

Other countries court skilled immigrants frustrated by U.S. visa laws

By Kevin Sullivan, Published: February 18

CAMBRIDGE, Mass. — The contraption sits in a basement lab at the Massachusetts Institute of Technology, a mishmash of hoses, wires, whirring pumps and a 12-foot-high plastic tower filled with steam and dripping water, all set on plastic milk crates.

It looks like a high school science project, but it was developed by two postdoctoral mechanical engineers at MIT. And it just might be a breakthrough that creates wealth and jobs in the United States and transforms the white-hot industry of oil and natural gas hydraulic fracturing, or fracking.

That is, as long as the foreign-born inventors aren't forced to leave the country.

Anurag Bajpayee and Prakash Narayan Govindan, both from India, have started a company to sell the system to oil businesses that are desperate for a cheaper, cleaner way to dispose of the billions of gallons of contaminated water produced by fracking.

Oil companies have flown them to Texas and North Dakota. They say they are about to close on millions of dollars in financing, and they expect to hire 100 employees in the next couple of years. Scientific American magazine called water-decontamination technology developed by Bajpayee one of the top 10 [“world-changing ideas”](#) of 2012.

But their student visas expire soon, both before summer, and because of the restrictive U.S. visa system, they may have to move their company to India or another country. “We love it here,” said Bajpayee, a cheerful 27-year-old in an argyle sweater and jeans. “But there are so many hoops you have to jump through. And you risk getting deported while you are creating jobs.”

Much of the immigration debate in Washington has centered on the 11 million undocumented migrants in the country. But, from the halls of MIT to the boardrooms of Silicon Valley, business and academic leaders are more focused on what they call an even greater threat to the U.S. economy: immigration laws that chase away highly skilled foreigners educated in U.S. universities, often with degrees funded by U.S. taxpayers.

While other countries are actively recruiting foreign-born U.S. graduates, the United States has strict limits on visas for highly skilled workers that often put them on waiting lists of many years. And unlike Canada and other countries, the United States offers no specific visa for young entrepreneurs like Bajpayee and Narayan who want to start a business in America.

“We train these people and then we push them away, while Chile and the U.K. and Canada are coming in to recruit them,” said Bill Aulet, managing director of the Martin Trust Center for MIT Entrepreneurship. “These are people who are creating jobs. It is so outrageous to me.”

Solution is gridlocked

The situation exemplifies the worst in Washington gridlock: Even when both sides agree on something, they can't agree on how to make it happen.

President Obama supports making it easier for foreigners who earn master's degrees or PhDs at U.S. universities to get green cards, as does a bipartisan group of U.S. senators working on reform. A solution is stuck in partisan infighting, however, over how to craft comprehensive reforms that address both skilled and unskilled immigrants.

Republicans have proposed increasing the number of visas for skilled immigrants by cutting the number available for unskilled immigrants — a trade-off that Democrats oppose.

Obama and some in Congress have also proposed creating a “start-up visa” for foreign entrepreneurs, similar to what Canada and other countries offer. Many applaud this plan, but not all.

“It's a stupid idea,” said [Mark Krikorian](#) of the Center for Immigration Studies, which supports tighter immigration controls. “What is an entrepreneur? Businesses come and go.”

That kind of talk is heresy in Silicon Valley, where business leaders have begged the government for more-welcoming immigration laws. The biggest obstacle to growth in America's tech industry, they say, is a desperate shortage of highly skilled workers in the STEM fields: science, technology, engineering and mathematics.

“No matter how many visas they gave out, those people would all get jobs and we would still need more,” said Margit Wennmachers, a partner at [Andreessen Horowitz](#), a major venture-capital firm in Silicon Valley. “It's not like we need 10,000. I think we could do with a million and still be hungry.”

According to a [study](#) by the Brookings Institution, about half of all PhDs working in science and technology are foreign-born. And about [40 percent](#) of all MIT graduate students are from other countries.

Leon Sandler, executive director of MIT's [Deshpande Center](#) for Technical Innovation, said it costs about \$250,000 to educate a single PhD student and the U.S. government pays for at least 80 percent of MIT's graduate research.

“Essentially we are funding their research, spending a quarter-million dollars in taxpayer money; then we make it hard for these people to stay here,” said Sandler, whose group helps start-ups and provided nearly \$150,000 to support Bajpayee and Narayan. “If you want more innovation in this country, fix the visa situation.”

A global bidding war

Countries from Canada to Germany to Australia to Singapore are enthusiastically courting foreign entrepreneurs with relatively easy visas. Some offer cash.

China has given bonuses of up to \$150,000 to thousands of highly skilled expatriates who have come home to work or start businesses. Chile is luring top talent with \$40,000 in capital, free office space and a quick visa through its [“Start-up Chile”](#) program.

Officials said the program has had more than 5,600 applicants since it started in 2010; it has accepted more than 1,000 entrepreneurs from 51 countries. The program has attracted dozens of foreign-born graduates of U.S. universities, who have started 47 businesses there.

On April 1, Canada plans to launch a [start-up visa program](#) giving entrepreneurs immediate permanent residence. Citizenship and Immigration Minister Jason Kenney told reporters last month that the program was designed, in part, to poach foreigners from the United States.

“We see the bright, young, international tech developers in the U.S. who are stuck on temporary visas as an immediate market, if you will, for this program,” Kenney said at a Jan. 25 news conference in Toronto.

Many foreign governments and companies are actively recruiting in U.S. centers of higher education from Cambridge, Mass., to Stanford, Calif., offering top graduates alternatives to the expensive, lengthy, difficult and, some say, even hostile U.S. visa system.

