

THE STATE OF THE UNIONS 2014

A Profile of Unionization in Chicago, in Illinois, and in America

April 22, 2014

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Research Report

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EXECUTIVE SUMMARY

Since 2003, unionization has declined in Illinois, in the Chicago region, and in America. There are approximately 116,000 fewer union members in Illinois today than there were in 2003, contributing to the 1.26 million drop in union workers across the nation over that time. Declining union membership has primarily been the result of decreases in male unionization, white non-Latino unionization, and private sector unionization.

Despite the long-term downward trends, however, both the unionization rate and total union membership increased in Illinois last year.

- The unionization rate increased from 14.6 percent in 2012 to 15.7 percent in 2013;
- Union members increased from 800,000 to about 850,000;
- This uptick was driven by increases in unionization of Chicago area workers, female workers, African-American workers, public sector workers, and older workers.

Over half of all public sector workers are unionized in both Illinois and the Chicago metropolitan area (about two-thirds of public sector workers are unionized in the City of Chicago proper). Meanwhile, slightly more than a third of all public sector workers are unionized across the nation. In comparison, one-in-ten Illinois and Chicago area workers in the private sector are union members while less than seven percent of private sector American workers are unionized.

Union membership is influenced by a number of factors. Employment in the utilities industry, construction industry, or public sector raises the chances that a given worker is a union member. African-American workers are also statistically more likely to be union members than their counterparts. On the other hand, high school dropouts, non-citizens, and residents who live in rural communities are less likely to be unionized.

Lastly, labor unions increase individual incomes by lifting hourly wages and by raising the number of hours that employed persons work each week. In Illinois, the usual workweek of union workers is 4.8 hours longer on average than the usual workweek of nonunion employees. Additionally, unions raise worker wages by an average of 21.4 percent (and by a median of 20.3 percent) in Illinois. The state's union wage effect exceeds the national average of 16.7 percent and is the 8th-highest in the nation.

Ultimately, despite the long-term gradual decline in union membership, labor unions continue to play a vital role in the direction of the economy and in the creation of public policy in Illinois.

INTRODUCTION

Throughout modern American history, labor unions have played a significant role in the nation's economy and political process. Unions have fought on behalf of workers for better pay and fringe benefits, worked to increase health and safety conditions in U.S. workplaces, and provided workers with a voice in the direction of the economy and in the creation of public policy. Organized labor has been the principal institution in fostering a middle-class society that protects the dignity of all work. Over the long run, the labor movement has contributed substantially to American families and communities.

The labor movement, however, has endured a gradual decline in both membership and influence. Almost one-in-four American workers (23.0 percent) were members of labor unions in 1980. Just over three decades later, in 2013, only one-in-nine employed persons in America (11.2 percent) are unionized (Hirsch & Macpherson, 2014). Concurrently, as unionization rates have waned, income inequality has soared. The richest 10 percent of American households accrued 49.7 percent of total U.S. income in 2007, up from 34.6 percent in 1980 and even greater than the previous peak of 49.3 percent in 1928 (U.S. Congress Joint Economic Committee, 2010). Declining unionization and polarizing worker incomes are linked: wage dispersion is 25 percent lower in unionized firms than in nonunion workplaces, reducing wage inequality in the national economy by as much as 10 percent (Freeman, 1996). Additionally, declining unionization has been found to be the main cause of income inequality among men while the declining real value of the minimum wage is the primary culprit for women (Gordon & Dew-Becker, 2008; Card, 1998).

Illinois has not been immune to these trends. In addition to declining union membership and rising income inequality, the state also continues to suffer from a weak economy in which wages have been largely stagnant and unemployment spells have been persistent (Manzo & Bruno, 2013). While the worst of the Great Recession appears to be over, much improvement is still needed in the Illinois labor market to restore maximum employment and raise consumer demand.

This Research Report—conducted by researchers at the Illinois Economic Policy Institute, the University of Illinois Labor Education Program, and The University of Chicago School of Social Service Administration—analyzes the course of unionization in Illinois, in the Chicago metropolitan statistical area (MSA), and in the United States from 2003 to 2013. The report is modeled off of *The State of the Unions in 2013: A Profile of Union Membership in Los Angeles, California, and the Nation* by the Institute for Research on Labor and Employment at the University of California, Los Angeles (Adler et al., 2013) and *The State of the Unions 2013: A Profile of Organized Labor in New York City, New York State, and the United States* by the Joseph S. Murphy Institute for Worker Education and Labor Studies at the City University of New York Graduate Center (Milkman & Luce, 2013). The report tracks unionization rates and trends, and investigates union membership across demographic, educational, sectoral, industry, and occupational classifications. The study subsequently evaluates the impact that labor union membership has on a worker's hourly wage in Illinois, in the Chicago MSA, and in America. Finally, the report concludes by recapping key findings.

DATA AND LIMITATIONS

This Research Report exclusively utilizes data from the Current Population Survey Outgoing Rotation Groups (CPS-ORG), which is collected, analyzed, and released by the U.S. Department of Labor Bureau of Labor Statistics (BLS). CPS-ORG data reports individual-level information on 25,000 respondents nationwide each month. The records include data on wages, unionization, hours worked, sector, industry, and occupation, as well as other demographic, geographic, education, and work variables. The data was extracted from the user-friendly Center for Economic and Policy Research Uniform Data Extracts (Center for Economic and Policy Research, 2013).

The 11-year dataset from 2003 to 2013 captures information on 3,523,304 individuals aged 16 to 85 in the United States. These observations include 2,152,088 persons with a job, of whom 230,521 were union members. Survey responses include information from 67,523 employed individuals in Illinois since 2003 and 35,154 employed persons in the Chicago MSA since 2005, the earliest year for which data are available. In 2013, respondents totaled 5,675 in Illinois, 3,848 in the Chicago MSA, and 186,115 nationwide. “Chicago MSA” workers are defined as only those who live in the Illinois component of the Chicago-Naperville-Joliet Metropolitan Statistical Area (i.e., no Indiana or Wisconsin residents are included).

Analytic weights are provided by the Department of Labor to match the sample to the actual U.S. population 16 years of age or greater. These weights adjust the influence of an individual respondent’s answers on a particular outcome to compensate for demographic groups that are either underrepresented or overrepresented compared to the total population. The weights are applied throughout the analysis.

There are limitations to the CPS-ORG dataset. First, the data reports a worker’s state of residence rather than state of employment, so the results may be biased by workers who live in one state but work in another (e.g., living in Illinois but working in Missouri) and vice-versa. Additionally, CPS-ORG data is based on household survey responses, so the potential exists for respondents to be untruthful. Certain individuals such as undocumented workers may also be underreported if they are harder to reach by survey officials.

UNIONIZATION RATES AND TRENDS

Since 2003, unionization has declined in Illinois, the Chicago metropolitan area, and the United States (Figure 1). The total union membership rate was 17.9 percent in Illinois and 12.9 percent nationwide in 2003. Eleven years later, both rates have fallen to 15.7 percent and 11.2 percent, respectively. The Chicago region’s unionization rate has also dipped from 16.9 percent in 2005, the earliest year for which data are available, to 15.6 percent in 2013. The gradual decline in the unionization rate has translated into a decrease in union membership of about 116,000 workers in Illinois since 2003, contributing to the 1,260,000 national decline in union members over that time. Additionally, from 2005 to 2013, the Chicago region experienced an estimated loss of 36,000 union workers (Figure 2).

News for the Illinois labor movement has not been all bad, however. Despite the long-term downward trends, unionization rates and total membership increased in 2013 for both Illinois and the Chicago region (Figure 1). The unionization rate rose in Illinois to 15.7 percent in 2013, up from 14.6 percent in 2012. This upward movement was the result of an estimated 50,000 year-over-year increase in union members throughout the state. Additionally, the statewide increase was driven predominately by improvement in the Chicago metropolitan area, which saw an 80,000-member growth and a 2.2 percentage-point increase in the unionization rate to 15.6 percent. Finally, despite fluctuations in unionization, Illinois’ union membership rate has consistently been above the national average. The 11-year combined Illinois unionization rate was 16.2 percent, 4.2 percentage points higher than the 12.1 percent national rate. On a year-by-year basis, Illinois’ elevation has ranged from 2.4 to 5.2 percentage points higher than the national average (Figure 2).

An ongoing challenge to the Illinois labor movement remains the high rate of unemployment in the state. Unemployment is the result of a surplus of workers compared to available jobs. Since labor supply exceeds the demand for workers, downward pressure is placed on wages and the job security of the currently employed is threatened. The pressures of a weak labor market thus empower employers relative to workers, and as a result unions may be pushed into making concessions.

In Illinois, unemployment has been above 9 percent for the past five years (Figure 3). Initially, the union membership rate actually increased during the Great Recession. Unionization was 16.6 percent in 2008

and 17.5 percent in 2009, up from a 2007 rate of 14.5 percent. The rise, however, was likely because unions protected the jobs of their members while employers cut nonunion and temporary workers from their payrolls. Since the initial bump, the unionization rate has regressed back into decline as high unemployment has incentivized employers to proceed to shed the union workforce.

