STILL AN HOURGLASS?

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September 2010

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Acknowledgments

The authors would like to acknowledge the Bill and Melinda Gates Foundation for their generous support of this research. We would also like to thank Harry Holzer at Georgetown University for his comments on earlier drafts of the report. Steve Hipple, Roger Moncarz, Michael Wolf, and Peter Meyer at the Bureau of Labor Statistics spent a considerable amount of time guiding us through their process for identifying the skill requirements of occupations in the Census data. We would also like to thank Demetrios Papademetriou, Madeleine Sumption, Jeanne Batalova, Aaron Terrazas, and Michelle Mittelstadt at MPI for their invaluable guidance and assistance with this report.

Cover Photos: Hotel desk photo courtesy of US Army, Susan Huseman; construction surveyor photo courtesy of George Smith; girl at computer and man in wheelchair with doctor (24017991) - Photos.com.

Cover Design and Typesetting: April Siruno, MPI

Suggested citation: Capps, Randy, Michael Fix, and Serena Yi-Ying Lin. 2010. *Still an Hourglass? Immigrant Workers in Middle-Skilled Jobs*. Washington, DC: Migration Policy Institute.

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Executive Summary

It has been conventional wisdom that the immigrant workforce is shaped like an hourglass — wide at the top and the bottom but narrow in the middle. In reality, immigrants are more evenly dispersed across the skills spectrum than has been widely recognized. Our analysis demonstrates that the fastest growth in immigrant employment since 2000 has occurred in middle-skilled jobs — jobs that require more than a high school but less than a college degree and that typically pay a family-sustaining wage.

This report addresses the question of whether US immigrants, legal and unauthorized, have been able to find good jobs before and during the recent recession. We examine four major US industries: the more highly skilled health care and information technology sectors and the lower-skilled construction and hospitality sectors. These four sectors all had substantial labor force growth — among both immigrants and natives — before the recession started.

Immigrants holding middle-skilled jobs in three of the four sectors (all but construction) earned more on average before the onset of the recession than natives with similar jobs. At the same time, many of the good middle-skilled jobs we describe here were in the construction industry, which suffered steep job losses (more than 30 percent in some occupations) during the recession.

Prerecession, immigrants were finding work at all skill levels and progressing substantially in their earnings across the sectors surveyed.

The research findings presented here were made possible through an approach to analyzing and arraying data that permits us to classify occupations by skill level based on the education and training they require — offering a new lens on immigrant employment patterns.

Our analysis makes clear that prerecession, immigrants were finding work at all skill levels and progressing substantially in their earnings across the sectors surveyed.

A. Key Overall Findings

Our analysis reveals a number of important trends:

Broad immigrant economic incorporation across sectors. Over the past two decades, the immigrant labor force has grown rapidly as the US labor market served as a powerful engine of immigrant attraction and mobility. The shares of immigrant workers in the total economy and for each of the four study sectors soared between 1990 and 2006 — with all four growing faster than the economy as a whole — and with immigrants far outpacing natives' growth rates. Nonetheless, native employment also grew rapidly in all four sectors, and natives' job growth in absolute numbers exceeded immigrants' growth in three of the four sectors (except construction).

During the 2000-2006 boom years, immigrants accounted for over half (5.5 million) of the net growth of 10 million jobs.

Immigrant access to middle-skilled jobs. The hourglass image often used to describe the immigrant labor force, emphasizing concentration at the high and low ends, does not appear to accurately portray

the skill levels of jobs that immigrants hold. Since 1990, middle-skilled occupations have accounted for almost a quarter of the jobs held by immigrants, about the same share as high-skilled jobs. From 1990 to 2006, the number of immigrant workers in middle-skilled jobs grew at about the same rate as low-skilled jobs (125 percent versus 124 percent). But when we look at a later time period — 2000 to 2006 — we see number of immigrants in middle-skilled jobs growing much more rapidly than the number in high-skilled jobs (50 percent versus 22 percent).

Nonetheless, over half (56 percent) of immigrant workers were employed in low-skilled jobs in 2006, before the recession began. The shares of all immigrant workers employed in high- and middle-skilled jobs were 20 percent and 24 percent respectively, while shares for natives were 25 percent in high-skilled and 29 percent in middle-skilled jobs. Thus, it could be argued that the skill distribution of the immigrant and native labor force resemble one another much more closely than has been popularly believed. Despite the similarity of these skill distributions, economists have not found that immigrants holding middle- and high-skilled jobs substantially lower native workers' employment or wages.[1]

Immigrants are more evenly dispersed across the skills spectrum than has been widely recognized.

Family-sustaining wages. Middle-skilled jobs represent important pathways for immigrant mobility, as the step up in wages from low-skilled jobs is substantial. In 2006, 60 percent of immigrants in middle-skilled jobs earned family-sustaining wages, compared with 28 percent of those working in low-skilled jobs.

The share of immigrants earning family-sustaining wages in middle-skilled jobs equaled or exceeded natives' share in three of the four sectors studied (all but construction). Immigrants earned more in part because they were better educated than natives in the health care and IT sectors; their wages and educational attainment were both roughly equivalent in hospitality. Well-educated immigrants are overrepresented in some middle-skilled jobs, potentially owing to their inability to meet credentialing requirements. For instance, immigrants with advanced degrees and experience in the health care field in their home countries may have difficulty passing licensing exams in the United States and having their credentials and work experience fully valued by US employers.

We also find substantial earnings variation among immigrants. English-proficient immigrants were more likely than natives to earn family-sustaining wages (63 percent versus 59 percent), and were twice as likely to do so as limited English proficient (LEP) immigrants (31 percent). Immigrants with ten years or more of US experience were almost as likely as natives to earn family-sustaining wages (54 percent). Sixty-two percent of immigrants born outside of Latin America earned family-sustaining wages, but only 32 percent of Latin American immigrants did so. Latin Americans comprised 51 percent of all immigrant workers, and were overrepresented in the lower-skilled and lower-paying sectors of construction and hospitality, at 83 percent and 62 percent respectively.

English and education demands. The importance of schooling and English language instruction to climbing career ladders is underscored by the fact that few immigrant workers in middle-skilled jobs had a high school education or less, or were LEP in three of the four sectors examined (health care,

1 Pia M. Orrenius and Madeline Zavodny, "Does Immigration Affect Wages? A Look at Occupational Level Evidence" (Discussion Paper No. 2481, Institute for the Study of Labor [IZA], Bonn, Germany, December 2006), http://ftp.iza.org/dp2481.pdf. We should note that the issue of competition and crowding effects was not a focus of this research, and there is little research on the topic generally, as most of the literature has examined crowding effects among low-skilled workers.

IT, and hospitality). The exception was construction, where substantial numbers of immigrants in middle-skilled occupations were LEP and did not have a high school education — but these immigrants generally earned less than natives in comparable occupations.

Youth progress. The unemployment rate for youth has approached 20 percent since the recession began, and the labor market has been poor for both immigrant and native-born youth. Even before the recession, immigrants age 16 to 26 were less likely than natives to hold promising entry-level or middle-skilled jobs in all sectors except construction. There were a few exceptions, such as computer support specialists in IT. Nineteen percent of immigrant youth earned family-sustaining wages, and the share for native youth — 23 percent — was roughly equivalent.

The recession's differing effects. Overall, immigrants' job growth suffered more than natives' across all fours sectors from 2007 to 2009, but the recession has had widely varying impacts on the four sectors, with construction hit the hardest. IT lost ground as well, following the sector's general stagnation in hiring since 2000. Job growth in hospitality has stalled while job growth for immigrants in health care continues to grow, albeit at a slower rate than for natives and at a much slower rate than before the recession. Thus the two sectors that saw the strongest job growth among immigrants before the recession — construction and IT — suffered the deepest immigrant job losses in the downturn.

Because of striking gender disparities across the four sectors, these recessionary trends have taken a heavier toll on immigrant men, who are much more heavily represented in the construction and IT sectors, than on immigrant women, who predominate in the health sector. Latino men have fared especially poorly, because of their even greater representation in construction.

With the disappearance of so many construction jobs, the number of middle-skilled jobs available to immigrants with comparatively low educational attainment and limited English skills has fallen dramatically — a finding that has implications for the types of work-preparation programs that can successfully serve US immigrant populations. In the current workforce development system, less-educated immigrants and those with limited English skills often have difficulty completing the extensive education and training necessary to obtain the credentials required for most middle-skilled jobs in sectors other than construction.

Career pathways suggests that the step up in wages from low- to middle-skilled jobs is substantial, most notably in health care.

Summary. Our analysis presents a mixed picture of the incorporation of immigrants in the economy as a whole and in the four sectors studied. Between 1990 and 2006, we see broad immigrant penetration from the bottom to the top of job ladders, with especially rapid growth occurring in middle-skilled jobs, many of which paid family-sustaining wages. At the same time, we find that half of immigrants worked in low-skilled jobs. In many career pathways, immigrants remained underrepresented in higher-skilled jobs and managerial positions. Many of the middle-skilled jobs that less educated, LEP, recently arrived, and young immigrants held in construction vanished — at least temporarily — in the harsh recession.

Our examination of career pathways suggests that the step up in wages from low- to middle-skilled jobs is substantial, most notably in health care. The analysis also highlights the fact that immigrant wage changes are usually equal to or higher than natives as they attain these credentials — except in construction. However, not all pathways seem open to immigrants as they remain underrepresented in

some stepping-stone occupations such as emergency medical technicians in health care and front-of-the-house jobs in hospitality.

Policy Implications. The results raise two sets of policy concerns. The first, which we will develop in later stages of our research project, bears on the targeting, effectiveness, and funding of work-preparing institutions that can move immigrants into family-sustaining jobs. Second, based on this evidence a case can be made that the current largely family-based permanent immigration system may be meeting the needs of the labor force to a degree that has gone unrecognized. Further research remains to identify how many immigrants enter with middle-level skills and credentials; what admission categories they enter under; the wage and employment effects they have on US workers; and the degree to which the immigration system should more expressly seek to fill near-term middle-skilled job shortages. These analyses could constitute part of the charge of a Standing Commission on Labor Markets, Economic Competitiveness, and Immigration that the Migration Policy Institute (MPI) has recommended.[2]

B. Key Sector-Specific Findings

These overall findings differ significantly by sector:

1. Health Care

Between 1990 and 2006, immigrant employment growth in health care was broad-based: foreign-born workers' employment growth outpaced natives' in each of the 39 occupations we examined.[3] Immigrants were well-represented in health care occupations at all skill levels: just over a quarter worked in high-skilled occupations, about one fourth in middle-skilled occupations, and about half in low-skilled occupations. Growth was especially rapid within low-skilled jobs such as home health aides. At the same time, the number of immigrants more than doubled in several middle- and high-skilled occupations, including licensed practical nurses (LPNs), registered nurses (RNs), and physicians.

Health care employment continued to grow for both immigrants and natives during the recession, and growing demand for health services as the US population ages and lives longer should continue to promote strong job growth. Indeed, the Bureau of Labor Statistics (BLS) projects 25 percent job growth in the sector between 2008 and 2018.

Overall in 2006, immigrant health care workers were more likely than natives to earn family-sustaining wages: 59 percent versus 56 percent. Over 80 percent of immigrants in high- and middle-skilled jobs earned family-sustaining wages, but this share dropped to 30 percent in low-skilled jobs.

Given the importance of English proficiency, it is not surprising that only 5 percent of workers in middle-skilled jobs were LEP. In fact, English-proficient immigrants with postsecondary credentials short of a bachelor's degree showed great mobility in the sector, with a large majority working in jobs that paid family-sustaining wages.

The mobility of immigrants in the sector did not extend to youth, as just 8 percent of immigrants working in health care overall and 4 percent in middle- and high-skilled jobs were ages 16 to 26.

Projected growth in the sector, especially in middle-skilled jobs such as nursing, should translate into

2 For more on this Migration Policy Institute (MPI) recommendation, see Independent Task Force on Immigration and America's Future, *Immigration and America's Future: A New Chapter,* (Washington, DC: MPI, 2006), www.migrationpolicy.org/ITFIAF/finalreport.pdf; Demetrios G. Papademetriou, Doris Meissner, Marc R. Rosenblum, and Madeleine Sumption, *Harnessing the Advantages of Immigration for a 21st-Century Economy* (Washin gton, DC: MPI, 2009), www.migrationpolicy.org/pubs/StandingCommission_May09.pdf.

3 These 39 occupations are some of the largest or most pertinent health care occupations and together comprise about 80 percent of all workers in the health care sector.

continuing opportunities for immigrant workers with less than a college degree and will likely offer the best prospects of the four sectors studied. BLS projects more absolute job growth for RNs than any other occupation.

2. Information Technology

IT experienced rapid employment growth during the 1990s, but the sector stagnated following the bursting of the high-tech bubble in 2000 and the recession of 2001-2002. IT also experienced job losses during the recent recession. BLS projects modest job growth (4 percent) for the sector from 2008 to 2018.

Before the recent recession, immigrant employment in IT rose, despite slowing job growth in the sector overall. The share of foreign-born IT workers increased from 12 percent to 17 percent from 1990 to 2000, expanding to 20 percent in 2006. Moreover, as occupational skill requirements and wages rise, immigrants represent an increasing share of all workers in the sector. Thus, the better the job in IT, the more likely it is to be filled by an immigrant.

Middle-skilled jobs represent important pathways for immigrant mobility, as the step up in wages from low-skilled jobs is substantial.

High-skilled workers predominate in IT, where there are fewer opportunities than in health care for those without at least a four-year degree. Immigrants are better educated than natives in the sector — 79 percent versus 51 percent hold at least four-year degrees — and their employment has been especially rapid in high-skilled jobs such as computer systems managers, network systems administrators, and database administrators.

Owing in part to their higher educational attainment, immigrants outearned US-born IT workers, with 89 percent of all immigrants and 84 percent of natives in the sector earning family-sustaining wages in 2006. In fact, three-quarters or more of immigrants from all countries of origin, including Latin America, held good jobs at this wage level. Even among LEP immigrants and recent arrivals, more than 80 percent held these good jobs.

Despite the high-skill bias of the sector, opportunities present themselves in the industry's middle-skilled occupations for less highly educated workers. Fifty-eight percent of immigrants holding middle-skilled jobs in IT had less than a bachelor's degree.

3. Construction

Construction stands out among our four study sectors as the one providing the most opportunities for less-educated workers. Before the recession, construction offered important pathways to good jobs for immigrants — especially men, youth, recent immigrants, those from Latin America, and those with less formal education and limited English skills.

Immigrant employment growth from 1990 to 2006 was as broad-based in construction as health care. Growth was especially rapid (more than 300 percent) in many low-skilled occupations as well as some middle-skilled occupations such as plumbers, carpenters, and electricians. In 2006, immigrants were a third or more of workers in several important middle-skilled occupations, with LEP workers holding more than a quarter of these middle-skilled jobs.

Despite their mobility into middle-skilled occupations, immigrants earned less than natives in most of these occupations. Overall, 39 percent of immigrant construction workers earned family-sustaining wages in 2006, compared with 65 percent of natives. The shares earning family-sustaining wages were lower among recent arrivals (26 percent), LEP immigrants (32 percent), and those of Latin American origin (33 percent).

Most middle-skilled construction occupations rely on on-the-job training and/or work experience rather than formal education in contrast with health care and IT. Although immigrants' wages were lower than natives' in 2006, absent the implosion of the housing market and onset of the recession, many more immigrants would likely have moved into good-paying jobs over time and with continued growth in the sector.

The rapid overall growth of the sector before 2007 also opened opportunities for large numbers of recent immigrants: in 2006, half of immigrant construction workers overall and more than half in several middle-skilled occupations had been in the United States for less than ten years.

Of course, the recession has dramatically affected immigrant employment, especially in occupations related to residential housing construction, such as carpenters, painters, roofers, and construction laborers. Just as immigrant employment growth outpaced that of natives before the recession, the drop in their employment since has been steeper and it remains to be seen whether or not immigrants can regain their foothold in the sector. BLS projects 19 percent growth across the sector from 2008 to 2018, but if the economy and the residential and commercial property sectors remain weak, these projections may not come to pass.

4. Hospitality

Hospitality employment also grew rapidly, with the number of immigrant workers growing by 134 percent (compared to 33 percent for natives) between 1990 and 2006. In absolute terms, employment growth was concentrated in low-skilled occupations such as cooks, cashiers, housekeepers, waiters, and waitresses. There was also rapid growth in middle-skilled supervisor and manager positions, but hospitality has relatively few of these positions.

Hospitality job growth slowed during the recession, but was not as strongly affected as construction. While immigrant employment in construction fell 23 percent between the third quarters of 2007 and 2009, immigrant employment in hospitality was flat. BLS projections anticipate modest 8 percent growth in employment from 2008 to 2018, the bulk of it in low-skilled jobs.

Hospitality has shorter job ladders, and hence fewer opportunities, for mobility than the other sectors we studied. In 2006, 78 percent of immigrants and 73 percent of natives worked in low-skilled occupations, while just 20 percent of immigrants and 23 percent of natives held middle-skilled jobs. Moreover, only one small subset of middle-skilled occupations paid a family-sustaining wage: supervisors or managers. Still, more than a fifth of workers in these supervisor and manager positions were immigrants. These positions generally require strong English skills, substantial postsecondary education, and substantial job experience.

In 2006, only 14 percent of immigrants in low-skilled hospitality jobs and 50 percent of those in middle-skilled jobs earned family-sustaining wages — proportions that were *higher* than those for comparable native-born workers(10 percent and 46 percent, respectively).

Hospitality employs large numbers of young immigrants and recent arrivals. In 2006, almost half (47 percent) of immigrants had less than ten years of US experience and almost a quarter (22 percent) were ages 16 to 26. But the vast majority of these workers held low-skilled jobs paying only a fraction of a family-sustaining wage.

On the one hand, these findings suggest that once immigrants learn English and move up into customer service jobs, they may be poised to move into middle-skilled supervisory positions. On the other hand, BLS projects that growth in these supervisory positions will be relatively low — numbering in the tens of thousands between 2008 and 2018.

I. Introduction and Approach

Before the onset of the recession, the conventional wisdom was that the US workforce would need far more immigrants, both high- and low-skilled, in future years. Labor market demand, a generous legal immigration system, and limited enforcement of immigration laws led to a near-doubling of the country's immigrant population, from just 20 million in 1990 to 38 million in 2006.[4] The immigrant labor force has been generally depicted as shaped like an hourglass — with larger numbers of lower- and higher-skilled immigrants, but a relatively thin population of workers in the middle. Our analysis suggests a different reality, with immigrants more evenly distributed across the job-skill spectrum than widely believed going back to 1990 and possibly earlier.[5]

In this report, we investigate the skill distribution of immigrant workers before the recession, concentrating on middle-skilled jobs (those generally requiring a high school education or similar level of job training but not requiring a four-year college degree). We also address how well immigrants were faring in the labor market by examining the share in various jobs earning a family-sustaining wage — $30,000 or more annually. (See Methodological Appendix for a detailed discussion of the definition of what constitutes a family-sustaining wage.) We find substantial evidence that many immigrants were finding good-paying jobs in middle-skilled occupations, though there were substantial variations by sectors of the economy, the educational attainment of workers, their English proficiency, and other factors.

A. Approach

Our approach to assessing the past, current, and future incorporation of immigrants into the US labor force has four defining features. First, we take a sectoral approach to immigrant incorporation, examining four sectors that have comparatively long job ladders, employ large numbers of immigrants, were growing rapidly before the recession, and are projected to grow in the coming years. This sectoral approach captures the career pathways that education and training programs increasingly follow and have shown some success in developing.[6] This approach also permits us to explore what turns out to be substantial variation in patterns of immigrant incorporation and recessionary impacts across the sectors. Finally, the approach fills a gap in the broad literature on immigrant integration that has generally examined the US immigrant labor force as a whole.

A second defining feature is our classification of occupations into three major skill groups based on education and training levels: high-skilled (those requiring a bachelor's degree or more education); middle-skilled (a high school education plus an additional credential, substantial work experience, or long-term on-the-job training); and low-skilled (moderate- or short-term on-the-job training only). To construct these skill groups, we used a detailed 11-level Bureau of Labor Statistics (BLS) index of the skills needed for various occupations, which required matching detailed BLS occupation codes to

4 MPI analysis of data from the 1990 US Census of Population and Housing and 2006 American Community Survey (ACS).
5 We were unable to analyze comparable data before the 1990 Census.
6 Harry Holzer, Is the Middle of the U.S. Labor Market Disappearing: A Comment on the "Polarization" Hypothesis (Washington, DC: Center for American Progress, 2010).

Census codes, and in many cases, reviewing individual occupations and assigning skill levels.[7] This categorization allows us to describe the representation of immigrant workers in our focal industries by skill levels, with a particular emphasis on those in middle-skilled occupations. Because our definition is based on detailed occupation codes, it generates different results from other studies that use broader occupational categories, wages, or educational attainment to identify middle-skilled workers.[8]

A third defining feature is our exploration of the degree to which differing occupations pay good wages to immigrant and native-born workers. To evaluate the adequacy of pay, we use the "family-sustaining wage" definition developed by the Economic Policy Institute (EPI). According to EPI's definition, a worker's income must be at least 60 percent of the median national household income, or about $30,000 in 2006 (when the median was roughly $50,000).[9] Larger families need higher incomes to sustain themselves, but they also tend to have more earners than smaller ones. Our family-sustaining wage of $30,000 is not the level a single worker would need to earn to sustain a family of four, but rather the amount that workers on average need to earn to reach this level given a mixture of smaller and larger families, most of which have more than one worker. It is also near the wage level that studies of large US metropolitan areas have found necessary to support a family.[10]

We also find that there is a high correlation between middle-skilled jobs and family-sustaining wages. While 60 percent of immigrant workers in middle-skilled jobs across the economy earned a family-sustaining wage in 2006, only 28 percent in low-skilled jobs did so.[11]

A fourth distinctive feature of the analysis is our disaggregation of immigrants by age, gender, country of origin, length of US settlement, English proficiency, and educational attainment to determine how they are correlated with immigrant penetration into good jobs.

B. Data Employed

This report makes use of data from the American Community Survey (ACS) and Current Population Survey (CPS).[12] For our "2006" estimates, we pool three years of ACS data (2005-2007) in order to expand sample sizes and increase the precision of our estimates. We do not pool data from 2007 with later years in order to avoid mixing expansionary and recessionary time periods. Finally, we employ BLS employment projections for 2008-2018, released in December 2009, to predict potential future employment trends. Where possible, we disaggregate immigrants from natives in the data. We also limit

7 US Bureau of Labor Statistics (BLS), "Measures of Education and Training," *Employment Projections,* (Washington, DC: BLS, 2009), www.bls.gov/emp/ep_education_tech.htm. See methodological appendix for further details.

