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No, The Tech Skills Shortage Doesn't Exist

Employers game the system and misrepresent the key market indicators.

URL: <http://www.informationweek.com/story/showArticle.jhtml?articleID=205601556>

Employers claim there is a severe shortage of IT workers in the United States. Listen in on any klatch of CIOs, and the conversation inevitably turns to their difficulties finding talent. Microsoft's Bill Gates, Intel's Craig Barrett, and other captains of tech industry argue that the situation has reached crisis proportions.

But moving beyond anecdotal impressions and vested interests, the employment and economic data paint another picture--one in which the IT labor market is clearing and none of the indicators demonstrates a systemic shortage. While exceptional talent or skills in emerging technologies will always, by definition, be in short supply, the most relevant market indicators--wages and employee risk--clearly show there's no broad-based scarcity of U.S. IT workers. In their zeal to enlist government help to expand the supply of tech workers through foreign guest worker programs, employers are misrepresenting IT labor market conditions.

Survey Results:

[Is There A Tech Talent Shortage](#)

Take Our Poll:

[What's your take on the IT talent shortage?](#)

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A key indicator of tightness in any labor market is wages--more specifically, whether wages are rising much faster than the norm. IT worker wages grew by a modest 2.9% in constant dollar terms from 2003 to 2005, according to Department of Labor data compiled by the Commission on Professionals in Science & Technology (CPST). This increase is indeed greater than the average 0.6% growth for all professional occupations, but the gains for IT workers were hardly robust and don't indicate any significant scarcity. More recently, we've seen some [growth in the wages for newly minted bachelor's degree computer scientists](#), according to the National Association for Colleges & Employers. Salaries for those entry-level jobs rose from \$50,744 in 2006 to \$53,051 in 2007, an increase of 4.5%. But those gains were almost completely gobbled up by inflation, which ran about 4.3% in 2007.

Another factor in considering the relative health of the IT job market is the level of risk employees face. As any investor will tell you, riskier investments should have the higher potential payoffs. It's no different with careers. While there are no formal measures of the risk and uncertainty of IT careers, it's obvious that they have soared over the past few years. The train wreck of 2002-2004 in the IT labor market derailed the careers of many professionals; some tech pros haven't come back.

Meantime, employer norms have shifted radically. Long gone are the days when IBM never laid off a worker. Nowadays, companies don't think twice about shipping IT work overseas or bringing in lower-cost foreign workers to replace U.S. employees, and even asking American workers to train their replacements. Intel's Barrett [writes an op-ed piece about the shortage of U.S. workers](#) even when his own company is in the process of major layoffs, shedding 14% of its workforce over the past two years.



In addition, the risk of technological obsolescence and age discrimination are higher in IT relative to other professions. How many physicians or pharmacists become obsolete at age 40? Put in this context, it's hard to believe that the very modest wage gains of the past few years balance the increases in IT employee risk.

Modest wage gains don't balance the rise in employee risk.

---**Ron Hira**, Rochester Institute of Technology, Economic Policy Institute

The consequences of this new equilibrium play out most prominently in career choices for those attending college. Enrollment of undergraduate computer science majors in major U.S. colleges and universities has plummeted an astounding 40% over the past four years, according to a [survey by the Computing Research Association](#). Many blame a lack of interest in the tech field among young people, or our failing K-12 education system. But the most likely explanation is that students, using an array of information at their disposal, including advice from relatives in the field, have decided that IT isn't as attractive an option as it once was.

SHRINKING EXPECTATIONS

More than any other indicator, student choice is an excellent pulse on the outlook for the U.S. IT labor market. The good news is that enrollments have stabilized, perhaps in reaction to the bottoming out of the tech recession. Even so, shrinking expectations of the size of the IT labor market are supported by the lackluster growth over the past few years, as well as by the future growth forecast by the Department of Labor. IT employment was slightly more than 3 million in 2006, up 2.2% from 2004, but those gains lagged the overall U.S. employment growth of 3.7% over the same period, according to CPST. Meantime, [the employment outlook continues to weaken](#).

In 2000, the Bureau of Labor Statistics projected that the United States would have 4,894,000 IT jobs by 2010. Since then, the bureau has consistently ratcheted down its forecasts, with the most recent projecting 3,522,000 IT jobs in 2010. I don't advocate using these forecasts as destiny, since the bureau has no way of accounting for important factors that will affect IT labor growth, whether it's on the downside (offshoring) or upside (technological breakthroughs). But it's one more important indicator of IT job market trends.

