



Silicon Valley report shows a 'region at risk'

Annual Index of Silicon Valley shows area's economic engine is stalled

by **Chris Kenrick, Palo Alto Online Staff**; Uploaded: Wednesday, February 10, 2010, 5:56 PM

With rising competition from Bangalore to Beijing, Silicon Valley's dominance as the world's innovation hub is "at risk as never before," a local think tank has concluded.

In an exhaustive study of the region's economy and health, Joint Venture: Silicon Valley Network said the rise of countries such as China and India, coupled with California's legislative gridlock, is "draining the lifeblood of funding and foreign talent from Silicon Valley."

"Silicon Valley's innovation engine has driven the region's prosperity for 60 years, but at the moment we're stalled," Joint Venture CEO Russell Hancock stated in the group's 16th annual Index of Silicon Valley.

"What's hard to say is whether we're stuck in neutral, which has happened before, or whether it's time now for a complete overhaul."

This year's index is co-sponsored by the Silicon Valley Community Foundation.

The 72-page index analyzes scores of barometers of the region's health, from the number of global patent collaborations and industry-by-industry venture investment to the English language proficiency of third graders in Santa Clara and San Mateo counties. The report can be found online at [www.jointventure.org JointVenture.com.]

Key findings include:

- Silicon Valley lost 90,000 jobs between 2008 and 2009, leaving 11 percent of the workforce unemployed, about a point above the national unemployment average
- The number of "green jobs" has increased but still represents a small fraction of the Valley's overall economy
- Real per-capita income has fallen locally, though it remains far higher than state or national averages
- Silicon Valley's "economic engine has cooled" by many measures such as patents, venture-capital investment and office vacancies
- Driven by foreign immigration, the Valley's population continued to grow in 2009 but at a slower pace than before
- Housing prices are down
- High school graduation rates are up slightly, but the proportion of graduates meeting entrance requirements for the University of California or the California State University systems has dipped below 50 percent
- Silicon Valley drivers are driving less and shifting to cleaner-running vehicles
- Compared to other regions, Valley taxpayers still contribute a disproportionately high share of personal income tax revenue to the state, though the share has fallen
- Nearly half the residents of Santa Clara and San Mateo counties -- 48 percent -- do not speak English at home. Of the non-English tongues, Asian or Pacific Islander languages top the list at 43 percent, with

□ Nearly half the residents of Santa Clara and San Mateo counties -- 48 percent -- do not speak English at home. Of the non-English tongues, Asian or Pacific Islander languages top the list at 43 percent, with Spanish at 39 percent.

Foreign-born talent, particularly in science and engineering, has been a linchpin of the Valley's success in past decades, but that dynamic is at risk, Hancock believes.

Fully 60 percent of the Valley's science and engineering workforce was born outside of the United States, mostly from India, China and Korea, according to the Index.

But "some who have lived and worked here for years are beginning to 'go home,'" observes Tom Friel, retired board chair of the executive search firm Heidrick & Struggles.

"This is a troubling trend, exacerbated by our dysfunctional national immigration policy agenda, and if not addressed will have significant negative impact on our future as a region."

In addition, the percentage of foreign-born students earning science and engineering degrees in Silicon Valley has declined since 2003, dropping from 18 percent to 16.6 percent in 2007. The influx was hit first by tightened restrictions under Homeland Security after Sept. 11, Hancock said.

Friel stressed the importance of supporting education and training for the local population, "natural and immigrant alike," and doing whatever possible to keep the region attractive to talent from around the world.

At the same time, he said, "I don't think it's realistic or healthy to continue to rely on such a large inflow of engineering and science talent from abroad, particularly from Asia. This inflow has been the source of much of the Valley's historic edge in innovation, but conditions for these immigrants, support for their education, financing for their business ideas, have improved in their home countries and declined here."

Even as attracting and retaining top talent remains important to the region, California's investment in higher education is declining. While the total number of science and engineering degrees has leveled off, the percentage conferred to foreign students has been sliding in both the state and nation as a whole, the report notes.

"California state policy has become a hindrance to our innovation potential, not only because of our failure to invest but also because our government is not addressing important problems," Hancock said.

Friel added, "Many in the region, including some in our local and state leadership, somehow have come to believe that we occupy this position of leading economic region by divine right rather than hard work, prudent investment and sound policy.

"Nothing could be more wrong or more dangerous for our future in my view than this sense of entitlement and complacency.

"What we have been able to do historically, other countries and regions can also do and are beginning to show that they can and will."

The 90,000 Silicon Valley jobs lost between 2008 and 2009 involve nearly all sectors, from information products and services to life sciences, community infrastructure and manufacturing, according to the Index.

So-called "green" (environmental) business establishments and jobs showed a significant increase but still represent just 14,000 jobs in Santa Clara and San Mateo counties -- about the same number as in the medical-device industry.

"Silicon Valley's economic and innovation engine has cooled off," the report said, citing dips in patents and venture investment and a spike in office vacancies -- the highest since 1998.

"The level of investment continues to decline, and venture capitalists generally have not realized

significant returns for the past decade.

"Investment is shifting away from software and semiconductors and into biotechnology, energy, medical devices and media."

Silicon Valley venture-capital investment in clean technology dropped to \$1.2 billion last year after peaking at \$1.9 billion in 2008.

The bulk of those were in energy generation (41 percent) and energy efficiency (26 percent).

But patent registrations in green technology in the Valley are growing.

From 2006 to 2008 more than 100 green-tech patents were registered from the region. The Valley accounts for an increasing percentage of green patents nationwide.

And the region "has continued to generate new companies and attract existing companies," the report said.

Between 2007 and 2008, Silicon Valley had a net gain of some 9,500 businesses of all kinds.

In terms of environmental habits, Valley residents are driving less and shifting to cleaner-running vehicles.

Per-capita fuel consumption has dropped 13 percent since 2000, far greater than the 2 percent statewide decline. Last year, Valley residents consumed 50 gallons of fuel less per person than other Californians.

When it comes to preparing Silicon Valley's workforce of the future, the picture is mixed.

The percentage of eighth-graders enrolled in Algebra 2 is slightly higher in Silicon Valley than in the state as a whole and, of those tested, 72 percent scored at the advanced level.

On the other hand, fewer Silicon Valley students are graduating from high school with a college-prep curriculum under their belts.

The region's dropout rate is only 10 percent -- about half the statewide rate -- but only 47 percent of high school graduates in 2007-08 met entrance requirements for the University of California or the California State University systems. That's 5 percent lower than the previous year.

At the same time, state general-fund spending on higher education dropped 17 percent in 2008, and total spending per student dropped 19 percent, the report notes.

"In order for the region to flourish, its companies need to be able to attract top talent to the region," Hancock said.

"If talent inflows from abroad become less reliable, the region will depend more on the development of domestic talent, which will require the strong commitment of public leaders largely outside the region to invest in education and training."

Despite the problems, Friel and others said they are optimistic that the historic resilience of the Valley remains strong.

"The challenges we face are significant, but none of them are unsolvable," Friel said.

"No other region in the world has a better opportunity for success. We have faced big challenges in the past and met them. Our challenge is to do it again."

□ [www.paloaltoonline.com Disturbing trends darken Silicon Valley outlook]

□ [www.paloaltoonline.com Valley residents hurting, but better off than others]

□ [www.paloaltoonline.com EXCLUSIVE: Video of Joint Venture CEO Russell Hancock discussing the

"2010 Index" report.]

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