



The Paradox of Worker Shortages at a Time of High National Unemployment

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EXECUTIVE SUMMARY



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At a time of high national unemployment, it has become a truism that there are few worker shortages and employers have numerous applicants for every available slot. After all, that is the very definition of joblessness. High unemployment results when there are many more workers seeking positions than available jobs.

Yet the paradox of the contemporary situation is that in this time of stubbornly high unemployment, a number of fields report a shortage of American workers and problems filling key positions. For example, even as the country as a whole experiences high unemployment, the Bureau of Labor has found that there are over 3.5 million open jobs - openings across the country and across sectors. In some specialized sectors, such as high-tech, advanced manufacturing, and medical specialties, unemployment rates are as low as three, four, or five percent. And on the labor-intensive side of the economy, agricultural companies report difficulty finding workers to pick vegetables and fruits, and hotels and restaurants indicate they have problems filling key positions.

The ripple effects of job vacancies spread throughout the economy. Companies that have been unable to fill key positions have closed down, moved entire operations abroad or delayed expansion plans. Conversely, filling worker shortages allows companies to better compete, grow, and create more jobs for American workers.

This report aims to provide a roadmap for where worker vacancies exist, and how they can most effectively be filled to help companies grow and expand.

Labor shortages are identified through analysis of job outlook surveys, government reports, and interviews with business and labor leaders. To estimate the impact of filling these shortages in specific industries across the economy, interviews were conducted with business and labor leaders in the accommodation, agriculture, food service, health care, manufacturing, technology, and life sciences sectors.

The data and interviews confirm that worker shortages exist in each of the sectors, and that these shortages cannot be filled by available American workers, even with high unemployment across the nation, due to retirements, demographic gaps, geographic differentials, and the failure of educational institutions to deliver employees in key sectors. Examples of the costs of shortages in various industries include:

- **Agriculture:** Lack of access to workers has led to (1) food processing operations for frozen broccoli and cauliflower moving to Mexico, (2) some of the nation's most productive farms closing down, and (3) farmers from states like Wisconsin, North Carolina, Maryland, Louisiana, and Washington delaying expansion plans.
- **Health Care:** At a time where increased retirements and new mandatory health insurance promise to dramatically increase the demand for medical care, 30 percent of hospitals are already reporting shortages in specialty services. The shortages of nurses alone are estimated to top 115,000. 80 percent of hospital CEOs are currently making efforts to increase the number of primary care physicians.
- **Manufacturing:** Employers in the manufacturing sector report difficulty filling available high-skilled positions. Even at the height of the Great Recession in 2010, companies reported 227,000 open jobs. Factory owners note that is difficult to bring manufacturing jobs back when they cannot find the talent they need to expand.
- **Technology:** Microsoft has 200 employees in its software center in Vancouver because it couldn't get engineers into the US. Google developed its news aggregator outside the US for similar reasons, and companies like ON Semiconductor in Phoenix are revving up their overseas hiring because they cannot find workers in the US. The problem is especially acute at the governmental level, where more than half of state governments (54.8 percent) report difficulty filling vacant IT positions.

There are two potential ways to fill these gaps, and both should play an important part in the country's economic recovery. The first is to retrain American workers to ensure that their skill sets match the needed requirements. The second is to take advantage of foreign workers with the skill set and mobility to fill the existing gaps.

These two solutions to worker shortages—training American workers and bringing in foreign-born workers—need not be in opposition. There are two competing theories on the role of immigrant labor in America - do they *compete with* or *complement* American workers? In the framework of compete, the American economy and labor force are seen as a zero-sum game and every job taken by an immigrant workers is one less job for an American worker. But economies are more complex than that, growing and

generating new jobs as companies innovate and expand, creating new jobs, or in some cases, new industries and sectors of the economy. In this context, immigrant workers can be seen as complementing American workers. Immigrants tend to have different skill sets and different education levels than American workers. They are more likely to have a PhD and less likely to have finished high-school. As a result, immigrant workers can *complement* American workers by filling in specialized roles at both ends of the economy.

The findings presented in this paper are consistent with prior research in this area. For example, research by the World Economic Forum and the Boston Consulting Group projects that within the decade there could be as many as “20 million vacant U.S. jobs unless the current education-to-employment system undergoes significant changes.”¹ The takeaways from these findings are clear. Addressing worker shortages – whether through job retraining or immigration—is a necessary part of our economic recovery that will create more American jobs.

When skill and labor shortages aren’t met, the economy suffers. A smart immigration system can help prevent this by filling needs so companies can expand operations in the U.S. and don’t have to move them overseas. But America’s immigration system is not designed for today’s economy, and remains largely unchanged since 1965. In fact, of the approximately one million green cards given out by the U.S. in 2011, around 139,000 (or 13 percent) were given out for economic reasons, a number far too small to meet the needs of the world’s largest economy.² By comparison, Canada provides a much higher percentage of employment-based visas than the U.S. even though it has a much smaller population.³ America’s immigration system must always help families reunite and provide a safe harbor for refugees and asylum-seekers. But as America rethinks its immigration system, there is a unique opportunity to secure growth and prosperity by ensuring that it meets the needs of a 21st century economy.