FIGURE 1: UNIONIZATION RATES AND TOTAL UNION MEMBERSHIP BY REGION, 2003-2013

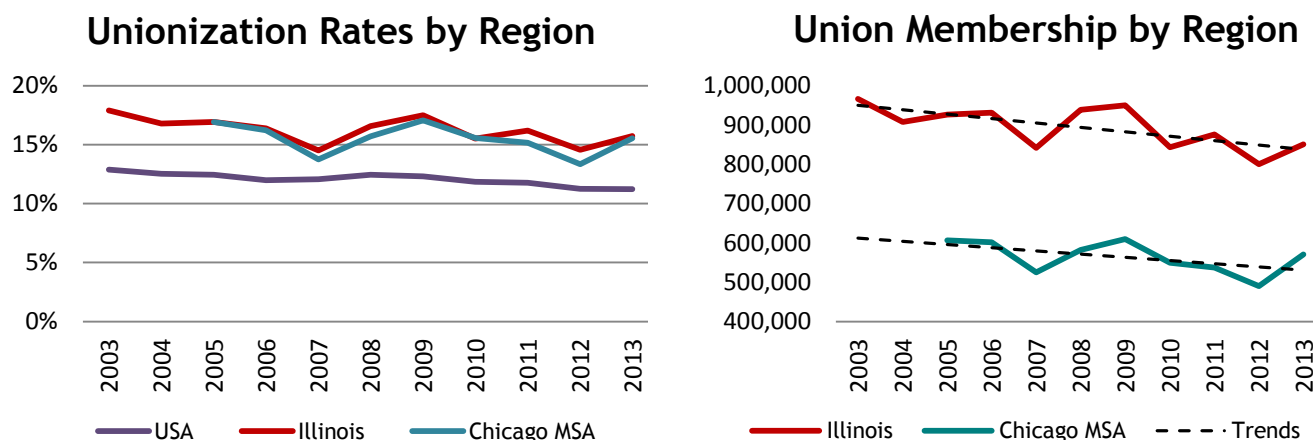
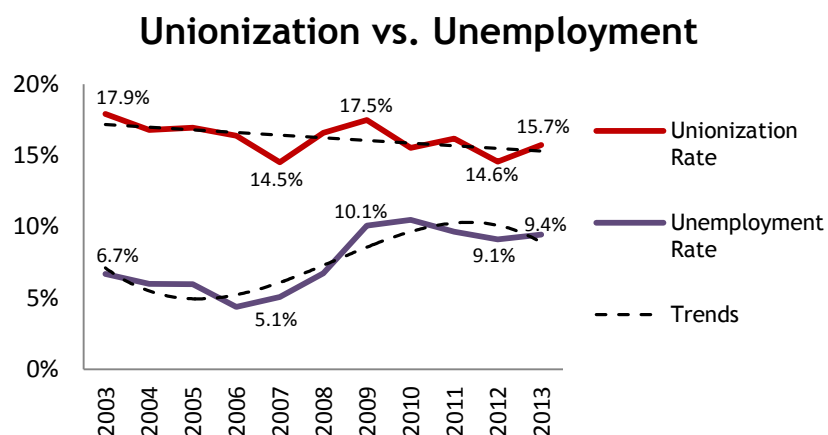


FIGURE 2: TOTAL UNION MEMBERS AND OVERALL UNIONIZATION RATES BY REGION, 2003-2013

| | Illinois | | Chicago MSA* | | USA | |
|--------|-----------|--------|--------------|--------|-------------|--------|
| Year | Members | Rate | Members | Rate | Members | Rate |
| 2003 | 966,861 | 17.91% | | | 15,775,968 | 12.89% |
| 2004 | 908,286 | 16.79% | | | 15,471,602 | 12.52% |
| 2005 | 926,805 | 16.94% | 606,501 | 16.92% | 15,685,387 | 12.46% |
| 2006 | 931,165 | 16.38% | 601,518 | 16.22% | 15,359,108 | 11.98% |
| 2007 | 842,189 | 14.51% | 525,343 | 13.77% | 15,670,352 | 12.08% |
| 2008 | 939,212 | 16.59% | 581,955 | 15.70% | 16,097,535 | 12.44% |
| 2009 | 950,586 | 17.49% | 609,460 | 17.06% | 15,327,280 | 12.31% |
| 2010 | 843,807 | 15.53% | 549,528 | 15.57% | 14,715,061 | 11.86% |
| 2011 | 875,891 | 16.19% | 537,637 | 15.18% | 14,754,673 | 11.78% |
| 2012 | 800,434 | 14.58% | 490,023 | 13.36% | 14,349,358 | 11.25% |
| 2013 | 850,557 | 15.74% | 570,390 | 15.55% | 14,515,755 | 11.24% |
| Totals | 9,835,792 | 16.23% | 5,072,355 | 15.47% | 167,722,080 | 12.07% |

*Due to changes in the definition of metropolitan statistical areas (MSAs), 2005 is the earliest year for which Chicago MSA data are available.

FIGURE 3: ILLINOIS UNIONIZATION RATE VS. ILLINOIS UNEMPLOYMENT RATE, 2003-2013

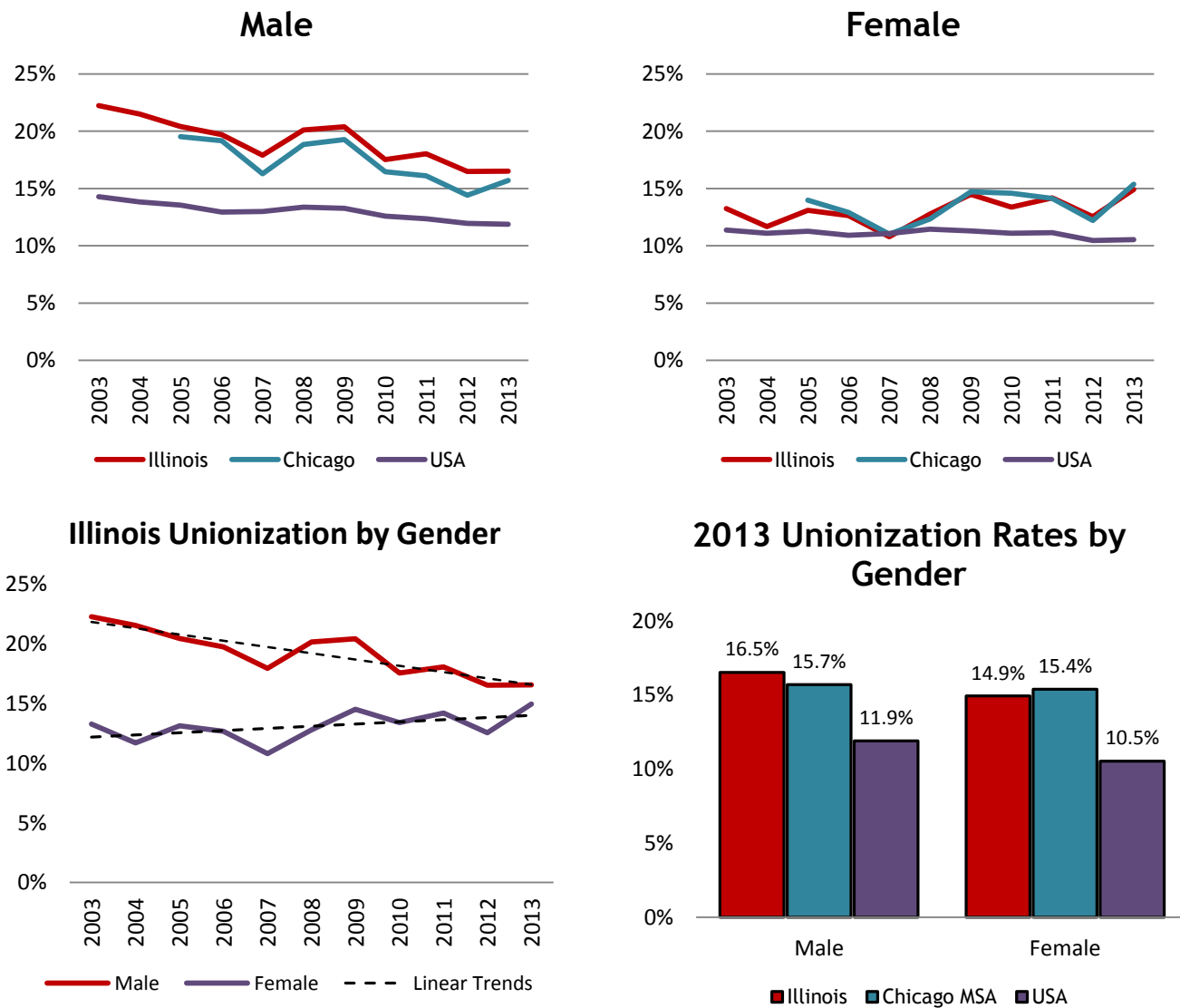


UNIONIZATION BY DEMOGRAPHICS

Falling rates of unionization have reflected steep declines in union membership among men (Figure 4). An estimated 22.2 percent of employed men were unionized in 2003, but the 2013 male unionization rate in Illinois fell to 16.5 percent. The male unionization rate has also decreased in both the Chicago region and the nation as a whole. Since 2005, male union density has dropped by 3.8 percentage points in the Chicago area and by 1.7 percentage points in the United States.

In Illinois, a significant portion of the male drop in unionization has been offset by an increase in the female union membership rate (Figure 4). Indeed, female union density in both Illinois and Chicago was higher in 2013 than at any other point over the past decade. While 13.3 percent of women workers in Illinois were union members in 2003, by the end of 2013 the rate had increased to 14.9 percent. The union membership rate for women is even larger in the Chicago region, at 15.4 percent. Nationwide, however, female union membership has dipped slightly, from 11.4 percent in 2003 to 10.5 percent today.