8 See, for instance, David H. Autor, Lawrence F. Katz, and Melissa S. Kearney, "The Polarization of the U.S. Labor Market" (NBER Working Paper 11986, National Bureau of Economic Research, Cambridge, MA, January 2006), www.economics.harvard.edu/faculty/katz/files/akk-polarization-nber-txt.pdf; Harry Holzer and Robert Lerman, *America's Forgotten Middle-Skill Jobs: Education and Training Requirements in the Next Decade and Beyond* (Washington, DC: The Urban Institute, 2007), www.urban.org/publications/411633.html.

9 Algernon Austin, "Getting Good Jobs to People of Color" (Briefing Paper #250, Economic Policy Institute, Washington, DC, November 2009), www.epi.org/publications/entry/getting_good_jobs_to_people_of_color/

10 For instance, a study by the Los Angeles Community Redevelopment Agency defined a family-sustaining wage as $28,000 in 2006. On average, this annual wage yielded about $50,000 in family income, or 250 percent of the federal poverty level, when all workers in families were taken into account. This family-sustaining income level was developed based on a budget for housing, food, health care, child care, transportation, other necessities, and taxes in the Los Angeles metropolitan area. See Michael Matsunaga and Daniel Flaming, "Benchmark for a Family-Sustaining Wage in Los Angeles" (Los Angeles: Los Angeles Community Redevelopment Agency, 2009) , www.economicrt.org/summaries/Sus_Fam.html.

11 Our results here are robust regardless of the exact cutoff for a "family-sustaining wage." For instance, at a cutoff of $25,000, 69 percent of middle-skilled immigrants and 38 percent of low-skilled immigrants earned a family-sustaining wage. At a cutoff of $50,000, the shares earning a family-sustaining wage were far lower but showed a similarly substantial gap between middle- and low-skilled immigrants: 30 versus 7 percent. See Methodological Appendix for more details.

12 Because of differing sampling strategies and questionnaires, the ACS and CPS frequently generate different estimates of the size and characteristics of the US labor force, especially when smaller groups such as immigrants are considered. Economists and demographers disagree about which data source is more accurate, but the ACS has a much larger sample size, enabling the type of detailed occupation-level analysis we conducted for this report.

our sample to those who worked at least part-time and earned some income from work.[13]

The data and analyses have a number of limits. First, BLS definitions of some occupations change over time, so trends among some occupations can be difficult to discern.[14] Second, we can only describe 2006 characteristics of workers and trends over time for relatively large occupations, as not all occupations have samples sufficient to develop precise estimates.[15] Third, the occupation codes are sometimes imprecise and capture jobs with varying skill levels and experience requirements. (For a full description of the methods, including our sector definitions, occupation selection, skill-level assignments, country/region of origin groupings, and other variables of interest, see the Methodological Appendix at the end of the report.)

C. *Report Organization*

In the next section, we describe immigrant employment in good jobs for the overall economy, across our four study sectors, over time, and among youth and other demographic groups. After setting the stage across the economy, we turn to employment patterns within our four study sectors, starting with the two sectors with larger shares of high- and middle-skilled jobs (health care and information technology, or IT), followed by the two sectors with larger shares of low-skilled jobs (construction and hospitality). Throughout the report, we focus on occupations requiring middle-level skills and those paying a family-sustaining wage. We conclude by drawing the implications of our results for the targeting of postsecondary work-preparing programs focusing on immigrant workers.

II. Immigrant Incorporation in the US Economy

A. *The Demographic, Economic, and Policy Context*

The backdrop for this report is the rapid growth in the US immigrant population through 2006, followed by a broad stabilization in the stock and a decline in the flow of both unauthorized and legal immigrants during the economic downturn that followed.

Since fall 2009, US unemployment rates have remained around 10 percent and underemployment rates — which also include part-time workers and those who have given up looking for work — have hovered around 17 percent. The burden of the recession has fallen hardest on undereducated and less-skilled workers, whose unemployment rates have been double those of workers with four-year college degrees and much higher than those with two-year degrees. According to some indicators, immigrants' economic fortunes have been especially volatile. While immigrants' unemployment rates historically have been lower than for natives, their rates rose faster and exceeded natives' during the current downturn. These outcomes owe in part to many immigrants' lower education levels, limited English proficiency, recency of arrival, and their concentration in the hard-hit construction industry.

From a policy perspective, this report comes at a time of sustained, contentious debate over the need for comprehensive immigration reform. Among other things, reform would extend legal status to

13 Workers are defined as those working at least 25 weeks (at least some hours over the course of six months) or 700 hours (full-time equivalent for 20 weeks) and earning positive wage and salary income during the prior year.

14 The IT sector was the most challenging to define, as described later in the report. In general there was less detail in the occupation codes in the 1990 Census than in later data sets, and the coding of information technology occupations was especially weak in 1990.

15 Our cutoff for an adequate sample size is 100 cases, representing a population that mostly falls in a range between 3,000 and 4,000.

the unauthorized, thus opening new labor market opportunities to them and generating additional demand for education, language, and training services. Immigration reform might also address the level and character of future flows, the mechanisms (such as a Standing Commission on Labor Markets, Economic Competitiveness, and Immigration) used to determine them, and the factors (such as sectoral employment shortages) that should be taken into account. While comprehensive immigration reform legislation is highly unlikely to be considered by Congress before 2011, the proposed legalization of unauthorized immigrant youth who complete high school (the DREAM Act) is likely to draw increased attention from policymakers and advocates.[16] The DREAM Act, which could grant permanent legal status to as many as 2.1 million unauthorized youth who complete its military service or postsecondary education requirements, would be the source of substantial new demand for the nation's two-year colleges, raising issues of capacity, funding, and quality.[17]

It is important to understand how deeply immigrants have become integrated into the US labor force

Further this analysis is being released as the long-running debate over reauthorizing the Workforce Investment Act (WIA) continues. WIA is the principal source of federal funding for the adult basic education, English language instruction, and workforce-training systems in the United States. Among other things, proposed legislation would create a WIA grant program designed to encourage partnerships between workforce development systems and industry- and sector-based clusters of employers.[18] Reform would also promote the integration of English language and workforce training by linking WIA's two major titles that separately fund workforce training and adult basic education.

This report addresses, then, a number of questions that should be important to policymakers: Have immigrants been successful in climbing job ladders in key economic sectors? How has immigrant employment responded to the recession? Do the wages of immigrants in middle- and high-skilled jobs equal or exceed natives'? What schooling, credentials and English language skills do immigrants in good middle-skilled jobs typically hold, and by implication, what would our fiscally constrained work-preparing institutions need to provide to help immigrants obtain these jobs?

B. Recent and Projected Trends in Immigrant Employment

With this economic and policy context, it is important to understand how deeply immigrants have become integrated into the US labor force. Other studies have looked at how immigrants are faring in the economy overall, but this study uniquely focuses on their penetration of four key sectors — health, IT, construction, and hospitality — and into good jobs paying family-sustaining wages in these sectors.

In 2006, immigrants made up 13 percent of the US population but comprised 16 percent of all US workers, reflecting their overrepresentation in the working population. Their shares of employment in IT, construction, and hospitality reached 20 percent or more, well above the economy-wide average, but in health care the immigrant share was slightly lower (see Figure 2.1). There were over 2 million foreign-born workers in each of the construction, health care, and hospitality sectors and roughly 1 million foreign-born workers in IT. Together, these four sectors employed roughly 40 percent of the nation's 18 million immigrant workers and 30 percent of the total US workforce.[19]

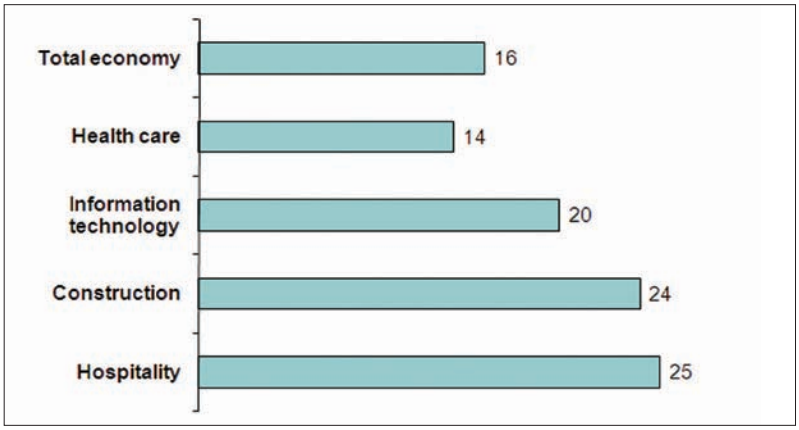
16 H.R. 1751, American Dream Act of 2009.

17 Jeanne Batalova and Margie McHugh, *DREAM vs. Reality: An Analysis of Potential DREAM Act Beneficiaries* (Washington, DC: MPI, 2010), www.migrationpolicy.org/pubs/DREAM-Insight-July2010.pdf.

18 H.R. 1855, Strengthening Employment Clusters to Organize Regional Success (SECTORS) Act of 2009.

19 Our definition of "worker" here is limited to those working at least part-time, and so is lower than the official total of the US workforce. See Methodological Appendix for details.

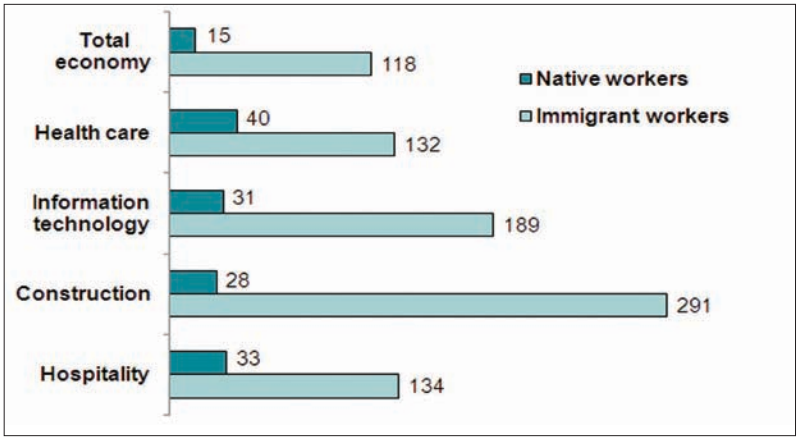
Figure 2.1. Share of Immigrant Workers, US Economy and Selected Sectors, 2006



Notes: Workers here and throughout the report unless otherwise stated are defined as adults ages 16 to 64 who worked at least 25 weeks (some hours over the course of six months) or 700 hours (full-time equivalent of 35 hours for 20 weeks) and earned positive incomes during the prior year. (See Methodological Appendix for full definition.)
Source: Migration Policy Institute (MPI) analysis of data from the American Community Survey (ACS) Public Use Microdata Samples (PUMS), 2005-2007 pooled.

Employment in all four sectors grew faster than twice the national average of 24 percent between 1990 and 2006. Health care, hospitality, and construction employment grew by about 50 percent, with these three sectors experiencing rapid growth both during the 1990s and since 2000. The IT sector grew the fastest — 62 percent from 1990 to 2006 — with most of this growth occurring before 2000.

Figure 2.2. Job Growth, US Economy and Selected Sectors (Percent), 1990-2006



Source: MPI analysis of data from the US Census of Population and Housing (Census), 1990, and ACS PUMS, 2005-2007 pooled.

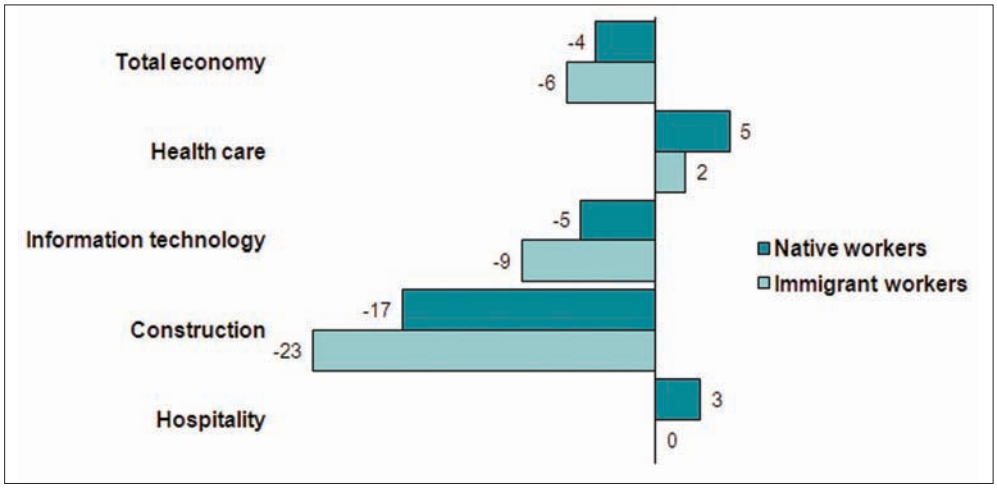
Immigrants were central contributors to employment expansion in all four sectors, with growth rates several times those for natives (see Figure 2.2). Immigrant employment rose almost 300 percent in construction, nearly 200 percent in IT, and more than 100 percent in health care and hospitality. During this period, the four sectors gained a total of 4.3 million foreign-born workers and 10 million workers overall.

1. The Recession's Impact

The recession affected immigrant employment differently across our study sectors, but in each, immigrants fared worse than natives. Between the third quarter of 2007 and the third quarter of 2009, overall employment of immigrants dropped by 6 percent, slightly more than the 4 percent decline

for US-born workers (see Figure 2.3).[20] Following the recession's onset, immigrant employment in each of the four sectors lagged that of natives, reversing earlier trends. From 2007 to 2009, foreign-born employment declined the most in the sectors that had experienced the greatest growth before the recession: construction (23 percent) and IT (9 percent).[21] Immigrant employment did not change in hospitality and actually rose slightly in health care, but even in these sectors native workers fared better than immigrants.

Figure 2.3. Job Growth, US Economy and Selected Sectors (Percent), Q3 2007 to Q3 2009



Notes: Workers are defined as adults ages 16 and older who were employed during the survey week, regardless of hours worked or earnings.
Source: MPI analysis of CPS 2007 and 2009 pooled quarterly data.

2. Projected Future Trends

The employment prospects of immigrant workers — as for all US workers — are uncertain in the aftermath of the recession. The most recent official employment projections by BLS suggest substantial future employment growth in health care, a rebound in construction, and somewhat slower growth in IT and hospitality. BLS projects that the US economy will add 14.6 million paid nonfarm jobs between 2008 and 2018. Health care will grow by 25 percent, generating 4 million new jobs; construction by 19 percent (1.3 million new jobs); hospitality by 8 percent (1.1 million new jobs) and IT by 4 percent (190,000 new jobs; see Figure 2.4).[22] BLS projections are based on ten years of employment trends (1998 through 2008), taking into account recent expansionary and recessionary periods. Like all economic projections, these have considerable margins of error and cannot predict large-scale events such as the financial crisis that prompted the current recession. The projections are especially uncertain in the current economic climate, when the recession appears to have ended but a full job recovery is expected to be years away. It is also difficult for BLS projections to capture unexpected changes in the demand for labor as a result of technological advances, international job competition, or other factors that are challenging to measure and predict.[23]

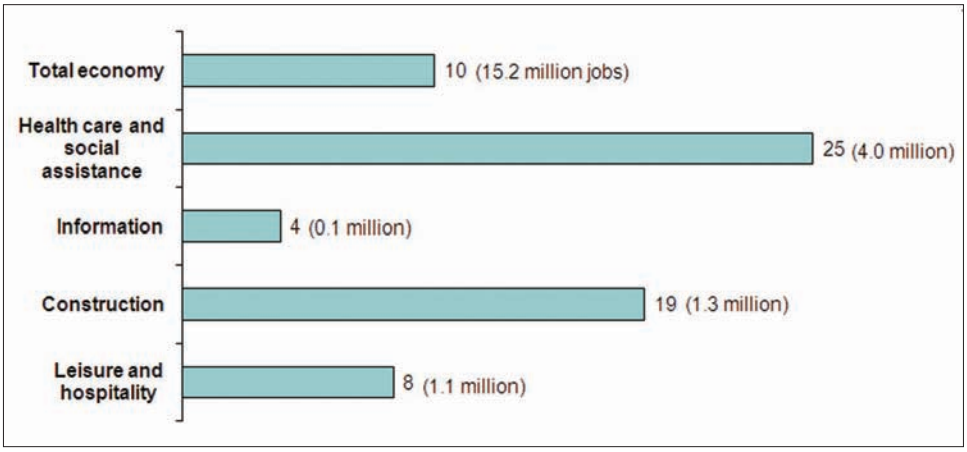
20 Here we define "workers" based on employment during the week prior to the survey, rather than those who worked at least part-time during the previous year. We use the prior week definition and do not limit the sample by hours of work or earnings, in order for the results to show the full impact of the recession.

21 The decline of Mexican and Latin American immigrant employment in the construction sector actually began in late 2006. See Rakesh Kochhar, *Latino Labor Report, 2008: Construction Reverses Job Growth for Latinos* (Washington, DC: Pew Hispanic Center, 2008), http://pewhispanic.org/reports/report.php?ReportID=88.

22 The industry definitions used by BLS for the projections are based on the Current Employment Statistics survey and differ slightly from the industry definitions we use in our analyses of ACS and CPS data. For instance, BLS defines an "information" industry which is somewhat narrower than our IT industry definition. The BLS health care and social assistance industry is broader than our health care industry.

23 Richard B. Freeman, "Is a Great Labor Shortage Coming? Replacement Demand in the Global Economy" in *Reshaping the*

Figure 2.4. Projected Job Growth, US Economy and Selected Sectors (Percent), 2008 to 2018



Notes: Projected employment changes are for all workers, regardless of hours of work or earnings. BLS definitions of industries vary slightly from our definitions based on ACS industry codes.
Source: BLS, "Table 2. Employment by major industry sector, 1998, 2008, and projected 2018," (Economic News Release, December 11, 2009), www.bls.gov/news.release/ecopro.t02.htm.

Good future middle-skilled jobs. BLS projects that 25 percent of all job openings between 2008 and 2018 will be in middle-skilled occupations. This translates into 12.6 million job opportunities that require a high school education plus an additional degree, certificate, or significant job experience. Another 23 percent will be in high-skilled occupations, while 52 percent of all job openings will still be low-skilled, requiring only short- or moderate-term on-the-job-training. A recent report contends that BLS projections may underestimate demand for middle- and high-skilled jobs, estimating that by 2018, jobs requiring postsecondary education will grow 29 and 33 percent respectively for middle- and high-skilled employment.[24] The BLS projections for 2008-2018 employment growth also reflect substantial sectoral differences when it comes to jobs paying family-sustaining wages to workers with less than a four-year college degree. The occupations projected to generate the largest number of good jobs over the decade are registered nursing (582,000); computer software engineers (295,000); and truck drivers in construction (232,000). Despite broad sectoral and occupational penetration, immigrant workers generally represent smaller shares of workers in these good jobs than of workers in the sectors overall. So while immigrants make up 14 percent of all health workers, they are only 13 percent of registered nurses (RNs) and 11 percent of licensed practical nurses (LPNs). Each of these occupations, then, may be a target for investments in postsecondary education and training, as described later in the report.

C. *The Skill and Education Levels of Immigrant Workers*

1. Skill Levels

The hourglass image often used to describe the immigrant labor force, emphasizing concentration at the high and low ends, does not appear to accurately portray the skill levels of jobs that immigrants hold. Since 1990, middle-skilled occupations have accounted for almost a quarter of the jobs held by immigrants, about the same share as high-skilled jobs (see Table 2.1). From 1990 to 2006, the number of immigrant workers in middle-skilled jobs grew at about the same rate as low-skilled jobs (125 percent versus 124 percent). But when we look at a later time period — 2000 to 2006 — we see the

American Workforce in a Changing Economy, eds. Harry J. Holzer and Demetra Smith Nightingale (Washington, DC: Urban Institute, 2006): 3-24.

24 Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Help Wanted: Projections of Jobs and Education Requirements Through 2018* (Washington, DC: Georgetown University Center on Education and the Workforce, 2010), www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/FullReport.pdf.

number of immigrants in middle-skilled jobs growing much more rapidly than the number in high-skilled jobs (50 percent versus 22 percent, not shown in Table 1). Nonetheless, over half (56 percent) of immigrant workers were employed in low-skilled jobs in 2006, before the recession began. The shares of all immigrant workers employed in high- and middle-skilled jobs were 20 percent and 24 percent respectively, while shares for natives were 25 percent in high-skilled and 29 percent in middle-skilled jobs. Thus, it could be argued that the skill distribution of the immigrant and native labor force resemble one another much more closely than has been popularly believed. Moreover, despite the similarity of these skill distributions, economists have not found that immigrants holding middle- and high-skilled jobs substantially lower native workers' employment or wages.

Table 2.1. US Workers by Nativity and Job Skill Level, 1990 and 2006

	Number of Workers (1,000s)		Change (%)	Skill Distribution (%)	
	1990	2006	1990-2006	1990	2006
Native-born	86,780	99,800	15	100	100
High-skilled	24,011	25,131	5	28	25
Middle-skilled	22,907	29,254	28	26	29
Low-skilled	39,862	45,415	14	46	46
Foreign-born	8,478	18,481	118	100	100
High-skilled	1,862	3,643	96	22	20
Middle-skilled	1,990	4,485	125	23	24
Low-skilled	4,625	10,353	124	55	56

Source: MPI analysis of ACS PUMS 2005-2007 data pooled, and 1990 Census of Population and Housing PUMS.

Table 2.2. Native and Immigrant Workers by Educational Attainment and Job Skill Level (Percent), 2006

	Native Workers		Immigrant Workers	
	Educational Attainment	Skill Level of Jobs	Educational Attainment	Skill Level of Jobs
High	31	25	29	20
Middle	33	29	19	24
Low	36	46	52	56

Notes: Educational attainment is based on years of schooling reported by respondents to the ACS. "High" refers to workers with at least a four-year college degree. In the middle are high school graduates with an associate degree or some college, but not a bachelor's degree. "Low" includes workers with high school education or less.
Source: MPI analysis of ACS PUMS 2005-2007 data pooled, and 2000 Census of Population and Housing PUMS.