Worker Shortages in the Health Care Field

Health care is an industry that has seen large job growth over the past decade. It is one of the biggest sectors in the United States, and comprises nearly one-sixth of the overall economy. It is crucial to the future of the country both from an economic as well as medical standpoint.

To compile data on current and future trends, the American Hospital Association completed a survey of 572 community hospital chief executive officers. Even in the middle of the most challenging economic circumstances since the Great Depression, the organization found worker shortages and difficulty filling positions. Hospital executives reported that 30 percent of hospitals had shortages in specialty services and that they could not fill 9 percent of their vacancies for therapists.⁴

In addition, officials indicated they needed to hire additional physicians in several different specialties in order to satisfy patient demands. For example, 80 percent of CEOs indicated they were making efforts to increase the number of primary care physicians, 65 percent were seeking additional physicians, 43 percent wanted most hospitalists, 41 percent sought more surgery physicians, 28 percent wanted more OB/GYN doctors, 23 percent felt they needed more emergency medicine personnel, 19 percent wanted more specialists in ear, nose, and throats, 19 percent were attempting to recruit new intensive care staff, 18 percent

wanted more psychiatrists, 13 percent desired additional neurosurgeons, and 13 percent were seeking more vascular surgeons.⁵

These trends were similar to earlier AHA findings when it undertook a survey of 840 hospital leaders. At that time, the organization found the areas facing the largest shortages included therapists (11 percent), registered nurses (8 percent), pharmacists (8 percent), nursing assistants (8 percent), licensed practical nurses (7 percent), laboratory technicians (6 percent), and imaging technicians (6 percent). According to hospital officials, these shortages created negative service impacts. Forty-nine percent of hospitals reported decreased staff satisfaction, 36 percent indicated there was emergency department overcrowding, and 35 percent noted they had experienced decreased patient satisfaction owing to the staff shortages.⁶

Shortages were particularly problematic in the area of nursing. The latter AHA survey found a shortage of 116,000 nursing positions among its community hospitals.⁷ In response to the registered nurse vacancies, 17 percent of medical facilities reported that they had hired nurses who were foreign-born and foreign-educated. Many of these nurses were recruited from the Philippines, although hospitals also noted that they have found them in Canada, India, Africa, China, and Korea.⁸

A survey found that 18 percent of [New York State] hospitals had hired nurses from foreign countries. But many reported difficulty bringing those individuals into the United States due to difficulties of obtaining work visas.

The nursing problem in New York State was similar. A survey found that 18 percent of its hospitals had hired nurses from foreign countries. But many reported difficulty bringing those individuals into the United States due to difficulties of obtaining work visas. The survey also documented 300 cases where foreign workers had job offers, but where their entrance into the country had been delayed due to immigration problems.⁹

Research by Professor Peter Buerhaus of Vanderbilt University has found the percentage of foreign-born nurses in the United States has grown from 9 percent in 1994 to 16.3 percent nationally in 2008. Many medical areas feature a high preponderance of foreign born workers owing to difficulty in recruiting American-born workers. For example, it has been estimated that immigrants make up “27 percent of physicians and surgeons, 21 percent of dentists and 15 percent of dental assistants, 14 percent of physical therapists, 19 percent of pharmacists, and 20 percent of home health aides.”¹⁰

Currently, there is a shortage of nurses due to lack of faculty instructors owing to state budget cuts that have reduced the availability of teachers and courses at public colleges and universities.¹¹ Thompson noted that, “The ability for our education system to handle future nursing workforce is stifled.... We don’t have enough faculty and don’t pay them enough. Medical professionals take big pay cuts if [they] move from clinical to medical schools.”

At the same time, national health care reform is likely to introduce many new patients over the next few years by providing insurance to the 18 percent of Americans estimated to have no health coverage. Combined with state budget reductions, this is going to press human resources. Thompson said, “There will be a major state budget impact. Legislators are going to education to cut funding. This will cut faculty and we won’t have enough faculty to teach. This will create more shortages in future. Part of training takes place

in hospitals.”

Experts anticipate that health care worker shortages caused by budget woes and passage of the Affordable Care Act, will grow even more acute due to upcoming retirements. In the public health system, for example, retirements are estimated to run as high as 45 percent of the entire workforce.¹² In an interview, Pam Thompson, senior vice president for nursing of the American Hospital Association, said “people put off retirement but they are going to retire at some point. Many are leaving the workforce. We don’t have enough younger people to match that. Only 5 percent of workforce is under 30. That big event is facing us. We can’t make up the difference with the current workforce. Foreign nurses are the way hospitals are filling vacancies. But even if we took every one, it wouldn’t fill all the vacancies.”