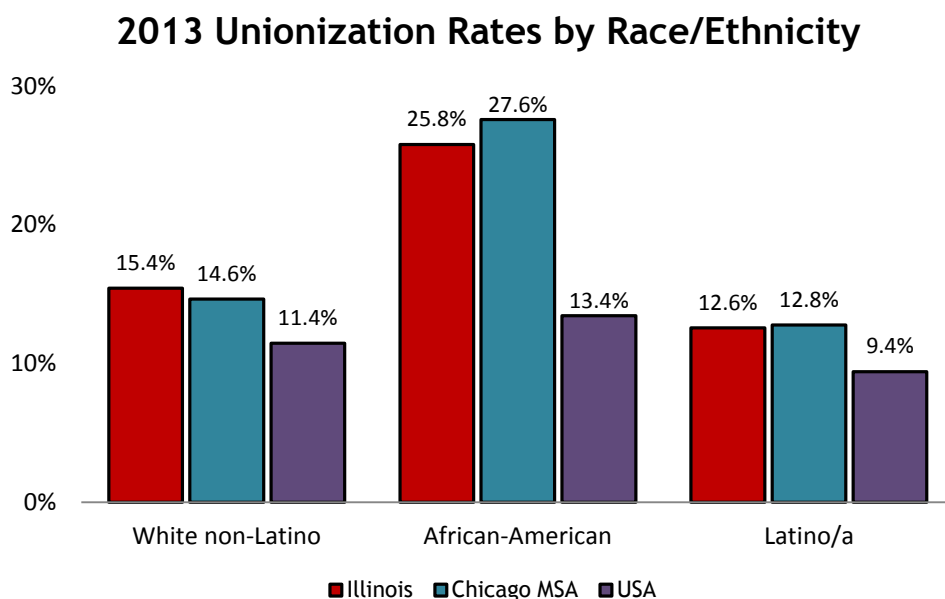
FIGURE 4: GRAPHS OF UNIONIZATION RATES BY GENDER, 2003-2013



The gap between male and female union membership rates is shrinking (Figure 4). In 2013, male union membership exceeded its female equivalent by just 0.3 percentage points in the Chicago area and by 1.6 percentage points in Illinois. But as recently as 2003, the Illinois gap was a full 9.0 percentage points. If current (linearized) trends in unionization continue in the state, the distance between male and female unionization rates will be eliminated by 2017, converging at 14.6 percent.

African-Americans are the most unionized racial or ethnic identity group (Figure 5). The unionization rate for African-American workers is 25.8 percent in Illinois, 27.6 percent in the Chicago MSA, and 13.4 percent in the United States. In comparison, white non-Latino union density is 15.4 percent in the state, 14.6 percent in Illinois' largest metropolitan area, and 11.4 percent across the nation. Respective unionization rates for Latino and Latina workers are currently lower, at 12.6 percent, 12.8 percent, and 9.4 percent.

FIGURE 5: UNIONIZATION RATES BY RACIAL OR ETHNIC IDENTIFICATION BY REGION, 2013



Over time, union membership has fallen for every racial or ethnic identity group except for African-Americans (Figure 6). From 2003 to 2013, unionization in Illinois fell by 2.4 percentage points for white workers, 3.6 percentage points for Latino/a workers, and 0.7 percentage points for other non-black workers. The African-American union membership rate, however, increased by 1.7 percentage points. In the Chicago area, trends have mirrored the overall state labor market except that, over the 11-year period of analysis, African-American union membership rates have generally been higher in the Chicago area than in the rest of the state while white non-Latino rates have been lower in the Chicago MSA. Thus, while white worker unionization increased slightly from 2012 to 2013, the primary reason that union membership jumped in Illinois last year was the boost in African-American unionization, particularly in Chicago. It is worth noting, however, that *national* unionization rates have declined for all racial or ethnic groups, especially for African-Americans. For all groups, unionization has fallen by between 1.3 percentage points (Latino/a workers) and 2.9 percentage points (African-Americans) in the United States since 2003.

Unionization rates are much higher for middle-aged workers than young workers (Figure 7). Regardless of region studied, unionization rates are highest for workers between the ages of 35 and 64 years old. Specifically, the most unionized age groups are those aged 55-64 for the Chicago MSA (20.5 percent) and America (14.4 percent) and workers between the ages of 45 and 54 for Illinois (19.4 percent). For young workers aged 16-24, unionization rates are less than 5 percent for each of Illinois, the Chicago MSA, and the nation.