2. Education versus Skill Level

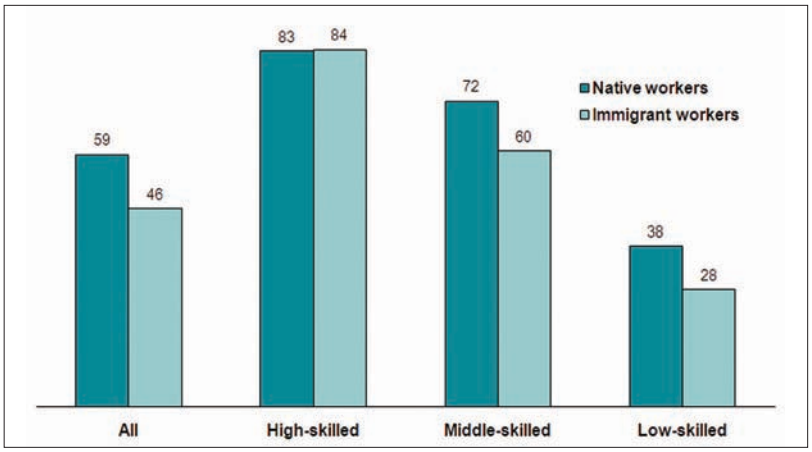
While immigrants and natives are surprisingly similar in their occupational skill levels, there are more substantial differences in their educational attainment — with immigrants significantly underrepresented among those with mid-level credentials (i.e., at least a high school education but not a four-year college degree). Here, at least, the hourglass image fits better, particularly when immigrants' educational attainment is compared to natives'. In 2006, immigrants were more likely than natives to have a high school education or less (52 versus 36 percent), and were also more likely to hold low-skilled jobs (56 percent versus 46 percent). Along similar lines, immigrant workers were substantially *less* likely to have mid-level education credentials than natives (19 percent versus 33 percent), while they had penetrated middle-skilled jobs at almost the same rate (24 percent versus 29

percent). Roughly similar shares of immigrants and natives held college degrees and were employed in high-skilled jobs. Taking education into account, immigrants are somewhat overrepresented in middle-skilled jobs and underrepresented in low-skilled jobs. This pattern probably results from some immigrants leveraging up low levels of formal education to work in middle-skilled jobs (particularly in construction) but in other cases working *below* the level of their formal qualifications (for instance, college-educated immigrants employed in middle-skilled health care jobs), due to limited English language skills or nonrecognition of professional credentials.[25]

D. *Jobs Paying Family-Sustaining Wages*

Regardless of skill level, the most important measure of a good job is the wage that it pays. Looking at the economy as a whole, we see that immigrant workers lagged natives in the share (46 percent versus 59 percent) receiving a family-sustaining wage, which we define as $30,000 per worker (see Figure 2.5). Middle-skilled jobs offer a substantial step up in wages from low-skilled jobs, for both immigrant and natives workers. In 2006, 60 percent of immigrants in middle-skilled jobs earned family-sustaining wages, compared with 28 percent of those working in low-skilled jobs. Natives were more likely than immigrants to earn family-sustaining wages at both skill levels: 72 percent for those with middle-skilled jobs and 38 percent for those with low-skilled jobs. The gap in wages, however, disappears for high-skilled workers, with immigrants just as likely as natives to earn family-sustaining wages. Thus, it appears that the payoff for increasing occupational skills is somewhat greater for immigrants than natives.

Figure 2.5. Share of Workers Earning Family-Sustaining Wages by Nativity and Skill Level, US Economy, 2006

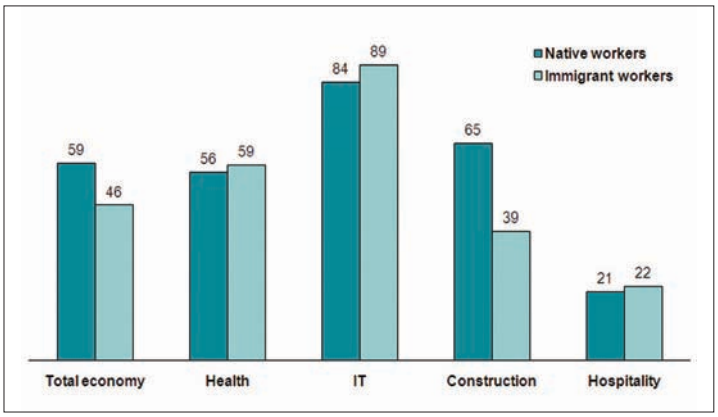


Source: MPI analysis of data from the ACS PUMS, 2005-2007 pooled, and 2000 Census of Population and Housing PUMS.

However, different patterns emerge across the four focal sectors. In three sectors — health, IT, and hospitality — immigrant workers were slightly more likely than natives to earn family-sustaining wages (see Figure 2.6). But in construction, immigrant workers lagged natives substantially: 39 percent to 65 percent. There is also wide variation across sectors in the shares of workers holding these good jobs — ranging from 22 percent of immigrant workers in hospitality to 89 percent in IT. It seems, then, that there are few good jobs paying family-sustaining wages in the hospitality industry but many more in health, IT, and even construction. Part of the explanation for lower wages in hospitality is the relatively lower share of high- and middle-skilled workers in that sector.

25 For more on underemployment of high-skilled immigrants in low-skilled jobs, see Jeanne Batalova and Michael Fix with Peter A. Creticos, *Uneven Progress: The Employment Pathways of Skilled Immigrants in the United States* (Washington, DC: MPI, 2008), www.migrationpolicy.org/pubs/BrainWasteOct08.pdf.

Figure 2.6. Share of Workers Earning Family-Sustaining Wages by Nativity, US Economy and Selected Sectors, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled, and 2000 Census of Population and Housing PUMS.

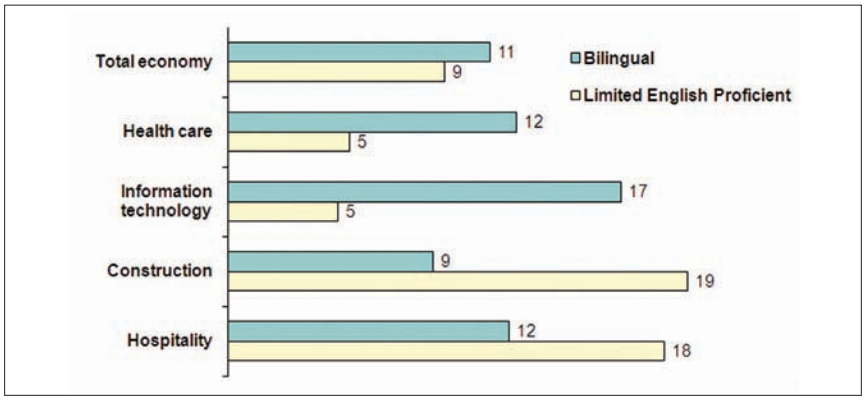
E. *Characteristics of Immigrants Holding Good Jobs*

Immigrants are not a homogeneous population, and their penetration into the various economic sectors and into good jobs varies substantially depending on a number of characteristics.

1. English Language Proficiency

English language proficiency is correlated with educational attainment, and immigrants with higher English proficiency levels tend to hold better jobs. In 2006, 9 percent of workers employed in the United States overall were LEP, meaning they did not speak English very well (see Figure 2.7).[26] A slightly larger share —11 percent —reported speaking English very well while speaking another language at home; we consider these workers to be bilingual.[27] The shares of LEP workers were much higher and hospitality — our two lower-skilled sectors — than in health care and IT. At the same time health and IT workers were more likely to be bilingual.

Figure 2.7. Share of LEP and Bilingual Workers, US Economy and Selected Sectors, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

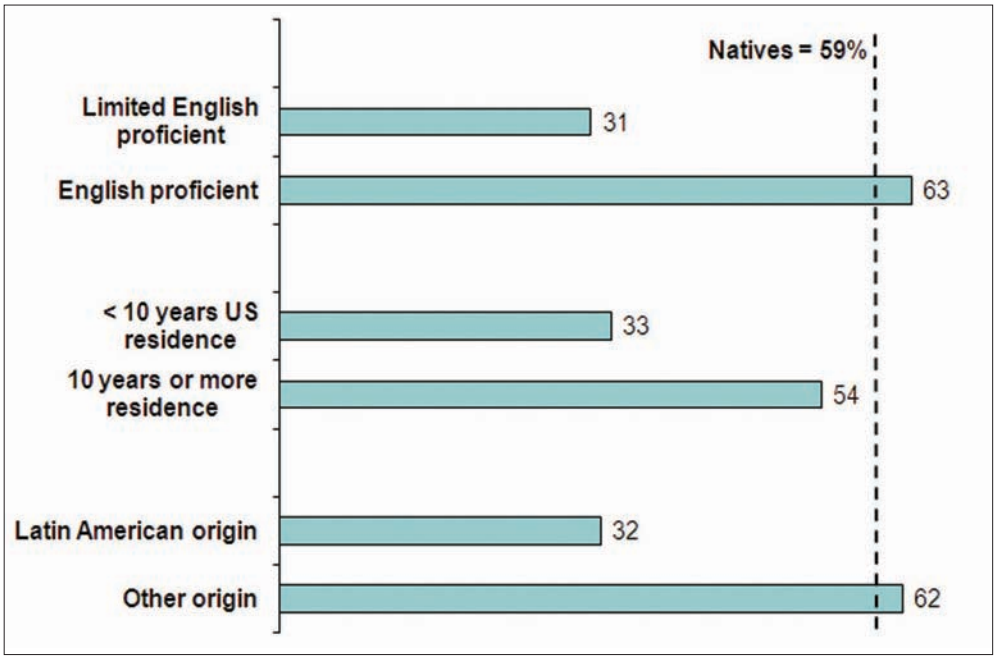
English language proficiency generally correlates with higher wages, as only 31 percent of LEP workers earned a family-sustaining wage, compared with 63 percent of English-proficient immigrants (see

26 Limited English proficient (LEP) workers are those reporting speaking a language other than English at home and speaking English "well," "not well," or "not at all."

27 We do not report English proficiency for immigrants and US-born workers separately, because the vast majority of LEP and bilingual workers are immigrants, and very small percentages of US-born workers are LEP or bilingual.

Figure 2.8). In fact, English-proficient immigrants were more likely than natives to earn a family-sustaining wage.

Figure 2.8. Share of Immigrant Workers Earning Family-Sustaining Wages, Selected Characteristics, US Economy, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled, and 2000 Census of Population and Housing PUMS.

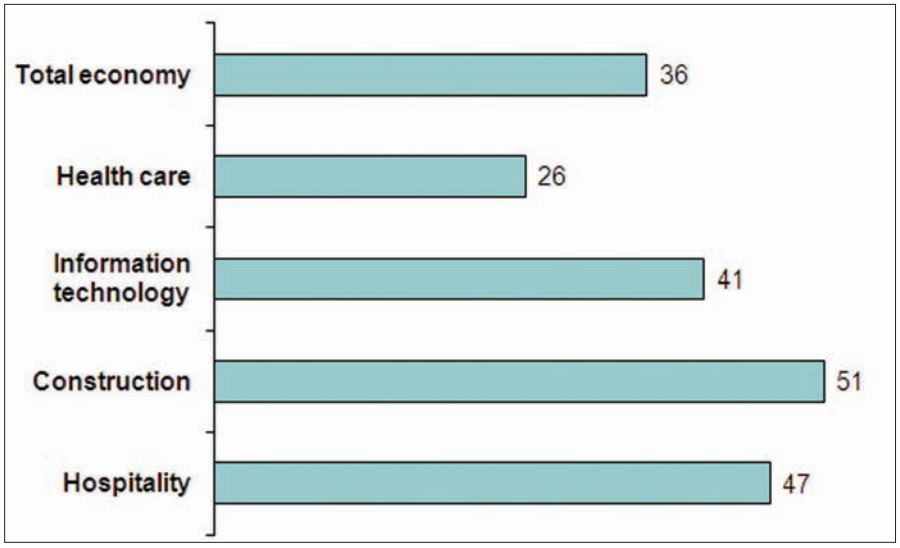
2. Recency of Arrival

Recency, like English proficiency, is a standard measure of immigrant integration, and so it is no surprise that longer-term residents hold better jobs than recent immigrants. In 2006, 36 percent of immigrant workers in the United States had arrived within the past ten years (i.e., had immigrated since 1996; see Figure 2.9), reflecting the rapid growth of the immigrant workforce in the years leading up to the recession. Nonetheless, it is an often overlooked fact that about two-thirds of immigrant workers have relatively deep roots in the US economy, having been in the country for a decade or longer — reinforcing the basic permanence of US immigration flows and accounting for the substantial incorporation of foreign-born workers into the economy.

Recent immigrant workers (those who arrived after 1996) made up particularly large shares of the construction and hospitality sectors, but much smaller shares of the more skill-based health care industry. Recent immigrant workers are especially vulnerable given their high concentration in declining construction occupations. IT includes large shares of both high-skilled and recent immigrants, some of whom are workers with temporary visas.

Longer-term immigrants are nearly as likely as natives to earn family-sustaining wages. In 2006, 54 percent of immigrants who had been in the United States for ten years or more earned family-sustaining wages compared to 59 percent of natives (see Figure 2.8). Only 33 percent of immigrants with less than ten years of US experience did so.

Figure 2.9. Recent Arrivals as Share of Immigrant Workers, US Economy and Selected Sectors, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

3. Immigrant Origins

Immigrants' origins are highly correlated with their integration into various US economic sectors as well as their penetration into good jobs paying family-sustaining wages. Immigrants from Mexico and Latin America make up over half of the US foreign-born population and workforce. In 2006, Latin Americans were 51 percent of all US immigrant workers and Asians were another 26 percent. Immigrants from Africa, the West Indies, Europe, and other regions made up the remainder (see Table 2.3).[28]

Table 2.3. Origins of Immigrant Workers, US Economy and Selected Sectors (Percent), 2006

	Mexico/ Latin America	Africa/ West Indies	East Asia	South Asia/ Middle East	Europe/ Other
Immigrant workers in US economy	**51**	**9**	**18**	**8**	**14**
Health care	28	21	25	10	16
Information technology	12	6	30	32	19
Construction	83	3	3	2	9
Hospitality	62	6	18	5	9

Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

Immigrants from Latin America, on average, have lower levels of formal education and English proficiency than those from other regions. As a result, they comprise higher shares of workers in lower-skilled sectors such as construction and hospitality, and lower shares in the higher-skilled health care and IT sectors. In 2006, Mexicans and other Latin Americans were 83 percent of immigrant workers in construction and 62 percent of those in hospitality. They made up smaller but still significant shares of immigrant workers in health care (28 percent) and IT (12 percent). African and West Indian

28 Here and later in the report, we include Mexico, Central America, South America, and Spanish-speaking Caribbean countries in the "Latin America" category. Immigrants from Caribbean countries where English and other non-Spanish languages are spoken are grouped together with Africa, in the "Africa/West Indies" category, primarily because these immigrants are of similar race (mostly black) and have relative high levels of English proficiency and educational attainment. We disaggregate immigrants from Asia into "South Asia/Middle East" (predominantly India and Muslim countries) and East Asia (including China, Japan, Korea, Southeast Asia, and Pacific countries). "Europe/other" includes Canada, Australia, and New Zealand. For further detail, see the Methodological Appendix.

immigrants were prominent in health care (21 percent), but not in the other sectors or in the overall economy. East Asian immigrants comprised significant shares in health care, IT, and hospitality — but not construction. South Asian and Middle Eastern immigrants represented a significant share in IT. Overall, Asians made up almost two-thirds of all immigrant workers in IT, the highest-skilled sector.

Due to their generally lower skill levels, Latin American immigrants are also less likely than other immigrants to earn family-sustaining wages (see Table 2.4). In 2006, only a third of Latin American immigrants held good jobs at this wage level compared to more than half of immigrants from all other regions. In fact, 60 percent or more of immigrants from Asia and Europe held these good jobs, above the level for US-born workers (59 percent).

The penetration of immigrants into good jobs varies more by region of origin in some sectors than others. In our highest-skilled sector, IT, three-quarters or more of immigrants earned family-sustaining wages, regardless of origin. On the other hand, the share holding these good jobs in hospitality was 40 percent or below for every immigrant-origin group. Latin Americans in health care and construction were far less likely to earn family-sustaining wages than other immigrants. In health care, African and West Indian immigrants fared better than Latin Americans, who generally lagged other groups.

Table 2.4. Immigrant Workers Earning Family-Sustaining Wages by Origins, US Economy and Selected Sectors (Percent), 2006

	Mexico/ Latin America	Africa/ West Indies	East Asia	South Asia/ Middle East	Europe/ Other	(Other)
US economy	**32**	**53**	**60**	**68**	**66**	**62**
Health care	41	55	70	77	65	65
Information technology	74	83	89	93	92	91
Construction	33	60	64	74	70	67
Hospitality	16	29	29	39	40	33

Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

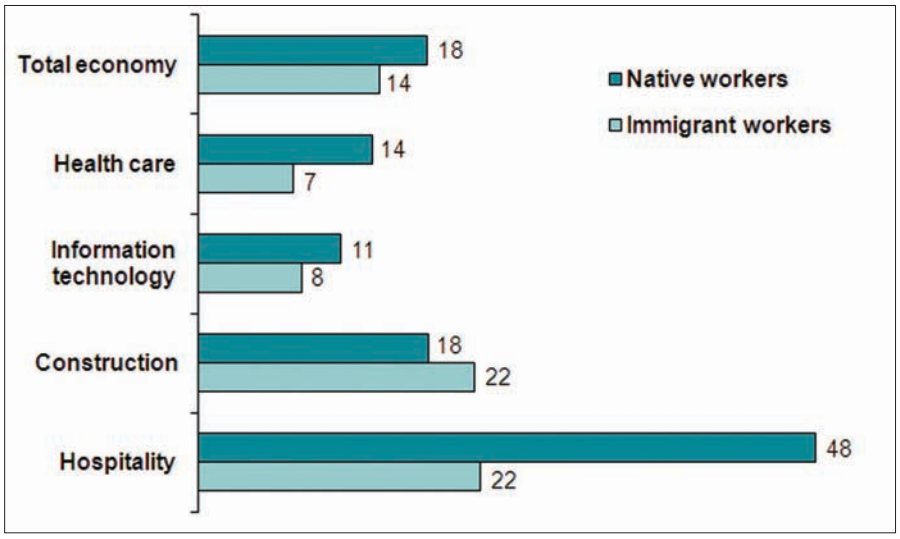
4. Immigrant and Native-Born Youth

Young workers are unlikely to hold good jobs paying sustaining wages before they reach age 26. It should be noted that young workers, whether native-born or immigrant, have fared especially poorly in the current recession: their July 2009 unemployment rate was 18.5 percent, the highest since record-keeping began in 1948.[29] In 2006, 18 percent of all US-born workers and 14 percent of immigrant workers were ages 16 to 26 (see Figure 2.10).

A number of trends bear noting. Young immigrants made up a small share (7 percent) of all foreign-born workers in the health sector — the sector expected to grow most rapidly between 2008 and 2018. At the same time, young workers composed substantially larger shares of the immigrant workforces in the hard-hit construction and slow-growing hospitality industries (22 percent in each industry). The wide disparity between the large shares of young native-born (48 percent) and immigrant (22 percent) workers in hospitality probably reflects the part-time and transient character of native youth employment in the industry. Because of their limited experience, among other things, it should not be surprising that comparatively small shares of the youth labor force earned a family-sustaining wage — 23 percent of young natives and 19 percent of young immigrant workers.

29 This unemployment rate is for youth ages 16 to 24. See BLS, "Employment and Unemployment among Youth Summary" (Economic News Release USDL-09-1021, August 27, 2009), www.bls.gov/news.release/youth.nr0.htm.

Figure 2.10. Share of Young Workers (16-26), US Economy and Selected Sectors, 2006

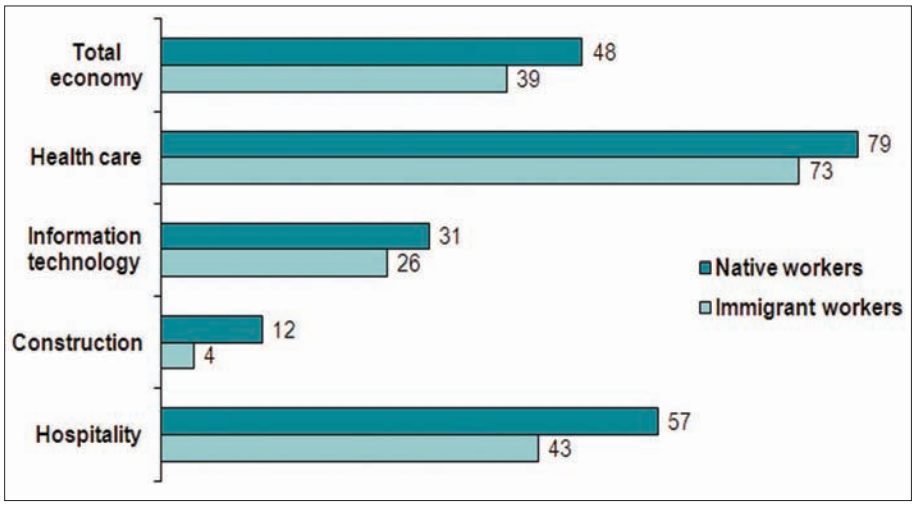


Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

5. Gender

Employment and wage patterns also differ significantly by gender: women earn less than men and are heavily concentrated in certain sectors. Overall, women made up a somewhat smaller share of the immigrant workforce (39 percent versus 48 percent for natives), a pattern replicated across all four sectors in 2006 (see Figure 2.11). The IT and especially the construction sectors were largely male, while health care was predominantly female. This gender distribution has meant that immigrant men and women have been differentially affected by the recession due to steep losses in construction. In 2006, only 41 percent of female immigrant workers earned family-sustaining wages, substantially below the rate for immigrant men (50 percent). There was an even wider gender gap in family-sustaining wages for natives: 49 percent for women versus 69 percent for men.