Only 5 percent of workforce is under 30. That big event is facing us.

Beurhaus has undertaken detailed Current Population Survey research on upcoming nurse shortages through the year 2025. Based on his work, he projected a shortage of 260,000 registered nurses by 2025. That would be “twice as large as any nursing shortage experienced since the introduction of Medicare and Medicaid in the mid-1960s.”¹³ In my interview, Thompson echoed this point, noting “there is an anticipated shortage of 250,000 to 300,000 nurses in next 15 years.”

Some locales already have seen a growing reliance on foreign health workers due to problems of finding sufficient native employees. In Massachusetts, for example, foreign born workers comprise a high percentage of medical positions, both at the high and low-skill ends. Half of the medical scientists were foreign born, as were 40 percent of the pharmacists, 28 percent of physician assistants, 33 percent of psychiatric nurses and home health aides, and 28 percent of physicians and surgeons.¹⁴

In short, longer life spans and legislative reforms designed to bring health care to the uninsured will dramatically increase demand for health care workers. At the very time when there are insufficient numbers of American-born workers to fill job vacancies, we face much higher demand for medical personnel. This mismatch between supply and demand explains why there are worker shortages during times of high national unemployment.

The Case of Manufacturing

Worker shortages have been a problem in the manufacturing area as well, especially at the high-skill end. Manufacturing constitutes 11.6 percent of the employment in the United States and generates well-paying wages and jobs.¹⁵ Industry studies report that the most pressing challenge in advanced manufacturing is “a chronic shortage of skilled technicians available for hire. Project interviews identified high-paying jobs that are going unfilled around the state [Pennsylvania] right now as employers struggle to find qualified candidates. The occupations most often identified to be in short supply include: machinists/tool and die makers, CNC operators and programmers, industrial maintenance technicians (electrical, mechanical, and electronic), and skilled welders.”¹⁶

In 2010, at the height of the Great Recession, American manufacturing firms reported 227,000 open

jobs, double the situation in 2009. One factory owner in the metal parts industry said “it’s hard to fill these jobs because they require people who are good at math, good with their hands and willing to work on a factory floor.”¹⁷

Christine Scullion is director of human resources for National Association of Manufacturers. “It always is a challenge to recruit high-skilled workers” she explained. “There are challenges with the recruitment of Masters and PhD students. Manufacturers need help on visas. It is a challenge for foreign students educated here who have problems staying here for jobs.”

Research by Gianmarco Ottaviano, Giovanni Peri, and Greg Wright on 58 manufacturing industries found that employment opportunities and pay levels “push natives toward jobs that are more intensive in communication-interactive skills and away from those that are manual and routine intensive.”¹⁸ This suggests that immigrants provide skills for jobs that native Americans are unwilling to pursue. That fact lessens the job competition often assumed in agriculture, hotel, restaurant, and manufacturing sectors.

A study of clean energy manufacturing in New York found a shortage of American-born workers. In looking at fields from solar energy and renewable fuels to weatherization, the authors found dozens of occupations “likely to have a tight labor supply.”¹⁹ In most of these fields, the demand for workers exceeds the available supply.

Mining and resource areas report similar problems. A 2011 Fitch Ratings report identified worker shortages in these areas. Its analysts warned that labor shortages in these fields “could result in reduced output and lower profits for employers.”²⁰ This weakens the potential for future economic growth in the United States.

Restaurants

Customer spending at restaurants is up over preceding years. According to Hudson Riehle, senior vice president for research and knowledge at the National Restaurant Association, “restaurant sales are projected to be a record \$632 billion this year, up 3.5 percent from 2011.” Continuing, he noted that “Americans now spend 48 percent of their food budget on eating out.”²¹

However, industry leaders are not sure where to get new workers given slow U.S. demographic growth among young people, the traditional base of the restaurant workforce. Bruce Grindy, the chief economist for the association says it “projects total restaurant and foodservice employment to grow 11 percent in the next 10 years, while the 16-to-24 year old labor force is only expected to grow four percent.”²² Unless the industry turns to other age groups, such as semi-retired employees, the shortage of American-born workers necessitates looking abroad to fill jobs in the industry.²³

The National Restaurant Association surveyed its members and discovered that they plan to add 1.3 million new jobs over the next decade. This will boost its employment to 14.1 million people and make the industry the second-largest private sector employer in the United States.²⁴

Employee recruitment is challenging because of demographic changes in the United States. Young people comprise the bulk of the restaurant labor force and this group is declining as a percentage of the

overall workforce. Those who are 16 to 24 years old comprised 24 percent of the workforce in 1978 but are expected to fall to 13 percent by 2018.²⁵ According to Grindy, there will be “1.6 million fewer 16-to-24 year olds in the labor force” than a decade earlier.²⁶ This is problematic, he noted, because that age group constitutes 38 percent of the foodservice workers.