FIGURE 6: GRAPHS OF UNIONIZATION RATES BY RACIAL OR ETHNIC IDENTIFICATION, 2003-2013

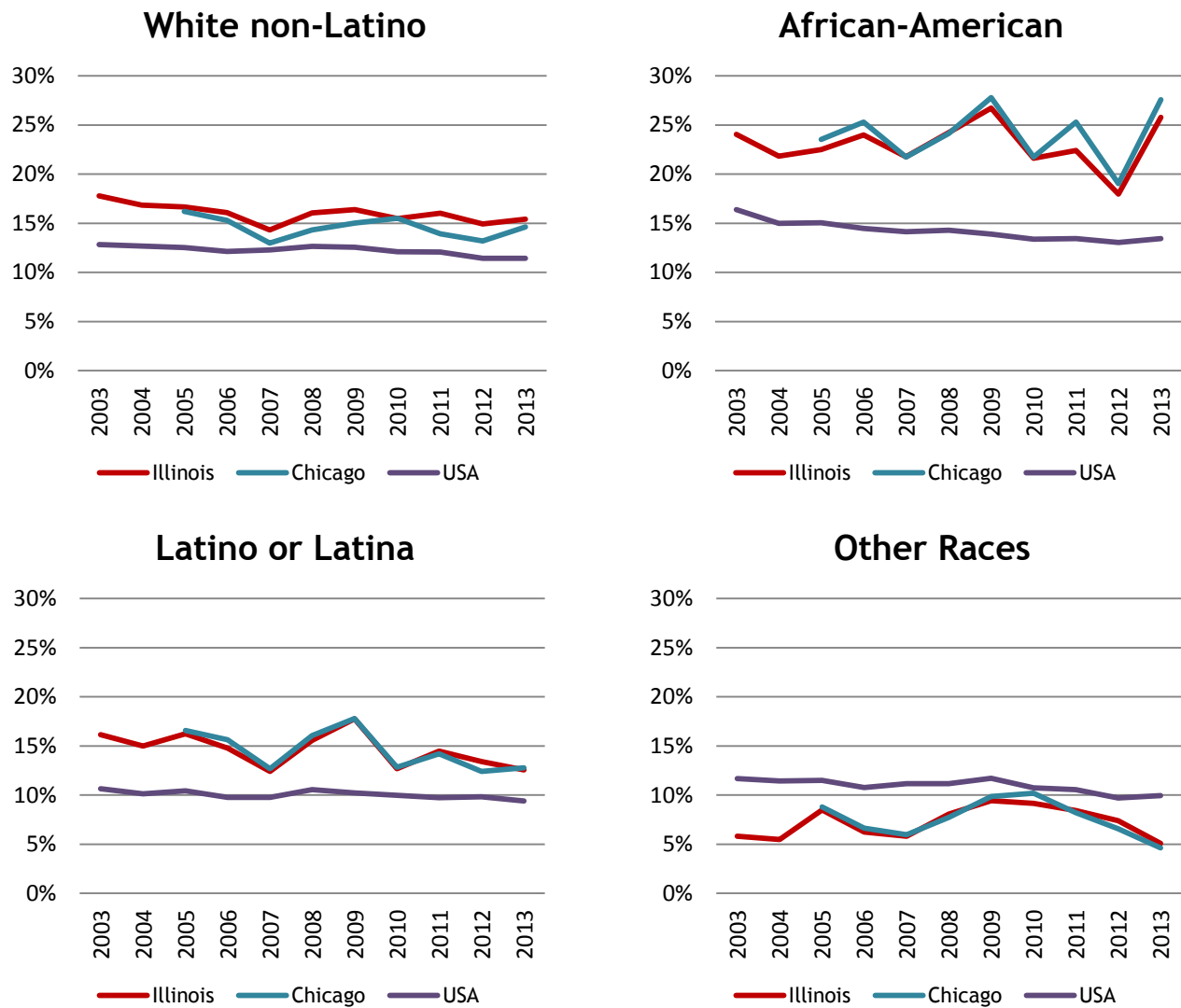


FIGURE 7: UNIONIZATION RATES BY AGE GROUP BY REGION, 2013

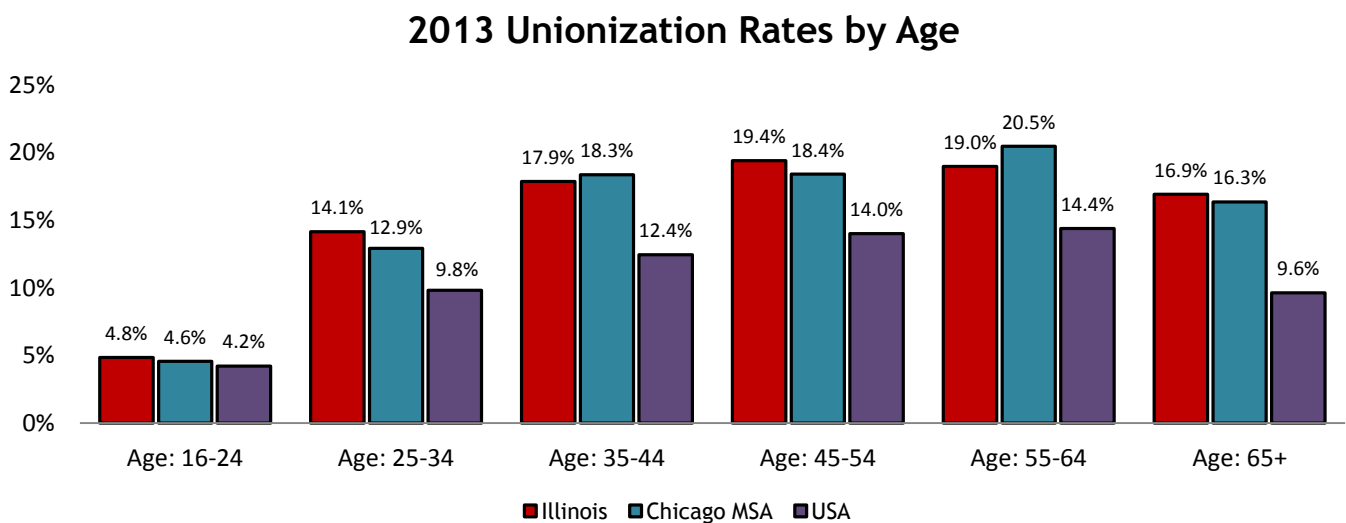


Figure 8 further explores the age disparity between the union workforce and the nonunion workforce in Illinois. As a share of the total union workforce, workers who are between 35 and 64 years old make up 69.6 percent of all union members in the state. By contrast, just 55.2 percent of the state's nonunion workforce is 35 to 64 years old. Meanwhile, young workers under 35 years old comprise 25.5 percent of the union workforce but 39.2 percent of all nonunion workers in Illinois (Figure 8). In addition, in four of the past five years, unionization rates have decreased or remained constant for all age groups in Illinois, except for workers aged 65 years or older. From 2012 to 2013, however, unionization rates in the state have increased for those aged 25-34, 34-44, 45-54, and 65 or older but decreased for those aged 55-64 and for workers who are 25 or younger (Figure 9). Overall, the average age of union workers is about 45 years old and the average age of nonunion workers is 41 years old, regardless of region studied (Figure 10). The findings generally indicate that union organizing of new workers in the labor force has been limited.

FIGURE 8: COMPOSITION OF UNION WORKFORCE AND NONUNION WORKFORCE BY AGE IN ILLINOIS, 2013

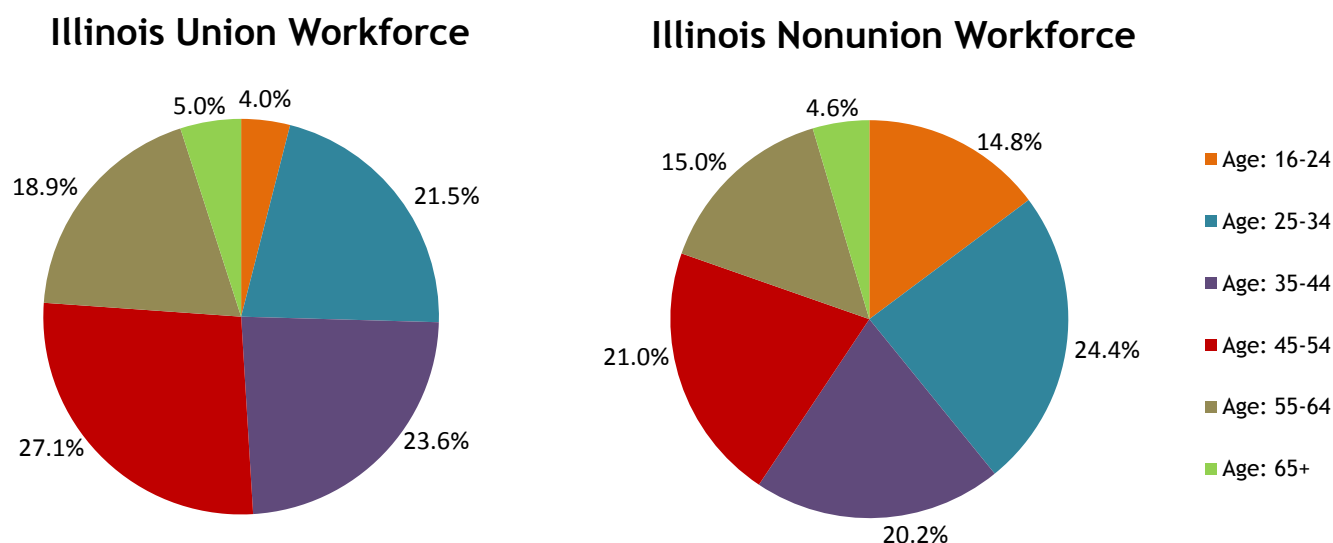


FIGURE 9: ILLINOIS UNIONIZATION RATES BY AGE GROUP, 2009-2013

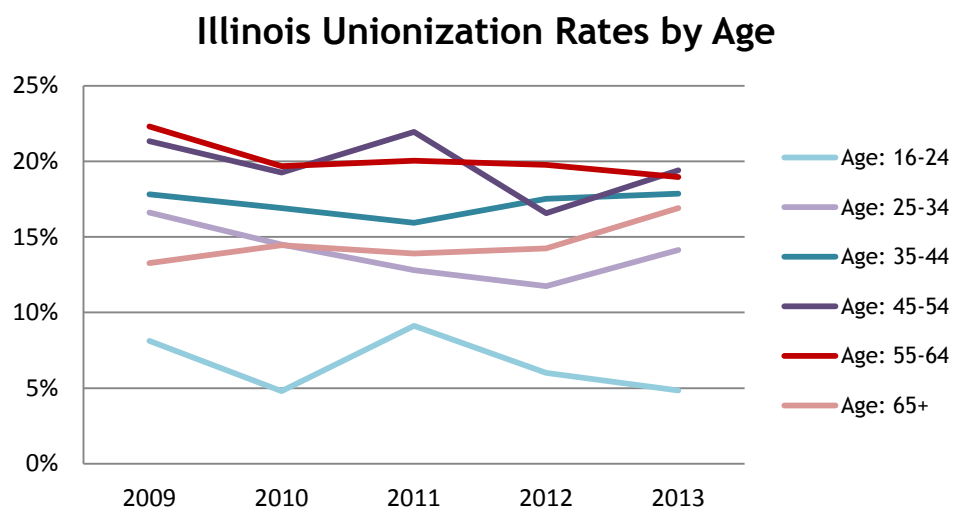


FIGURE 10: AVERAGE AGE OF UNION AND NONUNION WORKERS BY REGION, 2013

| | Illinois | | Chicago MSA | | USA | |
|-------------|----------|-------|-------------|-------|----------|-------|
| Variable | Nonunion | Union | Nonunion | Union | Nonunion | Union |
| Age (Years) | 40.80 | 44.62 | 40.75 | 45.14 | 40.87 | 44.84 |

Union membership varies across other demographic classifications as well (Figure 11). Among the most unionized social groups are war veterans. Almost one-quarter of all employed veterans are unionized in the Chicago area (23.4 percent) and Illinois (23.3 percent). For the United States, approximately 15.4 percent of employed veterans are members of unions. The unionization rate for married workers is also above the overall average for each of the Chicago MSA, Illinois, and the United States. In addition, foreign-born immigrant workers experience lower union membership rates than their respective regional averages, while native-born and naturalized citizens are more likely to be union members.

FIGURE 11: UNIONIZATION RATES OF SELECT DEMOGRAPHIC VARIABLES BY REGION, 2013

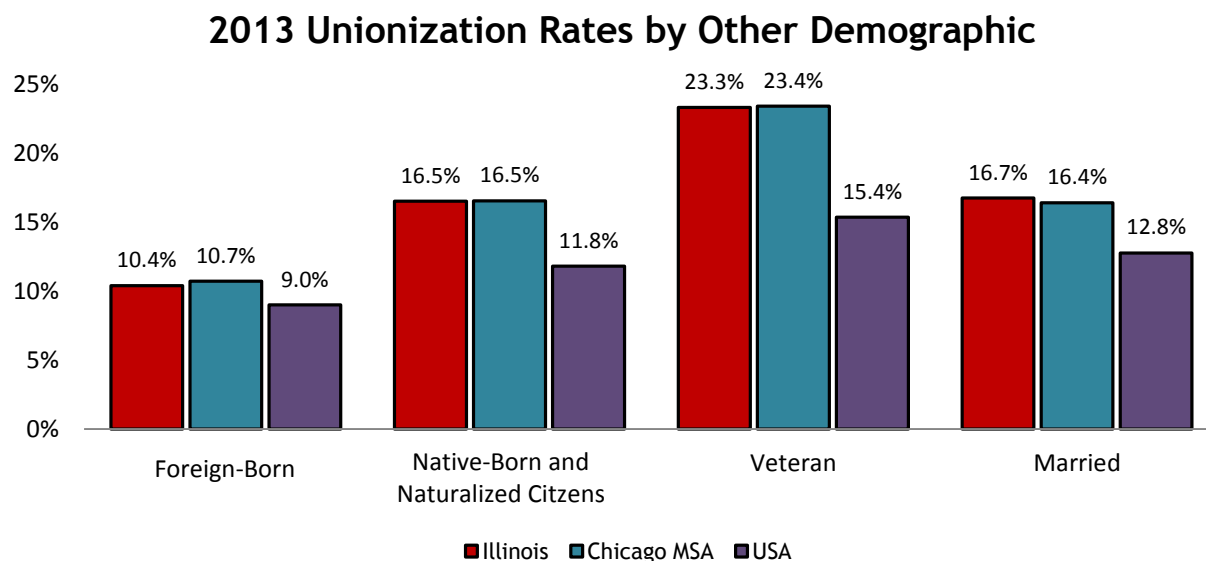
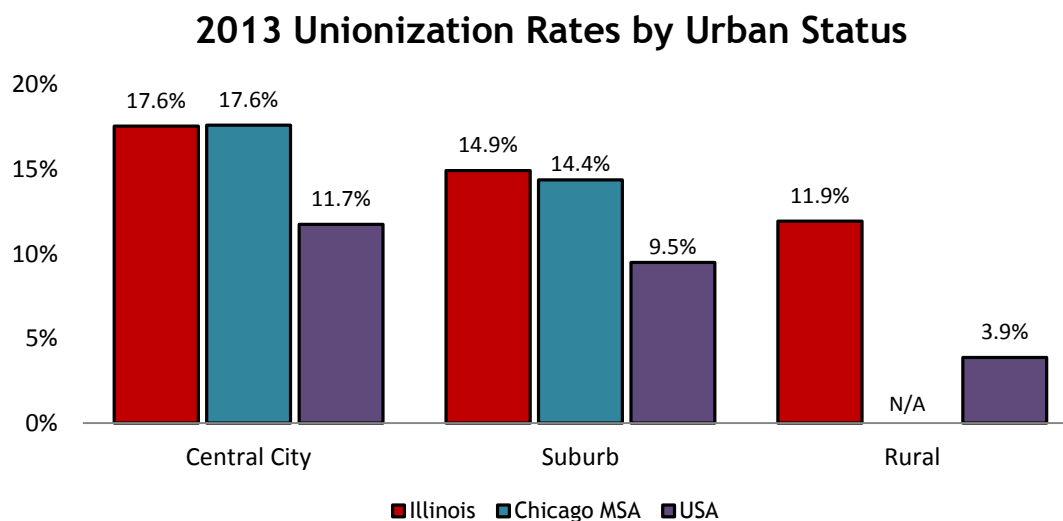


