



Immigrant Entrepreneurs: Talent, Technology, and Jobs

BY BETTY JOYCE NASH

Tinh duc Phan and Vivek Wadhwa arrived on opposite U.S. coasts five years apart under radically different circumstances. Yet they share the common history of growing businesses. Phan has built a construction firm, while Wadhwa has co-founded two software firms, and now works as an executive-in-residence at Duke University's Pratt School of Engineering. Both believe that the United States contains rich entrepreneurial soil.

The nation's foreign born have reached a record high, in total numbers. And they have fanned out to most of the 50 states, many in regions unaccustomed to immigrants. Of the foreign born, 29 percent lived in the South in 2003. These demographic changes have been fraught with controversy and confusion about the role of immigrants, legal and illegal, in the labor market (see *Region Focus*, summer 2006). And that's too bad because it may have obscured the yields from this cross-border pollination — the birth of businesses that produce not only jobs, but also the new technology that speeds growth.

Entrepreneurship isn't only about money, says Wadhwa, who is from India. He arrived in the United States in 1980 after studies in Australia. "You are creating an economic system of innovation." Another bonus — the children of these newcomers inherit entrepreneurial aptitude. Phan landed at Camp Pendleton in 1975 courtesy of the U.S. military after the fall of Saigon. He preached entrepreneurship to his offspring yet did not practice it. He finally leapt. "If I taught my kids how to listen to me and then I chickened out, what kind of a father is that?"

Institutions such as bankruptcy laws that allow for failure, generally widespread access to credit, and intellectual property protection can encourage entrepreneurship. Wadhwa says simply: "America is still the place where everyone wants to be ... because you're allowed to fail over here."

The Tide of STEMS

Recent studies have examined the extent and influence of immigrant-founded businesses in the United States. A November 2008 study for the Small Business Administration puts the immigrant share of business owners at 12.5 percent, with total income of \$67 billion.

A study published in 2006 by the National Venture Capital Association (NVCA) calculated that immigrants formed a quarter of venture-backed public firms, with a total market capitalization of more than \$500 billion. The research included whoppers like Intel, Yahoo, eBay, Sun Microsystems, and Google. Most companies were in STEM

areas: science, technology, engineering, and math. Tech manufacturers were even more likely — 40 percent — to have an immigrant founder.

In a separate study, Wadhwa enlisted the help of students at Duke's Master of Engineering Management Program where he teaches. They called small- to midsized tech firms to ask founders' nationalities. Results mirrored NVCA's. Immigrant entrepreneurs founded 25 percent of U.S. engineering and tech firms established in the past decade. Those companies generated \$52 billion in revenue and employed nearly half a million. "We're talking about high-tech, high-growth companies which have been giving America its big advantage," he says. California (39 percent), New Jersey (38 percent), and Michigan (33 percent) headed the list of states with the greatest representation of immigrant tech firms. Virginia wasn't far behind at nearly 30 percent. Maryland (nearly 20 percent) and North Carolina (14 percent) also ranked near the top.

Maybe these numbers shouldn't surprise us. After all, 13 percent of the U.S. working population is foreign-born, and 25 percent of all scientists and engineers (half at the doctorate level) were born outside the United States.

Neither Wadhwa nor the NVCA are subtle about the studies' agendas. They want to demonstrate limitations of immigration rules, like the 65,000 cap on visas that allow U.S. firms to hire expert foreign workers for a limited time. A dearth of visas and a million immigrants waiting for green cards, they say, will hurt in the long run. "The United States is stuck in massive brain drain," says Wadhwa. Frustrated, talented techs may take their education credentials, earned in the United States, and go home. And in fact, there is evidence that the Chinese contribution to U.S. patent activity has leveled off, and the Indian contribution has declined, according to Harvard Business School economist William Kerr, after increasing dramatically in the 1990s.

The Knowledge Channel

So what? Don't inventors maintain two-way ties with the home countries anyway and communicate within a worldwide professional circuit? Not exactly. Kerr studies cross-border tech transfer, and says it's hard to document spillovers. When highly educated, productive immigrants depart, it matters where they work, he notes. And multinational companies make some of these decisions. If U.S.-educated talent in Beijing research and develop products for Microsoft, Kerr says, it's not a clear picture as to whether the United States loses out. At least part of that

knowledge and money flows back to the United States. But what if a “hotshot” Indian graduate can’t work here, returns to India, and “never picks up the phone or comes back to the United States?” he asks. “We could have benefited from the job growth and innovation.”

