



## Is the U.S. Experiencing its First Brain Drain?

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*Editor's Note: When high-skilled immigrants and foreign students completing their degrees in the United States both consider returning to their home countries, it might be a sign that the United States is experiencing its first brain drain in history. NAM contributing writer Vivek Wadhwa has been tracking the effects of globalization on labor markets as a professor at Duke University's Pratt School of Engineering and Harvard Law School's Labor and Worklife Program. Immigration Matters regularly features the views of immigration experts and advocates.*

The United States has long served as a magnet for the world's talented scientists, engineers and mathematicians. But, this trend may now be reversing and the United States may be experiencing the first brain drain in its history.

Between 1990 and 2007, the proportion of immigrants in the U.S. labor force increased from 9.3 percent to 15.7 percent, according to the U.S. Census Bureau. Approximately 45 percent of the growth of the workforce over this period consisted of immigrants.

They came for the traditional reasons – education, professional opportunities, a chance at a better life. With them, many of these immigrants brought high levels of education and advanced skills. As a result, immigrants have contributed disproportionately to the most dynamic part of the U.S. economy -- the high-tech sector. In Silicon Valley, over 50 percent of the startups over the last decade have had an immigrant as a chief executive or lead technologist. Immigrants have co-founded firms such as Google, eBay, Intel and Yahoo, to name a few.

Now many are going back. While the economic downturn has caused a rise in xenophobia and the enactment of populist legislation to restrict the hiring of foreign nationals by some financial institutions, the economies of India and China have been rising. Some of the most highly skilled workers in American corporations are returning to the lands where they were born and foreign students who would normally be the next generation of U.S. science and engineering workers are buying one-way tickets home.

There are no hard numbers available, but anecdotal evidence suggests a sizeable reverse migration of skilled talent is in progress. Our team of academics at Duke, UC Berkeley and Harvard interviewed hundreds of company executives, surveyed more than 1,000 foreign students and more than 1,000 returnees, and made multiple trips to India and China to understand the trend.

What we learned should alarm policy-makers who are concerned about long-term U.S. competitiveness.

The average age of the skilled workers we located was in the low 30s, and more than 85 percent had advanced degrees -- precisely the type of people that the United States needs to fuel economic recovery. Among the strongest factors cited by these ex-immigrants as a reason for coming to the United States were professional and educational development opportunities. Ironically, this was the same reason they returned home. And, they had advanced their careers in the process.

Respondents reported that they have moved up the organizational chart by returning home. Only 10 percent of the Indian returnees held senior management positions in the United States, but 44 percent found jobs at this level in India. Chinese returnees went from 9 percent in senior management in the United States to 36 percent in China. Opportunities for professional advancement were considered to be better at home than in the United States by 61 percent of Indians and 70 percent of Chinese. These groups also felt that opportunities to start a business were significantly better in their home countries.

Surprisingly, visa status was not the most important factor determining their decision to return home -- even U.S. citizens and permanent residents were returning home. Three out of four indicated that considerations regarding their visa or residency permit status did not contribute to their decision to return to their home country. In fact, 27 percent of Indian respondents and 34 percent of Chinese held permanent resident status or were U.S. citizens. In addition to job opportunities, the returnees we surveyed were lured by social factors such as closeness to friends and ability to care for aging parents.

The rationale for returnees moving home was echoed by responses of surveyed foreign nationals currently enrolled in U.S. universities. These groups have traditionally represented a disproportionate percentage per capita of advanced degree students. During the 2004–2005 academic year, roughly 60 percent of engineering doctoral students and 40 percent of master's degree students were foreign nationals, and foreign nationals made up a significant share of the U.S. graduate student population in all STEM (Science, Technology, Engineering, Medicine) disciplines.

In the past, the overwhelming majority of these students worked in the United States after graduation. The five-year stay rate for Chinese holding Ph.D.s has been 92 percent and for Indians 85 percent. Most end up staying permanently. Yet, the overall consensus among students we surveyed was that the United States was no longer the destination of choice for their professional careers.

Most students in our sample wanted to stay in the United States, but only for short periods. Among respondents, 58 percent of Indian, 54 percent of Chinese, and 40 percent of European students said that they would stay in the United States for at least a few years after graduation, if given the chance. However, only 6 percent of Indian, 10 percent of Chinese, and 15 percent of European students said they wanted to stay permanently. The largest group of respondents— 55

percent of Indian, 40 percent of Chinese, and 30 percent of European students— wants to return home within five years.

Visa concerns were more evident among students. More than three-fourths of these students expressed concern about obtaining work visas, and close to that number worry that they will not be able to find U.S. jobs in their field. Few said they found anything but a warm reception here from the American people. But their concern over work visas could only have been exacerbated by the ongoing attempts to curtail work possibilities for foreign nationals in the United States.

Further, the students' assessment of their individual opportunities mirrored their view for the future of the U.S. economy. The survey found that only 7 percent of Chinese students, 9 percent of European students, and 25 percent of Indian students believe that the best days of the U.S. economy lie ahead. Conversely, 74 percent of Chinese students and 86 percent of Indian students believe that the best days for their home countries' economies lie ahead.

The anti-immigrant groups will no doubt celebrate the departure of foreigners. But the impact of a reverse brain drain could potentially be profound and long lasting for the United States. The country is effectively exporting its economic stimulus.

*Vivek Wadhwa co-authored his survey of returnees (<http://www.kauffman.org/newsroom/united-states-losing-immigrants-who-spur-innovation-and-economic-growth.aspx>) and foreign students(<http://www.kauffman.org/newsroom/foreign-national-students-in-united-states-plan-to-return-to-native-countries.aspx>) with the Kauffman Foundation.*