Figure 12 reveals that geographic distance from an urban core also plays a factor in union membership. Workers who reside in the central city of a metropolitan area are more likely to be unionized than those who live in suburbs, who in turn are more likely to be union members than people living in rural communities. In Illinois, 17.6 percent of urban workers are members of unions, 14.9 percent of suburban workers are unionized, and 11.9 percent of rural workers belong to a union. The comparable figures for the United States are respectively 11.7 percent, 9.5 percent, and just 3.9 percent.

FIGURE 12: UNIONIZATION RATES BY URBAN STATUS BY REGION, 2013



UNIONIZATION BY EDUCATION

Workers with master's degrees are the most unionized educational group in America (Figure 13). At 22.9 percent, unionization among master's degree holders in Illinois towers over the rates of all other educational attainment groups in each region studied. In the Chicago region, in Illinois, and in the United States, the second most unionized are those with associate's degrees. The two least unionized groups are at the educational extremes: In Illinois, only 9.1 percent of workers without a high school degree and 8.7 percent of workers with a professional (J.D., M.D., etc.) or doctorate degree are union members. For professional and doctorate degree holders, the data disclose a rare occurrence in which employed workers nationwide have a higher union membership rate than their counterparts in Illinois and in the Chicago region. Finally, among workers who are still in school, the unionization rate is about one-fourth or one-third as large for those enrolled full-time as the rate for part-time students. In Illinois, for example, the unionization rate is 16.8 percent for part-time students but 4.7 percent for full-time students (28.0 percent of the part-time rate).

FIGURE 13: UNIONIZATION RATES BY EDUCATIONAL ATTAINMENT OR STATUS BY REGION, 2013

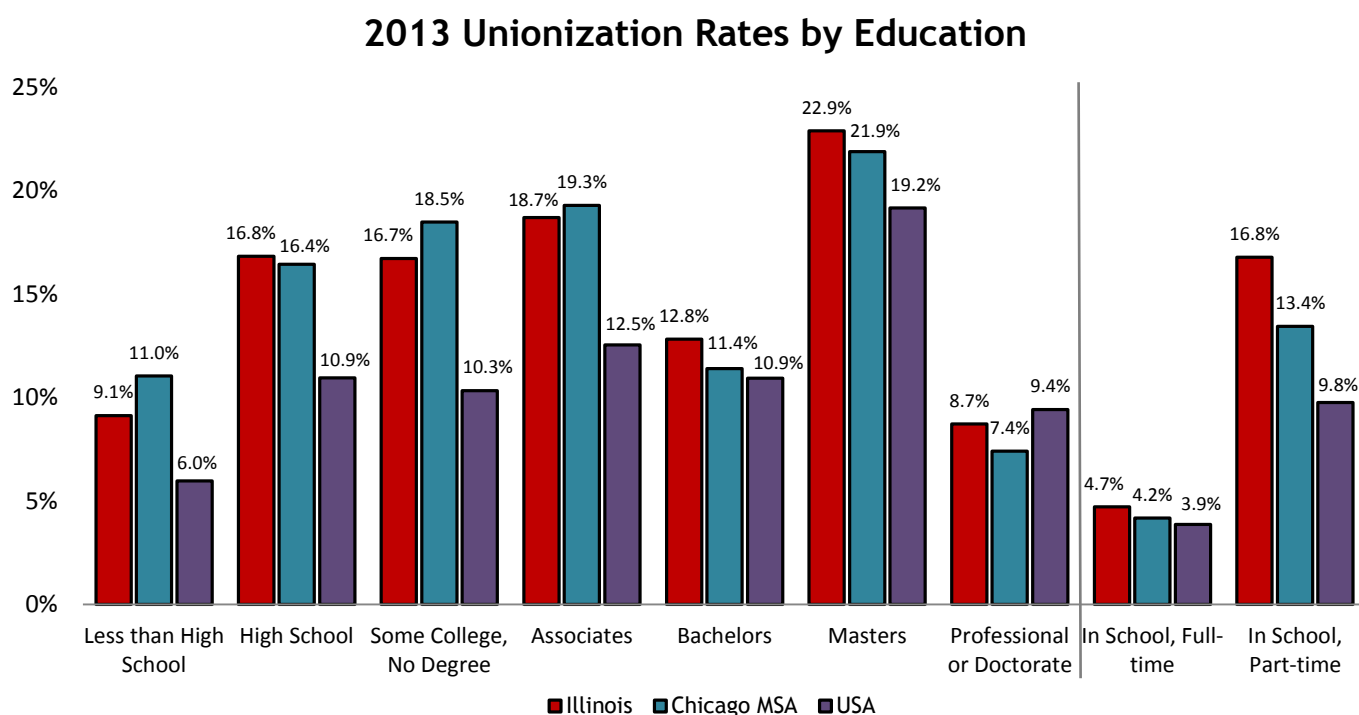


Figure 14 translates the data into breakdowns of the union workforce and nonunion workforce. Despite lower unionization rates, pluralities of both union and nonunion workers have either a high school degree equivalent or a bachelor's degree. As expected, master's degree holders comprise a larger share of the union workforce than the nonunion workforce; however, only 15.1 percent of Illinois and U.S. union workers and 17.8 percent of Chicago MSA union workers have a master's degree.

Over the past five years, unionization rates have fallen for almost all educational groups (Figure 15). To ensure statistical significance, Figure 15 compares the two-year moving averages of union membership rates of educational attainment groups by region for 2008-2009 and 2012-2013. Across the seven educational classifications in all three regions, the union membership rate has declined in all but one pairing: Workers in the Chicago metropolitan area with an associate's degree (a 1.8 percentage point increase). Uniformly across region, the largest declines in unionization were for master's degree earners. This is likely the result of cuts to government agencies and school systems, which disproportionately employ workers with master's degrees.

FIGURE 14: COMPOSITION OF UNION AND NONUNION WORKFORCE BY EDUCATION BY REGION, 2013

| Variable | Illinois | | Chicago MSA | | USA | |
|---------------------------|-----------|---------|-------------|---------|-------------|------------|
| | Nonunion | Union | Nonunion | Union | Nonunion | Union |
| Less than High School | 8.2% | 4.4% | 8.6% | 5.7% | 9.4% | 4.7% |
| High School | 24.2% | 26.1% | 21.7% | 23.1% | 27.1% | 26.2% |
| Some College, No Degree | 19.4% | 20.8% | 17.7% | 21.8% | 19.5% | 17.7% |
| Associates | 8.8% | 10.9% | 7.2% | 9.5% | 10.6% | 12.0% |
| Bachelors | 26.5% | 20.9% | 29.2% | 20.4% | 22.5% | 21.8% |
| Masters | 9.5% | 15.1% | 11.6% | 17.8% | 7.9% | 15.1% |
| Professional or Doctorate | 3.5% | 1.8% | 4.0% | 1.8% | 3.0% | 2.5% |
| Sample Size | 4,310 | 817 | 2,943 | 546 | 145,053 | 18,775 |
| Employed Population | 4,520,869 | 850,557 | 3,079,842 | 570,390 | 113,120,437 | 14,515,753 |

FIGURE 15: CHANGE IN UNIONIZATION RATES BY EDUCATION, TWO-YEAR MOVING AVERAGES, 2008-2013

| Variable | Illinois | | | Chicago MSA | | | USA | | |
|-------------------------|----------|---------|--------|-------------|---------|--------|---------|---------|--------|
| | 2008-09 | 2012-13 | Change | 2008-09 | 2012-13 | Change | 2008-09 | 2012-13 | Change |
| Less than High School | 11.6% | 8.1% | -3.5% | 12.9% | 9.5% | -3.4% | 6.8% | 5.8% | -1.0% |
| High School | 18.2% | 17.2% | -1.1% | 17.6% | 16.9% | -0.6% | 12.1% | 11.0% | -1.1% |
| Some College, No Degree | 16.8% | 15.3% | -1.5% | 18.0% | 15.0% | -3.0% | 11.4% | 10.3% | -1.1% |
| Associates | 19.5% | 17.4% | -2.1% | 16.8% | 18.6% | 1.8% | 14.1% | 12.6% | -1.5% |
| Bachelors | 14.6% | 12.5% | -2.0% | 13.0% | 10.7% | -2.3% | 12.4% | 10.9% | -1.5% |
| Masters | 26.8% | 21.9% | -4.9% | 24.5% | 20.9% | -3.6% | 21.5% | 19.4% | -2.1% |
| Professional/Doctorate | 8.1% | 7.8% | -0.3% | 8.5% | 6.5% | -2.0% | 10.1% | 9.3% | -0.8% |

UNIONIZATION BY SECTOR, INDUSTRY, AND OCCUPATION

Unionization rates are significantly higher for public sector workers (Figure 16). Over half of all public sector workers are unionized in both Illinois (52.3 percent) and the Chicago region (55.1 percent) and slightly over one-third are union members nationwide (35.3 percent). In comparison, just one-in-ten private sector workers is now a union member in both Illinois (10.0 percent) and the Chicago MSA (9.9 percent) and less than seven percent of the private sector is unionized in America (6.7 percent). Furthermore, though not shown graphically, union membership rates for the City of Chicago proper are 10.8 percent for private sector workers and 64.1 percent for public sector workers, based on results from a weighted sample size of 1,237 Chicago workers.