Figure 2.11. Share of Female Workers, US Economy and Selected Sectors, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

III. Immigrant Incorporation in the Health Care Sector

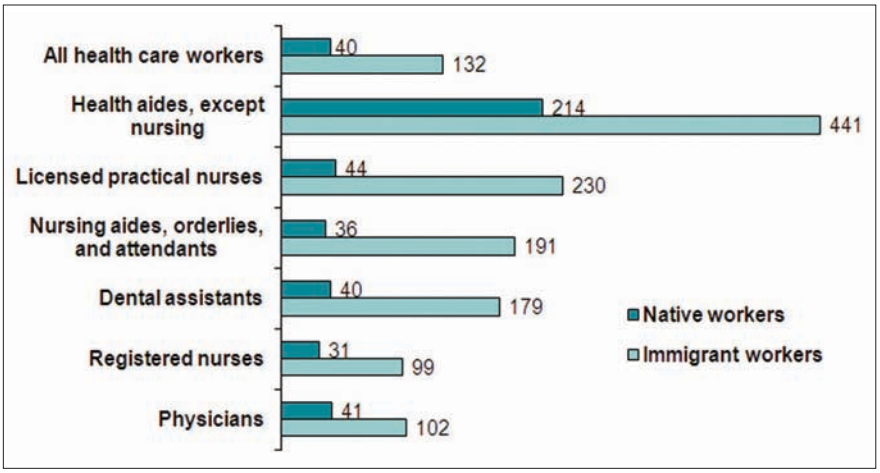
We turn now to our sector-specific analyses, beginning with health care, an industry with many high-paying, middle-skilled jobs and strong prospects for future growth. In 2006, health care was the largest single sector in the US labor market, employing 13.6 million workers or 12 percent of the total workforce. About 1.9 million immigrants, or 10 percent of all foreign-born workers, worked in the sector. The nation has been relying for some time on immigrants to offset health worker shortages brought about by an aging workforce, high turnover, and too few graduates from US training institutions. These factors have insulated health care against the job cuts most other sectors have experienced during the recession, and they are associated with strong projected future job growth. Sustained and even expanded growth may result, at least in the short and intermediate terms, from the health care reform legislation enacted in 2010.

A. *Past and Projected Future Growth*

Immigrant health care employment has grown rapidly in recent years, and this growth has been broad-based across low-, middle-, and high-skilled jobs. The number of foreign-born health care workers rose 132 percent between 1990 and 2006, with immigrants accounting for 25 percent of the sector's growth (see Figure 3.1).[30] By contrast, the number of US-born health care workers grew only 40 percent. The fastest growth in immigrant employment occurred among home health aides (441 percent), a low-skilled occupation; but immigrant employment also rose rapidly in several middle-skilled occupations, including LPNs (230 percent), nursing aides (191 percent), and dental assistants (179 percent). Immigrants' employment growth far outpaced natives' in every health care occupation for which we have sufficient data.

Health care employment has continued to grow despite the recession, with jobs in the sector actually increasing between the third quarter of 2007 and the third quarter of 2009. During this period, several large health care occupations expanded, including physicians (9 percent), RNs (9 percent), and nursing aides (4 percent). In all three occupations, as in the sector generally, immigrant employment growth was substantially lower than native-born employment growth, reversing prerecession patterns.

Figure 3.1. Growth in Number of Health Care Workers, Selected Occupations, by Nativity (Percent), 1990-2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

30 Our analysis describes 39 occupations that together include 10.7 million workers or 79 percent of all health care workers in 2006. The other occupations had sample sizes that were too small for us to analyze.

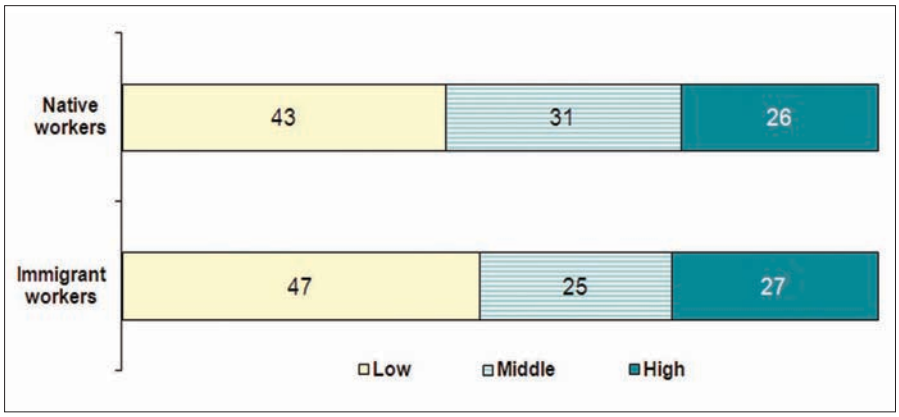
Health worker shortages are a persistent problem; as the US population ages and lives longer, growing demand for health services should continue to promote strong job growth. Private health insurers and government programs such as Medicare have restricted prices, adding to demand for health services.[31] Indeed BLS recently projected an increase of 25 percent in the number of health care jobs from 2008 to 2018. BLS also projected that the number of RNs will grow by 582,000 — more in absolute terms than any other occupation. According to these projections, several middle-skilled occupations, such as dental hygienists, physical therapist assistants, occupational therapist assistants, and pharmacy technicians, will be among the top 30 fastest-growing occupations. The federal health care reform law enacted in 2010 is likely to further constrain prices, potentially leading to even greater growth in demand, at least in the short to intermediate term. Thus, demand for immigrant labor at all levels in the health sector will likely persist.

B. *Abundance of Middle-Skilled Jobs*

The health care sector has long job ladders and an abundance of middle-skilled jobs, many of which are filled by immigrants. In 2006, health care accounted for 12 percent of all US workers in middle-skilled occupations.

Health care includes large numbers of jobs at different skill levels. While almost half of all health care workers hold low-skilled jobs, the remainder is almost evenly split between middle- and high-skilled jobs (see Figure 3.2). The skill-level distributions are remarkably similar for immigrants and natives. In 2006, there were almost 500,000 foreign-born workers in middle-skilled health care jobs, and more than 900,000 in low-skilled jobs.

Figure 3.2. Occupational Skill Levels of Health Care Workers, by Nativity (Percent), 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

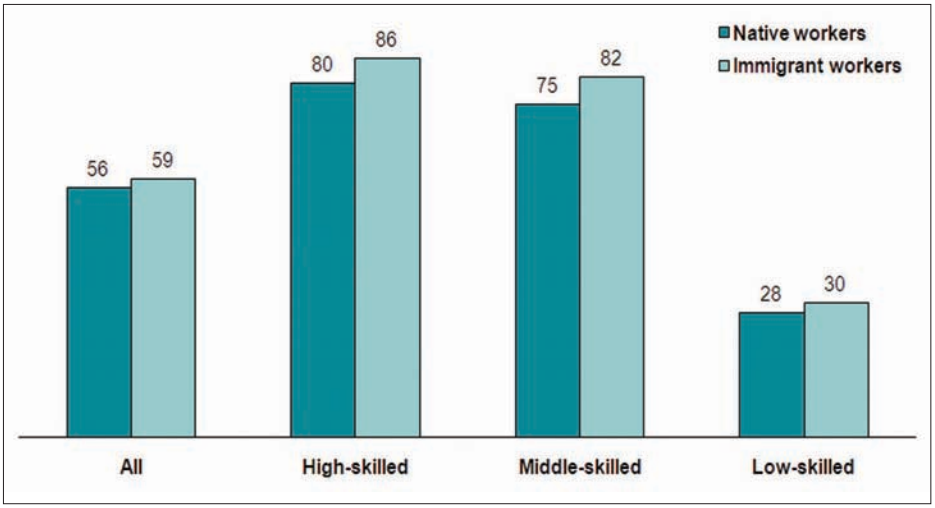
Immigrants are overrepresented in high- and low-skilled jobs, but they are also substantially represented in middle-skilled jobs. In 2006, they were 17 percent of high-skilled health care workers (versus 14 percent of health care workers overall) and 27 percent of physicians/surgeons, 22 percent of dentists, and 48 percent of medical scientists. Immigrants were 14 percent of RNs and smaller shares of all the other major middle-skilled jobs. They comprised over 20 percent in two major low-skilled occupations: nursing aides and home health aides.

31 Robin Stone and Joshua Wiener, *Who Will Care for Us? Addressing the Long-Term Care Workforce Crisis* (Washington DC: Institute for the Future of Aging Services, 2001), www.urban.org/UploadedPDF/Who_will_Care_for_Us.pdf.

C. Family-Sustaining Wages Earned by Majority of Immigrants

Despite their overrepresentation in low-skilled jobs, immigrants are more likely than natives to hold good health care jobs that pay family-sustaining wages. In 2006, 59 percent of foreign-born and 57 percent of US-born health care workers held jobs paying a family-sustaining wage (see Figure 3.3).

Figure 3.3. Share of Health Care Workers Earning Family-Sustaining Wages, by Job Skill Level and Nativity, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

Earnings are much higher for middle-skilled than low-skilled workers, whether they are immigrants or natives. Over three-quarters of all health care workers holding high- or middle-skilled jobs earned family-sustaining wages compared with less than a third of those in low-skilled jobs. At all three skill levels, immigrants were slightly more likely than natives to earn family-sustaining wages.

The sector includes several large low- and middle-skilled occupations that do not require a four-year college degree but nonetheless pay family-sustaining wages (see Table 3.1).[32] RNs, LPNs, emergency medical technicians (EMTs), and these other occupations represent important targets for the workforce preparation of immigrant workers, especially youth. By contrast, only 28 percent of foreign-born nursing and home health aides and 12 percent of personal and home care aides earned family-sustaining wages (not shown in table) — pointing to the importance of pathways out of these entry-level jobs into better-paying careers.

Immigrants are generally underrepresented in these good middle- and low-skilled health care occupations that pay family-sustaining wages. Immigrants represent less than 14 percent (the sector-wide average) of workers in every occupation listed in Table 3.1 — except eligibility interviewers. The immigrants who hold these good jobs, however, are more likely than natives to earn family-sustaining wages, suggesting that pathways to these jobs are the key to immigrant progress in the sector.

32 This list of occupations requiring only middle- or low-skills and paying $30,000 or more in wages to at least half of workers is not exhaustive, but represents those occupations for which we have reliable data.

Table 3.1. Low- and Middle-Skilled Health Care Occupations Paying Family-Sustaining Wages, 2006

Occupation	Immigrant Share	Share Earning Family-Sustaining Wages	
		Natives	Immigrants
All health care workers	**14**	**57**	**59**
Middle-skilled			
Registered nurses	13	86	90
Respiratory therapists	10	86	89
Diagnostic-related technologists and technicians	10	80	80
Dental hygienists	6	76	79
Occupational therapist assistants and aides	*5*	61	*87*
Physical therapist assistants and aides	9	52	*57*
Emergency medical technicians and paramedics	4	61	*56*
Licensed practical and licensed vocational nurses	11	58	71
Low-skilled			
Eligibility interviewers, government programs	20	65	*78*
Health diagnosing and treating practitioner support technicians	11	56	65

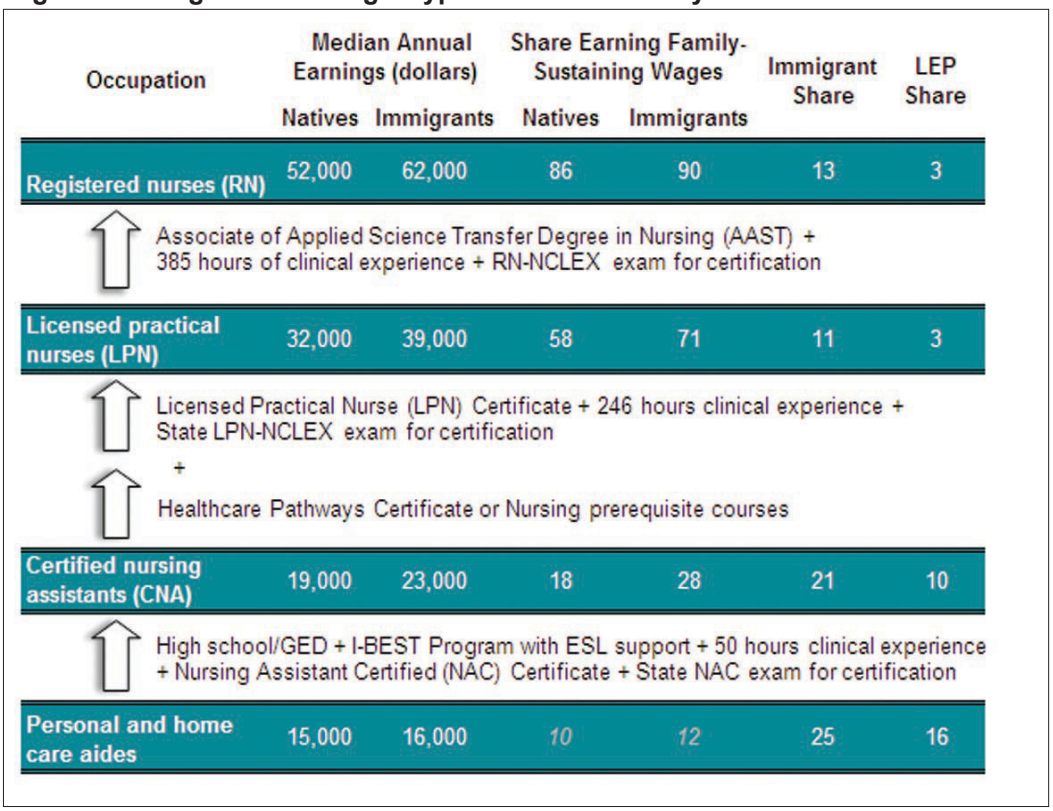
Notes: The occupations set out are restricted to those where over half of immigrant workers earned more than a "family-sustaining wage" in 2006. Italics refer to occupational data with sample size of less than 100 cases.
Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

Immigrants are generally underrepresented in these good middle- and low-skilled health care occupations that pay family-sustaining wages. Immigrants represent less than 14 percent (the sector-wide average) of workers in every occupation listed in Table 3.1 — except eligibility interviewers. The immigrants who hold these good jobs, however, are more likely than natives to earn family-sustaining wages, suggesting that pathways to these jobs are the key to immigrant progress in the sector.

D. Career Pathways Offer High Returns for Postsecondary Credentials

The health care sector offers ample opportunities to advance into good jobs paying family-sustaining wages, with investments in one or two years of postsecondary education yielding strong returns in terms of earnings. For example, immigrants working as personal and home care aides, an occupation requiring short-term on-the-job training, earn on average $16,000 annually — about half our family-sustaining wage (see Figure 3.4). After completing a high school or equivalent degree, obtaining a certificate, and passing a state licensing exam, immigrants can move up to certified nursing assistant (CNA) positions, with an average earnings gain of $7,000 over home health aides. Still, only about a quarter of immigrants and an even smaller share of natives earn family-sustaining wages at this level. It takes additional certificates, education, and more extensive hours of clinical experience to become LPNs and RNs, both middle-skilled nursing jobs paying family-sustaining wages to a majority of workers. It does not, however, take a four-year college degree to reach these good jobs.

Figure 3.4. Wage Gains along a Typical Career Pathway in Health Care



Note: Italics refer to occupational data with smaller sample sizes.
Sources: South Seattle Community College, www.southseattle.edu/documents/worker_retraining/2008/careerpathway/nursing_map.pdf; MPI analysis of ACS PUMS 2005-2007 data pooled.

E. Characteristics of Immigrants Holding Good Jobs

1. Education

Immigrants in middle- and high-skilled jobs are better educated than their native counterparts. Middle-skilled health care jobs generally require substantial postsecondary education, and higher educational attainment may at least partly explain the higher earnings of immigrants than natives. In 2006, immigrants were more likely than natives to have a four-year college degree at all three skill levels (see Table 3.2). Among low-skilled workers, immigrants were less likely to have completed high school, but otherwise were better educated than natives.

Table 3.2. Educational Attainment of Health Care Workers by Nativity and Skill Level of Jobs (Percent), 2006

	Native Workers	Immigrant Workers
High-skilled		
Four-year degree or more	74	84
Some college	18	11
High school only	6	4
Less than high school	1	1
Total	100	100
Middle-skilled		
Four-year degree or more	36	54
Some college	53	35
High school only	10	9
Less than high school	1	2
Total	100	100
Low-skilled		
Four-year degree or more	9	17
Some college	43	31
High school only	38	32
Less than high school	9	21
Total	100	100

Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

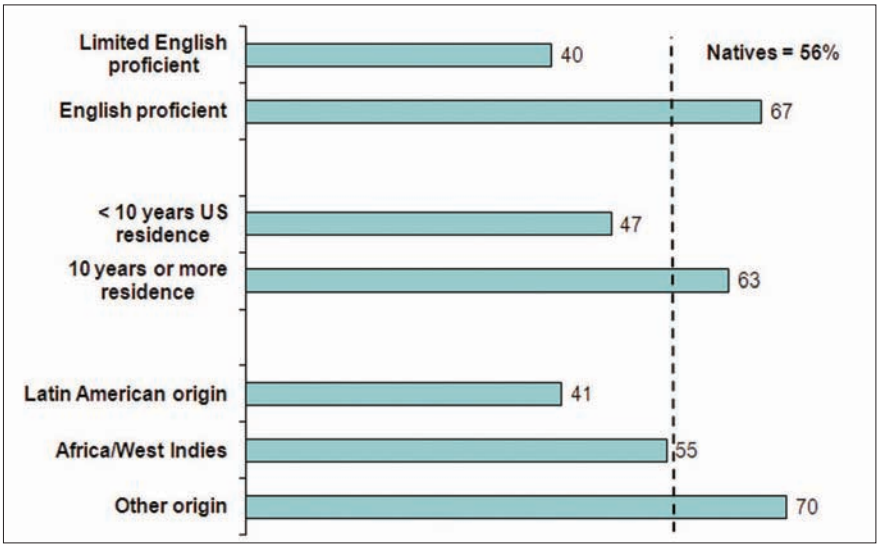
The discrepancy in educational attainment was especially wide in middle-skilled jobs, where over half (54 percent) of immigrants versus just 36 percent of natives had completed a four-year college degree. Immigrants were more likely than natives to hold four-year degrees in all the target occupations described earlier that pay family-sustaining wages, especially RNs (70 percent versus 53 percent), dental hygienists (52 percent versus 33 percent), respiratory therapists (48 percent versus 26 percent), and diagnostic technicians (41 percent versus 22 percent). It may be that some immigrants hold degrees or credentials from outside the United States and have had difficulty translating these into high-skilled jobs in the health sector. So despite their penetration into middle-skilled jobs, many highly educated immigrants may be underutilized.

2. English Proficiency

The nearly universal English proficiency of immigrants working in health care jobs may also help explain their relatively high wages. In 2006, only 5 percent of all health care workers had limited English skills and less than 10 percent of workers were LEP in all large occupations, except nursing and home health aides (10 percent), personal and home care aides (16 percent), and medical scientists (14 percent).

English skills are strongly associated with the likelihood that immigrants working in health care earn a family-sustaining wage. While 40 percent of LEP immigrants earned at least $30,000 in 2006, 67 percent of English-proficient immigrants did so (see Figure 3.5). In fact, English-proficient immigrants were substantially more likely than natives to reach this threshold.

Figure 3.5. Share of Immigrant Health Care Workers Earning Family-Sustaining Wages, by Selected Characteristics, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled and 2000 Census of Population and Housing PUMS.

3. Length of Residence

Long US tenure may be a third explanation for the relatively high wages of immigrant health care workers. In 2006, three-quarters of all immigrants working in the sector had been in the United States at least ten years. Immigrants with at least ten years of US experience were more likely to earn a family-sustaining wage than more recent arrivals or even US-born health care workers. Thus time in the United States has allowed most immigrant workers to gain work experience, move up career pathways, and increase their wages.

4. Region of Origin

Immigrants from Latin America are underrepresented in health care and far less likely than other immigrants to earn a family-sustaining wage. In 2006, 28 percent of foreign-born health care workers were from Latin America compared with 51 percent of immigrant workers overall. Latin Americans were only 11 percent of foreign-born physicians and 10 percent of immigrant RNs. The under representation of Latin American immigrants (as well as US-born Hispanics) among physicians and nurses has led to disparities in providing cultural and linguistically competent health care to Latino communities — disparities that are likely to widen following full implementation of health care reform.[33]

By contrast, Asian immigrants are overrepresented in health care occupations, especially high-skilled ones. In 2006, 35 percent of foreign-born health care workers were of Asian origin (versus 26 percent of all workers). Their share rose to over half among foreign-born high-skilled workers, and was particularly high among physicians (61 percent) and dentists (57 percent). Among the middle-skilled occupations, Asian immigrants were also substantially overrepresented among RNs (51 percent). Asian immigrants were underrepresented in the low-skilled health care occupations.

African and West Indians appear to have developed a niche in nursing and other middle-skilled occupations. In 2006, they were 21 percent of foreign-born health care workers overall and 31 percent

33 Rafael Pérez-Escamilla, "Health Care Access among Latinos: Implications for Social and Health Care Reforms," *Journal of Hispanic Higher Education*, 9(1): 43-60.

of immigrants in the sector's middle-skilled jobs. Africans and West Indians were relatively high shares of immigrants working as RNs (21 percent), LPNs (42 percent), and nursing aides (40 percent).

Latin American immigrants were the least likely to earn family-sustaining wages (41 percent), followed by Africans and West Indians (55 percent). Both were lower than natives (see Figure 3.5), who in turn lagged immigrants from other world regions (70 percent).

5. Youth

Very few immigrant health care workers are young, and they are less likely to be young than natives — another factor that could be correlated with higher wages for immigrants. In 2006, youth 16 to 26 comprised a smaller share of foreign- than native-born health care workers (8 percent versus 14 percent). Youth representation was lower still among immigrants in middle- and high-skilled jobs (just 4 percent and 6 percent, respectively). Twenty-seven percent of immigrant youth and 24 percent of native-born youth earned family-sustaining wages.

6. Gender

Health care pays high wages despite being one of the most female-dominated sectors of the economy. Women comprised 73 percent of immigrant and 79 percent of native health care workers. The only occupations in which women made up less than half of immigrant workers were physicians (35 percent), dentists (42 percent), and medical scientists (46 percent). Women were about 90 percent of RNs. Fifty-three percent of women working in the sector earned family-sustaining wages compared with 71 percent of men, with similar patterns observed for immigrants and natives.

IV. Immigrant Incorporation in Information Technology

Information technology has the highest skill requirements and the highest share of good jobs among our four study sectors. It is also the smallest of the four sectors, employing 4.5 million workers or 4 percent of the US workforce in 2006. IT has drawn many immigrant workers who have contributed to its competitiveness in the past decades. The sector was 20 percent foreign-born in 2006, employing almost 1 million immigrants.

