third party (or immigrant) investment, tied to a one-time increase of 75,000 entrepreneurs' visas, spread over four years. The immigrant startups must hire at least one U.S. employee right away for the immigrant to have a conditional work visa, and if the company expands to five full-time employees within four years, the immigrant founder would be given a permanent green card.

Even with their limits, the SUA entrepreneur visa requirements are by far the most liberal of any that have been formally proposed in the U.S. Congress. They also promise substantial job creation. Dane Stangler and Jared Konczal of the Kauffman Foundation have estimated that 75,000 new entrepreneurs conservatively would generate between 500,000 and 1.6 million new jobs over the next ten years. These jobs, in turn, would be responsible for boosting GDP by up to 1.6% by the end of the decade.¹⁰

Any initiative like SUA 3.0 that could generate such a substantial increase in jobs and output at a time when the U.S. economy is under-performing essentially at no budgetary cost should be a

¹⁰ Dane Stangler and Jared Konczal, "Give me Your Entrepreneurs, Your Innovators", Kauffman Foundation, February 27, 2013, available at <http://www.kauffman.org/newsroom/startup-visa-could-create-up-to-1-point-6-million-u-s-jobs-in-next-10-years-according-to-kauffman-foundation-report.aspx>.

political no-brainer.

Overcoming Political Roadblocks

With the 2012 election campaign over, and the first round of the fiscal cliff negotiations out of the way, there is some hope that Congress will take up on a bipartisan basis comprehensive immigration reform after the next round of budget negotiations relating to the lifting of the debt ceiling is completed. More comprehensive immigration reform is now clearly in the interest of both political parties.

Democrats have been pushing for the DREAM Act, for example, for some time. Many observers have credited the party's pro-immigration stance with the strong Hispanic vote in favor of President Obama in the 2012 election. The President has since followed up by endorsing a set of principles that eventually would legalize the roughly 11 million undocumented individuals now living in the United States.

As for Republicans, it is no secret of their desire to win back Hispanic voters who had supported the party during the tenure of President George W. Bush. This task is especially urgent given the relatively rapid growth of citizens and voters of Hispanic origin. Presidential candidate Mitt Romney was clearly hurt in his campaign by the perception among many in the Hispanic community (recognizing that this "community" is not monolithic, but is generally understood to refer to individuals with heritage from a Spanish speaking country) that he and the Republican party were hostile to immigrants.

It is this bipartisan spirit that has produced two major immigration proposals from two different bipartisan groups of Senators

If Congress and the President can find a way to bridge their gaps over some thorny issues – notably, whether the pathway to citizenship for undocumented individuals will be contingent on effective control of the border, and if so, how that condition would be defined – there is an excellent chance that any final immigration reform package will include provisions that expand the numbers of highly skilled immigrants, including entrepreneurs. The nation will be far better off with such a result.