Across all regions studied, the most unionized public sector group is local government employees, with almost six-in-ten workers belonging to a union in Illinois (56.6 percent) and the Chicago MSA (59.0 percent). State government commands the second-highest unionization rate among workers in the three levels of American government. Among public sector workers, the unionization rate is lowest for federal government employees, but federal government union membership rates are still about four times as high as the private sector workforce, ranging from 26.5 percent (in America) to 41.3 percent (in the Chicago area).

Overall, almost half of all union members now work in the public sector (Figure 17). Of the unionized workforce, public sector workers comprise 45.2 percent in Illinois, 49.6 percent in the Chicago area, and 44.2 percent in the United States. By contrast, public sector workers are just 7.5 percent of all nonunion workers in Illinois, 11.1 percent of all nonunion workers in the Chicago MSA, and 6.5 percent of the nonunion workforce across America. The largest component of the public sector workforce, unsurprisingly, is the local government bloc of employees.

FIGURE 16: UNIONIZATION RATES BY SECTOR OR LEVEL OF GOVERNMENT BY REGION, 2013

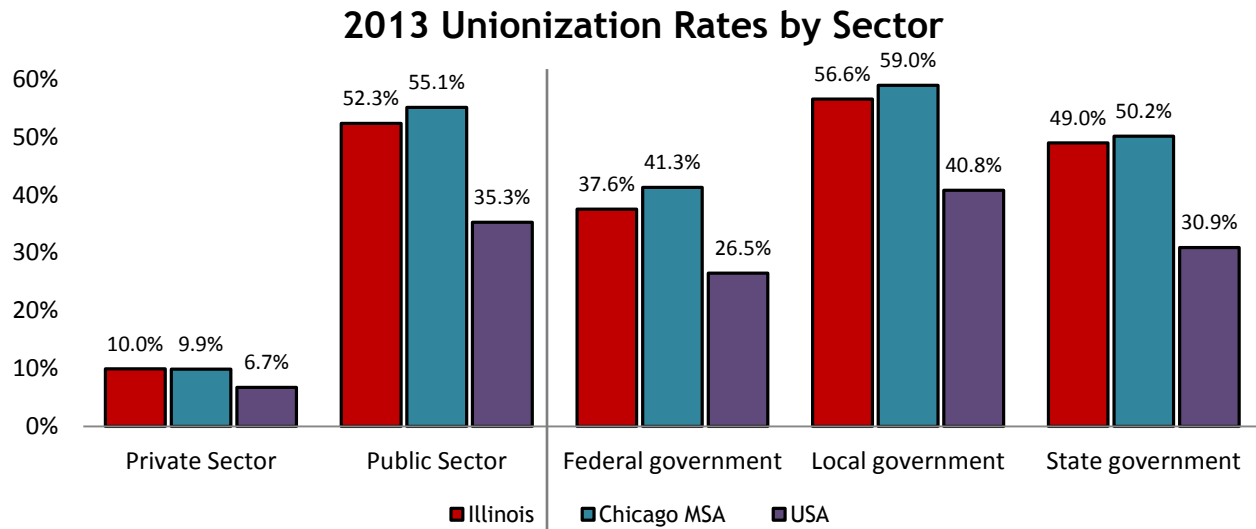


FIGURE 17: PUBLIC SECTOR AS A SHARE OF UNION AND NONUNION WORKFORCES BY REGION, 2013

| Variable | Illinois | | Chicago MSA | | USA | |
|---------------|----------|---------|-------------|---------|----------|---------|
| | Nonunion | Union | Nonunion | Union | Nonunion | Union |
| Public Sector | 7.5% | 45.2% | 11.1% | 49.6% | 6.5% | 44.2% |
| • Federal | • 1.2% | • 3.9% | • 1.2% | • 4.7% | • 2.1% | • 6.4% |
| • Local | • 4.3% | • 30.3% | • 4.2% | • 33.4% | • 5.2% | • 29.7% |
| • State | • 2.1% | • 11.0% | • 1.1% | • 6.1% | • 3.7% | • 13.5% |

Public sector unionization in Illinois has actually increased over time (Figure 18). While private sector unionization has gradually decreased in Illinois, the Chicago metropolitan area, and the United States, public sector union membership has experienced gains in Illinois and in the Chicago area (nationwide, public sector unionization has marginally declined). In Illinois, 2003 union membership rates were 49.8 percent for public sector workers and 12.9 percent for private sector workers. The rates experienced a trough in 2007, at 44.2 percent and 9.7 percent, respectively, before rebounding in 2009. Today, the union membership rate for private sector workers is 2.9 percentage points lower than it was in 2003 but 2.5 percentage points higher for public sector workers.

FIGURE 18: UNIONIZATION RATES BY SECTOR BY REGION, 2003 TO 2013

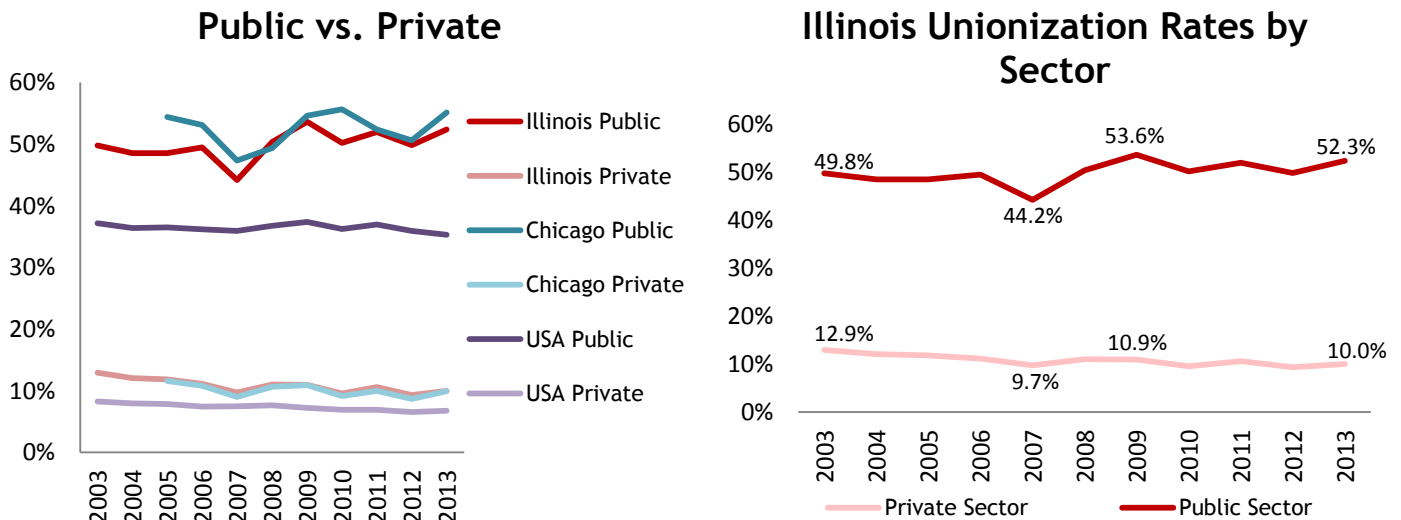
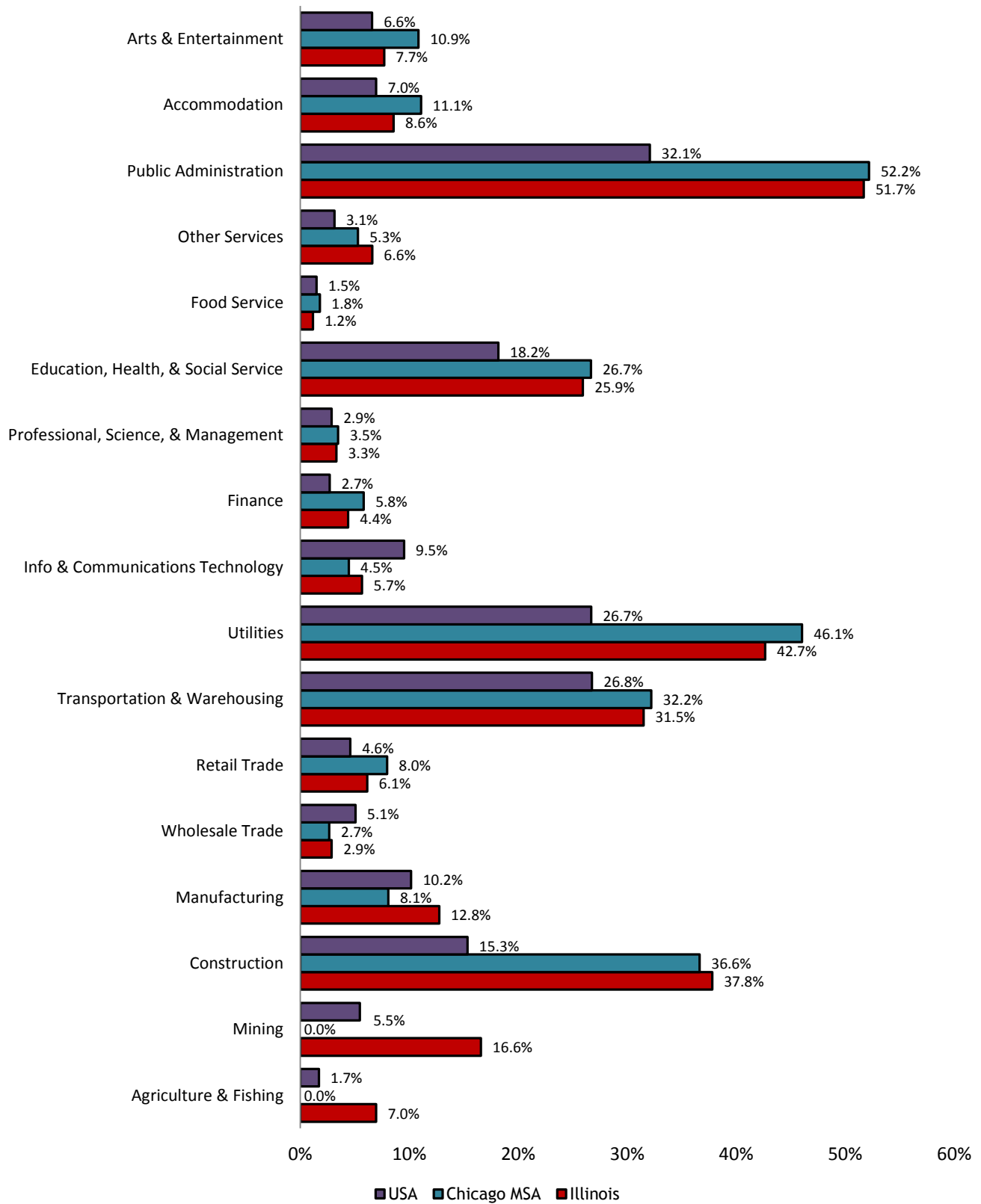


