THE COMING JOB BOOM

Forget those grim unemployment numbers. Demographic forces are about to put a squeeze on the labor supply that will make it feel like 1999 all over again.

By Paul Kaihla

Photograph by Mark Hooper

Judy Reed is a buyer in a buyer's market, and frankly, that has its advantages. The vice president for human resources at Stratus Technologies, a Maynard, Mass., maker of high-reliability servers, Reed never lacks for attention at parties and dinners in this employment-starved economy. When she does post a job, she gets four times the volume of responses she got three years ago, and some job seekers even follow up with Christmas cards. If she wanted to, she could fill every opening at a salary 15 percent below the going rate—as, in fact, many of her competitors do.

But that's one advantage Reed won't take. She recently hired an engineer with more than 10 years' experience for nearly six figures—the same wage she paid at the height of the bubble. Reed isn't just being kind. She asserts that any other course of action is asking for trouble down the road. "The buyer's market we're in now is temporary," she warns. "Maybe it'll last another year or two." And then? "Companies that haven't taken care to build worker loyalty," she says, "will find themselves in the same predicament as in 1999 and 2000."

At this particular moment in economic history, that is quite a statement. Two million workers have been downsized or displaced since the recession of 2001. At 6.2 percent, the national unemployment rate is the highest it's been in nine years, and the number of new jobless claims has sat above 400,000 for 20 weeks. To base hiring policy today on the prospect of a return to the tight labor market of 1999 seems not just counterintuitive—it defies the evidence of one's own eyes.

But Reed isn't alone. Executives at Cigna, Intel, SAS, Sprint, Whirlpool, WPP, and Adecco (the world's largest placement firm) have told *Business 2.0* that they, too, worry that the supply of labor is about to fall seriously short of demand. Former treasury secretary and current Harvard University president Larry Summers regards a skilled labor shortage as all but inevitable. Economists like former Deputy Secretary of Labor Edward Montgomery and Sigurd Nilsen, the director of education, workforce, and income security in the General Accounting Office, have issued warnings to the same effect. And in April the country's largest and most influential industrial trade group, the National Association of Manufacturers (NAM), added its voice to the chorus. The association released a white paper based on research by labor economist Anthony Carnevale, former chairman of President Clinton's National Commission for Employment Policy, that forecast a "skilled worker gap" that will start to appear the year after next and grow to 5.3 million workers by 2010 and 14 million 10 years later. (Including unskilled workers, the gaps will be 7 million in 2010 and 21 million in 2020.) "By comparison, what employers experienced in 1999 and 2000 was a minor irritation," Carnevale says. "The shortage won't just be about having to cut an extra shift. It will be about not being able to fill the first and second shift too." This will occur, he adds, without any heroic growth rates or bubblelike economic anomalies; all it will take is a return to the economy's long-term growth rate of 3 to 3.5 percent a year.

The cause of the labor squeeze is as simple as it is inexorable: During this decade and the next, the baby boom generation will retire. The largest generation in American history now constitutes about 60 percent of what both employers and economists call the prime-age workforce—that is, workers between the ages of 25 and 54. The cohorts that follow are just too small to take the boomers' place. The shortage will be most acute among two key groups: managers, who tend to be older and closer to retirement, and skilled workers in high-demand, high-tech jobs.

To see the demographic time bomb in microcosm, just count the gray heads around your own office. At Sprint, for example, half of the 6,000 field and network technicians are over 50. At Cigna Systems, about a quarter of the 3,400 IT workers will pass 55 this decade. And at Cary, N.C., software maker SAS, more than a quarter of the staff will be eligible to retire by this decade's end. The company's VP for human resources, Jeff Chambers, says this group is filled with veteran designers and engineers, many of them architects of the company's most successful products. "It doesn't take a rocket scientist to see what's going on," he says. "Existing staff are going to start getting out soon, and the feeder pool just isn't coming up. If you're responsible for the workforce, you'd better ask yourself what you are going to do."