The biggest increases come for positions in the areas of food preparation and service. Together, these jobs will increase by 403,000 over the upcoming decade. Other areas with substantial job growth include wait staff positions (240,000), other cook jobs (199,000), chefs and head cooks (122,000), first-line supervisors (102,000), and foodservice managers (27,000).²⁷

Accommodations

The Great Recession was challenging for the accommodations industry. With the slowdown in business conditions, fewer people traveled, stayed in hotels, and spent money on tourism. Between 2007 and 2009, employment in the leisure and hospitality field dropped by 454,000 positions, according to the U.S. Department of Labor. This represented a decline of 2.2 percent on an annualized basis.²⁸

But Geoff Freeman, the chief operating officer of the U.S. Travel Association, says “the industry is adding jobs now. It has added 267,000 in the last two years. This is one third faster than the rest of the economy. In 2008 and 2009, 454,000 jobs were lost in the travel industry. The industry adds jobs quicker than most. Business meetings get cancelled, but then there is a recovery on the group and business side. We can quickly add jobs back.”

According to the U.S. Travel Association, the travel industry comprises 2.7 percent of Gross Domestic Product. Around 5.7 percent of the American labor force has tourism-related positions. With the economic recovery, the need for accommodation industry workers has risen.²⁹

Marriott has forecast job growth of 6 percent this year to around 212,000 positions. The company “has plans to add as many as 15,000 rooms in the U.S. this year.”³⁰ It has not experienced significant difficulty in hiring people in many of its roles such as housekeeping, front desk and restaurant server positions, but faces challenges in some specialty areas. Karl Fischer, Chief Human Resources Officer for the Americas with Marriott International, says that “we have specialized roles in Engineering, Culinary, and Sales & Marketing that sometimes can tend to be more difficult to fill in this economic climate.”

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There are particular geographic areas in the United States where it can also be more challenging to recruit. Fischer noted that hiring difficulty tends to “follow the unemployment rate. For example, filling positions in Texas can be more challenging because their unemployment is lower.”

In order to identify talent, Francisca Martinez, Vice President of Talent Acquisition for Marriott International says “We use all kinds of strategies. We post jobs with many community organizations and related job boards. We leverage social media and new technology to help people learn about our jobs. A major source of external talent continues to be referrals.

Associates bring friends and family members to Marriott and they can be our best sources of talent.”

In Massachusetts, hiring difficulties have led to 30 percent of the jobs being filled by foreign-born workers. Researchers concluded that “in spite of the 2009 economic downturn, worker shortages are a continuing concern in Leisure and Hospitality industries throughout New England.”³¹

U.S. Travel Association’s senior vice president of economics and research David Huether said, “there is a fairly large share of workers in the travel space that are under 25 years old, around a quarter. It is a labor intensive industry compared to mining and finance. It is not something that can be outsourced. They are more apt to move facilities overseas.”

John Wilhelm, president of the UNITE labor union, has members who work mainly in the hotel industry. He has found that “anybody who is successful” has had difficulty filling job vacancies. He noted that without immigrants “our industry couldn’t open its doors” because it is hard to find native-born workers willing to clean rooms and staff hotel operations.

A job that some industry officials say is difficult to fill is hotel front desk clerks. This entry-level position is an area nationally that employs 218,800 employees and this number is expected to grow by 17 percent by 2016.³² Yet some employers cannot find sufficient workers to staff the job.

By 2020, the U.S. Bureau of Labor Statistics estimates the jobs for hotel housekeepers and maids will grow by 8 percent.³³ This will strain the available worker supply since young people comprise much of the labor pool and that group is not expected to grow very much.

Agriculture

The agriculture industry relies heavily on workers to pick fruits and vegetables, and tend to hog and cattle operations. Of the three million workers engaged in agriculture, about 1 million are hired farm workers. The tendency of farmers to supplement their agriculture income through off-farm employment forces them to rely on hired laborers. As national incomes rise, economist Edward Taylor says that “domestic agricultural workers become increasingly scarce.”³⁴

According to James Holt, “we are not coming close to producing enough native-born workers to meet the requirements of our growing economy.” This is particularly the case in the agriculture sector. That area “has been particularly affected by the shortage of legal native bornWith millions more jobs in the U.S. economy than there are legal workers to fill them, the legal workers have migrated to the more skilled, non-seasonal, more pleasant, urban, higher paying jobs.”³⁵

Demographer William Kandel writes that “hired farm workers are younger, less educated, more likely to be foreign-born, less likely to speak English, and less likely to be U.S. citizens.”³⁶ Agricultural work is physically demanding and not many Americans want to work in the fields. Paul Schlegel, director of public policy for the American Farm Bureau Federation, said in an interview “that is the problem. Most farmers say it is hard work and it is difficult to get Americans to do the job. They don’t show up and don’t last long if they do.”

