

How to Foster Tech Entrepreneurship

Viewpoint April 30, 2008, 10:56AM EST

Startup hotshots are older and more educated than generally thought; it follows that training and finance skills should be offered to all age groups

by [Vivek Wadhwa](#)

American tech entrepreneurs are young college dropouts—often from prestigious universities—who start companies out of their garages. So goes the stereotype, reinforced by tales from the dot-com boom and examples such as [Bill Gates](#) and [Steve Jobs](#). But [recent research](#) I helped lead at Duke and Harvard shows that most U.S.-born tech entrepreneurs are middle-aged and well-educated. [Most don't graduate from top-tier universities](#) (BusinessWeek.com, 8/31/07)—they come from an assortment of schools. Twice as many tech entrepreneurs start ventures in their 50s as do those in their early 20s, according to our research.

So just who is the typical, U.S.-born, tech entrepreneur? While [getting at related questions about immigrant entrepreneurs](#) (BusinessWeek.com, 1/3/07), we surveyed 652 U.S.-born chief executive officers and heads of product development in 502 engineering and technology companies established from 1995 through 2005. Here is what we learned:

A Surprise About Age

Contrary to the popular belief that tech entrepreneurs start their companies in their teens or early 20s, we found that the average and median age of founders was 39. Twice as many were older than 50 as were younger than 25. And there were twice as many over 60 as under 20. So, we may read stories about [young people starting tech companies](#) (BusinessWeek.com, 4/17/08), but they're the minority. Most tech entrepreneurs have grey hair and experience.

Very few tech entrepreneurs dropped out of college to start their companies. We found the vast majority (92%) of founders held bachelor's degrees, 31% held master's degrees, and 10% had completed PhDs. Nearly half of these degrees were in science-, technology-, engineering-, and mathematics-related disciplines. And one-third were in business, accounting, and finance.

Almost every major U.S. university was represented in the ranks of company founders—including schools such as The University of Southern Mississippi and Akron University. Only 8% graduated from Ivy League schools. But that was significantly higher than their proportion of all graduates. In other words, you don't need to graduate from an elite university to become an entrepreneur, but graduates of Ivy League schools were more likely to become entrepreneurs than others.

MBA Start Businesses Sooner

We also found a correlation between education level and company performance. In 2005, the sales revenue for the average company in our sample was around \$5.7 million. The number of employees was 42. Companies founded by those with just high school degrees had less than half the revenues and number of employees—\$2.2 million and 18 employees. Companies founded by Ivy League graduates were slightly above average—with \$6.7 million in revenue and 55 employees.

Founders holding MBA degrees established their companies the soonest compared to other advanced-degree holders—an average of 13 years after graduation. Master's-degree holders took 14.7 years and bachelor's degree holders took 16.7 years. Those with PhDs typically waited 21 years.

Our findings raise questions about how to best foster tech entrepreneurship. It is clear that education provides significant advantage, but most of these would-be entrepreneurs spend years in the workforce before starting their companies. That means if we want to boost entrepreneurship, we need to understand what might be keeping middle-aged workers from starting their own businesses. The next upstarts won't all be found in the university business-plan contests—they'll be found in the workplace.

Health Insurance Main Concern

Last year, the Kauffman Foundation, which sponsors some of my research, released a working paper titled "[On the Road to an Entrepreneurial Economy](#)". It found that health-care costs were a major concern for entrepreneurs and U.S. businesses in general. It said that fear of losing health insurance compounds workers' anxieties about job loss and deters them from leaving their jobs to start a venture. I know from founding my last tech company that other than obtaining startup funding, health insurance was my biggest concern. One solution the Kauffman paper suggested was to un-tether health insurance from employment.

It also suggested that school curricula be adapted to foster not just excellence in science and mathematics, but also creativity and entrepreneurial thinking among students. And it called for improvements at the university level. These were good recommendations, but I don't think Kauffman went far enough. We should put as much focus on educating our existing workforce as we do on the next generation. This means providing training in the basics of starting and running a business—and some of the finance, marketing, and management training that business schools teach—to potential entrepreneurs within the workforce.

Harvard economist Richard Freeman, who collaborated with me on the research, says the findings highlight the importance of the classic human capital factors—schooling, age, and experience—that lead someone to create a successful startup. A few people may be born with entrepreneurial skills, but most learn them by advanced schooling and experience. In other words, [entrepreneurs can be made](#) (BusinessWeek.com, 10/30/06). The key is to offer the tools needed to more age groups.

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