



ImmigrationWorks
USA



FILLING THE GAP

LESS-SKILLED IMMIGRATION IN A CHANGING ECONOMY

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ImmigrationWorks USA is a national federation of employers working to advance better immigration law. The network links major corporations, national trade associations and 25 state-based coalitions of small to medium-sized business owners concerned that the broken immigration system is holding back the nation's economic growth. Their shared aim: legislation that brings America's annual legal intake of foreign workers more realistically into line with the country's labor needs.



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EXECUTIVE SUMMARY

Immigration reform is back on the agenda in Washington, and one of the most disputed questions, this year as in past immigration debates, is whether the U.S. needs more less-skilled foreign workers.

Does the U.S. economy lack workers? Do less-skilled immigrants take jobs from Americans? Or are they filling jobs that most Americans are unable or unwilling to do because the work is physically demanding, hazardous or in a part of the country where few Americans live?

This study uses the U.S. Census Bureau's American Community Survey and the U.S. Department of Labor's Occupational Information Network, or O*NET, to examine similarities and differences in the jobs held by foreign workers and U.S.-born workers.

EDUCATION. American workers' educational attainment has improved dramatically in recent decades, and low-skilled immigrants are filling a gap created by rising education levels among Americans.

In 1950, more than half of U.S.-born workers had not completed high school. Today the figure is less than 5 percent – compared to nearly one-quarter of immigrant workers.

This education gap has dramatic consequences in the workplace: immigrants now account for one in six workers in the U.S. and more than half the less-skilled workers.

But the education gap alone does not explain the difference in the jobs held by immigrants and those held by less-skilled Americans.

COMPARATIVE ADVANTAGE. Even among less-skilled workers, Americans and immigrants tend to work in different fields.

Low-skilled Americans are twice as likely as low-skilled immigrants to work in offices or administrative support jobs. They're also twice as likely as immigrants to work in sales. In contrast, low-skilled immigrants are three times more likely than low-skilled Americans to fill farming, fishing and forestry jobs.

And even when they work in the same sector, Americans and immigrants tend to gravitate to different jobs. Four in ten low-skilled Americans working in the transportation and moving sector are truck drivers, compared to fewer than three in ten low-skilled immigrants in the field. Conversely, only 5 percent of American transportation and moving workers are hand packers and packagers, compared to 17 percent of immigrants in the sector.

What's the difference between a truck driver and a packer on a moving crew? One requires a driver's license and more familiarity with the lay of the land in the United States, is somewhat less physically demanding and arguably commands higher prestige.

Jobs filled by low-skilled
Americans require better
communications skills.

The Department of Labor's O*NET database helps explain what drives immigrants and Americans to different jobs.

Less-skilled native-born workers have a comparative advantage in jobs that require communications skills and managerial ability. Less-skilled immigrants have a comparative advantage in jobs that require physical strength and stamina: labor-intensive occupations such as building maintenance, landscaping, construction, food processing, food preparation and food service.

PHYSICAL INTENSITY. Still another way to compare jobs done by immigrants and Americans is to measure how physically taxing they are. How much bending, stretching, crouching, exposure to the elements, exposure to hazardous conditions and exposure to extreme weather does the job require? How much repetitive motion? How much exposure to contaminants?

The Department of Labor's O*NET database tracks and measures the attributes of every U.S. occupation, rating each on 224 different dimensions from how much English-language ability is needed to how much bending, stretching, crouching and exposure to the elements. Every job is scored numerically along each of these dimensions, with zero signifying that the job never requires that skill or physical endurance and 100 indicating that the job requires it every day or all the time.

Jobs filled by low-skilled immigrants are more physically taxing.

Less-skilled Americans work in difficult conditions – outdoors, on their feet, in jobs that require repetitive motion and expose them to contaminants. But less-skilled immigrants work in jobs that are even dirtier, more dangerous and more difficult.

Consider jobs that put workers in a position to sustain burns, cuts, bites or stings. The average O*NET score on that dimension for jobs commonly held by low-skilled American workers is 41; the average O*NET score for jobs commonly held by low-skilled immigrants is 45. So too with bending and twisting. The average score on that dimension for low-skilled American workers is 51; the average score for low-skilled immigrants, 57.

Less-skilled immigrants spend on average 13 percent more time climbing ladders, scaffolds or poles and working in high places. They spend 12 percent more time kneeling, crouching or crawling. Their jobs involve 10 percent more exposure to hazardous conditions, 7 percent more exposure to contaminants and 6 percent more use of hazardous equipment.

No matter what kind of physical intensity is being measured – outdoor work, repetitive motions, hazardous conditions, hazardous equipment, contaminants, kneeling, crouching, burns, cuts, bites or stings – the jobs held by immigrants are more physically taxing and more hazardous than jobs held by less-skilled American workers.

GEOGRAPHY. A final factor that limits competition between American workers and immigrants is geography.



Less-skilled immigrants and less-skilled Americans tend to live in different parts of the country, with immigrants typically drawn to areas with growing economies or immigrant enclaves.

Low-skilled immigrants are also more likely than low-skilled Americans to move in search of work. In 2005, for example, in the aftermath of Hurricane Katrina, some 100,000 immigrant workers migrated to Louisiana to assist with rebuilding, demolition, waste removal and sheet-rock installation, among other jobs.

This ready mobility is one of the key ways low-skilled immigrants contribute to U.S. economic growth. Low-skilled immigration helps ensure that there are workers where and when employers need them, and this in turn decreases the chances of low-skilled immigrants competing with low-skilled Americans.

AN ESSENTIAL WORKFORCE. Low-skilled immigrants, many of them unauthorized, meet a vital need for employers in a broad spectrum of essential industries. Immigrants rarely compete with Americans. They bring different strengths and skills. Most of the jobs they do cannot be automated. Most cannot be moved offshore. And many of the jobs held by immigrants support and create jobs for American workers.

Low-skilled immigrants contribute to economic growth by relocating to booming areas that need workers. They free up Americans to work in better jobs using their comparative advantage in communications and management. Immigrants available to fill jobs as house cleaners, gardeners and nannies have allowed millions of American women to work outside the home. Low-skilled immigration reduces the prices of the goods and services consumed by Americans. And it preserves American jobs by slowing the movement of companies and operations overseas.

IMPLICATIONS FOR POLICY. Despite the economic benefits of low-skilled immigration, the United States makes it extremely difficult for less-skilled foreigners to enter the country to work.

Creating a workable legal path for them to enter the U.S. and fill jobs when there are no willing and able Americans would have significant benefits for the workers, their employers and the rest of the nation – for economic reasons but also because of what it would do to restore the rule of law.

As the U.S. economy becomes more technology-intensive, there is less demand for low-skilled workers. But there will always be some need, and there are increasingly few Americans available to meet it. Educational attainment, comparative advantage, physical stamina and geographic mobility position low-skilled immigrant workers to fill this critical gap. Surely it's only common sense to create a way for them to enter the country legally.

FILLING THE GAP

LESS-SKILLED IMMIGRATION IN A CHANGING ECONOMY

Introduction

Immigration reform is back on the agenda in Washington, and one of the most disputed questions, this year as in past immigration debates, is whether the U.S. needs more less-skilled foreign workers.

For many reform advocates, the goal of an immigration overhaul is legalization of the 11 million unauthorized immigrants already living in the United States. Other reformers are most concerned about streamlining entry for highly skilled immigrants. A growing number of Americans recognize the economic contributions of foreign-born scientists, engineers and entrepreneurs who keep the U.S. knowledge economy growing and competitive, and any reform legislation is likely to include more visas for this highly skilled group.

Even among low-skilled workers, immigrants and Americans gravitate to different sectors and different jobs.

Much less consensus exists about less-skilled immigrant workers.

With employment slow to rebound from the downturn, many Americans question the need to admit more low-skilled immigrants or create a visa program that provides a way for them to enter the U.S. legally. The unemployment rate among Americans who most resemble less-skilled immigrants – Americans without

high school diplomas – is still above 10 percent, and skeptics argue against admitting any more uneducated foreign workers.

Does the U.S. economy need more less-skilled workers? Will we continue to need them in years ahead? Do low-skilled immigrants take jobs from Americans? Or are they filling jobs that most Americans are unable or unwilling to do because the work is physically demanding, hazardous or in a part of the country where few Americans live?

It's a highly emotional debate, but there is data available to answer these questions.