What employers will have to do, of course, is not difficult to predict: bid up wages, raid competitors for employees, seduce older workers to stay on the job, outsource whatever work they can, and lobby the government to jack up the quota for skilled immigrants. What they will not be able to do—at least not for much longer—is ignore the problem. "People think we're going to have plentiful workers forever, but that's not so," explains David Ellwood, a Harvard University professor who recently led an Aspen Institute study of the problem. "If you want to hire somebody who has traditionally been the bread and butter of the labor force, you're soon going to have to hire them away from somebody else."

No sentient adult could have made it through the past decade without developing a healthy distrust of forecasts like these. But the case for the worker gap differs from the usual economic entrail reading in one crucial regard: It's based on demographics, a far more certain discipline. When Carnevale's model, for instance, shows that within seven years 30 million people now in the workforce will be older than 55, that's not a guess. It is virtually a certainty. "Any kind of demographic projection with respect to people who have already been born is notoriously accurate," agrees former Treasury Secretary Summers.

What the projections reveal is a passing of the workplace torch unlike any other in U.S. history. Up to this point, each generation to enter the workforce has been larger and better-educated than its predecessor. This time, however, neither will be true. The number of workers in the prime-age category—the years when skilled, educated workers are at their peak productivity—will hardly budge during the next two decades, even assuming that there will be about 1 million legal and illegal immigrants a year. At the same time, the percentage of the prime-age labor force that has been to

"We are about to face a demographically driven shortfall in labor that will make the late 1990s seem like a minor irritation."

— Anthony Carnevale, former chairman, National Commission for Employment Policy

TIMOTHY BELL

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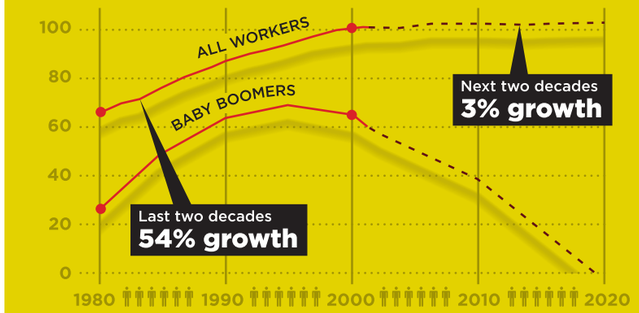
As the boomers retire, the workforce will stop growing ...

The U.S. has always been able to count on an expanding labor force. But as the boomers are replaced by a smaller generation, the number of workers between the prime working ages of 25 and 54 will stagnate.

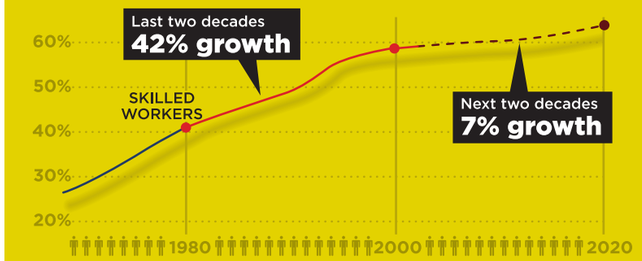
Prime-age workers (ages 25-54), in millions



and the average worker's education will flatline ...

During the past 20 years, the share of the workforce that had attended college grew from just over 40 percent to almost 60 percent. That figure will barely budge during the next two decades.

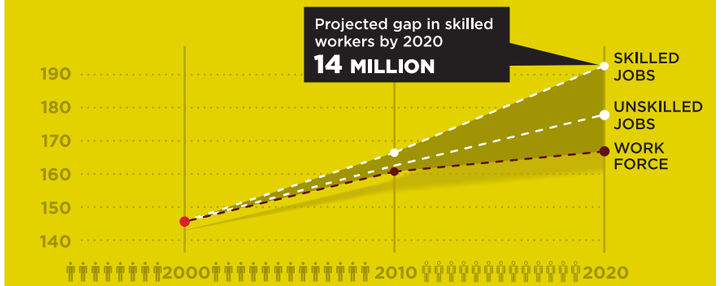
Prime-age workers (ages 25-54) with more than a high school degree



causing a serious shortage in skilled workers.

The static educational level of the workforce, coupled with the retirement of the baby boomers, means that there won't be enough skilled workers to meet continuously rising demand over the next 20 years.