FIGURE 19: UNIONIZATION RATES BY INDUSTRY BY REGION, 2013

2013 Unionization Rates by Industry



Union membership varies significantly by industry of employment (Figure 19). The top five industries by unionization rates are public administration; utilities; construction; transportation and warehousing; and the combined education, health, and social services industry. The national manufacturing workforce, associated historically as a leader in industrial unionization, is now only 10.2 percent organized, compared to 8.1 percent in the Chicago region and 12.8 percent in Illinois. The least-unionized industries generally are food service; the combined professional, science, and management industry; wholesale trade; finance; and the aggregated agriculture, fishing, and hunting sector.

Figures 20 and 21 present industry breakdowns of total union membership in Illinois compared to total employment in the state. In Figure 20, industries are organized in descending order by unionization rate and weighted estimates are rounded to the nearest thousand. The top five industries with the most union members in Illinois are education-health-social services (325,000 members), public administration (120,000 members), construction (89,000 members), manufacturing (86,000 members), and retail trade (39,000 members) (Figure 20). Together, union members from these five industries account for 87.1 percent of all union workers in Illinois (Figure 21). For more information, the Appendix includes profiles of unionization for these five largest Illinois industries by union membership.

One cautionary note must be mentioned, however. While the total sample included 5,675 respondents of persons living in Illinois who were employed (4,872 of whom offered their industry of employment), cutting the data into industry-level investigations results in relatively small sample sizes. Other than the large education-health-social sciences industry, the statistics in Figure 20 are simply *estimates*. Nevertheless, they are informative in that they shed light on the state's union membership and provide, at the very least, general parameters on the composition of the union workforce.

FIGURE 20: ILLINOIS INDUSTRY UNIONIZATION RATES, EMPLOYMENT, AND UNION MEMBERS, 2013

| Illinois 2013 | Unionization Rate | Total Employment | Total Union Members | Total Sample |
|---|----------------------|---------------------|------------------------|-----------------|
| <i>Public Administration</i> | 51.71% | 232,000 | 120,000 | 224 |
| <i>Construction</i> | 37.81% | 234,000 | 89,000 | 222 |
| <i>Education, Health, & Social Sciences</i> | 25.94% | 1,252,000 | 325,000 | 1,211 |
| <i>Manufacturing</i> | 12.76% | 672,000 | 86,000 | 647 |
| <i>Accommodation</i> | 8.57% | 60,000 | 5,000 | 56 |
| <i>Arts & Entertainment</i> | 7.70% | 85,000 | 7,000 | 82 |
| <i>Other Services</i> | 6.60% | 241,000 | 16,000 | 229 |
| <i>Retail Trade</i> | 6.14% | 627,000 | 39,000 | 589 |
| <i>Finance</i> | 4.40% | 400,000 | 18,000 | 382 |
| <i>Professional, Science, & Management</i> | 3.32% | 603,000 | 20,000 | 577 |
| <i>Food Service</i> | 1.17% | 365,000 | 4,000 | 336 |
| <i>All Other Industries</i> | 8.70% | 329,000 | 29,000 | 317 |

Lastly, Figure 22 depicts unionization rates by occupation. Across all regions, the five most unionized occupation groups are protective service jobs such as police officers and firefighters (53.7 percent in Illinois); education, training, and library occupations such as teachers (51.1 percent in Illinois); construction occupations such as carpenters and operating engineers (48.9 percent in Illinois); transportation and moving jobs such as public transit workers and truck drivers (25.6 percent in Illinois); and community and social service occupations such as community health workers and social workers (22.4 percent in Illinois). Nevertheless, compared to the nation, unionization rates in these five occupations are significantly higher in Illinois. Union membership in the construction and education-training-library occupations, as examples, are respectively 29.1 percentage points and 15.8 percentage points higher in Illinois than the United States average. The five least-unionized occupations, regardless of region, are sales; computer and math; management; legal; and business and financial jobs.

FIGURE 21: COMPOSITION OF ILLINOIS UNION WORKFORCE BY INDUSTRY, 2013

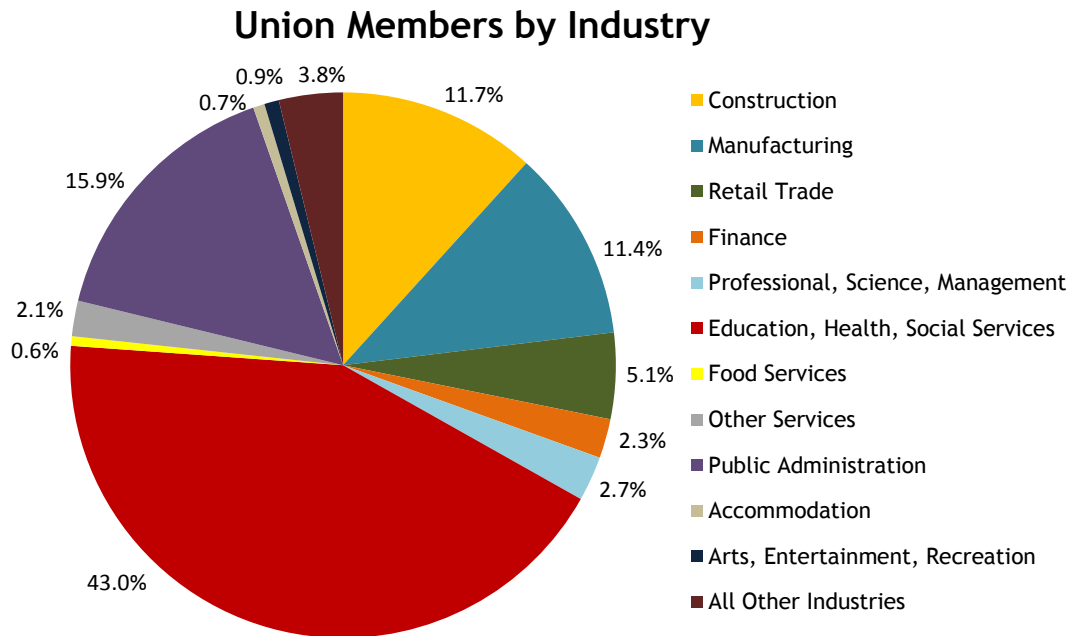


FIGURE 22: UNIONIZATION RATES BY OCCUPATION BY REGION, 2013

| Occupation 2013 | Illinois | Chicago MSA | USA |
|-------------------------------------|----------|-------------|-------|
| Management | 4.2% | 3.7% | 4.1% |
| Business & Financial | 6.9% | 8.1% | 5.5% |
| Computer & Math | 2.6% | 1.9% | 4.3% |
| Architecture & Engineering | 10.6% | 9.9% | 7.3% |
| Life, Physical, & Social Sciences | 4.9% | 3.5% | 10.0% |
| Community & Social Service | 22.4% | 26.3% | 16.0% |
| Legal | 4.0% | 5.1% | 5.3% |
| Education, Training, & Library | 51.1% | 50.2% | 35.3% |
| Arts, Entertainment, Sports & Media | 7.2% | 8.0% | 5.9% |
| Health Practitioner | 12.8% | 13.5% | 11.9% |
| Health Support | 18.0% | 22.1% | 9.3% |
| Protective Service | 53.7% | 54.6% | 35.4% |
| Building & Grounds Maintenance | 14.8% | 17.5% | 10.3% |
| Food Preparation & Service | 3.6% | 3.7% | 4.2% |
| Personal Care | 11.2% | 9.4% | 6.0% |
| Sales | 2.9% | 3.7% | 2.9% |
| Office Administrative Support | 12.2% | 12.5% | 9.4% |
| Construction | 48.9% | 45.6% | 19.8% |
| Installation, Maintenance, & Repair | 18.5% | 22.7% | 16.4% |
| Production | 18.9% | 14.6% | 13.4% |
| Transportation and Moving | 25.6% | 27.2% | 16.6% |

PREDICTING UNION MEMBERSHIP IN ILLINOIS

An advanced analytic model is developed to predict the chances that any given worker is a union member in Illinois, using 2013 data. The model, which is detailed in the Table A of the Appendix, reports how statistically significant variables increase or decrease one's probability of being a union member. The model does not allow the application of weights to match the sample to the actual Illinois population, but includes data on 2,166 Illinois workers. Given that Illinois had an estimated 5.40 million workers in 2013, the sample size would yield a normal 2.11 percent margin of error in a standard survey report.

