Immigration Brain Drain

THROWING OUT THE BABY WITH THE BATH WATER?

By Professor Vivek, Wadhwa Pratt School of Engineering at Duke University

Two of the most important questions now being debated in the U.S. are the effects of globalization and immigration on the nation's economy. Globalization is accelerating and it is still not clear whether trends like outsourcing will erode U.S. competitiveness or provide long-term benefits. The focus of the immigration debate is on the plight of millions of unskilled immigrants who have entered the U.S. illegally. Forgotten in this debate are the hundreds of thousands of skilled immigrants that enter the country legally.

A new study shows these skilled immigrants provide the U.S. a greater global edge. They contribute to the economy, create jobs, and lead innovation. Immigrants are fueling the creation of hi-tech business across our nation and creating a wealth of intellectual property. This research also raises a concern – an increasing percentage of U.S. international patents are being filed by foreign nationals who may not be here to stay. Our short-term solutions to global competitiveness may actually be creating long-term problems.

In 1999, Dean AnnaLee Saxenian of the University of California, Berkeley published a report showing that foreign-born scientists and engineers were generating new jobs and wealth for the California economy. But she focused just on Silicon Valley, and this was before the dot-com bust. With her help, my team at the Pratt School of Engineering at Duke University set out to update this research and look at the entire nation. We also wanted to quantify the intellectual contribution of this group.

After thousands of phone calls, our students were able to get responses from 2,054 engineering and technology companies founded over the last 10 years. We asked whether their chief executives or lead technologists were first-generation immigrants and where they were born. We were surprised by what we learned – the trend that Saxenian documented in Silicon Valley had become a nationwide phenomenon. Here are some highlights of our report, *America's New Immigrant Entrepreneurs:* memp.duke.edu.

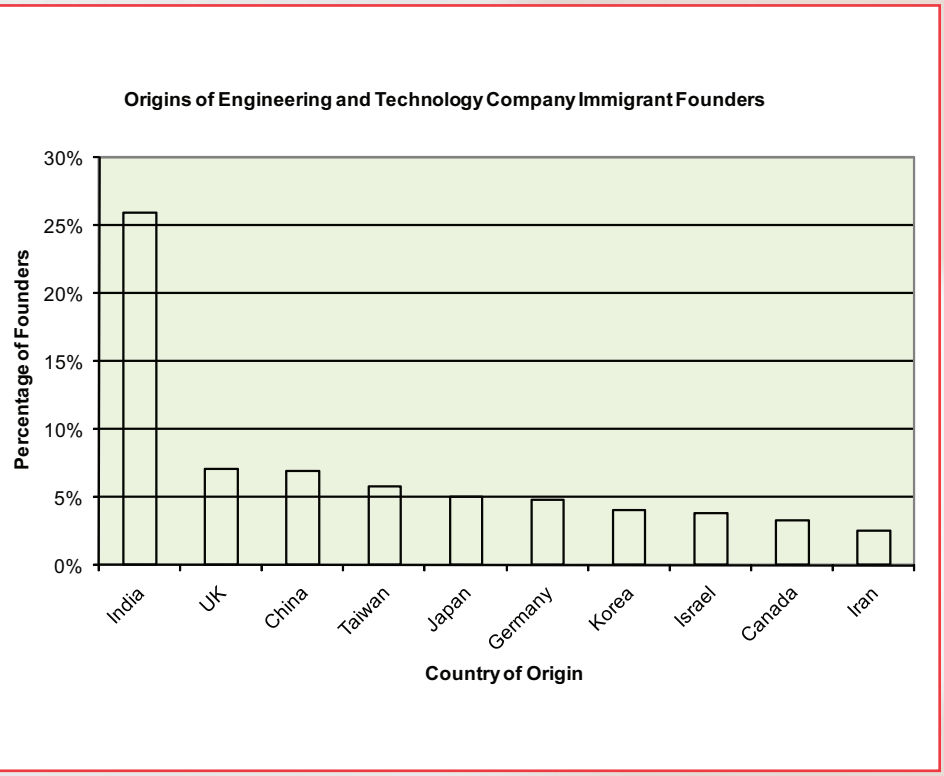
- In 25.3 percent of these firms, at least one key founder was foreign-born. States with an above-average rate of immigrant-founded companies include California (39 percent), New Jersey (38 percent), Georgia (30 percent), and Massachusetts (29 percent). Below-average states include Washington (11 percent), Ohio (14 percent), North Carolina (14 percent), and Texas (18 percent).

- Nationwide, these immigrant-founded companies produced $52 billion in sales and employed 450,000 workers in 2005.

- Indians have founded more engineering and technology companies in the U.S. in the past decade than immigrants from Britain, China, Taiwan, and Japan combined. Of all immigrant-founded companies, 26 percent have Indian founders.

