

# REVERSE BRAIN DRAIN

For decades the US economy gained substantially because of the migration of tens of thousands of talented Indian students, many of who settled down in the country. But the recession, amongst other things, has resulted in a reverse brain-drain, claim researchers led by a top Indian academician. A report by **Anand Kumar**.

**I**NDIAN students pursuing studies in science, technology, engineering and medicine (STEM) across campuses in the US have over the decades contributed significantly to the regeneration of the American economy.

But many experts in the US are now warning that the golden era – of the country benefitting from the expertise of tens of thousands of young, highly-qualified and talented migrants from Asia, especially India – is finally coming to an end.

Top academicians and researchers, led by Vivek Wadhwa – a senior research associate with the Labor and Worklife Program at Harvard Law School and an executive in residence/adjunct professor at the Pratt School of Engineering at Duke University – have come out with a series

of papers in recent weeks, indicating the US might well be experiencing its “first brain drain”.

“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 US science and engineering workers are buying one-way tickets home,” notes Wadhwa.

A team of academics at Duke, Harvard and the University of California, Berkeley, interviewed hundreds of company executives, surveyed more than a thousand foreign students and an equal number of ‘returnees’ – after making multiple trips to India and China – to understand the trend. ‘America’s Loss is the World’s Gain’, is the comprehensive survey undertaken by the

A substantial number of highly-skilled immigrants have started returning to their home countries.

**Robert E. Litan,**  
Kauffman Foundation

academics and backed by the Kauffman Foundation, a leading American foundation devoted to entrepreneurship.

'Losing the World's Best and Brightest: America's New Immigrant Entrepreneurs' was the fifth in a series of reports brought out by them in March.

"A substantial number of highly-skilled immigrants have started returning to their home countries in recent years, draining a key source of brain power and innovation," says Robert E. Litan, vice-president, research and policy, Kauffman Foundation. "We wanted to know what is encouraging this much-needed growth engine to leave our country, thereby sending entrepreneurship and economic stimulus to places like Bangalore and Beijing."

Foreign students make up a significant share of the US graduate student population in all STEM disciplines. For instance, according to Wadhwa, during academic year 2004-05, about 60 per cent of engineering doctoral students and 40 per cent of master's degree students were foreigners.

"Foreign students receive nearly 60 per cent of all engineering doctorates and more than half of all mathe-

## 'IT IS PAYBACK TIME FOR INDIA'

**VIVEK Wadhwa** began his career as a software developer. With a BA in computing studies from Canberra University, Australia, he added an MBA from New York University before joining CS First Boston (CSFB) as vice-president, information services in 1986. He later became executive vice-president and chief technology officer of Seer Technologies, which was spun-off by CSFB as a separate business unit, and then started Relativity Technologies in 1990. He is also founding president of the Carolinas chapter of The Indus Entrepreneurs (TiE), a non-profit global network that fosters entrepreneurship.

An interview with Prof Vivek Wadhwa, senior research associate with the Labor and Worklife Program at Harvard Law School and executive in residence/adjunct professor at the Pratt School of Engineering at Duke University.

**Your group at the Duke University, which has done pioneering research into globalisation, recently came out with its report, 'America's Loss is the World's Gain', on US immigrants returning home to countries like India. What do you think will be the full impact of this 'reverse brain drain' on the Indian economy, in terms of technological innovation, introduction of global best practices and improvement in managerial skills?**

I think this will be a big win for India in the long term. It is gaining tens of highly educated and skilled workers who are familiar with Western markets and management techniques. This is like the US providing India tens of billions of aid – in the form of intellectual capital. India will reap the benefits in the decade to come.

**Has the current global financial meltdown, particularly the crisis in the US, accelerated the trend of qualified Indian engineers and technologists returning home for good? Will it peter out, once the US economy picks up, creating more jobs and opportunities even for migrants?**

Yes, this has been a major factor because



Vivek Wadhwa

once H1B workers lose their jobs, they also lose their visa status and must return immediately.

Yes, the exodus will slow down once the economy here recovers, but the pull to India will become stronger because the returnees will be starting thousands of companies there which will provide equal or better opportunities than what are available in the west.

**Is this trend restricted only to sectors like information technology, or is it widespread, covering areas like space science, medicine, research, finance, even teaching?**

It is widespread and is in almost every profession.

**Do you expect many of these highly-qualified professionals to start their own business ventures on returning home, or will most of them end up working for Indian companies or multinationals?**

Some will join MNCs and Indian companies and many will start new businesses. In our survey, almost half of the returnees said they planned to start businesses in the future.

**India has been 'exporting' talent for nearly 50 years now, with the**

**first crop of engineers from the Indian Institutes of Technology (IITs) heading for the US during the 1960s. So is this the first major reversal of a trend that will have an equally significant impact on both the countries?**

It will be a big gain for India and a big loss for the US. This will start to level the playing field and make India much more competitive.

**Will this also trigger off a new trend of talented Indian students coming to the US for higher education, taking up a job for a few years and then returning to India?**

That is already happening. Imagine if India opened up its education system as it opened up its industry in the 1990s. You would have the best talent from all over the world coming to India.

**What are the other factors, besides the economic slowdown, that are triggering off this reverse trend? Are there any social and cultural aspects also at work?**

Indians miss home, family and friends and now have opportunities at home. They have never had the opportunities at home before this.