Continuing, he noted that, “we have difficulty finding workers in any place where you need specialty

labor. This includes orchards, fruits, vegetables, cash crops, strawberries, apples, and dairy. These are jobs where timeliness is important because things have to be harvested when they are ripe." A recent National Agricultural Workers Survey found that only 27 percent of farm workers are American citizens. Nearly three-quarters are immigrants, with 52 percent undocumented and 21 percent being authorized immigrants.³⁷

One of the key challenges in agriculture is the highly seasonal nature of the work. Even with increased reliance on mechanical harvesting equipment, farmers have substantial time pressure given the narrow windows for planting, cultivation, and harvesting.³⁸ When particular commodities are ripe, they need to be harvested in a matter of days or weeks. Failure to have sufficient workers means rotted fruits, unpicked vegetables and lost revenue.³⁹

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Technology

Many researchers have found that insufficient numbers of American-born young people are receiving training in science and engineering fields and going to work in those areas. One report pointed out that "candidates for training programs for manufacturing technicians often lack the math skills necessary to succeed in these rigorous programs." Indeed, the author noted that "an insufficient skill in applied math is the most commonly cited barrier both for incumbent workers and candidates for hire."⁴⁰ Combined with the idea that more and more Indians and Chinese are returning home and there is a problem in terms of worker shortages for the United States.⁴¹

In addition, a study by the U.S. Department of Commerce found that "STEM occupations are projected to grow by seventeen percent from 2008 to 2018, compared to 9.8 percent growth for non-STEM occupations. [In addition,] STEM workers command higher wages, earning 26 percent more than their non-STEM counterparts."⁴²

A number of high-tech companies report difficulties of worker shortages and missed opportunities arising from current immigration policies. Officials at Microsoft, Google, Intel, Cisco, and Hewlett-Packard officials complain that they cannot hire all the engineers and computer scientists that they need.

For example, Brad Smith, the General Counsel for Microsoft, testified before Congress that "filling our talent needs remains a serious challenge. For example, in May [2011], Microsoft had 4,551 unfilled job openings, of which 2,629 were for computer science positions. In 2011, it has taken us on average 65 days to fill openings for experienced candidates in core tech positions in the United States."⁴³

Jack Chen, an immigration attorney for Microsoft, explained to me that there is "a very competitive labor market for the right talent." Some technology fields have unemployment rates of three to four percent, he noted. "For every available and talented worker with the right skills, there are multiple job opportunities."

Christine Scullion, the director of human resources for the National Association of Manufacturing, said

“manufacturing is not what it used to be. It requires advanced skills that many folks don’t have. We focus a lot on skill-building even in entry level manufacturing jobs. We work to build the domestic pipeline for entry level jobs. We have to focus on STEM education and getting Americans to go into STEM fields... I talked to someone the other day who said there are 1,700 PhD graduates focusing on technology, but there are 3,000 open jobs. We don’t have enough workers in the domestic pipeline.”

Half of the states' governments (54.8 percent) report “difficulty recruiting new employees to fill vacant IT positions.”⁴⁴ Among the specific areas where state officials report the great difficulty finding employees are security (52.4 percent of states report difficulty), project management (50 percent), application development (47.6 percent), virtual architecture (47.6 percent), analysis and design (42.9 percent), and networking support (40.5 percent).⁴⁵

Similar to health care, an issue that will exacerbate current shortages is the upcoming IT retirement wave. A survey of state chief information officers found that “a quarter of state CIOs predict that between 21 and 30 percent of state IT employees will be eligible for retirement within the next five years.”

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Life Sciences

The area of life sciences faces challenges in worker recruitment. The shortage of bio-medical researchers has made it difficult to expand and build businesses. Rob Russell of Life Technologies said, “Some jobs are always tough to fill. That includes software positions, bio-informatics, and mid- to senior-level senior positions. Our average time to fill is 46 days across the board, but those positions take an extra 30 percent on top of that.”

The same problem has cropped up in bio-technology. This is an area that applies biological processes to health and technology issues. Industry surveys indicate that the 1,699 public and private bio-tech companies employ 109,100 people and generate over \$56 billion in revenues.⁴⁶

Its top areas in terms of employment are expected to grow considerably over the next decade. Company executives expect that employment of clinical laboratory technicians will grow by 14 percent, that of medical scientists will increase 40 percent, and jobs for biological scientists will rise by 21 percent.⁴⁷

When asked about their ability to find bio-tech professionals able to meet their job requirements, 22 percent of hiring managers reported it was excellent, 36 percent said it was good, 25 percent believed it was average, 6 percent indicated it was fair, and 11 percent described the situation as poor.⁴⁸

Areas most in need include: clinical research associate, bioanalytical data auditor, laboratory technician, chemist, hematology laboratory manager, medical technologist, medical laboratory technician, regulatory affairs manager, laboratory manager, and professional services manager. Seventy-six percent of the jobs posted require at least a bachelor’s degree.⁴⁹

Rob Russell of Life Technologies said in an interview that “the last 20 percent [of biotech jobs] are difficult. There are lots of non-native people there. The issue is technical competency or scientific

knowledge. There is a large population of foreign workers who are very qualified in those areas.”