Numbers of jobs and workers, in millions (adjusted for multiple job-holding)



Sources: David Ellwood/Aspen Institute's Domestic Strategy Group; Anthony P. Carnevale and Donna M. Desrochers, Educational Testing Service

college will flatline at about 60 percent. In fact, enrollments in the crucial fields of engineering and computer science have actually been declining.

The result is an unprecedented mismatch between the workforce and the demands of a growing high-tech economy. Projections by the Labor Department's Bureau of Labor Statistics indicate that the seven fastest-growing occupations this decade will all be in technology. Demand for applications software engineers and tech support specialists, for example, will double by 2010, according to the BLS. (See "The 10 Fastest-Growing Occupations," opposite page.) Even the seventh-ranked category, database administrators, is projected to grow by a stunning 66 percent. These high-demand tech fields will be the first to feel the labor crunch. By 2005, Carnevale says, "we'll start to see spot shortages all over the place." In some fields, he predicts, employers will be reduced to filling desperate job shortages with unqualified workers. By the following decade, when the bulk of the baby boomers bid their cubicles goodbye, a broad swath of corporate America will be scraping the bottom of the barrel for white-collar workers.

Every economic forecast has its critics, of course—particularly one so at odds with the prevailing mood about employment. The projections assume, for instance, that the baby boomers will leave the workforce at roughly the same age as their predecessors, but how do we know that they won't delay retirement to make up for recent stock market losses and depressed 401(k)s? The answer is that the trend toward early retirement is a deeply entrenched pattern established during the past four decades, and neither bull nor bear markets have made a dent in it. Even the Social Security Administration, which would love nothing more than to make the case that the retirement age will soon rise dramatically—the better to prove its own solvency—has been unable to find any data to support that view.

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JASON GROW

Another loud objection is that the model expects far too much growth in the battered tech sector. John Sargent, a senior policy analyst in the Commerce Department's Office of Technology Policy, says he hears that all the time. "A lot of people say, 'Are you freaking crazy? Haven't you seen what's happened in the last year and a half?'" But Sargent, an authority on economic measurement, defends the BLS numbers, calling them the "closest you get to absolute objectivity." To assume that the sector's current weakness is permanent makes no more sense than believing in 1999 that the gravy train would never end. Several studies show that where the bureau has erred, it has traditionally *under*estimated demand for tech.

The tech sector usually leads the economy during periods of employment growth, and it's not clear what force would prevent it from doing so during the next bounce. Some skeptics argue that the culprit might be technological progress itself. They point out that a considerable amount of brainpower at software companies is now aimed at automating business data centers and, in effect, putting hordes of gainfully employed IT workers out on the street. IBM calls the effort "on-demand" or "utility" computing. Oracle, typically, calls it nothing but boasts that it has developed software that could soon make database administrators as obsolete as typesetters.

Not likely. Even if such breakthroughs ever made the leap from PowerPoint presentation to reality—and they haven't yet—they probably wouldn't shrink demand for tech overall. That's not how progress works. Whenever new technology eliminates less sophisticated jobs, it tends to create higher-level positions elsewhere. Cathleen Barton, U.S. education manager at Intel, points out that in 21 years of steady improvements in equipment and processes, Intel's workforce has only grown. "There's always the argument that the more technology you put in, the fewer and less-skilled workers you will need," she says. "But that's just not the case." In 1982, for example, Intel had about 20,000 U.S. employees, and an entry-level plant operator needed only a high-school education. That worker's skills would be obsolete today, it's true. But in its current 49,000-person U.S. workforce, Intel employs far more plant technicians than it did two decades ago. The difference is that entry-level applicants now need at least a two-year degree in applied science to handle the job.