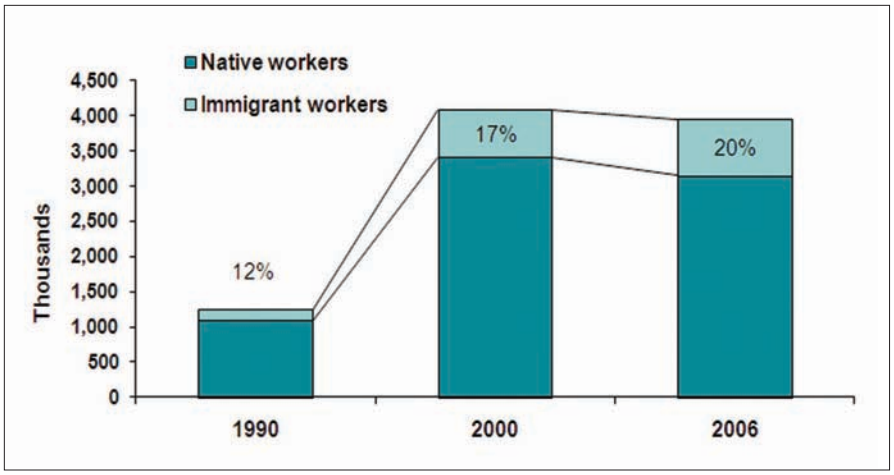
We have defined the sector in a manner that closely maps with the definition used by the National Research Council (NRC), which includes "core" IT occupations such as programmers, computer support specialists, and systems and networks administrators and managers. These occupations involve tasks such as designing and upgrading software; maintaining and supporting software and databases; designing and implementing computer-based business solutions; and managing testing, documentation, and configuration of IT products.[34] Our definition, like NRC's, also includes "IT-related" occupations such as engineering technicians, computer operators, and data-entry keyers, as well as occupations that involve the manufacture, installation, repair, and operation of computer hardware. Finally, our IT sector definition includes managers, but only those working in a small set of IT-related industries.[35]

34 National Research Council, *Building a Workforce for the Information Economy* (Washington, DC: National Academy Press, 2001), www.nap.edu/openbook.php?record_id=9830&page=1.
35 See the Methodological Appendix for further details.

A. Immigrant Employment Rose and Native Employment Fell before the Recession

IT experienced rapid employment growth during the 1990s, but the sector stagnated following the bursting of the high-tech bubble in 2000 and the recession of 2001-2002. From 2000 to 2006, the number of immigrants employed in the sector rose by 26 percent while natives dropped 9 percent.[36] The share of foreign-born IT workers increased from 12 percent to 17 percent from 1990 to 2000, expanding to 20 percent in 2006 (see Figure 4.1). Immigrant employment grew significantly in most high-skilled occupations, led by computer and information systems managers (101 percent), network and systems administrators (68 percent), and database administrators (52 percent). Immigrant employment grew among two of the middle- and low-skilled IT-related occupations, but fell for the other two (see Figure 4.2). In every occupation, immigrant employment grew faster or fell more slowly than native-born employment.

Figure 4.1. IT Workers by Nativity (Percent), 1990, 2000, and 2006



Notes: There were considerable changes in how IT occupations were defined in 1990 versus 2000 and later (i.e., there were fewer occupational categories in 1990); we have attempted to match occupation codes across the different time points. Additionally, this figure does not include IT industry managers, and so the total number of IT workers here is lower than the 4.5 million using our broader sector definition earlier in the text. (See the Methodological Appendix for more details.)
Source: MPI analysis of data from the 1990 Census of Population and Housing, 2000 Census, and ACS PUMS 2005-2007 data pooled.

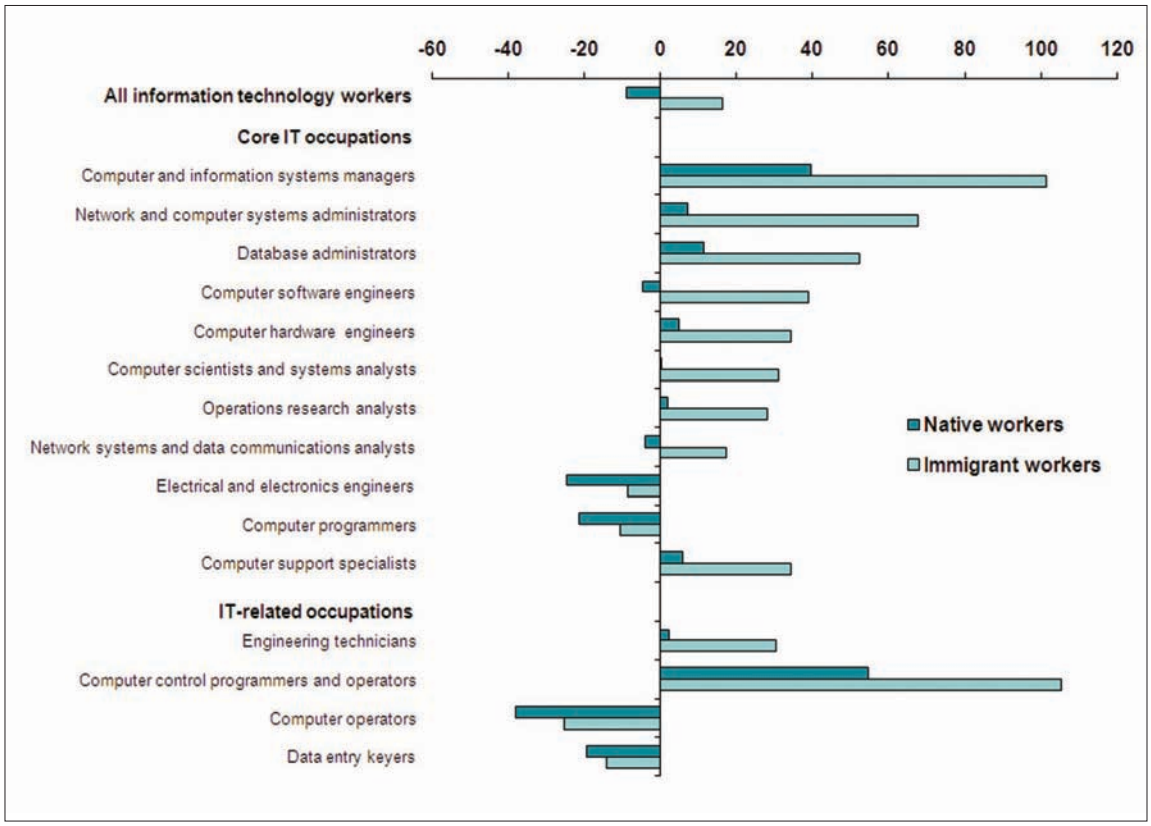
B. Greater Drop in Immigrant Employment since the Recession

Immigrants in IT have fared worse than natives since the recession. Between the third quarter of 2007 and the third quarter of 2009, immigrant employment in the information sector fell 9 percent, about twice the 5 percent drop for natives.[37]

BLS projects that IT employment will grow by about 4 percent between 2008 and 2018. Relatively rapid growth is projected in two large occupations: network systems and data communications analysts (53 percent) and computer software developers (32 percent). It is worth noting that immigrants accounted for virtually all of the 2000-2006 employment growth in these two occupations. Thus, the projections suggest increasing growth in immigrant-concentrated occupations.

36 Here we limit the analysis to 2000-2006 because many current IT occupations were not yet identified in the census data for 1990, when the sector was less developed.
37 The "information" sector in the CPS data used here for 2007 versus 2009 estimates is defined slightly differently than the "information and technology" section defined in the ACS data used for the 2006 estimates.

Figure 4.2. Growth in Number of IT Workers, Selected Occupations (Percent), 2000-2006

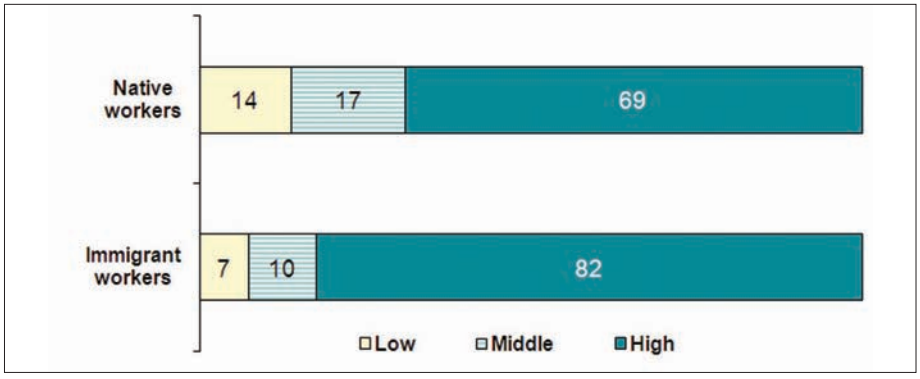


Source: MPI analysis of data from the 2000 Census of Population and Housing and ACS PUMS, 2005-2007 pooled data.

C. *Over 90 Percent of Immigrant Jobs Are High- or Middle-Skilled*

IT is predominantly high-skilled, and immigrants disproportionately work in the sector's high-skilled jobs. In 2006, 82 percent of foreign-born IT workers held high-skilled jobs and another 10 percent held middle-skilled jobs (see Figure 4.3). Immigrants were overrepresented in high-skilled IT jobs, but underrepresented in the sector's low-skilled jobs. Five of the nine high-skilled core occupations had higher foreign-born concentrations above the sector average of 20 percent, but immigrant concentrations were substantially lower — 14 percent or less — among the low-skilled IT-related occupations.

Figure 4.3. IT Workers by Occupational Skill Levels and Nativity (Percent), 2000-2006



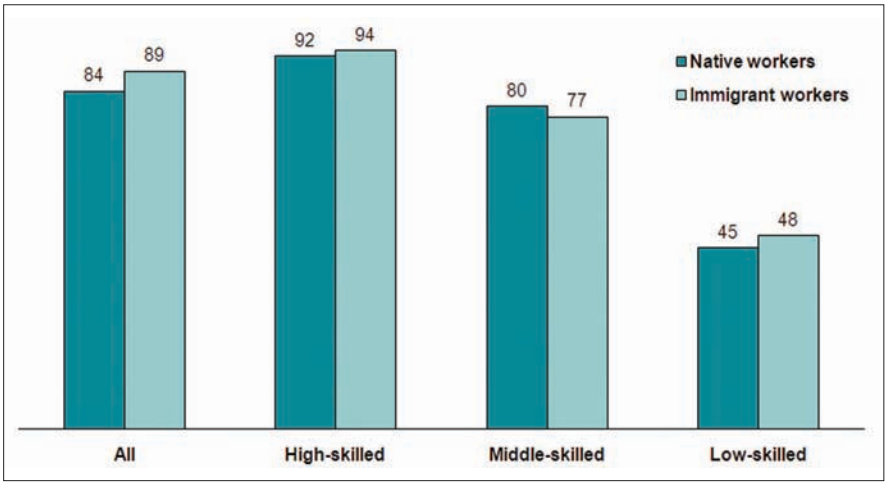
Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

D. Almost All Jobs Pay Family-Sustaining Wages

Almost 90 percent of immigrant IT workers earned family-sustaining wages in 2006 (see Figure 4.4). Natives were slightly more likely to earn family-sustaining wages in middle-skilled jobs, but less likely to do so in high- and low-skilled jobs. There was a substantial gap in the earnings provided by low- and middle-skilled jobs. About half of workers in low-skilled jobs earned a family-sustaining wage compared with over three-quarters in middle-skilled jobs.

Just four middle- and low-skilled occupations paid family-sustaining wages in 2006 (see Table 4.1). The largest in employment terms was computer support specialists, with over 350,000 workers. Computer support specialists comprise an important middle-skilled entry-level occupation on the career pathway to higher-paying IT jobs. BLS projects 14 percent growth in this occupation between 2008 and 2018.

Figure 4.4. Share of IT Workers Earning Family-Sustaining Wages, by Job Skill Level and Nativity, 2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

Table 4.1. Low- and Middle-Skilled IT Occupations Paying Family-Sustaining Wages, 2006

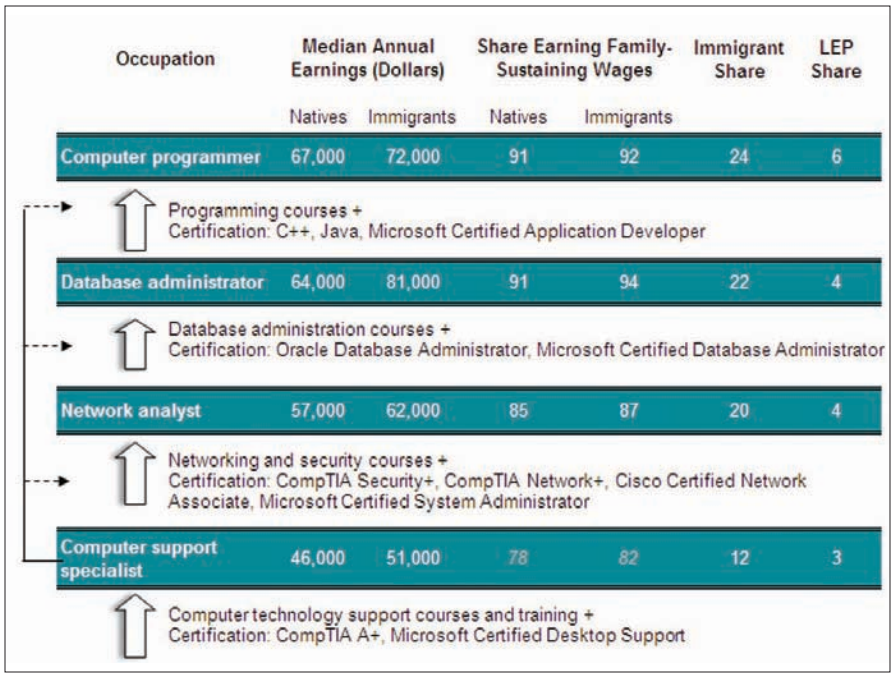
Occupation	Immigrant Share	Share Earning Family-Sustaining Wages	
		Natives	Immigrants
All IT workers	**20**	**84**	**89**
Middle-skilled			
Engineering technicians, except drafters	14	82	73
Computer support specialists	12	78	82
Low-skilled			
Computer operators	13	60	65
Computer control programmers and operators	14	73	70

Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

E. Even Entry-Level Jobs Have Significant Skill Requirements

IT career pathways generally begin at the middle-skilled level, due to the relative lack of low-skilled jobs in the sector. At one point of entry, workers start out as computer support specialists — a job that requires a high school degree or GED and a full year of training leading to a certificate (see Figure 4.5). In 2006, about 80 percent of workers in this occupation earned family-sustaining wages, testifying to its significant skill requirements. There are further wage gains as workers move up the ladder to jobs that require at least a two-year associate's degree — preferably a four-year degree — and industry certification.

Figure 4.5. Wage Gains along a Typical Career Pathway in Information Technology



Note: Italics refer to occupational data with smaller sample sizes.
Source: Portland Community College, www.pcc.edu/career/pathways/professional-technical/computer-technology-support/road-map.html. MPI analysis of ACS, 2005-2007 pooled data.

The share of immigrants increases along the pathway to higher-skilled and better-paying jobs in IT. In 2006, the foreign-born share of programmers was 24 percent, double the share of computer support specialists (12 percent).

F. Characteristics of Immigrants Holding Good Jobs

1. Education

As the skill distribution of IT jobs suggests, IT workers are highly educated, with immigrants better educated than their native-born counterparts. In 2006, 79 percent of immigrant IT workers had a four-year college education or more, compared with 51 percent of natives. Very few workers, either immigrants or natives, had a high school education or less.

Immigrants' educational advantage rises with occupational skill level. Immigrants in high-skilled jobs were considerably more likely than natives to have at least a four-year degree (88 percent versus 65 percent). Ninety-five percent of foreign-born computer software engineers and 92 percent of foreign-

born electrical and electronics engineers had college degrees, compared with 76 percent and 72 percent of native-born workers in these occupations. Immigrants working in middle- and low-skilled jobs were also more likely than natives to have a college education, though the gap was smaller than in high-skilled jobs (see Table 4.2).

Table 4.2. Educational Attainment of IT Workers by Nativity and Job Skill Level (Percent), 2006

	Native Workers	Immigrant Workers
High-skilled		
Four-year degree or more	65	88
Some college	28	9
High school only	6	2
Less than high school	1	1
Total	100	100
Middle-skilled		
Four-year degree or more	26	43
Some college	52	38
High school only	20	14
Less than high school	2	6
Total	100	100
Low-skilled		
Four-year degree or more	15	27
Some college	46	40
High school only	35	26
Less than high school	4	8
Total	100	100

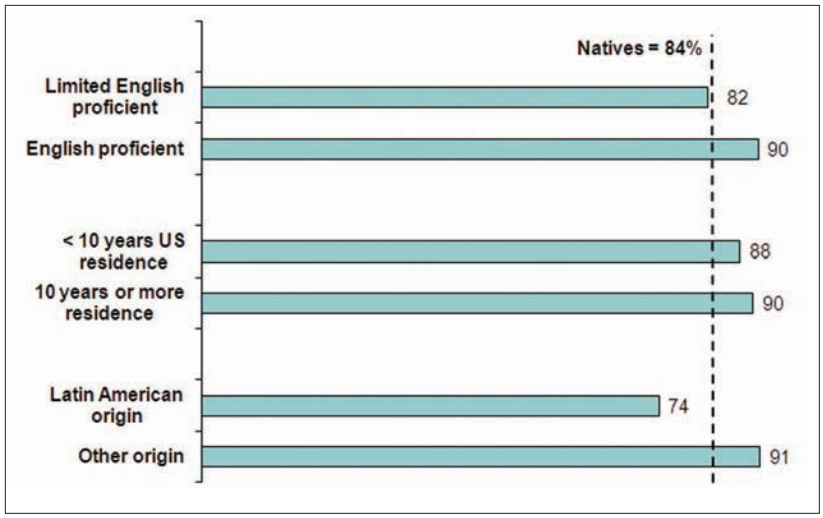
Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

There is little evidence of underemployment or skills mismatch in this sector, where over 80 percent of immigrants work in high-skilled jobs. The exception is the small number of college-educated immigrants working in low-skilled occupations (who comprise less than 5 percent of all immigrants in the sector).

2. English Proficiency

Almost all IT workers (95 percent) were English proficient, but lack of English proficiency did not appear to prevent immigrants from finding family-sustaining jobs. In 2006, 82 percent of LEP immigrants earned family-sustaining wages, just below the figure for natives and close to the share of English-proficient workers (see Figure 4.6).

Figure 4.6. Share of Immigrant IT Workers Earning Family-Sustaining Wages, by Selected Characteristics, 2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data and 2000 Census of Population and Housing PUMS.

3. Length of Residence

Many immigrants working in IT are recent arrivals, but even recent arrivals overwhelmingly earn family-sustaining wages. In 2006, 41 percent of foreign-born IT workers had less than ten years of US experience, as did a majority of foreign-born computer software engineers and over 40 percent of computer scientists, computer programmers, and computer hardware engineers. Almost 90 percent of these recent arrivals earned family-sustaining wages. The prevalence of highly paid recent immigrants among IT occupations could owe to the availability of H-1B visas used to bring in foreign-born workers on a temporary basis.[38] Almost half (41 percent) of the 250,000 H-1B beneficiaries in fiscal year 2009 worked in computer-related occupations.[39]

4. Region of Origin

Latin Americans, Asians, and other immigrants all generally earn family-sustaining wages. Latin Americans are substantially underrepresented in the IT sector, but those who do find work there are generally well compensated. In 2006, Latin Americans were just 12 percent of foreign-born IT workers and under 20 percent in every high-skilled IT occupation. The Asian share of IT workers was 62 percent, equally divided between those from South Asia/Middle East and from East Asia. In contrast with Latin American workers, Asian immigrants were overrepresented in the high-skilled occupations.

Even though Latin American immigrants were underrepresented in the IT sector overall and in high-skilled occupations, about three-quarters earned family-sustaining wages. IT was the only one of our four study sectors in which a majority of Latin American immigrants earned family-sustaining wages.

5. Youth

Although youth are a small share of IT workers, a majority earn family-sustaining wages in the sector. In 2006, just 11 percent of natives and 8 percent of immigrants were age 16 to 26. Young workers,

38 We cannot identify from the ACS data whether these workers are in the United States with temporary or permanent visas. We also cannot tell from the data whether workers who come in on temporary visas are able to stay permanently in the country and continue working in the sector.

39 Department of Homeland Security (DHS), *Characteristics of Specialty Occupation Workers (H-1B), Fiscal Year 2009 Annual Report* (Washington, DC: DHS, 2010), www.uscis.gov/USCIS/Resources/Reports%20and%20Studies/H-1B/h1b-fy-09-characteristics.pdf.

though, were a significant share of immigrants employed in several middle- and low-skilled IT occupations, including computer support specialists (15 percent), computer operators (14 percent), and data-entry keyers (21 percent). Two of these occupations paid family-sustaining wages to a majority of immigrant workers — suggesting that immigrant youth were able to find good IT jobs. In fact, IT was the only sector in which a majority of young immigrants (60 percent) earned family-sustaining wages.

6. Gender

IT is a predominantly male field, where men earn more than women, but women also earn family-sustaining wages. In 2006, only 31 percent of US-born and 26 percent of foreign-born IT workers were women. Men were a large majority in all of the high- and middle-skilled occupations. Women represented a majority of immigrants in only one, low-skilled IT occupation: data-entry keyers (80 percent). Ninety-two percent of immigrant men earned a family-sustaining wage, as did 80 percent of immigrant women.

V. Immigrant Incorporation in Construction

Construction is one of two study sectors (the other being hospitality) where low-skilled workers predominate. Before the recession, construction was an important source of employment and offered pathways to good family-sustaining jobs for immigrants, even recent arrivals and those with less formal education and limited English skills. Immigrant workers appear to have benefited disproportionately from the building boom before the recession. In 2006, the construction sector employed 11 percent (2.1 million) of all foreign-born workers while the sector employed only 7 percent of native-born workers. Twenty-four percent of all construction workers were foreign-born.

A. Broad-Based Growth in Immigrant Employment before the Recession

Before the recession, construction experienced rapid job growth, especially among immigrants. From 1990 to 2006, the number of immigrant construction workers rose by 291 percent (or 1.5 million workers), with the number of immigrants in several large middle- and low-skilled occupations growing by more than 300 percent (see Figure 5.1). Over the same period, the number of native-born workers grew by less than 100 percent in the sector overall and in most large low- and middle-skilled occupations. In a few occupations, the number of native workers fell prior to the recession.