The U.S. Census Bureau's American Community Survey tracks jobs held by immigrants and by U.S. workers. The U.S. Department of Labor's Occupational Information Network, or O*NET, makes it possible to compare the jobs held by immigrants and those held by Americans.

This study uses American Community Survey and O*NET data to examine similarities and differences in the jobs held by foreign workers and U.S.-born workers.



Our findings:

- American workers' educational attainment has changed over time, and low-skilled immigrants are filling a gap created by rising education levels among Americans.
- Low-skilled immigrants and low-skilled Americans work in different occupations that play to their different comparative advantages.
- There is little overlap in the types of jobs held by low-skilled immigrants and low-skilled Americans.
- There is little overlap in where the two groups live.
- Immigrants work in jobs that are more difficult and dangerous than jobs held by most Americans.
- Americans work in jobs that require more communications skills and managerial ability.

Immigrant workers, disadvantaged by linguistic, cultural and other gaps, contribute on the job mostly with their brawn. This is no longer true for most Americans, even the least educated Americans.

What's more, far from taking jobs from Americans, less-skilled newcomers complement native-born workers and boost employment among U.S. workers. Immigration reform that fails to take account of these realities risks damaging the U.S. economy and limiting opportunities for Americans.



DISHWASHER

Nearly every American has eaten out at a restaurant and left dirty dishes on the table after the meal. Somebody has to wash those dishes, and often it is someone who wasn't born in the United States.

According to the Department of Labor, 68 percent of dishwashers in the U.S. are foreign-born. Few Americans are interested in dishwashing jobs. Among unemployed native-born workers, aged 20-64, who held a job in the last five years, only .4 percent worked as dishwashers. The Labor Department's O*NET database of job descriptions, which measures the physical intensity of all U.S. jobs, isolates the aspects of dishwashing that are particularly demanding. It involves much more exposure to minor burns, more repetitive motions and more bending and twisting than a typical low-skilled occupation.

At Tad Mitchell's casual dining restaurant in Atlanta, as at countless others around the country, a typical eight-hour dishwashing shift begins at 7:00 a.m. The dishwasher's first task is to set up the "dish area," organizing the space where he will work through the day. By the time this is done, the cooks have used some dishes and pans, and the dishwasher must scour them. Before the restaurant opens, the dishwasher may help portion out some food. He sometimes sweeps the sidewalks and parking lot outside the restaurant and takes out the morning's accumulated trash. Then the real backbreaking work begins: washing dishes for the rest of his shift.

Restaurant-scale dishwashing is nothing like what happens at home. It involves repetitive movements, reaching, crouching and a danger of falling. There is dirt and grease. It's noisy, and the dishwasher is wet all day long.

At this restaurant, as at most, dishwashers alternate between hand-scrubbing pans and loading and unloading flatware in big



noisy dishwashing machines. When dishwashers aren't spraying dishes, their hands are immersed in hot water and, despite rubber boots and aprons, there is no escaping being wet. In the summer, the kitchen is warm and wet; in the winter, cold and wet. A dishwasher stands all day on a wet floor – and must learn to keep his balance on the slippery surface.







Dishwashing is also dirty work. Even a clean restaurant gets dirty, and workers spend much of their day trying to control the dirt and grease. Dishwashers and other cleaners crouch to get under machines. They reach and bend to clean tables and walls. The dirty dishes are unrelenting; so are the greasy pots and pans.

A dishwasher is in constant motion. He must reach high to hang pots and pans. He must turn and bend repetitively while loading and unloading dishes. Sometimes the repetitive motion causes so much strain that the worker must stop and do something else to give his body a break. The endless noise is also stressful and exhausting: the constant clanging of dishes and the rumble of the dishwashing machine.

It isn't easy to find people to do this punishing work. Tad Mitchell pays his dishwashers \$8 to \$10 an hour – on par with what dishwashers earn in labor markets as diverse as San Antonio, Las Vegas and Pittsburgh. In all three places, and many others, according to the Foreign Labor Certification Data Center, the starting wage for dishwashers is \$8 to \$8.75 an hour. In some areas where the labor market is tight, an experienced dishwasher or dishwashing supervisor can earn as much as \$14 an hour. But even the best paid dishwashers earn relatively little compared to most Americans – on average, \$8 to \$10 an hour.

Mitchell hasn't hired an American in over a year – they just don't apply. "Only immigrants want these jobs," he says, "and they work hard."

O*NET SCORECARD

99		Spend time standing.
83		Spend time making repetitive motions.
81		Exposed to minor burns, cuts, bites or stings.
75		Spend time bending or twisting the body.
57		Sounds, noise levels are distracting or uncomfortable.
53		Exposed to contaminants such as pollutants, gases, dust or odors.

* Scores range from zero to 100, with zero signifying that the job never puts the worker in this position and 100 indicating that the job puts the worker in this position every day or all the time.

Source: U.S. Department of Labor's Occupational Information Network, or O*NET.

Do Less-Skilled Immigrants Compete With U.S. Workers?

Workers compete for jobs only when they have similar skills and live in or are willing to move to the same geographic area.

Do immigrants and Americans have similar skills, or are they different? Do their backgrounds and educations give them different comparative advantages that lead them to self-select for different jobs? Do they live in the same or different parts of the United States – and what effect does this have on the jobs they hold?

Immigrants Fill A Gap In A More-Educated Workforce

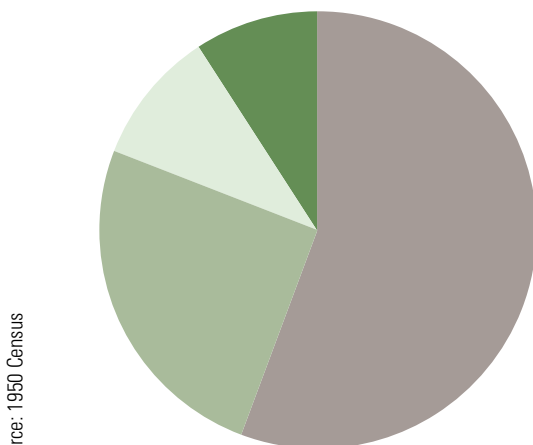
Immigrants now account for more than half the less-skilled workers in the U.S.

Skill can be measured with many different yardsticks, including educational attainment, job experience, language fluency, physical strength and supervisory experience. But one easy, shorthand way to identify low-skilled workers is those who lack a high school diploma or the equivalent.

Americans are increasingly educated. As we see in Figures 1A and 1B, educational attainment has risen dramatically since World War II.

FIGURE 1A

MOST AMERICAN WORKERS HAD NOT COMPLETED HIGH SCHOOL IN 1950

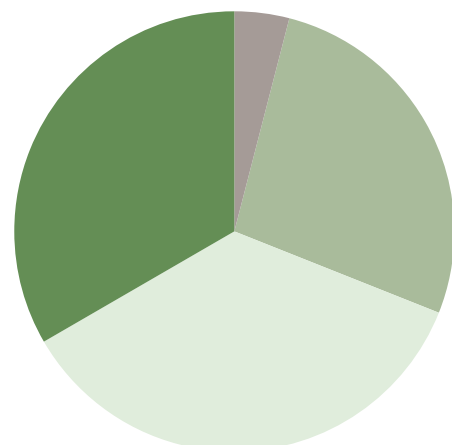


Source: 1950 Census

- Less than four years of high school
- Four years of high school
- Less than four years of college
- Four or more years of college

FIGURE 1B

FEW AMERICAN WORKERS HAVE NOT COMPLETED HIGH SCHOOL TODAY



Source: 2010 American Community Survey

- Less than four years of high school
- Four years of high school
- Less than four years of college
- Four or more years of college

In 1950, more than half of U.S.-born workers had not completed high school; today the figure is less than 5 percent. Young Americans entering the job market seek better opportunities and have more options than their grandparents or their parents.

The educational attainment of immigrants has also risen over time, but not as fast as that of Americans, and immigrants account for an increasingly large percentage of less-skilled workers.

Figures 1B and 1C compare immigrants and American workers in the U.S. today. Nearly one-quarter of immigrant workers have not completed high school, almost five times the share of American workers who have not done so.

This education gap has dramatic consequences in the workplace: immigrants now account for more than half of less-skilled workers in the United States. (They account for one in six workers overall.)