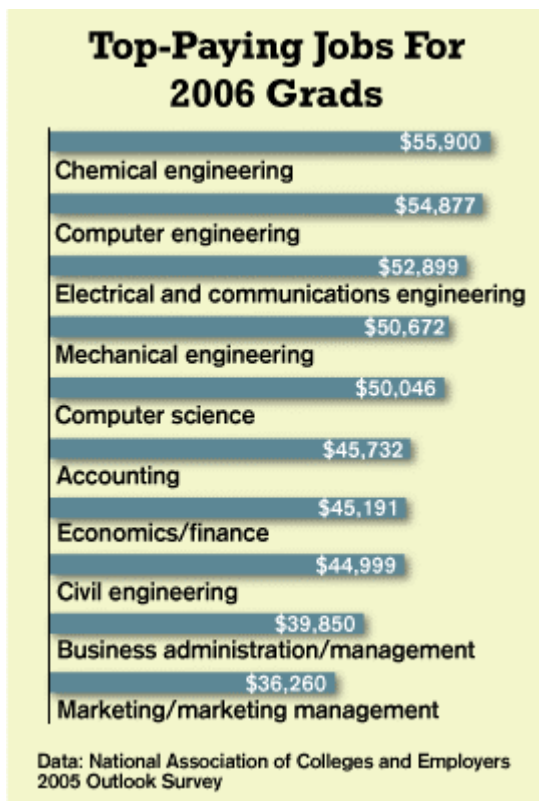
The average unemployment rate for IT occupations in 2007 was 2%, according to Bureau of Labor Statistics numbers released earlier this month, the same rate as for professional occupations as a whole. This compares favorably with the record high unemployment rates for IT workers just a few years ago. In 2003 the unemployment rate in IT was 5.5%, compared with 3.2% for all professional occupations.

We must take into account, however, that many of the IT workers laid off between 2002 and 2004, but who never made it back into the profession, aren't counted in the unemployment rolls. If an IT worker became a clerk at Home Depot or dropped out of the labor market, then he's no longer counted. And the surveys don't pick up underemployed workers.

IMPORTATION OF WORKERS

Some have pointed to the run on H-1B visas as an indicator of strong U.S. demand for IT labor. For example, in 2007 the base cap of 65,000 visas, for those workers holding no more than a bachelor's degree or having equivalent experience, was exhausted on the first day petitions were accepted for fiscal year 2008 by the Citizenship and Immigration Services.

But this self-serving explanation ignores the real reasons for the voracious appetite for foreign workers: their lower cost and the offshore outsourcing business model. With help from Congress, employers and university lobbyists have designed large loopholes into the H-1B program, letting employers legally pay below-market wages to those workers. Also, the H-1B and L-1 [guest worker visa programs are vital to the offshore outsourcing business model](#), as U.S. companies rotate employees for knowledge transfer and to shift work overseas. So vital are these visas to the offshore outsourcing industry that India's commerce minister, Kamal Nath, calls the H-1B the "outsourcing visa" and has demanded that the United States increase the cap.



We see both of these trends manifested in the wages of new H-1B computer workers, which dropped 16% from \$59,708 in 2002 to \$50,000 by 2005 in constant 2005 dollars. If wage gains have been modest under the current H-1B cap of 85,000 (plus exemptions for university and nonprofit research employers), what will happen to wages if the massive expansion being pushed by Compete America, the deep-pocketed lobbying coalition of industry and universities, were to be passed? The coalition has lobbied for uncapped exemptions for large categories of workers.

As if something out of *Thank You For Smoking*, the Hollywood spoof on lobbying, tech employers have repeatedly misrepresented the state of the U.S. IT labor market, saying that their use of guest worker programs prevents offshoring by redressing domestic shortages. Employers say they hire foreign guest workers only as a last resort, when they can't find U.S. workers. But their real motivations for a cap increase are quite different.

The public face of Compete America has been Robert Hoffman, a VP for government affairs at Oracle. In interviews, Hoffman never mentions that Oracle owns offshore IT outsourcing vendor

I-flex, a top 20 user of H-1B visas. Like other offshore outsourcing firms, I-flex rotates its foreign workers into and out of the United States under H-1B and L-1 visas and hires very few Americans. As an I-flex exec told National Public Radio's *Marketplace* program, "Most of the people coming through us have no intention of settling in the United States. These are folks who are coming here to do a job, have fun while they can in the United States, and then use this experience in different parts of the world." Oracle isn't the only company with an offshore outsourcing arm. EDS owns Mphasis and Computer Sciences Corp. recently purchased Covansys.

To make matters worse, major news publications have falsely claimed that the H-1B program requires employers to demonstrate there's a shortage of U.S. workers before hiring an H-1B worker. The Department of Labor's 2006 Strategic Plan puts it bluntly: "H-1B workers may be hired even when a qualified U.S. worker wants the job, and a U.S. worker can be displaced from the job in favor of the foreign worker."