The question gets more complicated by the idiosyncrasies of research. Bright ideas spread quickly. Kerr says researchers are 30 percent more likely to exchange new ideas through “ethnic knowledge” channels for about five years, and by the time the notion is a decade old, the “ethnic effect” has dissipated — the idea is everywhere.

It’s clear that foreign output and productivity benefit via the ethnic channel. Kerr has found that a 10 percent growth in immigrants’ research in the United States improves immigrants’ home country output and productivity by 1 percent to 3 percent. These effects are particularly strong for China and the computer industry.

Research also depends on colleagues in the office, down the hall, down the block, and across town. “I am influenced more by research that happens here [at Harvard] or at MIT than I am from someone at Chicago — we meet in the hall or have lunch,” Kerr says. “For myself, it probably hurts me if some of the very best potential researchers I could collaborate with are going back to their home countries.” And restrictive immigration rules are not the only reason that immigrants leave. “There was the early 2000 tech recession and the financial troubles now — that will lead to foreign opportunities improving relative to U.S. opportunities.”

With regard to the expert visa (called H-1B) problem, it’s tough to solve for many reasons, not least of which is lack of data. “We don’t know who leaves; we don’t have a group to compare them against,” Kerr says. His research has confirmed that the policy has substantial impact for U.S. Indian and Chinese innovation rates, not surprising because they get the visas. Raising the cap increases overall U.S. innovation primarily through the new immigrants themselves. “This faster innovation growth is not very dramatic — 1 percent to 2 percent in the most affected cities compared to the least affected cities, but it may add up over the course of many years,” he says.

Immigration policy debates continue, along with research about economic contributions. Economists have found that an immigrant college graduate is twice as likely to patent as a native counterpart, according to research by Jennifer Hunt and co-author Marjolaine Gauthier-Loiselle in a National Bureau of Economic Research working paper. That’s because more immigrants than natives have science and engineering degrees.

As economies like China and India leap ahead economically, it gets easier to make money there. The rate at which its scientists and engineers return home may accelerate as entrepreneurial infrastructure improves, and that could dull the United States’ competitive edge.

Praveen Kalakuntla graduated from Duke’s engineering management program in December, and will join colleagues back home in India once he observes “how processes and

people work here in the United States.” Kalakuntla plans to use his expertise to further green technology, and says the Indian government provides support in the form of land, special economic zones, and tax rebates for businesses. “People in India at least now are not afraid to take the risk in something that might be better for the world.” But he would consider locating a branch in the United States.

Longtime entrepreneur and Cuban immigrant Al Guerra of Kelvin International Corp. heads the Hampton Roads Hispanic Chamber of Commerce. Nearly all of Guerra’s cryogenic (ultralow temperature) equipment customers are overseas. Guerra immigrated alone at age 10 in 1961 as Castro took over. His father, also a businessman, a car dealer in Havana, left first, and his mother and brother traveled separately later. The reunited family settled in Boston, Guerra became an engineer, and later worked at Jefferson Labs, investing in the business on the side. He moved up as far as he could, but says that Hispanics with high-tech skills can encounter a glass ceiling. So he left to run Kelvin International full-time. “Don’t forget, most immigrants have the risk gene already built in,” he says. Guerra confirms that many immigrants he meets through his work with the Hispanic Chamber start businesses to escape discrimination or advance a stalled career. Often, ethnic groups cluster within a field because of language, culture, and knowledge affinities.

From “Sojourn to Settlement”

While STEM businesses have reshaped and boosted the economy in the past decade, traditional service or manufacturing startups remain common paths for newcomers. A family member may immigrate and open a restaurant, and later bring in friends and relatives who learn the ropes and open another. Ditto for motels, convenience stores, nail salons, dry cleaners, and other service niches dominated by specific ethnic groups.

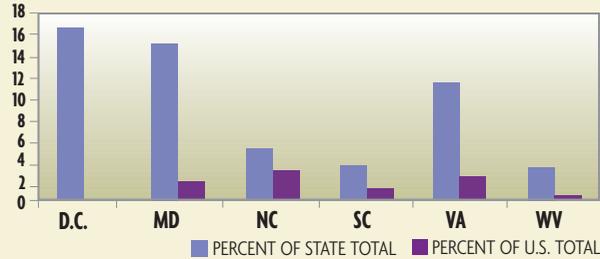
Relatives are preferred employees because of trust. Laura Zarrugh, a cultural anthropologist at James Madison University, documented immigrant business formation around Harrisonburg, Va. Entrepreneurship isn’t so



La Milpa in Richmond, Va., includes a restaurant, market, crafts, bakery, and a catering service. The business was started by Martin Gonzalez in 1995. He immigrated to Richmond from Mexico City in 1988.