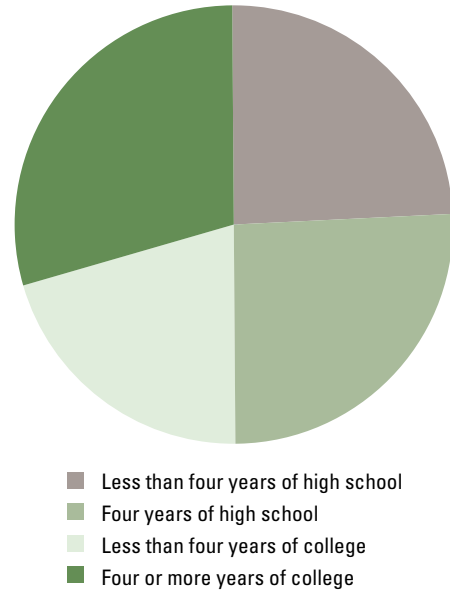
Mexican immigrants are even more likely than other immigrants to be less educated. More than half of Mexicans living in the U.S. have not finished high school, and they account for nearly one-third of less-skilled workers in the United States.

These less-educated immigrants fill a growing void in the U.S. labor market, working in routine, labor-intensive jobs that cannot easily be automated or shipped offshore.

Figure 2 illustrates this historic change using data from 1950 through 2010. The share of all employed workers who are low-skilled fell dramatically in the period from 1950 through 1990, then plateaued in recent decades.

FIGURE 1C

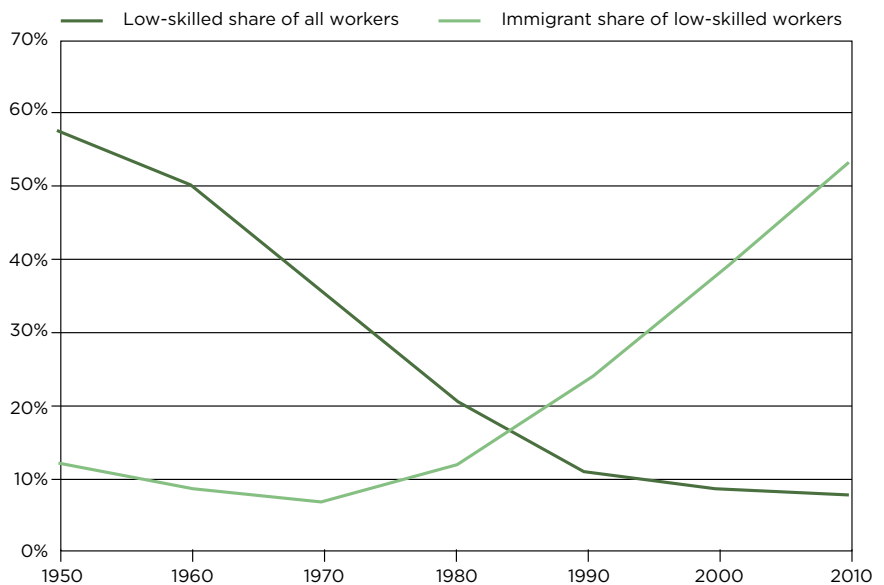
FAR MORE IMMIGRANT WORKERS HAVE NOT COMPLETED HIGH SCHOOL



Source: 2010 American Community Survey

FIGURE 2

THE IMPORTANCE OF LOW-SKILLED WORKERS HAS FALLEN WHILE THE PROPORTION WHO ARE IMMIGRANTS HAS RISEN



Source: 1950-2000 Census and 2010 American Community Survey



GROUNDS MAINTENANCE WORKER

Grounds maintenance may look like gardening – something many Americans do as a hobby. But working on a grounds crew is no lark: it’s backbreaking, physical, outdoor work – as demanding as farm work.

According to the Department of Labor, 74 percent of low-skilled grounds maintenance workers in the U.S. are foreign-born. Few Americans are drawn to the job. Among unemployed native-born workers, aged 20-64, who held a job in the last five years, only 2.1 percent worked on grounds crews. And according to the Labor Department’s O*NET database of job descriptions, landscaping is more taxing on virtually every measure than other physically demanding jobs held by low-skilled workers. It involves more exposure to contaminants, more exposure to hazardous conditions, more use of hazardous equipment, more outdoor work and more exposure to extreme temperatures.

Steve Steele is a manager at a commercial landscaping company in the Denver suburbs. The company employs 240 workers during the growing season, nearly 40 percent of them foreign-born. They work eight to ten-hour shifts that start at 7:00 a.m. – and the entire day is out of doors, whatever the weather, March through November.

Here as elsewhere across America, grounds maintenance workers mow, trim, prune, edge, dig, plant flower beds, uproot weeds, pick up trash and trimmings and take out debris and dead material. It’s dirty, dangerous, grueling work that requires physical strength and resilience to weather and noise.

The physical demands of the job are unrelenting. Landscapers push mowers, trimmers and edgers. They load and unload heavy equipment from trailers. They haul tarps piled high with grass and debris. And they do all this unceasingly through the day, rarely stopping to rest or take a breath.

Part of what makes the work so grueling is the repetitive motion: workers are constantly bending over and picking things up. Also stressful: the unending noise and physical vibration of the equipment.

Then there are the hazards, which no physical strength can protect you from. Insect bites and stings are par for the course, as is frequent exposure to poison ivy. Mowers and pruning equipment come with razor-sharp blades, and they often send debris flying dangerously through the air. There’s also hidden debris to trip over and hidden animal holes. Mowing on an incline can cause slips and falls, and mishandling equipment frequently leads to injury. Still other hazards include loose dogs and other animals. Many grounds maintenance workers wear eye, ear and hand protection, but many don’t, and inevitably the hazards take their toll.

The company where Steve Steele works invests heavily in safety training and instructs employees in how to operate equipment. But “injuries still happen,” he explains. Among the most common: twisted ankles, sprains, strained backs and eye injuries caused by flying debris.

No wonder landscaping jobs are hard to fill. Steve Steele has so much trouble hiring Americans that he now uses the H-2B temporary worker program to fill seasonal jobs.

Steele’s company pays his entry-level workers \$9.36 an hour, considerably more than the entry-level grounds maintenance wage in labor markets as diverse as Indianapolis, Austin and Las Vegas. In all three places, and many others, according to the Foreign Labor Certification Data Center, the starting wage for grounds maintenance workers is \$8.25 to \$9 an hour. In some cities where the labor market is tight, an experienced landscaper or landscaping supervisor can make as much as \$14 an hour. But even the best paid grounds maintenance workers earn relatively little compared to most Americans – on average, \$8.25 to \$12 an hour.

For Steve Steele’s company, it’s money well spent. “If I didn’t have access to this workforce,” he says, “I don’t know what I would do.” Immigrant workers help him keep the business open and keep more skilled American workers on the payroll year round. “Without a foreign workforce,” he says, “I don’t know how many jobs I’d be able to bid on for next year, how many contracts I could sign or how many people I would be able to place in the field.”

O*NET SCORECARD

99		Exposed to weather.
88		Exposed to contaminants such as pollutants, gases, dust or odors.
80		Exposed to very hot or cold temperatures – < 32 or > 90 F degrees.
77		Sounds, noise levels are distracting or uncomfortable.
70		Exposed to minor burns, cuts, bites or stings.
61		Exposed to hazardous equipment.

* Scores range from zero to 100, with zero signifying that the job never puts the worker in this position and 100 indicating that the job puts the worker in this position every day or all the time.

Source: U.S. Department of Labor’s Occupational Information Network, or O*NET.