Foreign workers have the skills to fill these jobs. Research has found that one-quarter of scientists and engineers in the United States are foreign-born. Fifty-four percent of American math doctoral degrees are awarded to foreign nationals. Sixty percent of computer science doctoral degrees go to foreign nationals and 65 percent of engineering degrees at American universities are obtained by non-U.S. citizens.⁵⁰ Another study found that foreign born individuals comprise 43 percent of medical scientists, 29 percent of economists, and 25 percent of physicists.⁵¹

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Out-Moded U. S. Visa System Constrains Economic Growth

Nearly everyone interviewed complained about the current American visa system and reported difficulties getting well-qualified foreign workers into the United States to fill jobs where there is a shortage of native workers. Regardless of whether the field requires low or high skill levels, industry officials say the process doesn’t work well and is overly bureaucratic. It is hard to get up-to-date information on applications and the process takes too long.⁵²

Surveys have found that three-quarters of foreign graduates of American universities with degrees in science, technology, engineering, and math would like to stay in the United States but have few opportunities to do so.⁵³ They have the skills required to fill the job vacancies noted above, but can’t get timely visas.⁵⁴ The result is that many of them return to their native countries, where they innovate, build businesses, and create jobs that otherwise might have taken place in the United States.

The H-1B visa program focuses on high-skilled workers, and it makes available 65,000 visas each year, plus some additional numbers not counted under the cap. In many periods, these visas have been gone in a short period of time. In 2008, there were 163,000 applicants for the 65,000 available slots.⁵⁵ In 2007, there were no visas after the first month of the year.⁵⁶ Even in the recessionary years of 2009 and 2010, these visas were taken before the end of each year.⁵⁷ This leaves many individuals who have job offers in the United States unable to get an entry visa. If they do get a visa, it is tied to particular companies, which in some cases limits worker mobility and promotions.

The situation with temporary H-1B visas is problematic because of the inability to bring on needed workers in short supply. “When the cap hits, we are not able to on-board until there is a new supply of visas,” said Robin Paulino, Microsoft’s senior attorney for global migration. “Sometimes, there is a four to five month wait.”

The limited supply of visas forces companies to focus their visa applications on exceptional people. Paulino said that “all of the jobs we submit for visas require at least a bachelor’s degree. We don’t bring executive assistants on board through the visa program.”

Google generally has found that around one-third of its H-1B visa applications have been denied, which

constrained innovation and job creation. In 2008, it submitted 300 H1-b visa applications, but 90 were not approved. Although 90 percent of its employees are American citizens or permanent residents, it fills the other 10 percent with immigrants because it cannot fill all of its vacancies with American born workers.

The National Association of Manufacturers' Human Resources Director Christie Scullion said, "there are well-documented problems in this area. H-1B visas max out every year. Using low skill visas is very challenging. It is not an easy system to use and the process is very difficult." There are insufficient American born workers to staff manufacturing positions. She notes, "Companies that have problems include high tech, standard engineering companies, and manufacturing. It is a real challenge to recruit because there aren't enough visas or people domestically with the right skills."

A similar issue has popped up in agriculture. During the few weeks that fruits have ripened and vegetables are ready for picking, farmers have a narrow time window in which work gets done. If foreign workers don't receive a visa that allows them to come to the United States during that period, fruits and vegetables don't get harvested and there are lost economic opportunities. Farmers in Alabama and Georgia, two states that recently have adopted restrictive immigration policies, have complained about not finding sufficient workers to complete their harvests.

The H-2A visa program that focuses on seasonal agricultural workers is highly insufficient. There were 64,000 applications processed in 2006. In order to obtain a visa, the program requires that "employers must demonstrate they lack a sufficient and timely supply of locally available qualified U.S. workers, and that using foreign workers would not adversely affect wages and working conditions of comparably employed U.S. workers."⁵⁸ Yet employers have only 45 days to apply for this visa before the individual starts working, which does not provide adequate flexibility to identify and recruit job candidates.

Industry leaders complain that the visa program is overly complicated in terms of paperwork requirements and the narrow time window for application. The American Farm Bureau's Schlegel says, "The H-2A program is historically dysfunctional. There is no way to get workers

for those kinds of operations. When you talk to farmers, they complain that they can't get the workers. If they doubled wages, they still wouldn't get workers. Americans don't want to do those jobs. Kids don't want those kinds of jobs anymore."

Agricultural workers need particular job qualities. Schlegel points out that, "Even low-skilled workers require a certain set of skills. They have to be able to pick melons, fruits, or vegetables so it doesn't bruise the fruit. There is a skill involved with that. It is skilled even though they are not working an Excel spreadsheet."