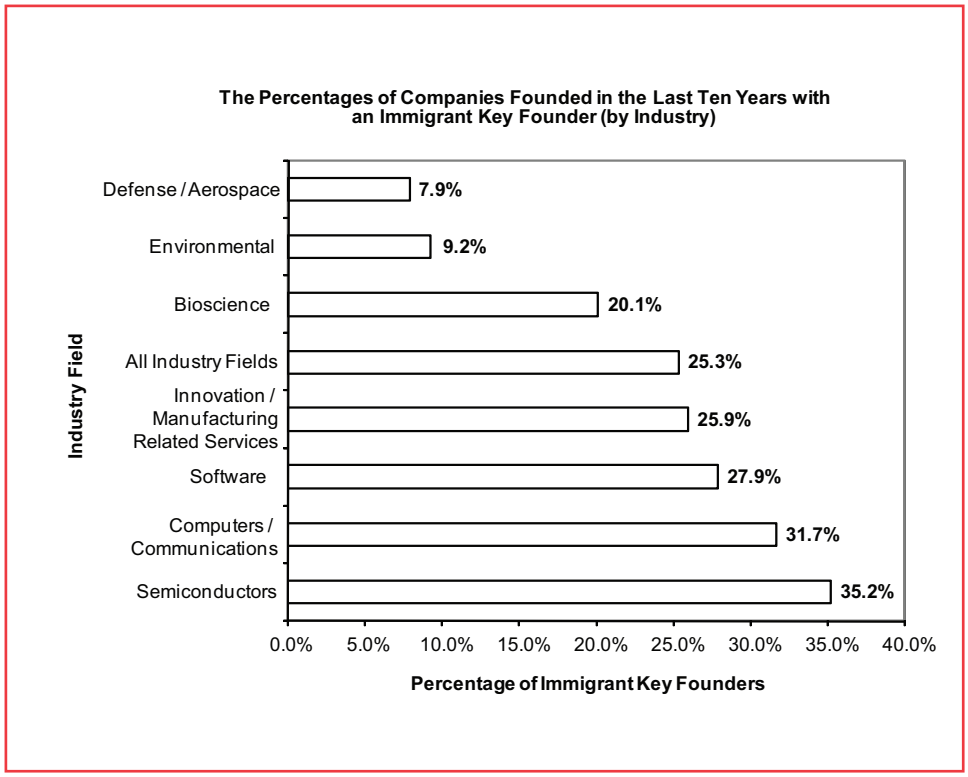
- The mix of immigrant founders varies by state. Hispanics constitute the dominant group in Florida, with immigrants from Cuba, Colombia, Brazil, Venezuela, and Guatemala founding 35 percent of the immigrant-founded companies. Israelis constitute the largest founding group in Massachusetts, with 17 percent. Indians dominate New Jersey, with 47 percent of all immigrant-founded startups.

- Chinese (Mainland- and Taiwan-born) entrepreneurs are heavily concentrated in California, with 49 percent of Chinese and 81 percent of Taiwanese companies located there. Indian and British entrepreneurs tend to be dispersed around the country, with Indians having sizable concentrations in California and New Jersey, and the British in California and Georgia.



Saxenian's research had shown that from 1980 to 1998, 24 percent of Silicon Valley startups had an Indian or Chinese founder. The Chinese were starting twice as many companies as Indians in that period. We found that 52.4 percent of Silicon Valley startups had one or more immigrants as a key founder. Indians had taken the lead in starting companies, but founders originated from all over the world – from Australia to Iran to Vietnam.

We also analyzed the patents filed by U.S. residents in the World Intellectual Property Organization patent databases. These are patents that give us a global edge. We found that foreign nationals residing in the



U.S. were named as inventors or coinventors in 24.2 percent of international patent applications filed from the U.S. in 2006 and this number increased from 7.3 percent in 1998.

To understand the significance of these numbers, it is worth noting that Indians and Chinese both constitute less than one percent of the U.S. population and census data show that 81.8 percent of Indian immigrants arrived in the U.S. after 1980.

These immigrants come to the U.S. with a good understanding of their home markets and have fresh perspectives. Given that we are going to be increasingly competing with the countries they immigrate from, their knowledge of the global landscape is an asset. Bringing in more skilled immigrants will likely lead to greater economic growth and create a greater intellectual property and competitive advantage. The question is how do we get them here to stay?

There is a yearly political debate about a temporary worker visa category called the H1-B. These visas allow U.S. companies and universities to temporarily employ foreign workers who have a bachelor's degree. Businesses argue they need more of these visas in order to remain globally competitive. They say these visas provide a steady flow of highly skilled professionals who are in short supply, and reduce the need for them to move their operations abroad. Opponents argue that these temporary workers displace substantial numbers of experienced U.S. engineers and cause a lowering of wages.

Both sides happen to be right about the problems, but perhaps we're focused on the wrong solution.

H-1B visas have a six-year time limit and impose many restrictions. An H-1B holder can only work for their sponsoring employer – they can't start new businesses. Their spouses aren't allowed to work or obtain Social Security numbers – which are usually needed for things like drivers licenses and bank accounts.