Immigrant Business Owners as Percentage of State and U.S. Total

(U.S. Total: 12.5 Percent)



NOTE: Percent of U.S. total for D.C. = 0.1

SOURCE: U.S. Census Bureau, 2000

surprising for Latinos since a quarter of Mexico's work force is self-employed. In the United States, Latinos are less likely to own a business than whites or Asian Americans, but there is evidence that Latino business numbers are rising. In 2003-2004, Zarrugh identified 48 operating, registered, and licensed Latino businesses in Harrisonburg, up from one business in 1989, but more probably exist in the informal economy. The small town in rural Virginia reflects nationwide Latino self-employment. Latinos represented 3 percent of total self-employment in 1979 and 8.5 percent in 2003, helping them move from sojourn to settlement.

Martin Gonzalez arrived in Richmond in 1988. The Mexico City native knew people who had already immigrated to Richmond. As he progressed through nighttime English language classes at Crestview Elementary, he worked construction, washed dishes, and waited tables. Then he went to J. Sargeant Reynolds Community College. Along the way, he developed a fresh idea that gave him "good results right away." It was a Mexican store — food, crafts, groceries. Another Mexican immigrant financed the business. A decade later, he's got his own enterprise. La Milpa offers to its 80 percent Mexican clientele a bakery and catering, restaurant, market and Mexican crafts. Gonzalez says it's been the chance of a lifetime "to prove all the knowledge I have."

Money and Moxie

The entrepreneur who doesn't have to worry about startup money is rare — immigrant or native. It's hard if not impossible to go to a bank touting an idea with no collateral. But

venture capital, especially in the tech centers in Silicon Valley, Chicago, Boston, and to a lesser extent, Research Triangle Park in North Carolina, has until recently flowed into tech ventures. "If you have a good idea, it's not hard to get financing," Wadhwa says, but it depends on where you are. The National Venture Capital Association reports six Initial Public Offerings of venture-backed firms through third-quarter 2008, the lowest number over three quarters since 1977.

Traditional businesses can be tougher to get off the ground, with many people relying on personal savings, says Phan. It's how he started. Now his firm has grown to three divisions, employing from 30 to 60 people. But he now tells fellow Asians in his role as the director of the Virginia Asian Chamber of Commerce that savings is old time. "We need to teach them to learn how to use a credit line, how to use money in the market."

Charito Krivant, a Bolivian native raised in Argentina, started Creative Associates International in Washington, D.C., with savings and an initial credit line of \$50,000 that her husband had to co-sign. It was the 1970s. Today, the firm works in 17 countries helping people cope and recover from the effects of conflict, among other efforts. Today, the firm's credit line is \$18 million.

Most immigrant entrepreneurs Laura Zarrugh studied in Harrisonburg used savings and money from second jobs to get going. Many got loans from parents or siblings or (less often) friends. Only four obtained startup capital from banks or small business loans. Those who obtained such loans did so with the help of American associates, a realtor in one case and a boss in another. Lack of formal credit history makes it hard for entrepreneurs generally and immigrants especially to get money from financial institutions.

Money issues aside, Wadhwa thinks we take for granted the "potent force" of the American dream — work hard and make it big. "In almost every country in the world, this is not the case."

Likewise, as Phan shows the younger generation how to manage and keep a business going, he urges them to become joiners, to live in the larger community because, in his words, "I probably love this country because I saw the other side of the coin." **RF**

READINGS

Anderson, Stuart, and Michaela Platzer. "American Made: The Impact of Immigrant Entrepreneurs and Professionals on U.S. Competitiveness." National Venture Capital Association, November 2006.

Fairlie, Robert W. "Self-Employed Business Ownership Rates in the United States: 1979-2003." The U.S. Small Business Association Office of Advocacy, December 2004.

Hunt, Jennifer, and Marjolaine Gauthier-Loiselle. "How Much Does Immigration Boost Innovation?" National Bureau of Economic Research Working Paper no. 14312, September 2008.

Kerr, William R. "Ethnic Scientific Communities and International Technology Diffusion." *Review of Economics and Statistics*, August 2008, vol. 90, no. 3, pp. 518-537.

Wadhwa, Vivek, Ben Rissing, AnnaLee Saxenian, and Gary Gereffi. "America's New Immigrant Entrepreneurs: Part 1." Duke Science, Technology & Innovation Paper No. 23, January 2007.

Zarrugh, Laura H. "From Workers to Owners: Latino Entrepreneurs in Harrisonburg, Virginia." *Human Organization*, Fall 2007, vol. 66, no. 3, pp. 240-248.