**How can 'recipient' countries like India best handle this reversal and help in the smooth resettlement of its skilled and highly-qualified expatriate workforce?**

The government should ease regulatory burdens in starting businesses and remove all red-tape. The markets can fix themselves. These people do not need government help, they need less government interference as is the case here (in the US).

**Will other countries that have 'suffered' from the brain drain also reap this 'intellectual windfall' over the coming years?**

China is the biggest other beneficiary.



maths, computer sciences, physics and economics doctorates awarded in the US," points out Wadhwa. "These foreign nationals end up making jobs, not taking jobs. They bring insights into growing global markets and fresh ideas. Research has shown that they even end up boosting innovation by US inventors. Losing them is an economic tragedy."

Immigrants accounted for about 45 per cent of the growth of the US workforce between 1990 and 2007, says Wadhwa; their proportion in the force increased from 9.3 per cent in 1990 to 15.7 per cent in 2007. In Silicon Valley, over 50 per cent

of the start-ups over the last 10 years have had an immigrant as a chief executive or lead technologist.

Wadhwa and his team see a reversal in trend. "Now many are going back," he notes. "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."

Visa status was surprisingly not the most important factor determining the decision of Indian and other foreign students and executives to return home.

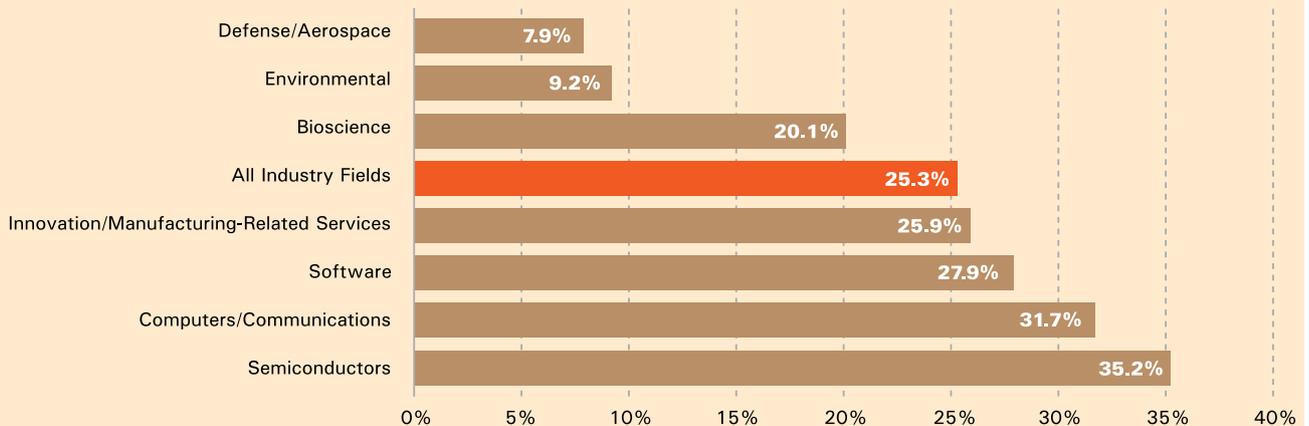


## KEY FINDINGS

The team of academicians from Duke University, Harvard University and the University of California, Berkeley, interviewed hundreds of company executives, surveyed more than a thousand foreign students and an equal number of 'returnees' – after making multiple trips to India and China. Key findings relating to Indian students:

- 10 per cent of Indians surveyed held senior management positions in the US, but 44 per cent found jobs at that level in India
- 61 per cent of Indians found opportunities for professional advancement better at home than in the US
- 35 per cent of respondents were young, married and had no children, and had degrees (Master's and PhD) in management, technology or science
- Most also found opportunities to start a business significantly better back home
- 79 per cent were motivated to return home because of growing demand for their skills in India
- 89.4 per cent considered care for ageing parents to be much better in India than in the US
- Just 6 per cent of Indian students surveyed would like to stay permanently in the US
- 58 per cent wished to stay in the US "for several years" after graduation
- 85 per cent stayed in the US for a minimum of five years
- 85 per cent are concerned about obtaining work visas in the US
- 74 per cent of Indian students were worried about obtaining jobs in their fields in the US
- Most fear the US economy will lag global growth rates in the near future
- 32 per cent said India had the best job opportunities
- 75 per cent did not believe the best days of the US economy lay ahead
- 86 per cent felt the best days for India's economy lay ahead
- 64 per cent indicated they want to start a business within the next decade in India
- 53 per cent of respondents hope to start businesses in India

### Percentage of Immigrant-Founded Companies in the US by Industry



Source: Social Science Research Network – Vivek Wadhwa, A Reverse Brain Drain

Even those with American passports and permanent residency status were returning home.

Three out of four respondents said their visa or residency permit status was not a factor contributing to their returning home. In fact, 27 per cent of Indian respondents had US citizenship or held permanent resident status.

"We found that foreign national students in our sample are planning to

leave the US after graduation in numbers that appear to be higher than the historical norm as measured in STEM disciplines," points out Wadhwa. "A significant percentage of these students also say they intend to open businesses in the future. This expressed intention is prevalent among Indian and Chinese nationals currently studying in the US.

"This would appear to be a marked contrast to the recent past, when Chinese

and Indian degree holders were very likely to stay in the US and continue working or in a research capacity (even more so in the PhD ranks)."

Indian head-hunters have started looking around for the returnees to fill up mid- and senior-level jobs in multinational corporations, the banking and financial sector, telecommunications, information technology and other relatively high-growth industries in the country. 🌈