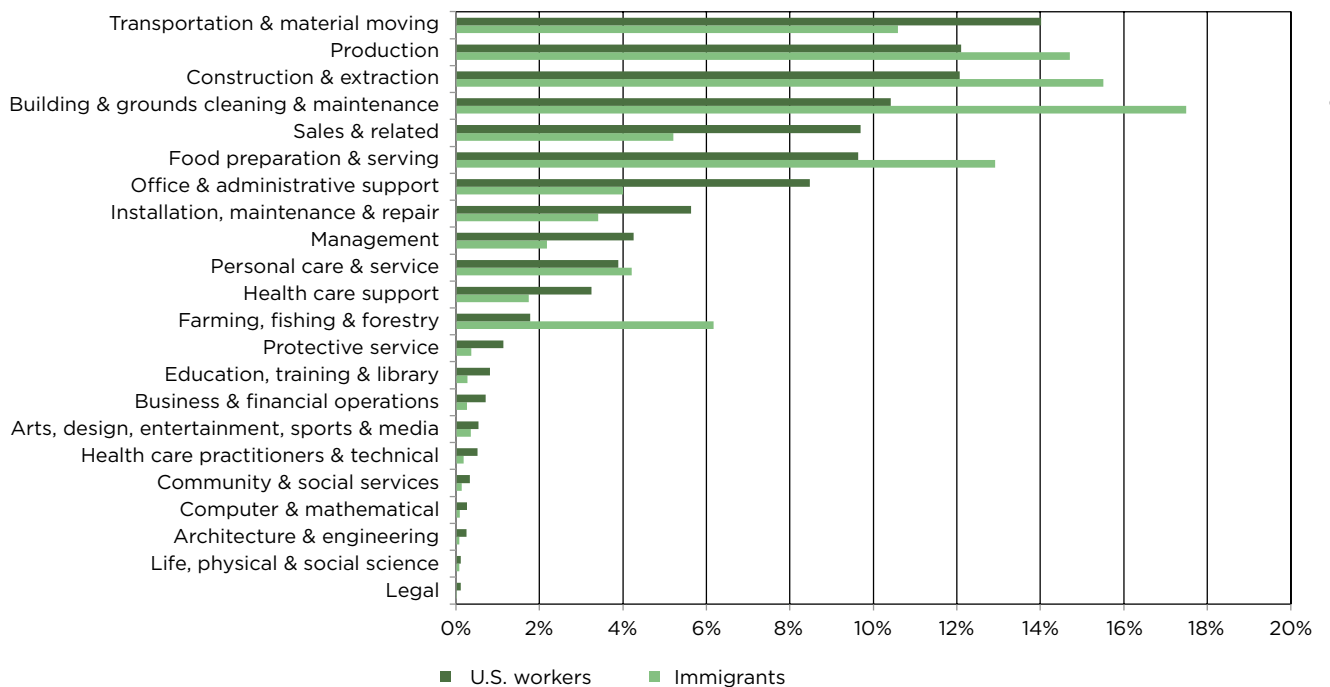


This suggests that the share of low-skilled jobs cannot fall much further. The economy will always need some workers to pick crops, build homes, clean offices and wash dishes.

Meanwhile, the share of low-skilled workers who are foreign-born has risen dramatically since 1970. As American workers have become more educated, employers have turned to immigrants to fill many low-skilled jobs.

FIGURE 3

LOW-SKILLED AMERICANS AND IMMIGRANTS WORK IN DIFFERENT OCCUPATIONS



Source: 2011 American Community Survey

Gravitating To Different Jobs

Given the two groups' different educational attainment, it's hardly surprising that immigrants and native-born workers gravitate to different jobs. But education is only part of the explanation for the divergence.

The Census Bureau's American Community Survey groups all U.S. jobs in 22 broad occupational categories. They range from highly skilled specialized occupations that require many years of education or training to less-skilled jobs open to any able-bodied worker. Among the most highly skilled fields: physical and social science; computer and mathematical occupations; architecture and engineering. Among the least skilled: farming, fishing and forestry; building and grounds cleaning and maintenance; construction and extraction.

By definition, low-skilled Americans and low-skilled immigrants work in occupations that require little education. But even among low-skilled workers, Americans and immigrants tend to work in different fields.

As Figure 3 shows, the top occupation among low-skilled native-born workers is transportation and material moving. For low-skilled immigrants, the top occupation is building and grounds cleaning and maintenance.

Low-skilled Americans are twice as likely as low-skilled immigrants to work in offices or administrative support jobs. They're also twice as likely as immigrants to work in sales. In contrast, low-skilled immigrants are three times more likely than low-skilled Americans to fill farming, fishing and forestry jobs.

The same pattern holds within each of the American Community Survey's 22 occupational categories: low-skilled immigrants and low-skilled native-born workers tend to gravitate to different work.

Consider transportation and moving jobs, the top occupational category for low-skilled American workers. Four in ten low-skilled Americans working in the transportation and moving sector are truck drivers, compared to fewer than three in ten low-skilled immigrants working in the field. Conversely, only 5 percent of American transportation and moving workers are hand packers and packagers, compared to 17 percent of immigrants in the sector. What's the difference between a truck driver and a packer on a moving crew? One requires a driver's license and more familiarity with the lay of the land in the United States, is somewhat less physically demanding and arguably commands higher prestige.

What accounts for these differences in the jobs held by low-skilled immigrants and low-skilled Americans? One explanation is what economists call "comparative advantage."

Low-skilled Americans are twice as likely as low-skilled immigrants to work in sales or office or administrative support jobs.



HOUSEKEEPER

Cleaning up after other people is grueling work. At hotels and resorts around the country, housekeepers spend eight-hour days mopping, dusting and vacuuming for as little as \$10 to \$12 an hour.

Dale Bugby, a property manager in Vail, Colorado, can't imagine doing it himself. He employs seven housekeepers to clean 45 condominiums at his small vacation resort. Most are scoured and scrubbed twice a week. And according to Bugby, getting a rental property ready for guests requires "cleaning to above hotel standards – so that it looks like no one ever lived there."

In Vail, as at many vacation spots, housekeeping is an immigrant job. According to the Department of Labor, 69 percent of low-skilled maids and housecleaning workers in the U.S. are foreign born. Few Americans are interested in the work. Among unemployed native-born workers, aged 20-64, who held jobs in the last five years, only 1.2 percent worked as maids or housecleaners. And according to the Labor Department's O*NET database of job descriptions, housekeeping is among the more physically demanding jobs held by low-skilled workers, immigrant or native-born: it involves more exposure to contaminants, more kneeling, crouching, crawling, bending, twisting, walking, running and more repetitive motion than many other low-skilled jobs.

At Dale Bugby's resort, a housekeeper's day begins when she gets the list of properties she must clean in the next eight hours. She gathers her supplies and gets started as quickly as possible, then remains on the go until the end of the shift. She carries her supplies wherever she goes, along with several heavy bags of clean linens and towels, and the smaller buildings on the property have no elevators, so everything must be toted up and down stairs.

Along with this heavy lifting, the job requires constant bending and repetitive motion. When guests leave ashes in a fireplace, the housekeeper must bend to sweep them out. There's no way to scour a bathroom except on your hands and knees. Refrigerators must be emptied and scrubbed, dishwashers loaded, towels folded. Outdoor balconies must be cleaned whatever the weather.

Beds must be made with perfect hospital corners, and there is endless wiping, dusting, vacuuming and mopping.

Employees at this ski resort use household cleaning products, but many hotels use industrial-strength products that can cause skin damage and other bodily harm when used repeatedly over time. Housekeepers are also exposed to viruses and other germs left by vacationing guests.

Resort cleaning jobs are not easy to fill, and according to Dale Bugby, it's getting harder to retain good workers. He's been in the hospitality business in Colorado for more than 30 years, and when he started, virtually all the cleaners were U.S. workers. Back then, he put an ad in the newspaper before the ski season and heard from as many as 30 applicants every day.

But all that changed dramatically in recent decades. The last time Bugby remembers hiring an American was in 1986. "This is unglamorous work," he explained, "that many U.S. workers look down upon." By 1990, his staff was made up almost entirely of Mexicans. This year, at the start of the season, he was short three housekeepers. But when he advertised in the local newspaper, only two women applied and both quit after a week on the job. He decided to pay his current employees overtime instead.

Bugby pays his employees between \$12 and \$13 an hour, on par with what housekeepers earn in other upscale areas like Boston and Las Vegas – and several dollars more than what they earn in many labor markets. In Austin, Indianapolis and Pittsburgh, for example, according to the Foreign Labor Certification Data Center, the starting wage for housekeepers is \$8.00 to \$8.25 an hour. In some places where the labor market is tight, an experienced housekeeper or housekeeping supervisor can earn as much as \$15 an hour. But even the best paid housekeepers earn relatively little compared to most Americans – on average, \$8 to \$13 an hour.

Bugby feels lucky to have his immigrant employees. "We just want good workers," he explains. He couldn't keep his resort clean without their "solid work ethic."