If smarter software and increased au-

Where the Jobs Are Going

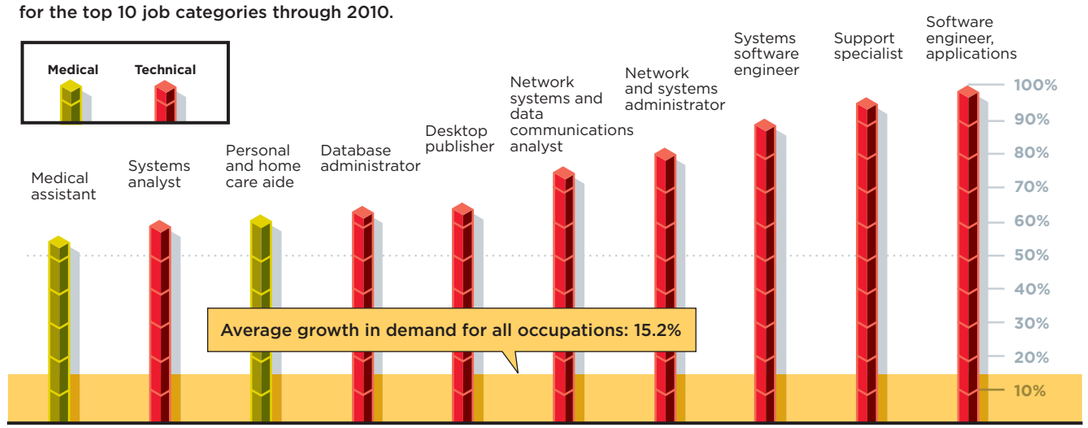
Americans will find the hottest job growth this decade in Southern and Western metro areas fed by expanding service industries and by a resurgence in the tech and defense sectors.

Metro area	Job growth, 2003-2013
Las Vegas	47.7%
Orlando	31.9%
West Palm Beach, FL	28.7%
Ft. Lauderdale, FL	25.7%
Riverside, CA	25.6%
Phoenix	25.3%
Jacksonville, FL	24.8%
Tampa, FL	24.4%
Raleigh-Durham, NC	24.0%
Sacramento, CA	23.7%
Austin	22.9%
Charlotte, NC	20.4%
Atlanta	19.8%
San Diego	19.2%
Washington	18.5%
Dallas	17.4%
Oakland, CA	17.3%
Miami	16.5%
Denver	16.5%
Orange County, CA	16.4%

Sources: Global Insight; Bureau of Labor Statistics

The 10 Fastest-Growing Occupations

Over the course of this decade, the biggest increase in employee demand will occur in the technology and medical fields. Here's the forecast for the top 10 job categories through 2010.



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Source: Bureau of Labor Statistics

tomation won't derail a coming surge in demand for skilled American workers, how about competition from cheaper workers abroad? The double-digit growth in outsourcing of service jobs to low-wage countries, particularly India, has spawned more than its share of hand-wringing in the press and protectionist brimstone in state legislatures. Much of the worry seems to have crystallized around an estimate by technology research and consulting firm Forrester Research that India and other nations will import some 3.3 million U.S. service jobs during the next 15 years.

For the most part, economists say, this is mere hysteria. India, China, the Philippines, and other newly industrialized countries simply haven't enough capacity to prevent the U.S. labor squeeze, especially in IT. India's IT industry, after all, produces about $14 billion a year, a gnat on the hide of the U.S. sector's $813 billion. Likewise, the subcontinent's 150,000 tech workers represent less than 2 percent of America's domestic IT labor force, barely enough to make a ripple in the looming job shortage.

And what of the 3.3 million jobs that Forrester predicts will move offshore by the end of the next decade? Most experts in the field put little faith in that number; they say there's not yet enough data to make any credible projection. (Some, in fact, dismiss Forrester's study as little more than a marketing brochure for Forrester's own offshore outsourcing consultancy.) Martin Kenney, a professor at the University of California at Davis who has just released a study on outsourcing in India, guesses that the true figure will be only half that many and that most of those will fall into lower-skilled categories like call centers. But even if Forrester's prediction came true—and even if each of the 3.3 million exported jobs would otherwise have been filled by a U.S. manager or skilled worker—that still represents only a fraction of the shortage that Carnevale and other economists foresee. In other words, the long-term tragedy of offshoring isn't that it's snatching away skilled American jobs. It's that it can't possibly snatch enough of them.

Elementary economics teaches that there can never be more jobs than jobholders. A gap of 5.3 million workers in 2010 doesn't mean that there will be millions of empty cubicles waiting for workers who will never show up. Instead the labor market will "clear." Wages in the hottest professions will rise high enough

Hasn't This Happened Before?

Last time there was a labor shortage as deep as the one that looms today, the peasants revolted.