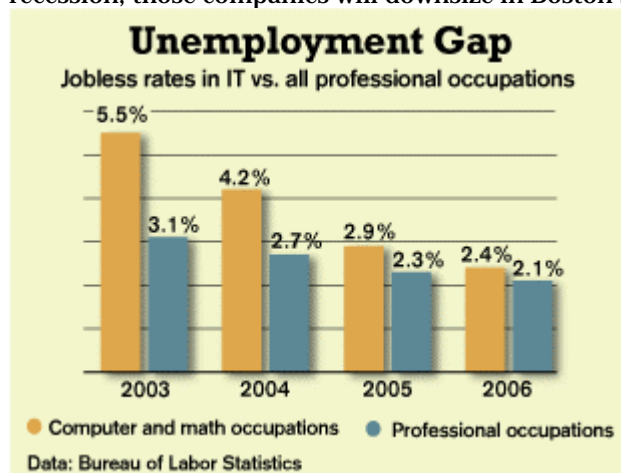
CONSIDER OBJECTIVE DATA

Every major HR department benchmarks the labor market with objective data, such as offer acceptance rates (the likelihood a candidate who's offered a job accepts), signing bonuses, days jobs go unfilled, and wage increases. The [Seattle Post-Intelligencer reported in 2005](#) that Microsoft's offer acceptance rates were an astoundingly high 90%-plus. A rate greater than 50% is considered a sign that employers are facing little competition for talent.

Duke University's Vivek Wadhwa took my advice to ask for this kind of hard data when he designed a study to determine whether there was a shortage of engineers. [He found no such shortage in the United States](#). Another recent study, by Hal Salzman of the Urban Institute and Lindsay Lowell of Georgetown University, [drew a similar conclusion](#).

Many of the indicators cited above are at the macro level, but there isn't a single IT labor market. Instead, diverse labor markets vary by geography, skill set, experience, and other factors. And this is where we need a much more nuanced discussion of what is really in demand and what is available.

Based on the indicators I've cited, my judgment is that the U.S. IT labor market overall is doing OK, for now. We're seeing modest wage growth and indications that college enrollments in tech-related programs have bottomed out. There's no shortage of supply, but there are many looming threats to the domestic workforce as firms build huge labor capacity overseas. Accenture passed a milestone in August, with more employees in India (35,000) than in any other country. IBM will have 100,000 workers in India by 2010, rivaling its U.S. head count. During the next tech recession, those companies will downsize in Boston before Bangalore.



What drove us out of the tech labor recession of the early 1990s was the mass move to client-server computing, the widespread corporate adoption of ERP software, the move to object-

oriented programming, and, of course, the Internet. How much of future tech breakthroughs will be filled by low-cost foreign labor versus U.S. labor remains to be seen.

We must move beyond the "he said, she said" op-ed analyses to a cooperative dialogue among the various interest groups: employers, university administrators, and worker groups. Employers have a strong interest in claiming there are worker shortages because it provides them with public relations cover for outsourcing, it induces more people to enter the field, it justifies flooding the market with lower-cost foreign workers, and it gets additional government dollars thrown at the so-called problem. Universities overhired computer science, IT, and MIS faculty during the boom times and thus have a strong incentive to present the rosier picture possible to attract new students. And, of course, incumbent workers have an interest in keeping supply low.

It's time to break this logjam with some cold, hard facts and sound judgment.

Dr. Ron Hira is an assistant professor of public policy at Rochester Institute of Technology, where he specializes in engineering workforce issues and high-skill immigration. He's a past chairman of IEEE-USA's Career & Workforce Policy Committee, a research fellow at the Economic Policy Institute, and co-author of the book [Outsourcing America](#) (AMACOM, 2005)..

Illustration by Brian Stauffer

TECHSUNITE.ORG



Will H-1B Visa Reform be talked about in the Presidential Debates? Help Make it Happen!

As you are well aware, report after report after report shows that there is no "shortage" of tech workers in the U.S. Just this weekend Ron Hira put out an article backing this up -

<http://tinyurl.com/2u8fzq>

However, if the candidates for president aren't asked about it - how can we expect them to do stand up for it once they get into the White House? **Help us make H-1B Visa reform an issue by visiting <http://dyn.politico.com/debate> and submitting a question to be asked of the candidates at the CNN debates at the end of this month.**

A sample question:

"Given the numerous reports showing there is no shortage of tech workers, would you agree to cut or eliminate the H-1B Visa program?"

In Unity-Strength & Solidarity:

**Steve Tisza, President
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Chicago**