Michelle Reinke Neblett of the National Restaurant Association says, "Getting H-2B visas are an on-going concern and priority. We have seen the program attacked over the years and we constantly have to

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defend it. We want it to be workable and usable. It goes down to the cap. With the wage methodology rules, it is becoming more complicated to use it. The new rules attack the system and make it unworkable. You can't source that way and operators can't fill their needs with current workers."

Long-term workforce trends will make it even more important to be able to get visas for foreign workers. Speaking of the nursing profession, Pamela Thompson of the American Hospital Association said, "There are problems with foreign worker getting visas. There are limits on number of visas so once used they are used, they aren't available. Today, we are not looking to bring in a lot of foreign workers because of low vacancy rates. But that will change in future. When people retire and the economy improves, there will be problems."

The difficulties of the visa process force companies into targeting applications on high-level individuals. Rob Russell of Life Technologies said, "We don't sponsor visas for someone who is a junior level financial analyst. That would never get through immigration long-term. We are now sponsoring one-third of the workforce outside the U.S. We focus on specialty positions where we can get visas."

Caps on the number of visas make it difficult to fill vacancies in seasonal industries. Michelle Reinke Neblett of the National Restaurant Association says of the H-2B program that "Restaurateurs continue to face challenges in applying for and using the H-2B visa program. Although the cap has been split by Congress between two halves of the year, it fills up quickly. It is really limited. With the new rules, it is more difficult. Those working for you previously and coming back didn't use to count against cap, but now they do. It is not just restaurants, but many industries that compete for these visas."

This also is a problem in the hospitality industry. Scott Samuels, President of Horizon Hospitality says, "Many seasonable hospitality businesses work with individuals who require visas. For example, country clubs located in colder regions typically need seasonal workers. Many of these clubs work directly with companies that specialize in obtaining visas for hospitality industry employees. If a visa is required for employment, it is an added hurdle we need to overcome with our clients, as compared to individuals who do not need one." The result is that resort communities such as Martha's Vineyard or Myrtle Beach scale back their operations or fail to expand because they can't find the needed workers.

Moving Business Operations Abroad Robs the U.S. of Economic Growth

The difficulty of getting qualified foreign workers into the United States has affected firm location and development decisions. Rather than navigate a complicated visa system, some companies are choosing to expand outside the United States. Leading technology leaders note that "restrictions on skilled immigration are forcing companies to expand in other countries where laws make it easier to hire a global workforce."⁵⁹

Some of Microsoft's Kinect game console and Google's News aggregator were developed outside the U.S.⁶⁰ The latter's system allows people to search leading media sites for stories that have been in the news. The company cites this case as an example of how its inability to fulfill job vacancies through American workers "is restrictive to our ability to grow and innovate" and necessitates reliance on foreign born

workers.⁶¹

Microsoft has opened a software center in Vancouver, British Columbia, three hours across the border from its headquarters in Redmond, Washington. The office houses 200 employees and makes it possible for Microsoft to hire needed scientists and engineers. Its press release pointed out that the Vancouver office would allow “the company to recruit and retain highly skilled people affected by immigration issues in the U.S.”⁶² Company Vice President of Human Resources for Microsoft Canada Sharif Khan noted how the company’s proximity to corporate offices in Redmond, Washington helps overcome the restrictions of American immigration policy. “There’s a restriction on the number of visas the company can get for foreign employees in the U.S.,” he said. “Canada’s slightly more inclusive in that respect.”⁶³ Microsoft’s Paulino explained that “if we have identified the best and brightest and can’t bring them to the United States, we will look for opportunities to bring them in elsewhere.”

Intellectual Ventures represents another company that has located an office in Vancouver. The patent company specializes in the technology area and has amassed more than 30,000 patents. This international office helps the business by expanding its international footprint.⁶⁴

These are not rare occurrences. In the biotech area, Rob Russell of Life Technologies said, “We try to be proactive on new initiatives so we can get ahead of the game. There are certain skill sets where if you ask me to find 50 people, we will have difficulty meeting that goal. That has happened with some of our small programs.”

Some industries such as food services are location specific and cannot easily relocate to another country except through franchises. When they encounter problems hiring workers, they cut costs. Michelle Reinke Neblett of the National Restaurant Association says, “Restaurant operators face difficult decisions when they can’t find Americans to do the work. They either close operations or cut back hours.”