O*NET SCORECARD

94		Spend time standing.
92		Spend time bending or twisting the body.
82		Spend time making repetitive motions.
81		Spend time kneeling, crouching, stooping or crawling.
75		Exposed to contaminants, such as pollutants, gases, dust or odors.

* Scores range from zero to 100, with zero signifying that the job never puts the worker in this position and 100 indicating that the job puts the worker in this position every day or all the time.

Source: U.S. Department of Labor's Occupational Information Network, or O*NET.

Low-skilled native-born workers have a comparative advantage in jobs that require communications skills – sales, for example, or office and administrative support – in part because they speak better English than most low-skilled immigrants. According to American Community Survey data, one in five low-skilled immigrant workers speaks no English, and another 40 percent do not speak it well.

Low-skilled immigrants have a comparative advantage in jobs that require physical strength and stamina.

In contrast, many low-skilled immigrants have a comparative advantage in jobs that require physical strength and stamina: labor-intensive occupations such as building maintenance, landscaping, construction, food processing, food preparation and food service.

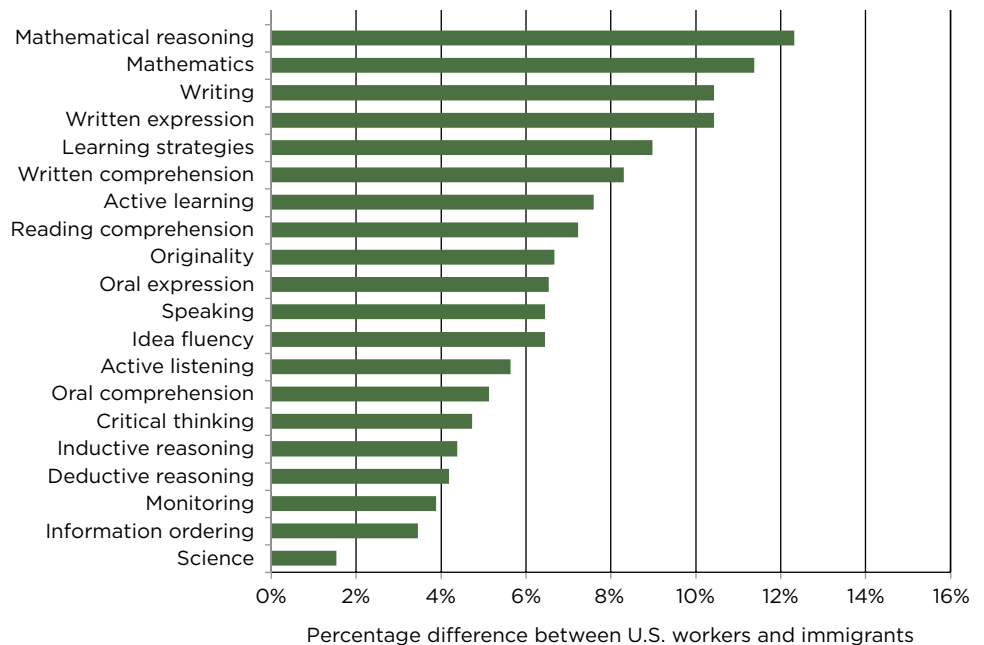
BOTTOM LINE: Few low-skilled immigrant workers compete for jobs with American workers because the two groups tend to have different skills and different comparative advantages.

A Skills Gap In Communication And Management

What exactly accounts for the contrasting comparative advantages of less-skilled immigrants and less-skilled Americans? What is the nature of the difference? And how do these diverging comparative advantages translate in the world of work – in the types of jobs held by immigrants and U.S. workers?

One way to compare jobs is to measure the skills required to complete essential tasks. How much of the job depends on being able to read and write? How often do workers use math or science? How much time do they spend managing other workers? Do they control their own time?

The Department of Labor’s O*NET database tracks and measures the skills required for every U.S. occupation. It rates occupations on 224 different dimensions ranging from how much English-language ability is needed to what level of writing skill to how much hand-eye coordination and how much managerial ability – and many other dimensions that go beyond skill. Every



Source: 2011 American Community Survey and O*NET database

FIGURE 4

LOW-SKILLED AMERICANS WORK IN JOBS THAT REQUIRE MORE COMMUNICATION SKILLS

conceivable job in the U.S. is measured and rated, and every job is scored numerically along each of these 224 dimensions. Scores range from zero to 100, with zero signifying that the job never requires that skill or puts workers in that position and 100 indicating that the job requires it every day or all the time.

The job descriptions in the O*NET database help explain why less-skilled immigrants and less-skilled Americans often gravitate to different jobs – why, for example, Americans in the transportation industry are disproportionately truck drivers, while immigrants are disproportionately packers. Truck drivers need better reading comprehension skills than packers: O*NET scores the reading skills needed by truck drivers at 49 and those needed by packers at 38. Truck drivers need better oral comprehension: an O*NET score of 56 versus 50 for packers. Truck drivers also need better active learning skills (39 versus 22) and better mathematical ability (41 versus 25).

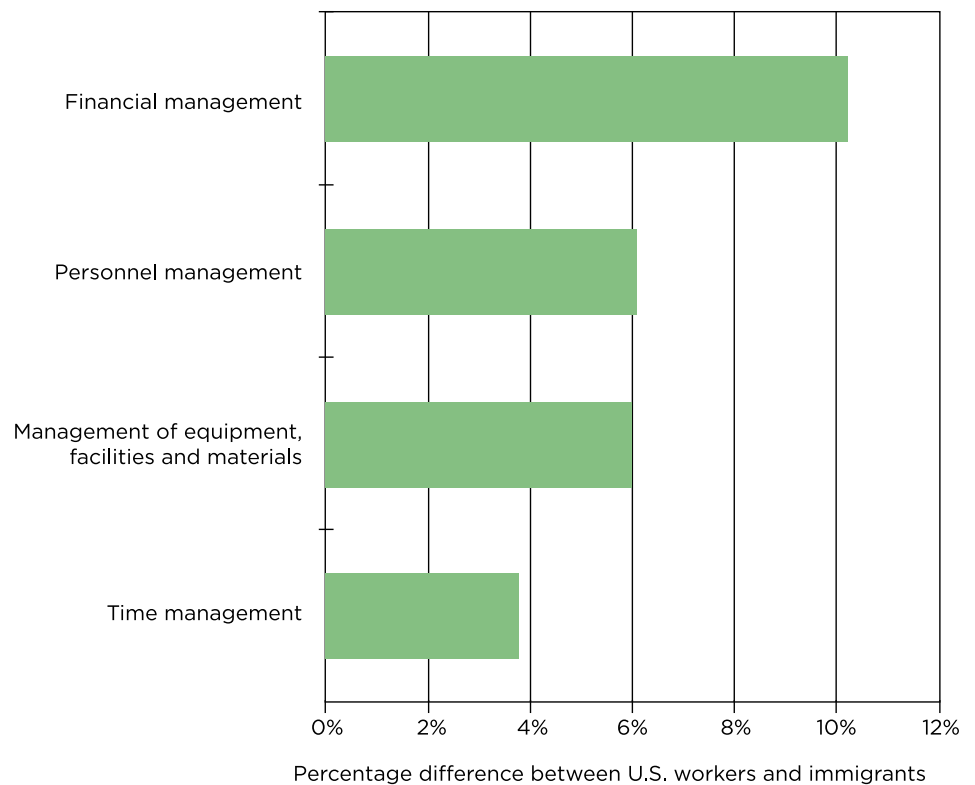
Americans hold jobs that require better reading, writing and speaking skills and more mathematical reasoning.

Figure 4 (on page 13) examines the differences between low-skilled U.S. workers and immigrant workers along 20 different cognitive and communications skills tracked in the O*NET database: reading comprehension, critical thinking, inductive reasoning, information ordering and mathematical reasoning, among others. As the figure shows, the jobs held by less-skilled Americans require consistently higher skill levels than those held by low-skilled immigrants. Americans hold jobs that require better reading, writing and speaking skills and more mathematical reasoning and critical thinking skills, among others. The difference is greatest for math, writing and written expression, but low-skilled Americans consistently work in jobs that require more cognitive and communications skills.

O*NET also measures management skills: financial management, personnel management, time management and management of equipment, facilities and materials.

FIGURE 5

LOW-SKILLED AMERICANS WORK IN JOBS THAT REQUIRE MORE MANAGERIAL TALENT



Source: 2011 American Community Survey and O*NET database

On these skills too, low-skilled Americans differ markedly from low-skilled immigrants. Truck drivers, for example, score 25 in financial management skills while packers score 10.