Switzerland, for example, has a “science consulate” with a sleek, modern storefront on a street between MIT and Harvard devoted to promoting Swiss companies and universities to top students.

A Silicon Valley company, [Blueseed](#), has proposed a novel way to skirt U.S. immigration laws: It is trying to create a tech hub on a leased cruise ship in international waters 12 miles off the California coast. Entrepreneurs could run their start-ups there with no need for a visa, and ferry to Silicon Valley on visitor visas to meet with investors or clients.

More than 1,000 entrepreneurs from 64 countries have expressed interest, and investors have put up more than \$400,000, said Blueseed executive Dario Mutabdzija, a U.S. citizen who came to the United States as a refugee from the former Yugoslavia.

“The current U.S. laws are not appropriate for the current economic reality,” Mutabdzija said. “Blueseed has become a poster child for that.”

Other options elsewhere

Bajpayee and Narayan want to stay in the United States. They don’t want to move to Chile or Israel or Singapore, which seem too small and too far from their main markets in the U.S. oil and gas fields. But, they said, if they can’t legally stay in the United States, they have other options to consider.

Indian and Chinese investors want them to locate in those countries. Brazilian mining company officials have called, too, hoping to lure them to Brazil. They have thought about moving to Australia.

“If it doesn’t happen in the U.S.,” Narayan said, “we will make it happen somewhere else.”

Bajpayee came to the United States from India 10 years ago, when he was 18, drawn by the dream of attending a U.S. university. He ended up at the University of Missouri because his uncle lived nearby.

At first his English needed work, and he didn’t understand many of the jokes his new American friends were making. So he said he started watching American movies, sometimes three a day. “Forrest Gump.” “The Godfather.” “American Pie.” “Animal House.” Anything starring Will Ferrell.

By the time classes began in the fall, he said, he had watched 85 films and could make his own jokes in fluent American English.

“Living in the middle of Missouri really forced me to learn the language and the culture,” he said. “In New York or California, there are lots of Indian people. But in southern Missouri, there were just lots of nice Missouri farm boys. You have to learn to enjoy a football game.”

He earned a bachelor’s degree in mechanical engineering in three years, then was accepted at MIT, where he finished a master’s and earned his PhD last summer. His research was paid for partly by U.S. government grants and partly by the Deshpande Center.

During his studies, he worked with a professor who was researching the freezing of human cells. They were looking for a way to remove moisture from cells so they could be frozen without damage.

Bajpayee discovered that one of the processes they were using was unexpectedly effective at removing contaminants from water. A professor asked him: Could that technique be used to desalinate seawater or clean contaminated water, perhaps producing drinking water on a large scale?

“At MIT, no idea is too wild or too revolutionary to consider,” said Bajpayee, who exudes an inventor’s optimism and a salesman’s charm. “And this worked.”

Narayan, 28, came to MIT in 2008 and was working on his own water-purification research when he met Bajpayee. Much more reserved than his gregarious partner, he had grown up in southern India in an apartment building with no running water. He said his life’s dream was to create a cheap way to provide safe drinking water to millions of people.

The two engineers pooled their efforts. Their plan is to first market Narayan’s system, the one bubbling away in the MIT basement, and keep working to perfect Bajpayee’s.

They said their systems could make fracking more cost-efficient and environmentally safe. Robert MacKenzie, an oil industry analyst with FBR Capital Markets, said oil companies create seven barrels of wastewater for every barrel of oil they produce. If Bajpayee and Narayan have found a way to fully clean that wastewater, cheaply and on an industrial scale, MacKenzie said, “That could be the Holy Grail.”

Business dreams at risk

When he arrived in the United States, Bajpayee was issued a five-year student visa, which he renewed for a second five years. It expires in May.

Now, with a business and millions of dollars of financing on the line, he wants the security of permanent residency. But all his routes to a green card are difficult.

Last September, after he finished his PhD, he was granted one year of Optional Practical Training (OPT), for those on student visas, which allows him to stay in the United States for a few months longer. He could apply for an OPT extension for 17 months more, an option open to people with degrees in the STEM fields.

But that comes with a tough restriction: After his student visa expires in May, if he left the United States for any reason — to visit family, to attend a business meeting — he would have to go back to India to apply for a new student visa.

The law says that people on student visas must intend to leave the country after their studies end. But because Bajpayee has started a company in the United States, lawyers tell him he could easily be denied a new student visa.

The most common visa for high-skilled immigrant workers is the H1-B, for foreigners working at a U.S. firm. But immigration lawyers said the government often denies those visas for people working for businesses they started themselves — so Bajpayee would probably be rejected.

His most promising option, he said, would be to apply for an [EB-1 visa](#) for people who have “extraordinary ability.” Those visas are among the most difficult to get. They require applicants to show that they are “one of a small percentage who have risen to the very top” of their field. They must have won a “major, internationally recognized award,” such as a Pulitzer Prize, an Oscar or an Olympic medal. If they have no such award, they must have been published in prestigious scientific journals or have made other extraordinary contributions in their field.

Of the 140,000 employment-based immigrant visas given each year, only about 2 percent are in that category.

Bajpayee and Narayan have systematic plans for how to perfect their product, manufacture it, sell it and grow their business. But when it comes to getting a green card, their strategies are less scientific.

“Prayer,” said Narayan.

“My strategy,” Bajpayee said, “is to get the best possible lawyer in Boston and pay them as much money as they desire.”

http://www.washingtonpost.com/national/other-countries-court-skilled-immigrants-frustrated-by-us-visa-laws/2013/02/18/73d9f7ce-7137-11e2-ac36-3d8d9dcaa2e2_story.html