A worker scarcity driven by demographics—the fate predicted for the U.S economy during the next two decades—is rare in history, but not unknown. When it occurs, the value of labor invariably rises, just as the law of supply and demand would suggest.

The most recent worker gap arose in the 1950s. A mild shortage of younger workers cropped up in that decade partly because restrictive laws choked off immigration during the 1930s, even as the Great Depression cut the U.S. fertility rate by more than a quarter. The relatively small generation born during the Depression would enter the workforce just as the post-World War II boom lifted demand for new workers. "The scarcity of labor led to wage premiums for the Depression babies," says Nicholas Eberstadt, an economist at the American Enterprise Institute. "That contributed to the postwar prosperity experienced by the boomers' parents."

BETTMANN/CORBIS

To find a mismatch between successive generations as deep as what lies in store in the United States, Eberstadt says, you have to go back another 600 years. Beginning in 1348, the Black Death wiped out 30 to 50 percent of Europe. In England, the plague produced such a severe labor shortage that grain rotted in fields during the 1349 harvest. Peasant farmhands, who made up the vast majority of the surviving labor force, demanded pay hikes to compensate for the extra work demanded of them. Landowners responded by ramming wage controls through Parliament. Eventually, the overworked laborers launched the Peasants' Revolt of 1381, one of the greatest working-class rebellions of the Middle Ages.

Although the revolt was quickly repressed, the persistent labor shortage wound up driving many landlords out of direct cultivation. Instead, they outsourced production by breaking their estates into parcels that they rented out, sometimes to ambitious peasants. Those yeomen entrepreneurs gave rise to a new gentry during the Renaissance. In the same vein, skilled American workers who currently fear downward mobility may emerge as a privileged elite in the 21st century. For those workers, such an outcome would be a welcome reversal of fortune—no revolt necessary. — P.K.

JASON GROW

"If you want to hire the people who have always been the bread and butter of the labor force, you're going to have to hire them away from someone else."

— David Ellwood,
professor of political economy, Harvard University

to induce workers to change careers, emigrate to Silicon Valley, or retrain themselves in the desired skills (remember "Internet or Bust"?). Companies will coddle workers to build loyalty (remember free massages?), lure skilled retirees back from the golf course, or redeploy other workers. Eventually the demand will be met.

Anticipating the shortage, some companies have already put the process in motion. For example, Gail Doughtie, a vice president at Cigna Systems, has begun preparing for a shortage of database administrators by training other Cigna IT workers for the job; on big projects she looks for chances to pair veteran database administrators with junior IT workers in their 20s and 30s.

For her part, Judy Reed has refused to cut not only starting salaries but also budgets for athletic teams, picnics, and parties. "If your social life is at work, then it's harder to leave that work behind," she reasons. The company also offers over 70 courses a year in technology, management training, and skills like negotiating and writing. "Loyal workers refer other loyal workers," she says.

SAS, meanwhile, has used the current downturn to staff up, hiring more than 800 new employees. "We've been using this downturn to buy loyalty with these people, in the hope that we can ride them through the decade," Chambers says. "If you lost your job at Dotcom Inc. but got hired at SAS and prospered, you're probably not going to move when a competitor comes calling."

Like Reed, Chambers predicts that tech companies will try to offset the shortage of IT help by enticing boomers to work far beyond the standard retirement age. He's been urging senior SAS management to adopt programs to keep the more than 1,000 managers nearing retirement age from leaving. Among his suggestions is one that's almost certain to become more widespread this decade: flexible hours. "I know I'm not going to want to work every single day when I'm 55," Chambers says, "but I'll still probably want to work. We'll say, 'We'll pay you for an average of 100 hours a month, but if you want to take off June to spend time with your new grandchild, that's OK.'"

As the labor shortage grows more acute during the next decade, the returns on such tactics are likely to diminish. At the margin, there may simply be no cost-effective way to coax one more warhorse out of retirement or equip one more high school dropout for the rigors of a high-tech economy. In that case, the labor market will still clear—but it will do so not by increasing supply, but by lowering demand. Projects will be abandoned, growth opportunities will lie fallow, and economic output will settle at a new, slower rate of growth.