On time management, truck drivers score 51 while packers score 35. On personnel management, truck drivers score 28 to packers' 19, and on equipment, facilities and materials management, it's truck drivers 25 to packers 15.

These same discrepancies appear across many sectors of the U.S. economy. As Figure 5 shows, the jobs more often filled by

Truck drivers, who are more likely to be Americans, score 25 on financial management, while packers, more likely to be immigrants, score 10.



low-skilled American workers require significantly better management skills than jobs more likely to be filled by low-skilled immigrants.

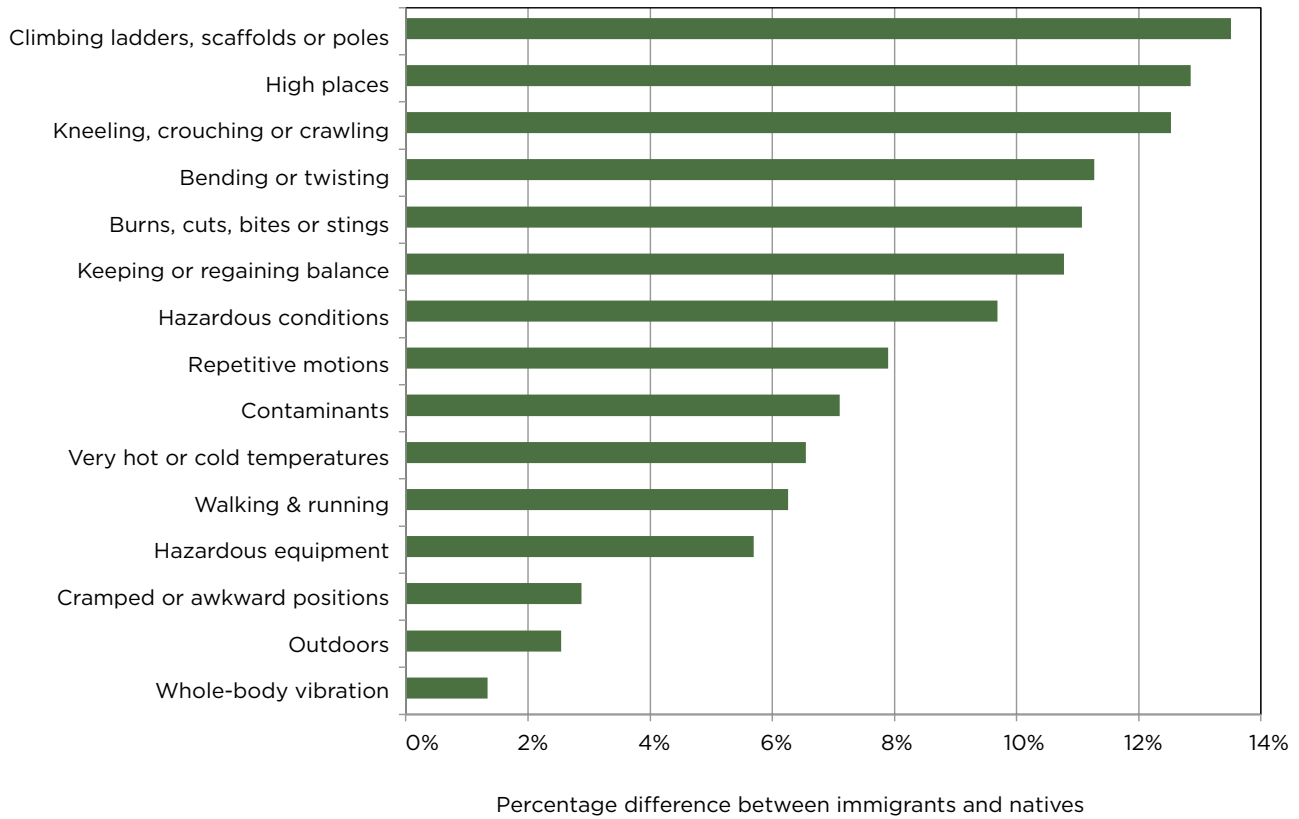
The biggest difference is in financial management, where low-skilled Americans' jobs require 10 percent more managerial ability than low-skilled immigrants' jobs.

Americans and immigrants gravitate to jobs that reward their comparative advantages. Indeed, as other research shows, Americans have responded to immigration by moving away from physically intensive jobs and toward communication-intensive work. As a result of this self-sorting, the two groups more often complement than compete with each other, and immigration has little adverse impact on Americans' employment and earnings.

BOTTOM LINE: Immigrants and American workers hold jobs that play to their comparative advantages. Even among the least skilled workers in the economy, Americans hold jobs that require better communications and managerial skills than are needed for jobs commonly held by immigrant workers.

FIGURE 6

LOW-SKILLED IMMIGRANTS WORK IN JOBS THAT ARE MORE PHYSICALLY INTENSIVE



Source: 2011 American Community Survey and O*NET database

The X Factor – Physical Intensity

Still another way to compare jobs is to measure how physically taxing they are. How much bending, stretching, straining, exposure to the elements, exposure to hazardous conditions and exposure to extreme weather does the job require? How much time spent kneeling, crouching, stooping or crawling? How much repetitive motion? How much exposure to burns, cuts, bites or stings? How much exposure to contaminants?

The O*NET database also measures this – not just the skills required for every U.S. job, but also its physical intensity. On these dimensions too, scores range from zero to 100, with zero signifying that the job never requires that intense physical activity or endurance and 100 indicating that the job requires it every day or all the time.

Consider one of many jobs commonly filled by immigrants: landscaping and groundskeeping worker. According to O*NET, landscaping work is extremely physically taxing. It’s done outdoors in all kinds of weather (O*NET score 99). Workers are exposed to minor burns, cuts, bites and stings (O*NET score 70). Workers must make repetitive motions (score 69), and they are frequently exposed to contaminants (score 88).



Looking beyond landscaping, how do most jobs typically held by less-skilled immigrants compare in physical intensity to jobs held by less-skilled American workers? Figure 6 looks at a range of dimensions – repetitive motion, exposure to contaminants, exposure to very hot and cold temperatures, bending, twisting, kneeling, crouching and crawling, among others – and finds that immigrants’ jobs are more physically taxing on every count.

Low-skilled Americans also work in difficult conditions. Many are regularly exposed to contaminants and spend at least half their time at work on their feet. They frequently work outdoors exposed to extreme temperatures, and their jobs typically involve repetitive motions.

But as Figure 6 illustrates, less-skilled immigrants work in jobs that are even dirtier, more dangerous and more difficult.

Consider jobs that put workers in a position to sustain burns, cuts, bites or stings. The average O*NET score on that dimension for jobs commonly held by low-skilled American workers is 41; the average O*NET score for jobs commonly held by low-skilled immigrants is 45. So too with bending and twisting. The average score on that dimension for low-skilled American workers is 51; the average score for low-skilled immigrants, 57.

Less-skilled immigrants spend on average 13 percent more time climbing ladders, scaffolds or poles and working in high places. They spend 12 percent more time kneeling, crouching or crawling. Their jobs involve 10 percent more exposure to hazardous conditions, 7 percent more exposure to contaminants and 6 percent more use of hazardous equipment.

No matter what kind of physical intensity is being measured – outdoor work, repetitive motions, hazardous conditions, hazardous equipment, contaminants, kneeling, crouching, burns, cuts, bites or stings – the jobs held by immigrants are more physically taxing and more hazardous than jobs held by less-skilled American workers.

No matter what kind of physical intensity is being measured, the jobs held by immigrants are more physically taxing and dangerous.



BOTTOM LINE: Along with educational attainment and contrasting comparative advantages, the X Factor of physical intensity further differentiates immigrants from American workers. The work done by immigrants is generally dirtier, more difficult and more dangerous.

Low-skilled immigrants and low-skilled Americans rarely compete for the same jobs. Even among the lowest skilled workers, immigrants tend to work in jobs that require physical endurance, while Americans tend to work in jobs that require communications skills and management ability.