Immigration data shows a bigger problem. The current wait time for skilled immigrants from India and China to be granted permanent residence stands at nearly six years. In other words, U.S. Citizenship and Immigration Services is backlogged, currently processing applications for those who applied for permanent residence in 2001. Additionally, there is a yearly limit of around 140,000 employment-based permanent resident visas for skilled workers. And to further complicate things, no more than 7 percent of the visas are allowed to be allocated to immigrants from any one country.

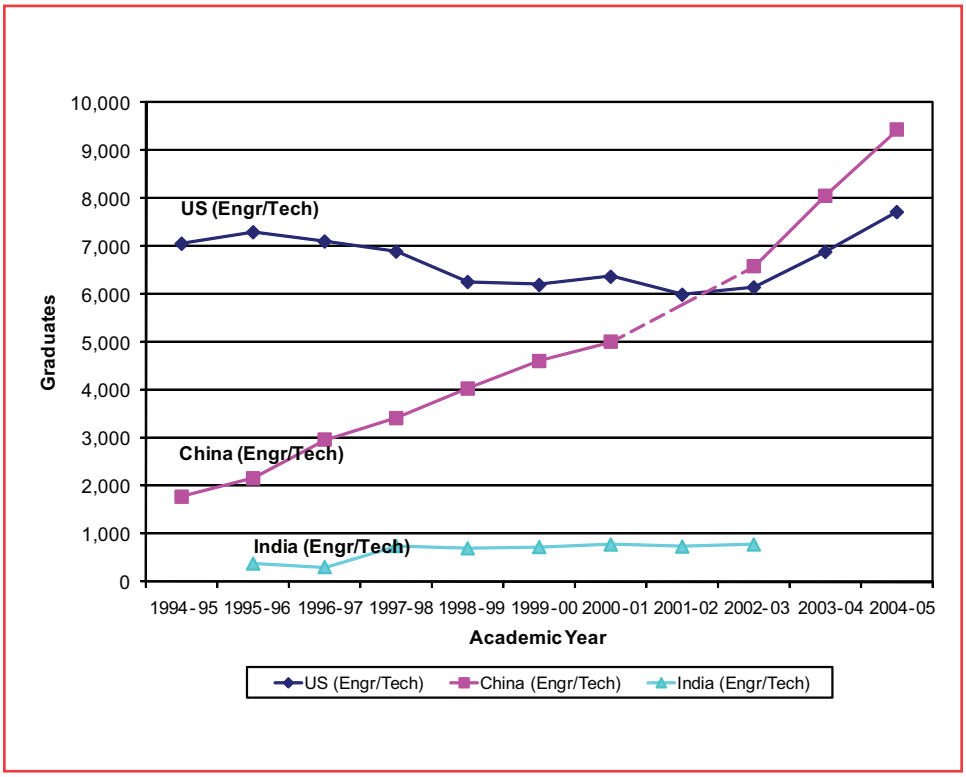
The per-country limitation is meant to avoid monopolization of visa numbers by appli-

cants from any one country. Under current law, no more than 9,800 visas can be issued to employment-based immigrants (including their spouses and children) from any single country. However, this policy bears no relation to demand: countries with large populations or a large number of emigrants have the same quota as countries with small populations or low emigration rates. We allow as many skilled immigrants from Russia and India as we do from Iceland and Senegal.

So, we are now setting the stage to force those we've educated in our universities and trained in our corporations to return to home or go to other countries where they could become our competitors. This is despite the fact that we still need their skills and most of them desperately want to stay.

The 331 percent increase in foreign nationals contributing to U.S. patents is a welcome contribution to U.S. intellectual property – yet it highlights the depth of this problem. These increases correspond to the increasing numbers of foreign students here on visas that expire shortly after graduation and H-1B-holding workers in the U.S. The majority of the foreign engineers and scientists filing these patents are Indians and Chinese. They may have to leave the country – and take their knowledge and experience with them.

Economist and 1992 Nobel laureate Gary Becker says "it is simply foolish for the U.S. to keep out the skilled immigrants we badly need." He prescribes increasing annual quotas for highly skilled professionals by many multiples with no per country limits. He advocates the elimination of the H-1B program so that all such visas become permanent. Becker believes that current limits



place the many skilled applicants from India and China at an unfair disadvantage while the U.S. gains nothing from the policy.

Other thought leaders suggest we grant automatic citizenship to students who complete degrees in mathematics, engineering, and science from qualified institutions of higher learning. These are precisely the individuals we should be seeking to attract and retain, and the promise of citizenship upon satisfactory completion of their studies would be a powerful incentive for many to come.

I believe the U.S. needs to be very selective in who it admits and screen immigration applicants very carefully. But let's do what we can to attract the best from our competition and get them here to stay permanently. **N**

Mr. Wadhwa holds an MBA from New York University and a B.A. in Computing Studies from the Canberra University in Australia. He is founding president of the Carolinas chapter of The IndUS Entrepreneurs (TIE), a non-profit global network intended to foster entrepreneurship. He has been featured in thousands of articles in worldwide publications including The Wall Street Journal, Forbes Magazine, Washington Post, New York Times and U.S. News and World Report. He has also made many appearances on U.S. and international TV stations including CNN, ABC, NBC, CNBC and the BBC.