B. Recession Leads to Steep Drop in Immigrant Employment

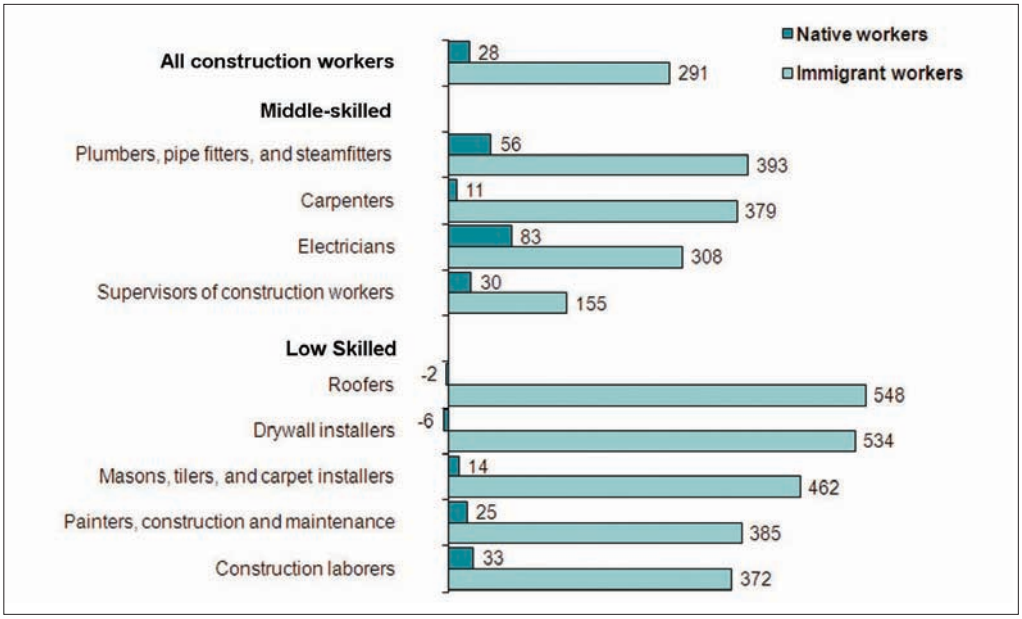
After the recession began, trends in immigrant and native construction employment reversed. From the third quarter of 2007 to the third quarter of 2009, immigrant employment fell faster than native-born employment: 23 percent versus 17 percent (see Figure 5.2).[40] In most of the largest construction occupations, immigrants bore more job losses than natives.[41] Immigrant job losses were especially steep among carpenters (44 percent) and painters (28 percent). These heavy job losses reversed much of the progress that immigrants made in the sector and reduced opportunities for them to find family-sustaining jobs in the future.

40 Some researchers have dated the beginning of the drop in immigrant employment in the sector to late 2006. See Kochhar, *Latino Labor Report;* Orrenius and Zavodny, *Tied to the Business Cycle.*

41 Here we employ data from the CPS, which provides more recent postrecession data, but has a much smaller sample size than the ACS, allowing us to analyze fewer occupations. It is likely that immigrant employment fell faster than native employment in many other, smaller occupations.

It remains to be seen whether immigrants can regain the foothold they had in the construction sector before the recession. BLS projects 19 percent growth across the sector from 2008 to 2018, but if the economy and the residential and commercial property sectors remain weak, these projections may not come to pass.

Figure 5.1. Change in Number of Construction Workers, Selected Occupations (Percent), 1990-2006

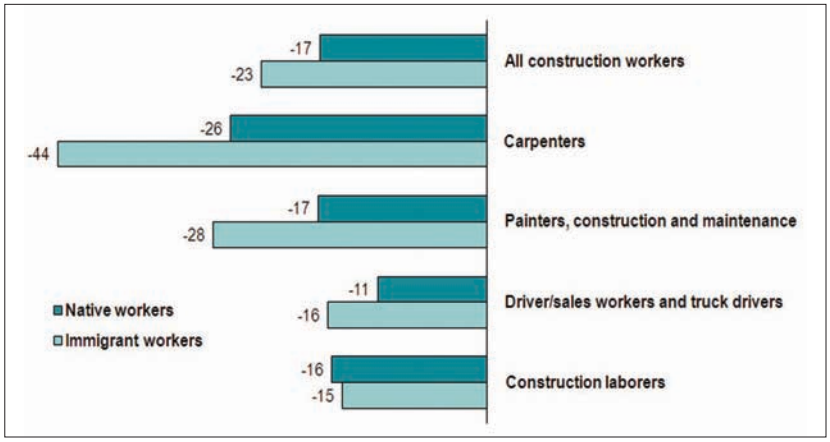


Source: MPI analysis of data from the 1990 Census of Population and Housing and ACS PUMS 2005-2007 data pooled.

C. *Immigrants Represent Large Shares of Low- and Middle-Skilled Workers*

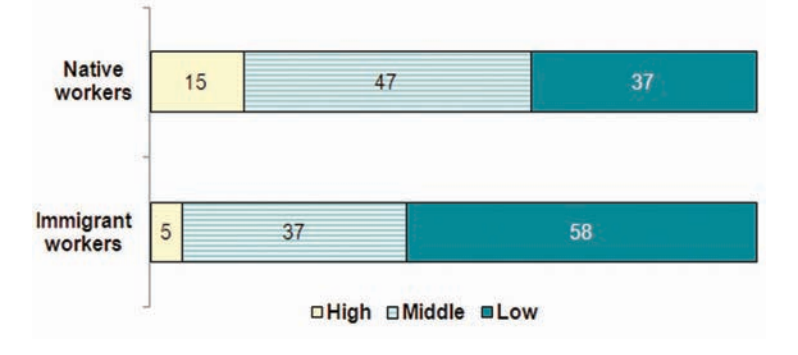
Construction has historically had long job ladders and substantial numbers of middle-skilled jobs. In 2006, 37 percent of immigrants held middle-skilled jobs compared with 47 percent of natives (see Figure 5.3). At the same time, immigrants were more likely than natives to hold low-skilled jobs (58 percent versus 37 percent). There were about 750,000 immigrants in middle-skilled jobs and 1.2 million in low-skilled jobs. Very few construction workers, whether foreign- or US-born, held high-skilled jobs.

Figure 5.2. Growth in Number of Construction Workers, Selected Occupations (Percent), Q3 2007 to Q3 2009



Source: MPI analysis of CPS 2007 and 2009 pooled quarterly data.

Figure 5.3. Occupational Skill Levels of Construction Workers, by Nativity (Percent), 2006



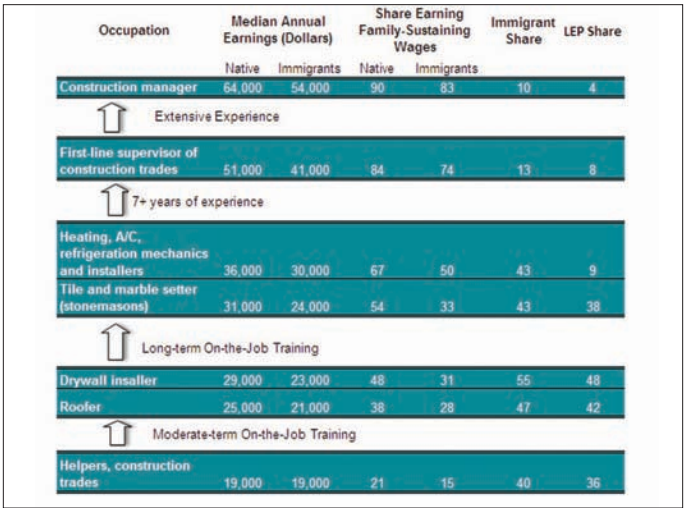
Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

Despite their overrepresentation in low-skilled construction jobs, immigrants compose large shares — even majorities — of some middle-skilled occupations. In 2006, immigrants made up 33 percent of all workers in low-skilled and 20 percent of all workers in middle-skilled construction jobs. Immigrants made up especially large shares of middle-skilled occupations such as plasterers and stucco masons (61 percent), brickmasons and stonemasons (43 percent), and carpenters (32 percent). Immigrants' penetration of these middle-skilled construction jobs demonstrates their substantial sectoral progress on the eve of the recession.

D. *Fewer Immigrants Earn Family-Sustaining Wages*

Immigrants also made progress in finding good jobs that paid family-sustaining wages, although natives were more successful in this regard. In 2006, immigrants made up 24 percent of all construction workers but represented 15 percent of workers in family-sustaining jobs. Put another way, 65 percent of natives held these good jobs versus 39 percent of immigrants (see Figure 5.4). Advancing from low- to middle-skilled jobs offered more of an earnings return for natives than immigrants. Forty-five percent of immigrants in middle-skilled jobs earned family-sustaining wages compared to 70 percent of natives.

Figure 5.4. Share of Construction Workers Earning Family-Sustaining Wages, by Skill Level and Nativity, 2006



Source: MPI analysis of ACS PUMS 2005-2007 data pooled.

Looking at specific occupations, we see a similar pattern: immigrants have been able to penetrate good jobs, but are generally paid less than natives within these occupations. There is a long list of low- and middle-skilled occupations paying family-sustaining wages to a majority of all workers, and these occupations employ significant numbers of immigrants (see Table 5.1). Immigrants' penetration

Table 5.1. Low- and Middle-Skilled Construction Occupations Paying Family-Sustaining Wages, 2006

Occupation	Immigrant Share	Median Annual Earnings (Dollars)			Share Receiving Family-Sustaining Wages	
		All Workers	Natives	Immigrants	Natives	Immigrants
All construction workers	**24**	**34,000**	**38,000**	**25,000**	**65**	**39**
Middle-skilled						
Elevator installers and repairers	*8*	63,000	65,000	*57,000*	89	*83*
First-line supervisors/ managers of mechanics, installers, and repairers	*6*	54,000	56,000	*30,000*	91	*68*
Crane and tower operators	*6*	51,000	51,000	*35,000*	86	*66*
First-line supervisors/managers of construction trades and extraction	13	49,000	51,000	41,000	84	74
Construction and building inspectors	*11*	45,000	44,000	*47,000*	83	*79*
Drafters	*16*	41,000	41,000	*37,000*	78	*66*
Structural iron and steel workers	12	40,000	41,000	31,000	73	54
Engineering technicians, except drafters	*11*	40,000	40,000	*40,000*	80	*84*
Electricians	14	37,000	38,000	30,000	69	52
Pipelayers, plumbers, pipefitters, and steamfitters	18	36,000	38,000	26,000	68	44
Glaziers	*15*	36,000	37,000	*31,000*	70	*55*
Heating, A/C, and refrigeration mechanics and installers	14	35,000	36,000	30,000	67	50
Welding, soldering, and brazing workers	23	35,000	37,000	28,000	67	48
Sheet metal workers	11	34,000	35,000	25,000	63	36
Electrical power-line installers and repairers	*16*	32,000	34,000	*25,000*	60	*41*
Telecommunications line installers and repairers	*17*	32,000	33,000	*27,000*	59	*47*
Low-skilled						
Construction equipment operators except paving, surfacing, and	11	36,000	37,000	31,000	68	53
Driver/sales workers and truck drivers	15	32,000	32,000	30,000	59	52
Highway maintenance workers	7	32,000	32,000	28,000	60	44
Paving, surfacing, and tamping equipment operators	*21*	31,000	33,000	*26,000*	58	*36*
Insulation workers	34	30,000	34,000	28,000	60	42

Source: MPI analysis of ACS PUMS 2005-2007 data pooled. Italics refer to occupational data with smaller sample sizes.

has only gone so far, as they are underrepresented in almost all of these good jobs relative to the construction sector overall (24 percent). Moreover, immigrants earned less than natives in almost all middle-skilled jobs. These findings suggest that penetration into middle-skilled construction jobs is insufficient for immigrants to earn family-sustaining wages.

E. Career Pathways Available through Training and Experience

The construction sector offers multiple pathways for advancement across occupations, pathways that do not always require significant postsecondary education. Construction workers may also advance to middle-skilled jobs through on-the-job training, apprenticeships, or work experience (see Figure 5.5).[42] Low-skilled jobs such as roofers, drywall installers, and construction trade helpers require short- or moderate-term on-the-job training (i.e., training of less than a year) and pay well below family-sustaining wages. With long-term on-the-job training (a year or more), or in some cases lengthy apprenticeships, workers can move up into middle-skilled trade occupations such as stonemasons or heating and air conditioning repair technicians — occupations that pay above family-sustaining wages. Construction was the only one of our four sectors where obtaining these good jobs was possible without at least a year or two of college.

As we saw earlier, however, many immigrants in middle-skilled trade occupations do not earn a family-sustaining wage. In fact, it is only when immigrants reach supervisory positions that a majority earn this wage level. Immigrants earn less than natives at every step along this pathway, in part because native-born construction workers tend to be better educated.

Figure 5.5. Wage Gains along a Typical Career Pathway in Construction

Occupation	Median Annual Earnings (Dollars)		Share Earning Family-Sustaining Wages		Immigrant Share	LEP Share
	Native	Immigrants	Native	Immigrants		
Construction manager	64,000	54,000	90	83	10	4
⇧ Extensive Experience						
First-line supervisor of construction trades	51,000	41,000	84	74	13	8
⇧ 7+ years of experience						
Heating, A/C, refrigeration mechanics and installers	36,000	30,000	67	50	43	9
Tile and marble setter (stonemasons)	31,000	24,000	54	33	43	38
⇧ Long-term On-the-Job Training						
Drywall insaller	29,000	23,000	48	31	55	48
Roofer	25,000	21,000	38	28	47	42
⇧ Moderate-term On-the-Job Training						
Helpers, construction trades	19,000	19,000	21	15	40	36

Sources: Home Builders' Institute, www.buildingcareers.org/uploads/FlowChart.pdf; MPI analysis of ACS PUMS, 2005-2007 pooled data.

42 Note that our description here refers to career pathways in residential construction, and pathways may differ for commercial construction. Unfortunately, we cannot distinguish between residential and commercial construction in the ACS data. For more on immigrant employment in residential construction, see Dale Belman, "Construction Labor Shortages and Immigration," (PowerPoint presentation for *Labor Shortages and Comprehensive Immigration Reform* meeting held at Economic Policy Institute in Washington, DC, May 27, 2009), http://epi.3cdn.net/9849209ae826da3a01_63m6bns6y.pdf.

F. *Characteristics of Immigrants Holding Good Jobs*

1. Education

The most notable characteristic of the construction sector is that less-educated immigrants have been able to advance into middle-skilled jobs. In 2006, almost half (46 percent) of immigrants in middle-skilled jobs lacked a high school education and another third had only a high school education (see Table 5.2). By contrast, only 13 percent of natives in middle-skilled jobs lacked a high school education. Thus, immigrants were overrepresented in middle-skilled construction jobs relative to their low educations. In low-skilled occupations, natives were also far less likely than immigrants to lack a high school education. The relatively low educational attainment of immigrants is an important factor in explaining their lower wages in both low- and middle-skilled positions.

Table 5.2. Educational Attainment of Construction Workers by Nativity and Skill Level of Jobs (Percent), 2006

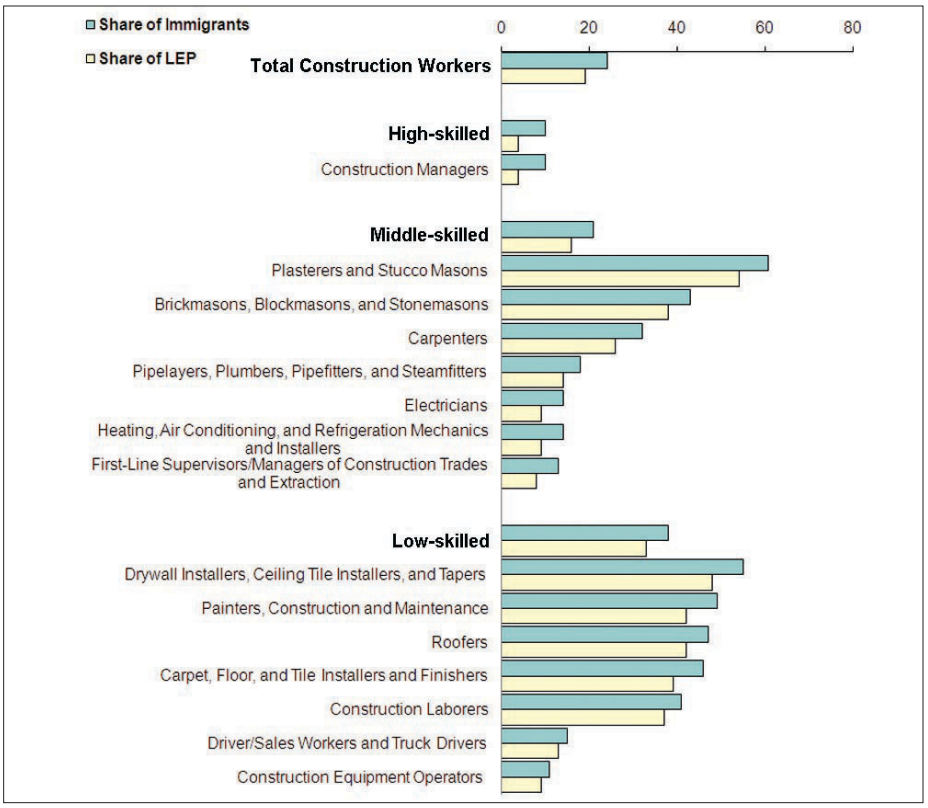
	Native Workers	Immigrant Workers
High-skilled		
Four-year degree or more	38	49
Some college	34	21
High school only	24	18
Less than high school	4	12
Total	100	100
Middle-skilled		
Four-year degree or more	8	7
Some college	33	14
High school only	46	33
Less than high school	13	46
Total	100	100
Low-skilled		
Four-year degree or more	6	4
Some college	26	9
High school only	49	29
Less than high school	19	58
Total	100	100

Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

2. English Language Proficiency

The construction sector offers opportunities for immigrants without strong English skills. Like low education levels, though, limited English skills appear to depress immigrants' wages. In 2006, LEP workers were heavily concentrated in low-skilled jobs but also made up large shares of middle-skilled plasterers, brickmasons, and carpenters (see Figure 5.6).

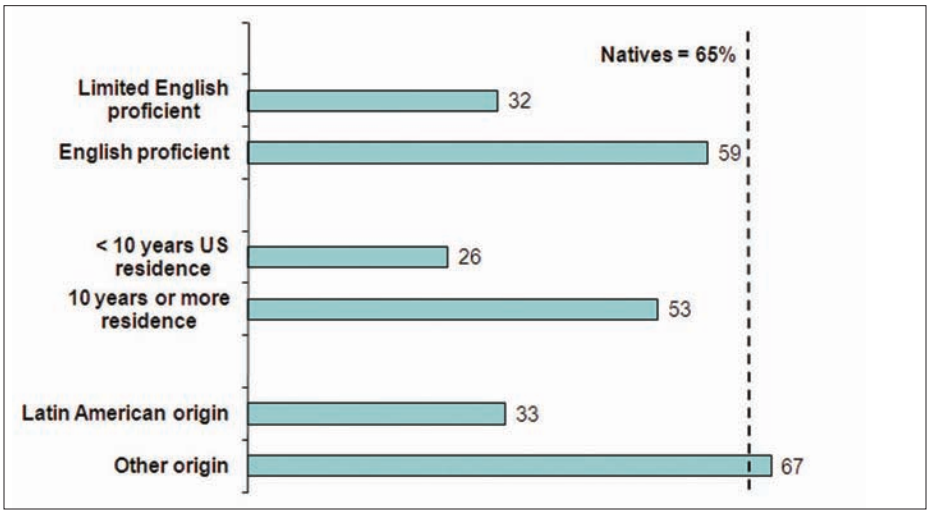
Figure 5.6. Share of Immigrant and LEP Construction Workers, Selected Occupations, 2006



Notes: A small number of LEP workers were US-born.
Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

In construction, as in the economy overall, English-proficient workers earned substantially more than LEP workers, with 59 percent of English-proficient immigrants earning family-sustaining wages versus 32 percent of LEP workers (see Figure 5.7).

Figure 5.7. Share of Immigrant Construction Workers Earning Family-Sustaining Wages, Selected Characteristics, 2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data and 2000 Census of Population and Housing PUMS.

3. Recency of Arrival

About half (51 percent) of immigrants working in construction arrived within the past ten years, limiting their exposure to US job experience and depressing their wages. Recent arrivals earn far less than longer-term immigrants or natives. In 2006, immigrant workers with at least ten years of US residence were twice as likely as more recent immigrants to earn family-sustaining wages.

4. Immigrant Origins

Latin American immigrants predominate, but earn less than others. In 2006, Latin Americans made up 83 percent of all construction workers, and their integration into the sector followed the same pattern as LEP workers and immigrants overall: they were overrepresented in low- and middle-skilled occupations. Because of the jobs that Latin American construction workers held and their relatively low levels of educational attainment, they were only half as likely to earn family-sustaining wages as other immigrants.

5. Youth

Immigrant youth penetrate middle-skilled jobs, but at low wages, with construction providing many young adults their first job opportunities. In 2006, about a fifth of all construction workers, both immigrants and natives, were youth ages 16 to 26. Youth were not restricted to low-skilled jobs; they represented more than a fifth of immigrants in middle-skilled occupations such as plasterers, brickmasons, carpenters, and heating and air conditioning mechanics.

Young immigrants, like recent arrivals, are unlikely to hold construction jobs that pay family-sustaining wages. In 2006, just 18 percent of young immigrants held these good jobs. On the other hand, 35 percent of young natives earned family-sustaining wages, suggesting that natives' wage advantage extends to younger and presumably less experienced workers.

6. Gender

Historically over 90 percent of construction workers have been men. In 2006, 12 percent of native-born construction workers and just 4 percent of foreign-born workers were women. Substantial shares of managers (both immigrant and native) were women, but otherwise women were a small minority of workers in every construction occupation. This gender difference among construction workers has meant that the recession disproportionately affected men.

Immigrant men earn far less than native-born men, but the nativity gap in wages is smaller among the few women who work in the sector. In 2006, 67 percent of native men earned family-sustaining wages compared to 39 percent of immigrant men. By contrast, 55 percent of native women reached this wage threshold, only slightly higher than the share for immigrant women (48 percent). Foreign-born women actually outearned foreign-born men, mostly because they were less likely to hold the low-skilled jobs that paid the lowest wages.