Geography

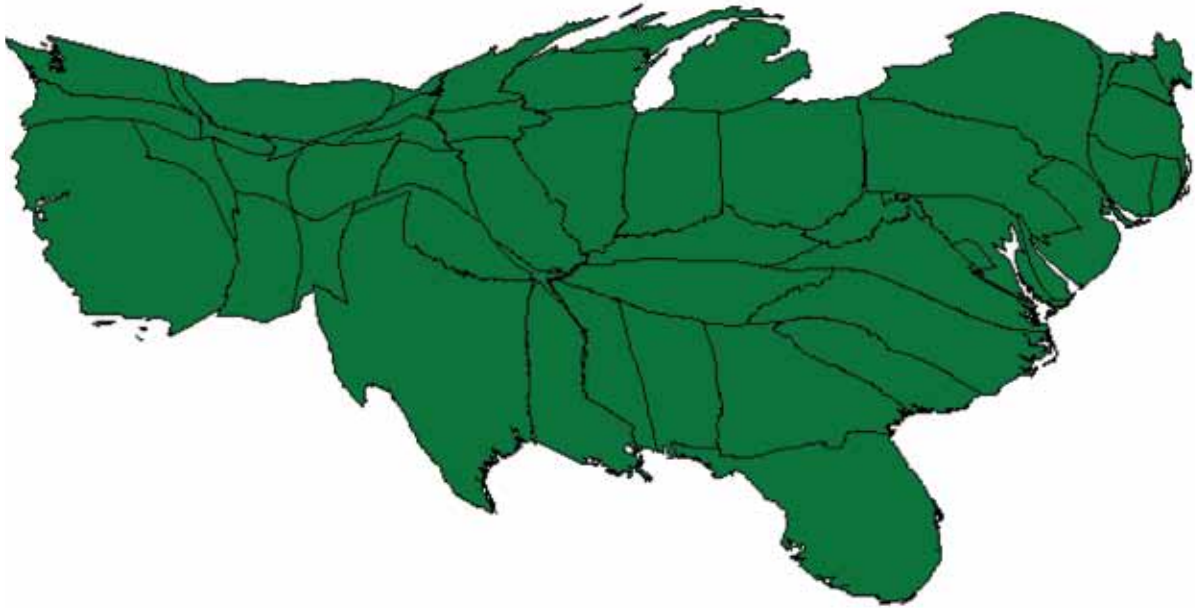
A final factor that limits competition between American workers and immigrants is geography.

Labor markets – especially low-skilled labor markets – are defined by geography. Highly educated workers – professionals, artists, high-end managers, among others – often move across the country to pursue career opportunities. Less-skilled, less-educated native-born workers rarely move in search of work. Among Americans aged 25 and older, in 2001 fewer than one-third of those without high school diplomas lived outside the state where they were born, compared to half of college graduates.

Low-skilled immigrants and low-skilled Americans rarely compete for the same jobs.

But less-skilled immigrants and less-skilled Americans respond differently to geography. The two groups tend to live in different parts of the country. Immigrants are typically drawn to areas with growing economies or immigrant enclaves. They live disproportionately in what are known as immigrant gateway states: California, Florida, Illinois, New Jersey, New York and Texas. Many less-skilled U.S. workers live in those states, too, but they account for a smaller share of the population.

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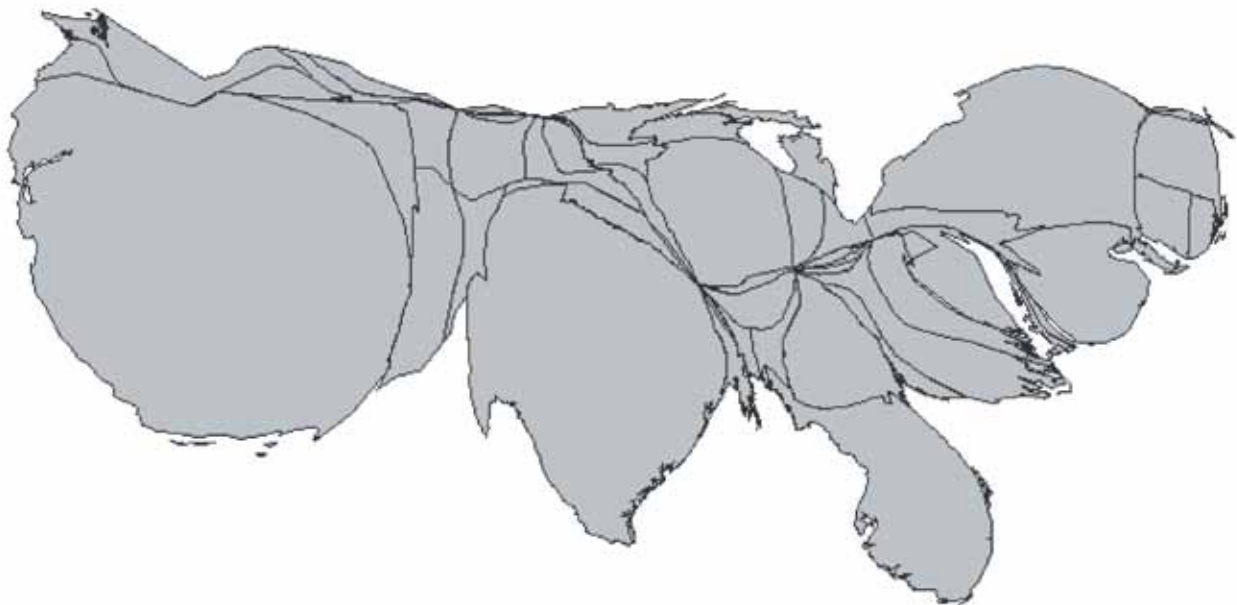


Source: 2011 American Community Survey

FIGURE 7
LOW-SKILLED AMERICAN WORKERS ARE SPREAD OUT ACROSS THE COUNTRY

Figures 7 and 8 illustrate this point. One map shows the distribution of less-skilled Americans, the other the distribution of less-skilled immigrants. If the two groups were spread evenly across the U.S., the two maps would look the same - but notice that neither looks very much like the U.S. as we know it.

In Figure 7, many states in the South look bigger than they are in reality because many less-skilled Americans live in the Southeast. But overall, less-skilled American workers are spread out across the country. Less-skilled immigrants, in contrast, are highly geographically concentrated. In Figure 8, California, New York, Ohio, New Jersey and Texas all look larger than they are in reality because many immigrant workers



Source: 2011 American Community Survey

FIGURE 8
LOW-SKILLED IMMIGRANT WORKERS ARE CONCENTRATED IN JUST A FEW STATES



have gravitated to those states. Not just the South, but also the Rust Belt, most of the Midwest and the Mountain West are home to far fewer less-skilled immigrants than less-skilled native-born workers.

And that's not the end of the geographical differences between less-skilled immigrants and less-skilled Americans. Low-skilled immigrants are also more likely than low-skilled Americans to move across the country in search of work. Less-skilled Americans are slow to respond to changes in economic conditions. Many are hesitant to leave their homes or pull up roots in communities where they have lived for a long time. Immigrants, in contrast, tend to move readily in response to economic opportunities. In 2005, for example, in the aftermath of Hurricane Katrina, some 100,000 immigrant workers migrated to Louisiana to assist with rebuilding, demolition, waste removal and sheet-rock installation, among other jobs.

This ready mobility is one of the key ways low-skilled immigrants contribute to U.S. economic growth. Low mobility is sand in the wheels of the labor market: it slows the pace of growth in booming regions while prolonging slumps in others. Low-skilled immigration helps ensure that there are workers where and when employers need them, and this in turn decreases the chances of low-skilled immigrants competing with low-skilled Americans.

BOTTOM LINE: Geographic distribution and immigrants' greater readiness to move to take jobs add significantly to the factors that limit competition between less-skilled immigrants and less-skilled American workers.

An Essential Work Force

Education, comparative advantage, physical intensity and geographic distribution: all work together to differentiate immigrants from American workers and limit the competition between the two groups.

Immigrants fill gaps in the American workforce by taking physically demanding, hazardous and repetitive low-skilled jobs that many Americans cannot or will not do. As American educational attainment and incomes have risen, increasingly few native-born workers are willing or able to do the jobs held by low-skilled immigrants.

These foreign workers, many of them unauthorized, meet a vital need for employers in a broad spectrum of essential industries. Less-skilled immigrants plant and pick America's crops. They build, clean and maintain America's homes and workplaces. They prepare and serve food at American restaurants. They take care of our children and our home-bound elderly. Most of these jobs cannot be automated, and most cannot be moved offshore.

