



Building a high-tech nation

HIGH ACHIEVERS

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That the United States is a nation built by immigrants is a truism – but several recent studies identify just how important immigrants remain to the US economy, especially within important sectors like technology.

A 2007 study of 2,050 companies by Duke University has provided continuing evidence supporting research done in a well known 1999 study by Berkeley professor AnnaLee Saxenian on the importance of immigrant entrepreneurs in the high-tech sector – the chosen industry area for the vast majority of US immigrant entrepreneurs.

The Duke study found that almost 80 per cent of immigrant-founded companies were within just two industry fields: software and innovation/manufacturing-related services. In 2005, these companies produced \$52 billion (€35.5 billion) in sales and employed 450,000 workers.

A full quarter of all technology companies founded between 1995 to 2005 have at least one foreign-born founder, corroborating figures first recorded by Saxenian, who found that 24 per cent of Silicon Valley companies founded between 1980 and 1999 had at least one Chinese or Indian founder (Duke found that has risen to 28 per cent now).

According to the Duke graduate researchers, immigrant-founded companies rise to 39 per cent in California, 38 per cent in New Jersey and 29 per cent in Massachusetts. But in Silicon Valley, the figure balloons to a whopping 52.4 per cent.

And Indians have founded more engineering and technology companies in the US in the past decade than immigrants from the UK, China, Taiwan and Japan combined. Of all immigrant-founded companies, 26 per cent have Indian founders.

And immigrants and foreign nationals don't just set up companies – they spur innovation that adds to the intellectual property wealth of their new home country.

According to Duke estimates, non-citizen immigrants produce an extraordinary 24.2 per cent of all US patent applications, up from 7.3 per cent a decade ago. “The contributions immigrants and foreign national residents are making to our economy – and particularly to science and

technology – are well recognised and this report is a start at documenting the statistics of those contributions,” says Kristina Johnson, dean of Duke's Pratt School of Engineering.

“The US has a long history of welcoming international students and entrepreneurs – and has benefited greatly as a result.”

A key US study from the National Venture Capital Association this year quantified just how much financial benefit accrues to the US and international economies from immigrant entrepreneurship.

One out of every four public, venture-backed companies founded since 1990 in the US has at least one immigrant founder, according to the report.

Such companies, among them Sun Microsystems, Yahoo, eBay, Google and Intel, have a collective market capitalisation of an extraordinary \$500 billion (€341 billion) and are responsible for 400,000 jobs globally (including thousands in Ireland), said the study.

Some 87 per cent of all immigrant founders are in three sectors central to a knowledge economy: information technology; life sciences and high-tech manufacturing.

They come predominantly from countries like India and China, the Middle East and Taiwan, according to the report.

Almost half of all the immigrant entrepreneurs, 46 per cent, arrived as students. More than half of the founders started their businesses within 12 years of entering the US. They hold an average of 14.5 patents.

Two-thirds of them say they are going to start more US-based companies and most become US citizens. Many of them – such as Yahoo co-founder Jerry Yang – are the first generation children of economic migrants.

That indicates that immigration policy should not be narrowly focused on the immediate qualifications of immigrants. “Few of the immigrant entrepreneurs identified came to the US ready to start a company capable of attracting venture capital. As the data, profiles and interviews revealed, most entered the country either as children, teenagers or graduate students, or were hired on H-1B visas to begin a first job while in their mid-twenties,” said the report authors.

Ireland would definitely benefit from encouraging immigrant entrepreneurs, say many business authorities. "Ireland has quite a number of start-up companies founded and run by immigrant entrepreneurs, and I believe that some of these entrepreneurs may well emerge as global leaders," Iona Technologies founder Dr Chris Horn has written in an essay on his weblog.

"The strong linkage to other, frankly, lower cost economies which the immigrant communities create, are enabling relatively easy off-shoring opportunities to globally compete with world class products, of Irish-based innovation, with high value propositions."

Patricia Callan, director of the Small Firms Association and chairwoman of Emerge, an EU-funded Irish project to help immigrant entrepreneurs, agrees. "We find in other counties, [immigrant entrepreneurs are] a wealth generator, and we need to find people and go after them."

While the US experience is inspirational, it doesn't fully transplant to an Irish situation, she says. One intent of Emerge was to identify some of the Irish barriers to entrepreneurship and "demystify the whole business process and culture" for immigrants.

What they found sometimes surprised – Callan said that while many assumed access to finance was a key issue for immigrants, often immigrants said they received more support from banks here than they would in their home countries.

What immigrants do need is help in learning what supports are available, she says. Once they are up and running, they have the same problems as any small businessperson and can be mainstreamed into existing organisations like the SFA. Callan strongly feels non-Irish nationals shouldn't be steered into national immigrant business organisations that might create further "niches and ghettos".

That's slightly at odds with Dr Tom Cooney, director of the Institute for Minority Entrepreneurship at Dublin Institute of Technology. He says that due to the linguistic and cultural challenges, immigrants often need their own business associations to provide a platform for them to feed into the established organisations

Cooney says many immigrants start businesses due to negative experiences – being unable to find work. Therefore, he thinks it's necessary, in many cases, to build the person, to build the business.

Currently, it is extremely difficult for students, even post-doctorates, to remain in Ireland when they finish coursework, he says, yet as the US Venture Capital Association report noted, many entrepreneurs first arrive in the US as students.

General bureaucracy and the lack of a real green card programme that offers the opportunity of citizenship are cited by both Cooney and Callan as a huge problem, as are the salary qualifications (€30,000 and €60,000) that both say are too high and don't align with job demand.

Future general economic growth is also a concern. "Only 10 per cent of Irish exports come from indigenous firms," says Cooney, noting the state needs to grow its own business sector to address this shortfall.

Cooney believes that, as in the US, immigrant entrepreneurs will be an important source of new companies and economic activity. He likes to use the example of how Irish immigrants have helped build the US for over a century. "We talk about that with pride. So, why can't that happen in Ireland, with a new wave of immigrants?"

"We suffered a brain drain long enough. It's time for a brain gain." ■

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