VI. Immigrant Incorporation in Hospitality

Hospitality has the shortest job ladders — i.e., the narrowest range of occupations — among the four sectors studied. It has both the largest share of low-skilled workers and, accordingly, the smallest share of workers who earn a family-sustaining wage. In 2005, hospitality employed 7.5 million workers, a quarter of whom were immigrants; 10 percent of all immigrants worked in the sector. Most hospitality

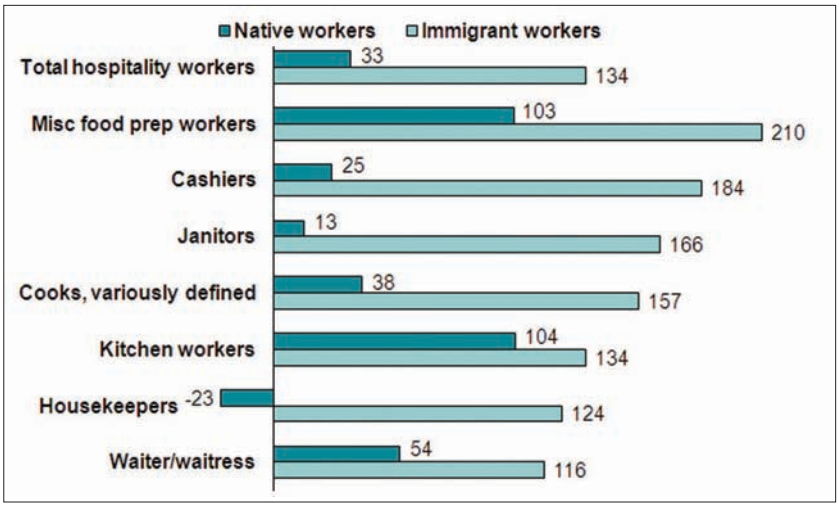
jobs do not require much formal education. Jobs paying family-sustaining wages in hospitality generally involve supervisory or managerial responsibilities, but their supply is limited.

A. Rapid Growth, Mostly in Low-Skilled Jobs

Hospitality grew rapidly before the recession. From 1990 to 2006, the number of immigrants working in the sector grew by 134 percent, greatly exceeding the rate for natives (33 percent; see Figure 6.1). Immigrant employment growth also outpaced natives' growth in middle-skilled hospitality occupations. For instance, the number of foreign-born cleaning and building service supervisors grew by 211 percent — three times the overall growth rate (77 percent) for that occupation (not shown in Figure 6.1). But overall, most of the fastest- growing occupations were at the low-skilled level, where the numbers of foreign-born cooks, cashiers, janitors, and food preparation workers all rose by more than 150 percent during the period.

These patterns changed substantially during the recession, with immigrant employment stagnating and US-born employment rising by 3 percent. Looking to the future, BLS projects modest growth in hospitality jobs (8 percent, or 1.1 million new jobs) between 2008 and 2018.

Figure 6.1. Growth in Number of Hospitality Workers, Selected Occupations (Percent), 1990-2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

B. Immigrants Mostly in Low-Skilled, "Back-of-the-House" Jobs

Three-quarters of all hospitality workers are low-skilled according to our definition. Among the occupations we analyzed, a total of only 191,000 hospitality workers held high-skilled jobs while 1.5 million held middle-skilled jobs and 4.8 million held low-skilled jobs. Native and immigrant workers shared similar occupational skill distributions (see Figure 6.2).

We subdivided low-skilled hospitality occupations into "front-of-the-house" jobs that require face-to-face interaction with customers — such as waiters and waitresses, cashiers, bartenders, bellhops, porters, clerks, and receptionists — versus "back-of-the-house" jobs that do not require public interaction, including cooks, food preparation workers, dishwashers, maids, janitors, and ground maintenance workers.[43] Workers can advance from back-of-the-house to front-of-the-house jobs by acquiring customer service skills and English proficiency.

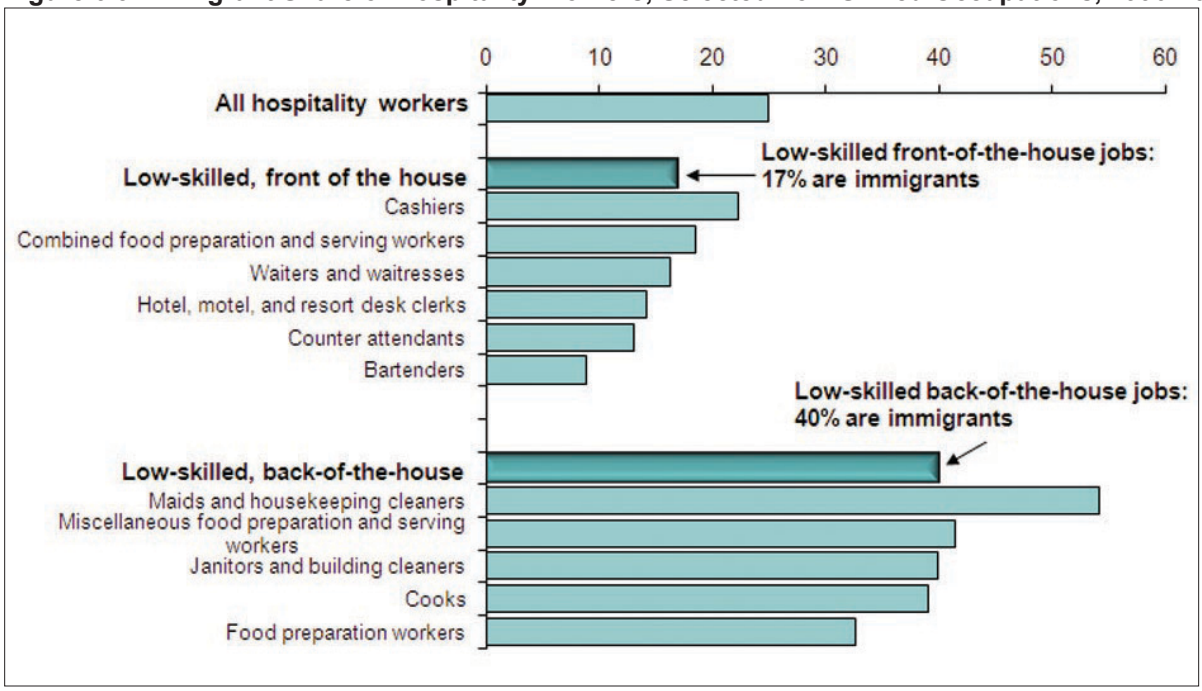
43 A similar categorization is used by the Restaurant Opportunities Center of New York and New York City Restaurant Industry Coalition. See *The Great Service Divide: Occupational Segregation & Inequality in the New York City Restaurant Industry* (New York: Restaurant Opportunities Center of New York and New York City Restaurant Industry Coalition, 2009), www.rocunited.org/files/GREATSERVICEDIVIDE.PDF.

Figure 6.2. Occupational Skill Levels of Hospitality Workers, by Nativity (Percent), 2006

Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

Immigrants held 27 percent of low-skilled jobs overall, but they were underrepresented in front-of-the-house jobs (17 percent) and overrepresented in back-of-the-house jobs (40 percent, see Figure 6.3). In fact, shares of immigrants were generally lower in low-skilled, front-of-the-house jobs than in management positions. This pattern suggests that barriers to immigrant mobility may be greater between the front and back-of-the-house jobs than between low- and middle-skilled jobs.

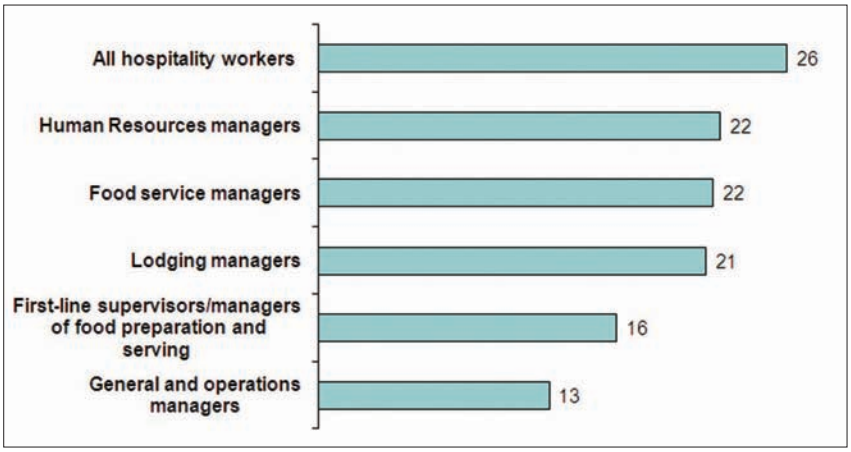
Figure 6.3. Immigrant Share of Hospitality Workers, Selected Low-Skilled Occupations, 1990-2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

In fact, immigrants are well represented among the sector's middle-skilled jobs, which are almost all manager or supervisor positions. Immigrants made up over 20 percent of the main management occupations and 16 percent of first-line food supervisors (see Figure 6.4). At the same time, these supervisory and management positions are small in number, and BLS has projected only tens of thousands of new jobs in these occupations from 2008 to 2018.

Figure 6.4. Immigrant Share of Hospitality Workers, Selected Managerial and Supervisory Occupations, 2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

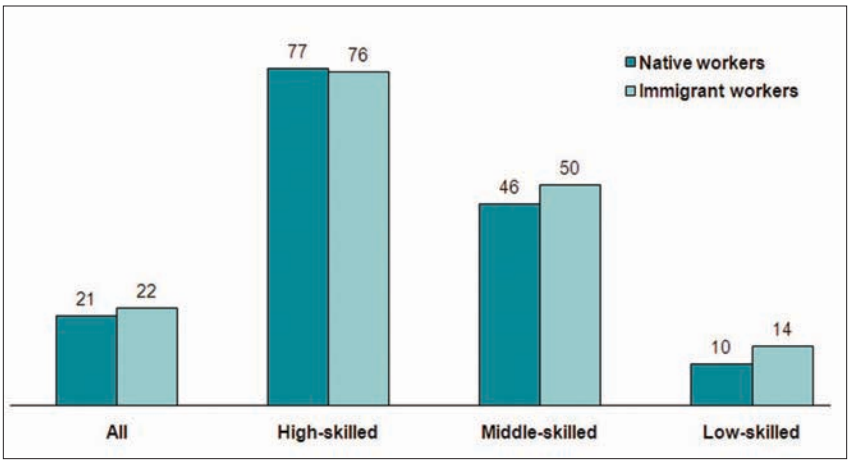
C. *Few Immigrants Earn Family-Sustaining Wages*

The low skill levels of hospitality workers are reflected in their earnings. In 2006, only about a fifth of all hospitality workers earned family-sustaining wages, a share that was similar for immigrants and natives (see Figure 6.5). Median annual earnings were $18,000 for immigrants and $14,000 for natives.

Hospitality workers' earnings increase substantially as skill levels increase, and immigrants outearn natives at both the low and middle levels. In 2006, only 10 percent of natives and 14 percent of immigrants in low-skilled jobs earned family-sustaining wages. Roughly half of middle-skilled jobs paid family-sustaining wages to natives (46 percent) and immigrants (50 percent). However, as we saw earlier, only a fifth of immigrants held these middle-skilled jobs.

We found only three middle-skilled occupations that pay family-sustaining wages: food service managers, lodging managers, and first-line supervisors of office workers (see Table 6.1). None of the low-skilled occupations paid family-sustaining wages, suggesting that simply moving from the back to front-of-the-house jobs is insufficient to advance in the sector.

Figure 6.5. Share of Hospitality Workers Earning Family-Sustaining Wages, by Skill Level and Nativity, 2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

Table 6.1. Middle-Skilled Hospitality Occupations Paying Family-Sustaining Wages, 2006

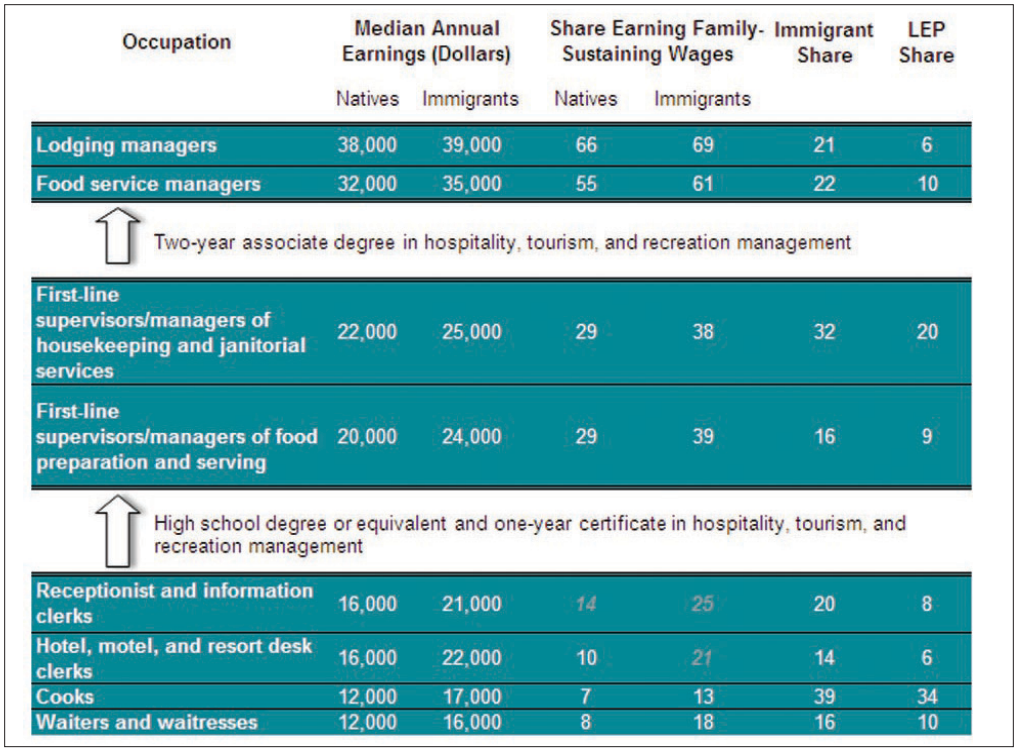
Occupation	Immigrant Share	Median Annual Earnings (Dollars)			Share Earning Family-Sustaining Wages	
		All Workers	Natives	Immigrants	Natives	Immigrants
All hospitality workers	**25**	**16,000**	**14,000**	**18,000**	**21**	**22**
Food service managers	22	32,000	32,000	35,000	55	61
Lodging managers	21	38,000	38,000	39,000	66	69
First-Line supervisors/managers of office and administrative support	18	29,000	28,000	30,000	47	*54*

Notes: The occupations selected are those where over half of immigrant workers earned more than a family-sustaining wage in 2006. For skill-level definitions, see Methodological Appendix. Italics refer to occupational data with smaller sample sizes.
Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

D. Career Pathways Depend on Work Experience and Acquisition of Supervisory or Managerial Responsibilities

To earn a family-sustaining wage then, hospitality workers must advance into supervisory or managerial jobs. Workers start out in low-skilled jobs such as cooks, waiters and waitresses, receptionists, and hotel desk clerks (see Figure 6.6). With a high school degree plus a one-year certificate in hospitality management, workers can move up to first-line supervisor positions, which pay much more than entry-level jobs, though still substantially below a family-sustaining wage. With a two-year associate's degree and more work experience, supervisors can move up to become food service or lodging managers — jobs paying above a family-sustaining wage.

Figure 6.6. Wage Gains along a Typical Career Pathway in Hospitality



Sources: Tillamook Bay Community College (Oregon), www.tbcc.cc.or.us/~careerpathways/assets/htrm_print.pdf; MPI analysis of ACS PUMS, 2005-2007 pooled data. Italics refer to occupational data with smaller sample sizes.

Overall, career pathways in hospitality take longer to yield jobs paying family-sustaining wages than health care or construction. Even after completing high school and a year-long certificate program, hospitality supervisors generally do not earn a family-sustaining wage. It takes two years of college plus substantial work experience to rise into a managerial position, and even then jobs pay far less on average than jobs requiring comparable credentials in other key sectors.

E. Characteristics of Immigrants Holding Good Jobs

1. Education

Immigrant hospitality workers have substantially less formal education than natives, but they are almost as likely to hold middle-skilled jobs. In 2006, immigrants were considerably more likely than natives to have a high school education or less (72 percent versus 53 percent).

Gaps in educational attainment between immigrants and natives were especially wide in middle- and low-skilled occupations (see Table 6.2). In general, immigrants were overrepresented in middle-skilled jobs relative to their education levels. The fact that more than half (56 percent) of immigrants in middle-skilled hospitality jobs had a high school education or less suggests that some are able to move up into supervisory positions with work experience or qualifications other than formal education.

Table 6.2. Educational Attainment of Hospitality Workers by Nativity and Skill Level of Jobs (Percent), 2006

	Native Workers	Immigrant Workers
High-skilled		
Four-year degree or more	41	54
Some college	37	25
High school only	19	14
Less than high school	3	7
Total	100	100
Middle-skilled		
Four-year degree or more	18	21
Some college	39	23
High school only	34	31
Less than high school	9	25
Total	100	100
Low-skilled		
Four-year degree or more	8	8
Some college	34	15
High school only	36	33
Less than high school	23	44
Total	100	100

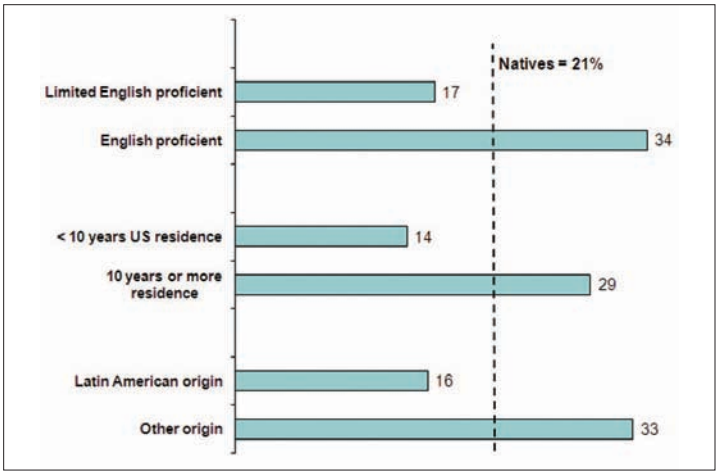
Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

2. English Proficiency

Even though immigrants with limited formal education often advance into middle-skilled jobs, very few LEP immigrants do so. In fact, English proficiency may be a prerequisite for moving along the pathway from the back to front-of-the house jobs, and then on to supervisory and managerial jobs. In 2006, LEP workers held 35 percent of low-skilled, back-of-the house jobs but only 11 percent of front-of-the-house jobs. According to a recent study conducted in the restaurant industry, English proficiency is one of the most important qualifications for front-of-the-house jobs.[44] The only supervisory occupation with a significant (20 percent) share of LEP workers was supervisors of housekeepers (see Figure 6.6).

English proficiency raises wages but not enough to lift immigrants above the family-sustaining threshold. In 2006, 34 percent of English-proficient immigrants earned a family-sustaining wage, double the share for LEP immigrants (see Figure 6.7).

Figure 6.7. Share of Immigrant Hospitality Workers Earning Family-Sustaining Wages, by Selected Characteristics, 2006



Source: MPI analysis of ACS PUMS, 2005-2007 pooled data and 2000 Census of Population and Housing PUMS.

3. Length of Residence

Hospitality employs a significant number of recent immigrants, but very few of them hold good jobs paying family-sustaining wages. In 2006, 47 percent of immigrants in the sector had arrived within the past ten years. Only 14 percent of these recent arrivals held good jobs, a share half that for longer-term immigrants. Thus longer US tenure, like English proficiency, raises wages substantially though not nearly enough for a majority to earn family-sustaining wages.

4. Region of Origin

In 2006, Latin Americans made up almost two-thirds (62 percent) of immigrants in the sector overall. They were large majorities in most back-of-the-house occupations, including grounds maintenance workers (79 percent), cooks (78 percent), janitors (76 percent), and food preparation workers (72 percent). Latin Americans were a lower share, but still a majority (56 percent), of immigrants in front-of-the-house jobs (see Table 6.3). Latin American representation dropped further in middle- and low-skilled supervisory and management positions. While immigrants overall comprise a significant share of supervisors and managers, Latin Americans are substantially underrepresented in these occupations.

44 Restaurant Opportunities Center, *The Great Service Divide.*

Latin Americans working in hospitality earn less than immigrants from other regions. In 2006, just 16 percent of Latin Americans earned a family-sustaining wage, half the rate for other immigrants (see Figure 6.7).

Table 6.3. Origins of Immigrant Workers in Hospitality Occupations by Skill Level (Percent), 2006

	Latin America	Other
All immigrant hospitality workers	**62**	**38**
High-skilled jobs	31	69
Middle-skilled jobs	44	56
Low-skilled jobs, front-of-the-house	56	45
Low-skilled jobs, back-of-the-house	75	25

Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

5. Youth

Youth and part-time workers represent higher shares of native than immigrant hospitality workers. Like the construction sector, hospitality provides many young people 16 to 26 with their first jobs — jobs that are generally low-paying. But unlike construction, native-born hospitality workers were more than twice as likely as immigrants to be young: 48 percent versus 22 percent.

The high youth share among the native born reflects the part-time and transient character of native employment in the sector. In 2006, 81 percent of immigrants worked full-time compared to just 58 percent of natives. Almost 60 percent of native youth worked part-time compared to only 30 percent of immigrant youth. Thus, hospitality employment appears to be more transitory for native than immigrant workers.

Due to the transitory and low-skilled nature of most jobs they hold, young workers seldom earn family-sustaining wages in the hospitality sector. In 2006, only 6 percent of native youth and 8 percent of foreign-born youth held jobs paying these good wages.

6. Gender

Hospitality is the only one of our four focal sectors with roughly equal numbers of men and women. In 2006, women were more than half of native-born hospitality workers (57 percent), but slightly less than half of immigrant workers (43 percent). The gender composition of supervisory positions was mixed, with men predominating in some occupations and women in others. Women were under a third of cooks and under a fifth of chefs and head cooks. Among the low-skilled occupations, the share of women ranged from a high of almost 90 percent of maids and housekeepers to a low of just 3 percent among foreign-born grounds maintenance workers. Across almost all occupations, immigrants were substantially less likely to be women than US-born hospitality workers.

Men and women were equally likely to earn family-sustaining wages, among both immigrants and native-born workers.

VII. Conclusion

Are immigrants getting good jobs? Our analysis presents a mixed picture of immigrant mobility in the US economy and in the four sectors examined in this report.

The period before the recent recession was one of rapid immigration, with immigrants accounting for one of two new labor force entrants from 2000 to 2006. The immigrant labor force grew much more rapidly than the native-born labor force across the board and in our four study sectors. Especially rapid growth occurred in middle-skilled jobs — many of which paid family-sustaining wages. We also see that immigrants were substantially less concentrated in low-skilled jobs than their educational credentials might predict. In three of the four sectors examined (health care, IT, and hospitality), the shares of immigrants earning family-sustaining wages equaled or exceeded the share of native-born workers. In one sector — information technology — immigrant proportional representation rose with jobs' skill demands and wages.

In sum, the data make clear that immigrants were finding work at all skill levels and progressing substantially in their earnings before the recession hit.

At the same time, more than half of immigrants worked in low-skilled jobs, a share only somewhat higher than for natives. Less educated, LEP, recently arrived, and young immigrants rarely held good jobs in three of the sectors we studied. In the fourth, construction, many such immigrants achieved substantial mobility before the recession, only to see many of their jobs vanish during the real estate bust.