Between now and then, though, there promises to be one ferociously tight labor market. Hard as it may be to picture in the midst of today's employment gloom, the coming squeeze could be as big a bonanza for skilled workers as 1999 was—and as big a headache for employers. The only difference is, you can see this one coming. Whether you prepare for it or let it catch you by surprise is up to you. ✦

Paul Kaihla (pkaihla@business2.com) is a senior writer at Business 2.0.

The Land of Parasite Singles

And you thought America had demographic problems. In Japan, a shortage of young adults willing to marry and start families has had devastating economic consequences.

Japan's marathon dance with deflation and economic stagnation, now in its 13th year, is nothing like the scenario mapped out for the United States in the accompanying story. Still, if you have any lingering doubts about the power of demographics to affect an economy, take a look at Japan. Of all the nations on earth, Japan today offers the strongest lesson on how disruptive it can be when the supply of youth drops below a tipping point.

To explain the bursting of the Japanese bubble of the 1980s, conventional wisdom focuses on the supposed defects of Japan's political and financial systems: The government is controlled by vested interests that are resisting reform, the reasoning goes; the bankers are failing. Though both factors certainly played a role in Japan's decline, they don't explain it. After all, Japan is no more ridden with cronyism now than it was during the prosperous 1970s and '80s. What changed?

The answer is the structure of Japan's population, which is now the most rapidly aging in the world. In Japan, as in any country, a growing population of young adults is a major source of expanding production and consumer demand. Growth in the labor supply comes almost exclusively from this age group. So does a lot of spending: Young adults acquire and furnish new homes, buy major appliances, and spend on their children. But from 1980 to 2000, the number of Japanese between the ages of 25 and 44 declined by 7 percent. Moreover, an unprecedented share of them decided to remain single and live with their parents, further depressing consumer demand.

Meanwhile, even as Japan's supply of young adults was shrinking, the number of people ages 45 to 64 was swelling by a massive 42 percent. Middle-age people typically have put the cost of acquiring a home and raising a family largely behind them, and are saving more and more of their income for retirement. So it happened that a rapidly growing middle-age population and a shrinking supply of youth combined to cause what Yamada Masahiro of the Tokyo Gakugei University has called the world's first "low-birth-rate recession."

BARRY CRONIN/GETTY IMAGES

ECONOMIC PROBLEM There aren't enough of them and they won't play by the old rules.

When the Japanese bubble first burst, many Westerners predicted a quick rebound. After all, the country excelled, and still does, in the quality of its workforce and its technological prowess. Yet the prospect of boundless prosperity was undercut by drastic changes in Japanese family life. In the mid-1970s, surveys showed that some 80 percent of respondents—male and female, young and old—agreed with views such as "Women should marry" and "Men work, women keep homes." By the 1990s, only 40 to 60 percent of Japanese still clung to those attitudes. Marriage rates dropped and a new social type emerged, which many Japanese commentators call the *parasaito shinguru*, or "parasite single."

While the term applies to both men and women, the stereotypical *parasaito shinguru* is a young career woman living rent-free with her parents. Dressed in designer clothes and jewelry, she frequently travels with girlfriends to Europe, New York, or Thailand, typically staying at the best hotels and resorts.

Those sympathetic to such young women say they avoid marriage because, under Japanese custom, they would be expected to care for a husband's aging parents as well as their own. The rigor of Japanese education raises the cost of parenthood, and perhaps erodes its joys as well. Tellingly, only 9 percent of Japanese mothers say they find pleasure in rearing children. In other industrialized countries, that figure is 40 to 70 percent. In 2001, Japan's Youth Research Institute asked schoolgirls around the world to consider the statement "Everyone must get married." More than three-quarters of American schoolgirls agreed, while a staggering 88 percent of Japanese girls *dis*agreed.

Given such attitudes, it's hardly surprising that Japan's fertility rate is among the world's lowest—just 1.4 children per woman. In the two generations after World War II, Japan rebuilt itself into the world's preeminent industrial power. Yet as its subsequent experience shows, prosperity ultimately depends not just on efficient factories and driven office workers, but also on the intimate decision men and women make when they stare into each other's eyes and ask, "Should we make a baby?" — PHILLIP LONGMAN