Meanwhile, jobs filled by immigrants – even less-skilled immigrants – support and create jobs for American workers. Low-skilled immigrants contribute to economic growth by relocating to booming areas that need workers. They free up Americans to work in better jobs that require the communications and managerial skills that are Americans' comparative advantage. Immigrants available to fill jobs as house cleaners, gardeners and nannies have allowed millions of American women to work outside the home. Low-skilled immigration reduces the prices of the goods and services consumed by Americans. And it preserves American jobs by slowing the movement of companies overseas.

BOTTOM LINE: American businesses need less-skilled workers, and American consumers benefit from the work they do. Few American workers compete with immigrants for low-skilled, physically taxing jobs.

Jobs held by low-skilled immigrants support and create jobs for Americans, freeing Americans to work in better jobs that require communications and managerial skills.



Implications For Policy

Despite the economic benefits of low-skilled immigration, the United States makes it extremely difficult for less-skilled foreigners to enter the country to work.

Two small temporary worker programs provide visas for seasonal workers: the H-2A agricultural visa program and the H-2B non-agricultural program. But both are costly and cumbersome to use, making them unpopular with employers. Only 5,000 permanent visas, or green cards, are allotted annually for workers without college degrees, and the lengthy, costly green card application process deters all but a handful of less-skilled foreign workers from applying. The bottom line: low-skilled foreigners who want to work year-round and have no family in the United States have virtually no option but to enter the country illegally.

Creating a workable legal path for low-skilled foreigners to enter the U.S. and fill jobs when there are no willing and able Americans would have significant benefits for the workers, their employers and the rest of the nation – for economic reasons but also because of what it would do to restore the rule of law.

Few low-skilled immigrant workers compete with Americans. On the contrary, they complement U.S. workers and increase their productivity. Creating a workable visa program would strengthen economic growth and augment national income. It would make it easier for immigrants with skills in short supply to fill critical niches in the U.S. labor market. And this in turn would make it easier for employers in sectors that rely on low-skilled labor to open more businesses and grow them to meet customers' needs, creating jobs for Americans up and downstream in the local economy.



A workable low-skilled visa program would also help reduce unauthorized immigration, enhancing border security and the rule of the law in the workplace.

The overwhelming majority of less-skilled workers would prefer to enter the country legally, and employers who are more readily able to hire legal workers would have less reason to turn to unauthorized workers. A legal visa program would reduce competition between less-skilled Americans and unauthorized immigrants willing to accept submarket wages. And it would have fiscal benefits at the state and national levels, as more immigrant workers paid their full freight in taxes.

Better enforcement of immigration law is clearly a necessity, on the border and in the workplace. But ultimately the best antidote to illegal immigration is a legal immigration system that works.

As the U.S. economy becomes more sophisticated, there is less demand for low-skilled workers. But there will always be some need, and there are increasingly few Americans available to meet it. Educational attainment, comparative advantage, physical stamina and geographic mobility position low-skilled immigrant workers to fill this critical gap. Surely it's only common sense to create a way for them to enter the country legally.



Notes

Page 4: For estimates of the number of unauthorized immigrants, see Jeffery S. Passel and D'Vera Cohn, "Unauthorized Immigrant Population: National and State Trends, 2010," Pew Hispanic Center, 2011 (<http://www.pewhispanic.org/files/reports/133.pdf>).

Page 4: For the unemployment rate among workers aged 25 and older with less than a high school diploma, see <http://www.bls.gov/news.release/empsit.t04.htm>. The rate includes both immigrants and natives.

Figures 1 and 2: Calculations based on 1950-2000 Censuses and 2010 American Community Survey data from Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder and Matthew Sobek. *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Minneapolis: University of Minnesota, 2010. The samples include employed individuals aged 20-64. Educational attainment is coded as recommended in David A. Jaeger, "Reconciling the Old and New Census Bureau Education Questions: Recommendations for Researchers," *Journal of Business and Economic Statistics* 15 (1997): 300-309. Immigrants are individuals who are not U.S. citizens by birth. Person weights were used to calculate all statistics reported here.

Figures 1A-C: The percentage breakdown depicted in Figure 1A: in 1950, 56 percent of American workers had less than four years of high school, 25 percent had four years of high school, 10 percent had less than four years of college and 9 percent had four or more years of college. The percentages behind Figure 1B: in 2010, 4 percent of American workers had less than four years of high school, 27 percent had four years of high school, 36 percent had less than four years of college and 33 percent had four or more years of college. Figure 1C: in 2010, 24 percent of immigrant workers had less than four years of high school, 26 percent had four years of high school, 21 percent had less than four years of college and 29 percent had four or more years of college.

Figures 3-8: Calculations based on 2011 American Community Survey data from Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder and Matthew Sobek, *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Minneapolis: University of Minnesota, 2010. The samples used here include civilian workers (people who report being employed and not in the Armed Forces) aged 20-64. GED holders are considered high school graduates for this analysis.

Page 13: The O*NET data are available online at <http://www.onetonline.org/>. The O*NET data were merged with the 2011 American Community Survey data by the most disaggregated occupation code possible. Fifteen other dimensions of physical work conditions are not examined here because they are not particularly adverse (e.g., time spent sitting) or they primarily apply to highly specialized, skilled occupations (e.g., exposure to radiation is 100 among nuclear medicine technologists but 0 among landscaping and groundskeeping workers). The O*NET contains additional measures of communications and

related skills (in the “cognitive abilities” category) that we did not examine. We assume that all workers in a given occupation require the same skills and have the same work conditions, although immigrants probably work in worse jobs than U.S.-born workers within a given occupation.

Page 15: See Giovanni Peri and Chad Sparber, “Task Specialization, Immigration, and Wages,” *American Economic Journal: Applied Economics*, 1 (2009): 135-69.

Page 20: For evidence on the geographic mobility of less-skilled natives and immigrants, see David Card and Ethan Lewis, “The Diffusion of Mexican Immigrants during the 1990s: Explanations and Impacts,” in George J. Borjas (ed.) *Mexican Immigration to the United States*. Chicago and University of Chicago Press, 2007 and George J. Borjas, “Does Immigration Grease the Wheels of the Labor Market?” *Brookings Papers on Economic Activity* 1 (2001): 69-119.

Page 20: See, for example, Leo Braselton Gorman, “Latino Migrant Labor Strife and Solidarity in Post-Katrina New Orleans, 2005-2007,” *University of New Orleans Theses and Dissertations*. Paper 949 (2009); Elizabeth Fussell, “Post-Katrina New Orleans as a New Migrant Destination,” *Organization and Environment* 22 (2009): 458-469.

Page 21: For evidence on the economic benefits of less-skilled immigrant workers, see, for example, Giovanni Peri and Chad Sparber, “Task Specialization, Immigration, and Wages”; Patricia Cortés and José Tessada, “Low-Skilled Immigration and the Labor Supply of Highly Skilled Women,” *American Economic Journal: Applied Economics* 3 (2011): 88-123; Delia Furtado and Heinrich Hock, “Low Skilled Immigration and Work-Fertility Tradeoffs Among High Skilled US Natives,” *American Economic Review: Papers & Proceedings* 100 (2010): 224-228; Frank D. Bean, et al., “Luxury, Necessity, and Anachronistic Workers: Does the United States Need Unskilled Immigrant Labor?” *American Behavioral Scientist* 56 (2012): 1008-1028; Gianmarco I.P. Ottaviano, Giovanni Peri, and Greg C. Wright, “Immigration, Offshoring and American Jobs,” National Bureau of Economic Research working paper no. 16439 (2010); Patricia Cortés, “The Effect of Low-skilled Immigration on U.S. Prices: Evidence from CPI Data,” *Journal of Political Economy* 116 (2008): 381-422.

Page 22: The Immigration and Nationality Act allocates no more than 10,000 visas per fiscal year to “other workers” in the EB-3 preference category. However, this limit was reduced to 5000 per fiscal year as part of the 1997 Nicaraguan and Central American Relief Act for as long as necessary to offset adjustments to legal permanent resident status made under that program.

Page 22: For a broader discussion of unauthorized immigration and less-skilled immigrant workers, see Gordon H. Hanson, *Regulating Low-Skilled Immigration in the United States*. Washington, DC: American Enterprise Institute, 2010.

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