Not all pathways seem equally open to immigrants, as foreign-born workers remain strikingly underrepresented in some stepping-stone occupations.

Looking to the future, BLS has projected that the four sectors examined here will offer uneven prospects for immigrants and native-born workers, with substantial growth expected in health and construction and slower growth, especially among good jobs, in hospitality. But as this report was written, the economy overall and the construction sector in particular continued to experience high historic levels of unemployment, with uncertain prospects for the future.

Our analysis of immigrant mobility suggests that immigrants have been able to advance into middle-skilled jobs that pay family-sustaining wages without four-year college degrees. This finding is consistent with a recent report demonstrating that while more education is highly associated with higher earnings, other factors such as occupational choices can also affect earnings potential.[45] Among the sectors that we examined, the step up in wages from low- to middle-skilled jobs is substantial, most notably in health care. We also find that immigrants holding middle-skilled jobs usually earn as much or more than natives in the same jobs — except in construction, where natives earn more than immigrants within almost all occupations.

That said, not all pathways seem equally open to immigrants, as foreign-born workers remain strikingly underrepresented in some stepping-stone occupations, such as EMTs in health care or front-of-the-house jobs in hospitality. Our analysis also suggests that with the recent decline in the construction sector, jobs paying family-sustaining wages across the sectors may increasingly demand English language skills and postsecondary credentials.

The results raise two sets of policy concerns. One bears on the targeting, effectiveness and funding

45 Carnevale et al, *Help Wanted: Projections of Jobs and Education Requirements Through 2018*.

of the work-preparing institutions that can move immigrant youth and workers now in low-skilled jobs into middle-skilled work that pays a family-sustaining wage. The institutional issues here for employers, states, and the federal government are many:

- The often limited incentives of the workforce preparation system to meet the needs of hard-to-serve populations like English language learners and workers with low education and literacy skills
- The low persistence levels of immigrants in adult education and English as a Second Language (ESL) programs, as they seek to meet the competing demands of work and family
- The low completion rates of immigrant and other minority students seeking degrees from community colleges or other labor market credentials. These low completion rates often result from expensive and attenuated remedial education demands, limited financial aid, a failure to recognize credits for prior schooling and learning, and weak career guidance
- The lack of coordination among the adult basic education, ESL, and workforce development systems, resulting in instruction that does not mesh across systems and in long, inefficient pathways to gaining credentials — all critical issues in current debates over the Workforce Investment Act
- The reduced funding and increased crowding of workforce development and community college systems in the current recession. Crowding complicates already limited access to schooling and places a greater premium on emergent technology-based approaches to delivering instruction
- The failure of some US employers and professional associations to recognize foreign credentials and work experience.

These issues will be pursued in substantial depth in successor reports that will be developed as part of this project.

Our findings also beg the question of whether the current, largely family-based, permanent immigration system may be meeting the needs of the labor force to a degree that has gone unrecognized. With the exception of nursing, few visas for permanent or temporary admission are set aside for the expanding number of immigrant middle-skilled workers that we find here. Further research is needed to identify how many immigrants enter with middle-level skills and credentials; under what admission categories they enter; the wage and employment effects they have on US workers; and, looking to a postrecession future, the degree to which the immigration system might more expressly seek to fill middle-skilled job shortages. These analyses could constitute part of the charge of a Standing Commission on Labor Markets, Economic Competitiveness, and Immigration, which MPI has recommended be created to advise the executive branch and Congress on what employment-based immigration levels would be optimal for the US economy and that should be addressed in proposals for comprehensive immigration reform.[46]

In sum, immigrants are more evenly dispersed across the skills spectrum than has been widely recognized. The number of immigrants holding middle-skilled jobs has been growing rapidly and is expected to continue growing in key sectors such as health care. Most immigrants in middle-skilled jobs earn family-sustaining wages, and in sectors such as IT and health care where immigrants are better educated, they are more likely than natives to cross this wage threshold. By and large, we find that immigrants in middle-skilled jobs paying good wages are high school graduates, often with postsecondary degrees or credentials, and speak English fluently. Moreover, going forward, with the decimation of the residential construction industry, the prospects for immigrants with little formal education and limited English skills have weakened significantly even as funding for the institutions positioned to bolster their skills has eroded.

46 For more on this recommendation, see Papademetriou et al, *Harnessing the Advantages of Immigration for a 21st-Century Economy*; and Independent Task Force on Immigration and America's Future, *Immigration and America's Future: A New Chapter* (Washington, DC: Migration Policy Institute, 2006), www.migrationpolicy.org/ITFIAF/finalreport.pdf.

Methodological Appendix

Data sources. The primary data sets we employed are the 2005-2007 American Community Survey (ACS), public use microdata samples (PUMS), and the PUMS for the 1990 and 2000 Census of Population and Housing. The ACS data are collected monthly and released annually; an annual ACS PUMS file represents about 1 percent of the US population. We chose to combine three years (for a 3 percent sample of the population) in order to improve the precision of our estimates. For the 1990 and 2000 censuses, we used the 5 percent PUMS. Although 2006-2008 ACS data became available in January 2010, we chose not to combine 2008 ACS data with prior years to avoid the effect of mixing expansionary and recessionary years.

To capture employment trends since the recession began (officially in December 2007),[47] we used quarterly data from the US Current Population Survey (CPS) to study sector-level and occupation-specific patterns between the third quarter of 2007 and the third quarter of 2009. CPS offers more recent data than ACS, and quarterly CPS data have a larger sample than single-month data. We also disaggregated employment trends for native- and foreign-born workers.

The ACS and CPS data are collected differently, from different samples, and using different questionnaires. The two surveys at times have produced divergent estimates of the size and characteristics of the labor force, especially for smaller groups such as immigrants and workers at the state or metropolitan level.[48] We used the ACS where possible because its larger sample size allowed us to examine detailed occupations, which in turn helped us more precisely define low-, middle-, and high-skilled jobs. At the same time, we used the CPS to provide more recent statistics where the ACS is less current.

For our employment projections, we used the latest US Bureau of Labor Statistics (BLS) occupation-specific projections for 2008-2018.[49] These projections were released in December 2009 and take into account the recession. However, these projections do not disaggregate by nativity.

Workers. In our analyses using the ACS and Census data, we limited the sample to those ages 16 to 64 who were employed (including self-employed), worked at least 25 weeks a year (i.e., at least some hours over the course of six months) or 700 hours (i.e., full-time equivalent for 20 weeks), and reported positive wage and salary income during the prior year. Thus we excluded highly seasonal, intermittent, and occasional workers (including many day laborers). For the postrecessionary trend data, using the 2007-2009 CPS, we defined workers as all adults ages 16 and older who were employed during the survey week, regardless of hours worked and earnings. This more expansive definition allowed us to more fully capture employment effects of the recession.

Our results for 2006 would not differ substantially if we analyzed all adults age 16-64, versus restricting the sample to workers with at least 25 weeks/700 hours and positive earnings. For instance, the pattern of educational attainment for immigrants and natives does not differ substantially between samples of all adults and our restricted worker sample (see Table A-1):

47 National Bureau of Economic Research Business (NBER) Cycle Dating Committee, *Determination of the December 2007 Peak in Economic Activity* (Cambridge, MA: NBER, 2008), www.nber.org/cycles/dec2008.html.

48 Leading economists and demographers do not ascribe greater accuracy to either the ACS or CPS data. Based on conversation with Reynolds Farley, Population Studies Center, Institute for Social Research, University of Michigan, April 2010.

49 BLS, "Measures of Education and Training."

Table A-1. Educational Attainment of Immigrant and Native-Born Adults versus Workers (Percent), 2006

	All Adults Ages 16-64	Part-time Workers with Positive Earnings
Total		
High	31	27
Middle	31	31
Low	39	42
Native-Born		
High	31	27
Middle	33	33
Low	36	40
Foreign-Born		
High	29	27
Middle	19	20
Low	52	53

Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

Immigrants or foreign-born. We define the foreign-born population, using the citizenship variable in the ACS, Census, and CPS, to include naturalized US citizens and noncitizens. People born in the United States, born abroad to US citizens, or born in territories such as Puerto Rico and Guam are all considered to be natives. We use the terms "immigrants" and "foreign-born" workers interchangeably; "natives," "native-born" and "US-born" are also interchangeable.

Countries/regions of origin. Where data permit, we disaggregate immigrants by their origins. The groupings we use are:

- *Latin America:* Mexico, Central America, South America, and Spanish-speaking Caribbean countries
- *Africa and West Indies:* Immigrants from Caribbean countries where English and other non-Spanish languages are spoken are grouped together with Africa, primarily because these immigrants are of similar race (mostly black) and have relatively high levels of English proficiency[50]
- *Southeast and East Asia:* including China, Japan, Korea, Southeast Asia, and Pacific countries
- *South Asia and Middle East:* predominantly India, Pakistan, and Middle Eastern countries
- *Europe and others:* including Europe, Central Asia, Canada, Australia, New Zealand, and Oceania.

Recency of arrival. We identify immigrants who came to the United States ten or fewer years before the survey was taken versus those with more than ten years of US experience, using data on the year in which immigrants first came to the United States to live.

Limited English proficient (LEP). LEP workers are those who speak another language at home and speak English "well," "not well," or "not at all."

50 Urban Institute, "The Urban Institute Children of Immigrant Data Tool Technical Appendix" (Washington, DC: Urban Institute, 2009), www2.urban.org/charts/datatool/TechnicalAppendix.pdf.

Bilingual workers. Those who speak another language at home but also speak English "very well."

Focal sectors. We define three of our study sectors — health care, construction, and hospitality — based on industry codes in the ACS and Census data. Industry codes were based on the 1990 Census Bureau industrial classification system, which allows for a consistent long-term classification of industries. Because IT jobs are spread across many different industries, we relied primarily on occupation codes to define this sector. Industry definitions are slightly different — but still comparable — for the BLS projections and the CPS data, because they use a different set of codes. Following are the definitions:

Health care includes offices and/or clinics of physicians, dentists, chiropractors, optometrists, and health practitioners; hospitals; nursing and personal care facilities; health services; and residential care services.

Information technology: Analysts differ in their definitions of the IT sector, and estimates of the size of the sector vary significantly depending on which method is applied.[51] We have chosen to define the sector based on the job titles or occupations that workers hold, regardless of industry.[52] The occupations we examine closely map the definition of IT workers developed by the National Research Council (NRC). The NRC definition includes workers who:[53]

- design, install, upgrade, or maintain and support IT hardware, including computers, switches, routers, and chips with a digital aspect to their operation;
- design, author, adapt, test, implement, maintain, or support software or databases;
- install, configure, support, maintain, or utilize "back-office" systems and applications for use by those who interact directly with these systems for business purposes;
- design, develop, document or train on, or implement computer-based business solutions for clients;
- undertake software-based enterprise resource planning or just-in-time inventory control and systems integration;
- write software code for embedded systems such as hand-held, palm-top devices or equipment controllers;
- develop design tools, simulation, and IT-intensive systems for the delivery of electronic content;
- are responsible for testing, documentation, or configuration management; and
- directly manage IT workers.

Accordingly, our analysis focuses on the following "core" IT occupations:

- computer and information systems managers
- computer software engineers
- computer scientists and systems analysts

51 NRC summarized research conducted between 1998 and 2000 and found that the estimates of the size of the IT workforce ranged from under 2 million to nearly 10 million, depending on the different definitions, datasets, and methods. See NRC, *Building a Workforce for the Information Economy*.

52 Occupation and job titles do not fully convey what workers do on a daily basis, so there are limitations to this method. For example, although they might be considered IT workers, computer graphic illustrators are coded as "painters, sculptors, craft artists, and artist-printmakers" and thus not covered in this report. Another limitation is that occupational codes often cannot capture the rapid pace of change in the IT sector.

53 NRC, *Building a Workforce for the Information Economy*.

- computer programmers
- network systems and data communication analysts
- electrical and electronics engineers
- network and computer systems administrators
- database administrators
- computer hardware engineers
- operations research analysts
- computer support specialists

In addition we examine the following IT-related occupations that involve the manufacture, installation, repair, or operation of the hardware that is critical to the functioning of IT. (These are also included in the NRC definition.) The IT-related occupations are:[54]

- engineering technicians (except drafters)
- computer operators
- computer control programmers and operators
- data-entry keyers

Finally, we also include high-skilled managers in areas such as computer and information systems, marketing and sales, general operations, and human resources — but only those working in a small group of specific IT industries.[55]

Construction: This is a single, aggregated sector that comprises all establishments primarily engaged in the construction of building or engineering projects.[56]

Hospitality: includes the industries of hotel and motel services, lodging places, and eating and drinking places.

Occupations. Occupations are provided by the Standard Occupational Classification (SOC) codes provided in the ACS, Census, and CPS data. For trends in time back to 1990, we employed 1990 Census PUMS occupation codes, which are more aggregated and limited in number than the later SOC codes.

Occupational skill level. We categorized occupations into three major skills groupings: high-, middle-, and low-skilled. To construct these skill-level groupings, we used a detailed 11-level BLS category system that describes the type of postsecondary education or training needed to become fully qualified in a given occupation.[57] The 11 BLS categories and the way we aggregated them into three groups by skill level are as follows:

High-skilled occupations are those that typically require workers to attain the following level of education and training:

1. First professional degree: Completion of this degree usually requires at least three years of full-time academic study beyond a bachelor's degree. The first professional degree is the minimum preparation required for entry into several professions. Physicians and dentists illustrate the

54 This is not an exhaustive list of computer-related occupations but the major ones that were available from the ACS. We did not include smaller computer-related occupations such as technical writers or peripheral equipment operators.
55 Daniel E. Hecker, *High-Technology Employment: A NAICS-Based Update* (Washington, DC: BLS, 2005), www.bls.gov/opub/mlr/2005/07/art6full.pdf.
56 Ideally we would analyze immigrant representation in residential versus commercial construction jobs. But industry codes from ACS do not allow such disaggregation. Other data sources, such as the employment-based Occupational Employment Statistics survey, contain more details, but do not disaggregate workers by nativity.
57 BLS, "Measures of Education and Training."

types of occupations requiring this level of education.

2. Doctoral degree: Completion of a Ph.D. or other doctoral degree usually requires at least three years of full-time academic work beyond the bachelor's degree. Examples include medical scientists and psychologists.

3. Master's degree: Completion of this degree usually requires one or two years of full-time academic study beyond a bachelor's degree. Examples include physician's assistants and most counselors.

4. Bachelor's or higher degree plus work experience: Most occupations in this category are management occupations. All require experience in a related nonmanagement position for which a bachelor's or higher degree usually is required. Examples include computer and information systems managers, medical and health services managers, and construction managers.

5. Bachelor's degree: Completion of this degree generally requires at least four years, but not more than five years, of full-time academic study beyond high school. Examples include social workers, clinical laboratory technicians, and engineers.

Middle-skilled occupations are those that typically require workers to attain the following level of education and training:

6. Associate's degree: Completion of this degree usually requires at least two years of full-time academic study beyond high school. Examples include computer support specialists and dental hygienists.

7. Postsecondary vocational award: These programs lead to a certificate or other award, but not a degree. Some such programs last only a few weeks, while others may last more than a year. Occupations in this category include some that require only the completion of a training program and some that require individuals to pass a licensing exam after completion of the program before they can work. Examples include nursing aides, licensed practical nurses, and heating, air conditioning, and refrigeration mechanics and installers.

8. Work experience in a related occupation: Among the many occupations that require work experience is that of first-line supervisors or managers of service, sales, and production occupations. Examples include first-line supervisors of construction trades, food service managers, and chefs and head cooks.

9. Long-term on-the-job training: More than 12 months of on-the-job training or, alternatively, combined work experience and formal classroom instruction are needed for workers to develop the skills to become fully qualified. This category includes formal or informal apprenticeships that may last up to five years. Long-term on-the-job training also includes intensive occupation-specific, employer-sponsored programs that workers must complete. Examples include carpenters, electricians, and plumbers.

Low-skilled occupations are those that typically require workers to attain the following level of education and training:

10. Moderate-term on-the-job training: Skills needed for a worker to become fully qualified can be acquired during one to 12 months of combined on-the-job experience and informal training. Examples include heavy and tractor-trailer truck drivers, construction laborers, data-entry keyers, and medical secretaries.

11. Short-term on-the-job training: Skills needed for a worker to become fully qualified can be acquired during a short demonstration of job duties or during one month or less of on-the-job experience or instruction. Examples include home health aides, and waiters and waitresses.

We matched the occupation codes in the ACS to the 11 BLS-specified education and training categories, eventually collapsing them into the three skill groups. The matching process required careful assessment of all occupations at the most detailed level. While BLS published education and training measurements for 750 detailed occupations in its 2008-2018 employment projections, the ACS includes only 467 SOC codes for civilian occupations. The BLS and SOC coding systems match for 406 of the 750 BLS occupations. But to assign corresponding skill levels for the remaining 344 occupations, we reviewed them individually. For these 344 occupations, we assigned skill levels manually, using a set of assignment standards based on occupational characteristics, employment size, and workers' average educational attainment. For example, to assign the skill level for "cooks," which in the ACS is a large single occupation with over 2 million workers, we examined characteristics of the separate BLS codes for cooks that require only minimal training — such as those in fast food restaurants, institutions, and cafeterias — versus higher-skilled cooks who work in restaurants and private households. In the end, we assigned cooks to the low-skilled category because of the generally low wages and education levels of most immigrants and natives employed in these occupations.

Skill levels could also be defined based on occupational groups instead of detailed occupations. One study using this method groups all construction occupations together in the middle-skilled category.[58] But when we assign skill levels based on detailed occupations, 42 percent of construction occupations are low-skilled and 45 percent are middle-skilled. Thus, using different methods for defining middle-skilled jobs produces somewhat different results.

Although examining skill levels of detailed occupations might be more precise, there are several limitations to this method of using BLS education and training categories. First, BLS only assigns one category to each occupation to keep the system simple, so the system fails to capture the multiple training and education pathways that enable workers to become fully qualified for the job. There are also problems associated with occupation codes, as some occupations encompass a variety of jobs with varying skill levels and experience requirements that can make a single education and training category imprecise. In assigning skill levels to specific occupations, BLS usually gives educational requirements precedence over work-related training, and thus training and work experience requirements may be omitted from the information included in the coding system.

Finally, we want to be clear that educational attainment data for job holders — as obtained from the Census Bureau data — often does not closely reflect the education or training assignments of a specific occupation. For example, although the BLS training and education category assigned to dental assistants is moderate-term on-the-job training, which we further categorized as a low-skilled occupation, our ACS educational attainment data shows that more than 80 percent of the dental assistants at least have high school or some college degree. There are a variety of reasons for such discrepancy, including ACS respondent or coding errors, as well as contextual reasons such as skill mismatches (i.e. underemployment or up-skilling), individual job choices, or changes in job entry requirements over time.

Median earnings. We calculated the median for annual earnings — including both wage and salary and self-employment income. All of the earning amounts were standardized to 2007 dollars by the Census Bureau in the 2005-2007 data file. Earnings are reported in the ACS for the 12 months leading up to the time of the survey (which can be at any time during the year).

Family-sustaining wage. We define a family-sustaining wage as the amount of annual earnings necessary to sustain a household at 60 percent of median income. Averaging data for 2005 through 2007, median US household income was $50,007, and our family-sustaining wage was $30,004. This

58 Holzer and Lerman, *America's Forgotten Middle-Skill Jobs.*

definition was developed by the Economic Policy Institute (EPI).[59] In 2006, $30,004 was equivalent to 150 percent of the federal poverty level for a family of four ($20,000).[60] Our assumption is that larger families have more earners, and that most four-person families have two earners. A study of family-sustaining wages in Los Angeles calculated that an average wage of $28,000 was required to sustain a family at 250 percent of the federal poverty level, or about $50,000 in family income.[61]

The wage standard we employ has been used for international comparisons and tracks broad economic changes, since it is tied to average income across the economy.[62] This standard is also similar to an alternative poverty threshold developed by the National Academy of Sciences and is just above the threshold for food stamp eligibility but still below that for the National School Lunch Program; Women, Infants and Children; and Medicaid for children in most states.[63] Like the federal poverty level, our family-sustaining wage does not vary geographically and does not take into account state and local differences in cost of living. Unlike EPI's analysis, however, our definition of family-sustaining jobs does not take into account health insurance or other employment benefits, as data on such benefits are unavailable in the ACS.

Were we to employ a different threshold for a family-sustaining wage, it would change the shares of immigrants and natives with earnings above that threshold substantially. However, even with substantial changes in the threshold, middle-skilled immigrants are much more likely than low-skilled immigrants to earn family-sustaining wages. For instance, varying the threshold from $25,000 to $50,000 decreases the share of immigrants earning a family-sustaining wage from 55 to 24 percent (see Table A-2). But the gap between middle- and low-skilled immigrants in the share earning a family-sustaining wage only varies from 31 to 23 percent.

Table A-2. Share of Immigrant and Native Workers Earning Family-Sustaining Wages, by Skill Level of Occupation and Wage Threshold, 2006

	$25,000		$30,000		$50,000	
	Natives	Immigrants	Natives	Immigrants	Natives	Immigrants
All Workers	**67**	**55**	**59**	**46**	**31**	**24**
High-skilled jobs	88	88	83	84	56	62
Middle-skilled jobs	79	69	72	60	39	30
Low-skilled jobs	48	38	38	28	12	7

Source: MPI analysis of ACS PUMS, 2005-2007 pooled data.

59 Austin, "Getting Good Jobs to America's People of Color."

60 US Department of Health and Human Services (HHS), "Prior HHS Poverty Guidelines and Federal Register References," (Washington, DC: HHS, Assistant Secretary for Planning and Evaluation, November 16, 2009), http://aspe.hhs.gov/poverty/figures-fed-reg.shtml.

61 This family-sustaining income level was developed based on a budget for housing, food, health care, child care, transportation, other necessities, and taxes in the Los Angeles metropolitan area in 2006. See Matsunaga and Flaming, "Benchmark for a Family-Sustaining Wage."

62 Wen Hao Chen and Miles Corak, "Child Poverty and Changes in Child Poverty in Rich Countries Since 1990" (Luxembourg Income Study Working Paper Series No. 405, The Graduate Center at the City University of New York, 2005), www.lisproject.org/publications/LISwps/405.pdf.

63 Thesia I. Garner, "Poverty Thresholds for Two-adult-two-child Family Following NAS Recommendations: 1999-2008" (Poverty Measurement Studies and Alternative Measures, US Census Bureau, 2009), www.census.gov/hhes/www/povmeas/web_tab5_povertythres2008.xls.

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