Some U.S. agricultural production has moved abroad due to lack of American born workers. For example, in the last decade, the top three asparagus canners “closed their Washington State operations and opened new plants in Peru.”⁶⁵ Green onions are a case where production has shifted overseas. With the U.S. process requiring “nine manual labor steps from harvesting to packing”, production has shifted to Mexico, and it now supplies “91 percent of U.S. green onion consumption.”⁶⁶

Research by the Economic Research Service of the U.S. Department of Agriculture points to several examples of *processed* fruit and vegetable production that have gone to Mexico. This includes frozen broccoli and cauliflower. It is harder to find examples of *fresh* fruit and vegetable production that has moved to Mexico in seasons they could grow in the United States.⁶⁷

The U.S. Department of Agriculture found that “13,280 farms went out of business from 2006 to 2007.” One of the nation’s most productive tomato growers, Keith Eckel of Pennsylvania, closed down this year because he couldn’t get enough workers.” In interviewing Eckel, he said, “If we went ahead and planted this season, we would have \$1.5 million to \$2 million worth of tomatoes in the field that we’re not positive we can harvest. That’s too big a risk.”⁶⁸

Similar actions have taken place in the computer industry. The ON Semiconductor Corporation in Phoenix “has increased overseas hiring for design work in part because it’s difficult to take on noncitizens

within the U.S.”⁶⁹ This demonstrates how job hiring shortages have affected American companies interested in expansion.

Negative Impact on Firm Expansion Plans

Worker shortages have negatively affected firm expansion plans. For example, research undertaken by Immigration Works USA shows that farmers in Wisconsin, North Carolina, Maryland, Louisiana, and Washington have limited expansion plans due to problems in hiring employees.⁷⁰ If they cannot find sufficient numbers of American-born workers and have difficulties bringing foreign workers to the United States, it is difficult to build the business and create jobs.

A survey of businesses undertaken by Immigration Works and the U.S. Chamber of Commerce found that companies “hire H-2B workers primarily because few U.S. workers are interested in temporary or seasonal work. According to employers, the physically demanding nature of many seasonal jobs also makes them unappealing to many U.S. workers.”⁷¹

Using statistical modeling, that project documented that the H-2B visa program creates jobs. Its researchers argued that, “By augmenting the volume of business being done by the company, visa holders often allow employers to hire more U.S. workers for skilled, year-round jobs.” They also found that one-third of businesses indicated “they would reduce operations or close completely if they were not able to hire H-2B workers.”⁷²

In the restaurant business, Michelle Reinke Neblett of the National Restaurant Association says, “Lots of things are constraining growth. It certainly is a concern because if you don’t have employees and people who stay with you, you can’t operate and improve the business. We have high turnover. You need employees to open a new location. They will use seasonal workers and college students, but that is not always an option. You have to look abroad if you can’t find American workers. This is a problem for seasonal business. They are looking to fill lots of jobs for a set of time.”

Continuing, she pointed out that, “A lot of folks are taking a second look because labor is one of biggest line item for restaurants. The retention of those employees is very important. This is one of first thing they look at in expansion planning. Any uncertainty makes them think twice about expanding. They go back and reconsider their plans.”

Georgia legislation targeting illegal workers has limited agricultural expansion and left food producers in dire straits. According to news coverage, “Georgia farmers have been forced to leave millions of dollars’ worth of blueberries, onions, melons and other crops unharvested and rotting in the fields.”⁷³ A survey by the state’s Department of Agriculture estimated that farmers needed more than 11,000 seasonal workers and that as many as half of the jobs might go unfilled.⁷⁴ With the loss of the undocumented labor force, farmers have not been able to harvest fruits and vegetables and this has led to lost jobs and a sharp decline in income.

Conclusion

In short, the United States has the paradoxical result of worker shortages at a time of high national unemployment. There are current and looming shortages that native workers aren't able to satisfy due to rising worker demand, limited supply in certain fields, demographic gaps, geographic differentials, and retirements. Based on interviews, job outlook surveys, and government reports, American schools are not turning out workers in particular sectors that are adequate to fulfill company needs.

There are two potential ways to fill these gaps. The first is to retrain American workers to ensure that their skill sets match the needed requirements. The second is to take advantage of foreign workers with the skill set and mobility to fill the existing gaps. These two solutions do not have to be in opposition to one another. Economies are not zero-sum activities where every job for an immigrant means one less position for an American worker. It is possible to generate new jobs as companies innovate, expand, and develop new parts of the economy. Immigrants have different skill sets and different education levels than American workers. They are more likely to have a PhD and less likely to have finished high-school. As a result, immigrant workers can *complement* American workers by filling in specialized roles at both ends of the economy.

Research has shown that immigrants are vital to long-term innovation and economic development. A recent study by the National Foundation for American Policy found that nearly half of U.S. startup companies were launched by immigrants. Of the top 50 firms, "23 had at least one immigrant founder ... [and] 37 of the 50 companies employed at least one immigrant in a key management position such as chief technology officer."⁷⁵

Having a growing population is a strong economic development strategy, and immigrants represent a way to expand our population and fill looming job shortages that are arising in a variety of high and low-skill industries. Since employers have difficulty in filling current vacancies due to an outmoded immigration system, they are altering their recruitment and expansion plans. This suggests a need to change our current immigration system so that companies can fill needed vacancies and the American economy can prosper in the future.

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