Many factors increase the likelihood that an employed person is a union member in Illinois. Employment in the utilities industry, the largest contributor to an individual's chances of being a union member, raises the probability by 30.9 percentage points on average. Local, state, and federal government employment respectively increase the union probability by averages of 17.5, 15.5, and 15.1 percentage points. Employment as a construction *occupation* worker (e.g., as a carpenter, an operating engineer, a pipefitter, an electrician, a painter, etc.) lifts the likelihood that a worker is a union member by 13.9 percentage points. There is also suggestive evidence that working in the construction *industry* (which would include, for example, lawyers, architects, and administrative workers in contractor offices) adds 10.4 percentage points to the chances of being a union member and that protective service occupations increase the chances of union membership by 9.8 percentage points. Thus, employment growth in the public sector or in construction and utilities (through infrastructure investment) would likely increase unionization.

FIGURE 23: LOGISTIC REGRESSION ON PROBABILITY OF BEING A UNION MEMBER, 2013

| Probability of Union Membership | Illinois Mean | |
|---------------------------------------|--------------------|-------------|
| <u>Predictor</u> | <u>Coefficient</u> | <u>Sig.</u> |
| <i>Industry: Utilities</i> | 30.90% | ** |
| <i>Local government</i> | 17.49% | ** |
| <i>State government</i> | 15.48% | ** |
| <i>Federal government</i> | 15.07% | ** |
| <i>Occupation: Construction</i> | 13.90% | ** |
| <i>African-American</i> | 12.18% | ** |
| <i>Industry: Construction</i> | 10.40% | * |
| <i>Occupation: Protective service</i> | 9.81% | * |
| <i>Citizen</i> | 9.20% | ** |
| <i>Age</i> | 0.54% | * |
| <i>Usual hours worked</i> | 0.41% | ** |
| <i>Less than high school</i> | -6.00% | ** |
| <i>Rural</i> | -7.95% | ** |
| <i>Constant</i> | 14.13% | ** |
| <i>Observations</i> | 2,166 | |

Two asterisks (**) indicate significance at the 5-percent level. One asterisk (*) indicates significance at the 10-percent level. Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2013. Only statistically significant variables are displayed in the figure. For more, see the Appendix.

Beyond sector, industry, and occupation influencers, a few factors contribute positively toward the chances that a given worker in Illinois is unionized. First, African-American workers are 12.2 percentage points more likely, on average, to be union members than all other racial or ethnic groups. In addition, U.S. citizenship (or naturalization) increases the probability of being a union member by 9.2 percentage points. Every additional hour that a person usually works during a week adds 0.4 percentage points to the likelihood, meaning that a full-time worker who usually works 40 hours per week is 8.2 percentage

points more likely to be a union member than a part-time employee who usually works 20 hours in the same job. The only educational attainment variable which statistically significantly impacts union membership is having less than a high school degree: high school dropouts are 6.0 percentage points *less* likely to be union members than the rest of the Illinois workforce. Decreasing the high school dropout rate may thus have a positive impact on union membership. Finally, residence in rural Illinois reduces an individual's union membership probability by 8.0 percentage points on average compared to urban and suburban workers.

UNION WAGES

Unionized workers typically earn substantially more than their nonunion counterparts (Figure 24). Figure 24 graphically illustrates the difference between the average union wage and the average nonunion wage in Illinois, the Chicago MSA, and the United States by both percentage benefit and actual per-hour dollar benefit. The results do not control for other factors which may increase a worker's wages (e.g., education, occupation, industry, age, etc.). The raw averages show that, regardless of geography and time, union membership has been positively correlated with increased worker wages. Nationwide, union membership continues to raise worker wages by over \$4.00 per hour, or by about 20 percent. The gap between union and nonunion wages appears to be smaller in Illinois and even less impactful in the Chicago metropolitan region. But the differences have rebounded significantly from 2011 lows: up to a \$3.72 hourly benefit (16.5 percent) in Illinois and a \$2.62 hourly benefit (10.9 percent) in the Chicago region in 2013 (Figure 25). Additionally, the average union worker works more hours than the average nonunion worker. Union workers usually work an average of 37.9 hours each week in Illinois, 38.0 hours each week in the Chicago area, and 37.8 hours each week in America. By contrast, nonunion employees usually work an average of 33.0 hours in Illinois, 34.3 hours in the Chicago region, and 33.0 hours in the United States (Figure 25). Thus, unions raise individual incomes both by lifting wages *per hour* and by increasing the number of *hours* that employed persons actually work each week.

FIGURE 24: UNION WAGE DIFFERENCES BY REGION, PERCENTAGE AND DOLLAR VALUES, 2003 TO 2013

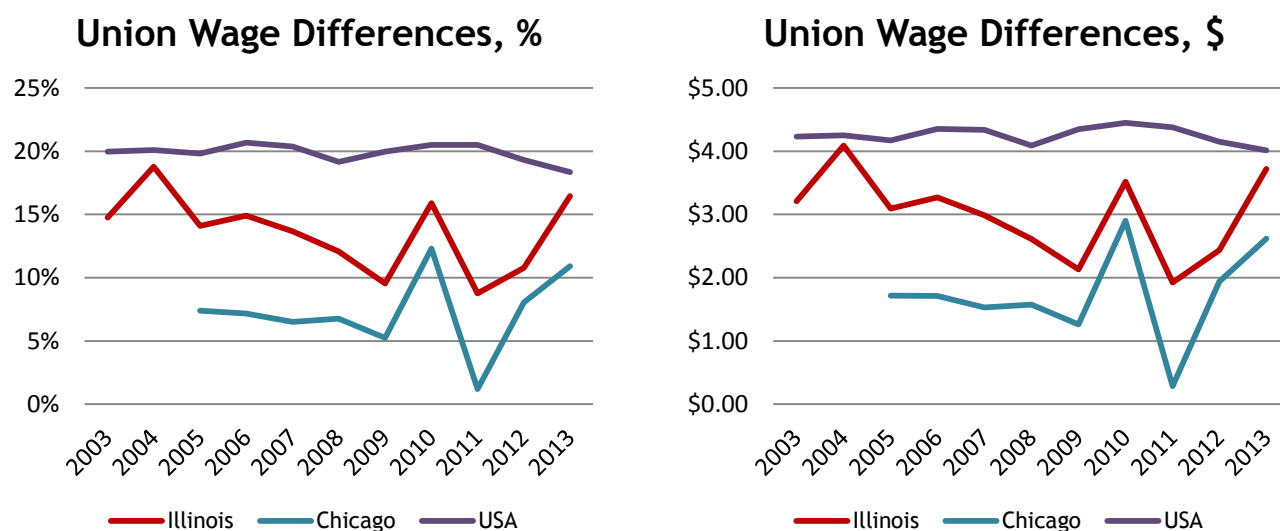


FIGURE 25: WAGES AND USUAL HOURS WORKED OF UNION AND NONUNION WORKERS BY REGION, 2013

| | Illinois | | Chicago MSA | | USA | |
|----------------------|----------|---------|-------------|---------|----------|---------|
| Variable | Nonunion | Union | Nonunion | Union | Nonunion | Union |
| Wage | \$22.61 | \$26.33 | \$23.95 | \$26.57 | \$21.88 | \$25.87 |
| Union Difference, % | | 16.46% | | 10.92% | | 18.34% |
| Union Difference, \$ | | \$3.72 | | \$2.62 | | \$4.01 |
| Usual hours worked | 33.03 | 37.86 | 34.34 | 37.97 | 33.04 | 37.76 |

The data presented in Figure 25 may overstate the union wage effect because union members may be more likely to have characteristics associated with higher wages such as age, education, job experience, and geographic location. We utilize regression analyses (OLS and quantile regressions) to control for such factors in order to isolate the effect of unionization of wages and report them in Figure 26. The national average further controls for an individual respondent's state of residence. Data are for employed persons aged 16 and older in 2012 and 2013 and are based on the natural logarithm of hourly wages to "normalize the data" and analyze the results in percentage terms. For more on the union wage premium regressions, see Table B in the Appendix.

After controlling for education, demographics, and employment factors, the union wage premium is actually revealed to be stronger in Illinois than the rest of the nation (Figure 26). On average, unions are found to increase a worker's per-hour wage by 16.7 percent in the United States. In Illinois, the union wage premium is an estimated 21.4 percent on average, holding all else constant (including occupation and industry). Both results are statistically significant, even at the 1-percent level.

A unique analytical tool, called a quantile regression, permits evaluation of the union wage premium across the wage distribution. While union membership is statistically associated with a 21.4 percent increase in the *average* Illinois worker's wage, the benefit was actually higher for those toward the top of the state's hourly income distribution (Figure 26). In fact, in 2012 and 2013, the union wage effects produced raises of 12.5 percent at the 10th percentile, 16.9 percent at the 25th percentile, 20.3 percent at the median (50th percentile), and 27.4 percent at the 75th percentile before declining to 25.4 percent for the 90th percentile.

FIGURE 26: REGRESSIONS OF UNION WAGE PREMIUMS FOR THE UNITED STATES AND ILLINOIS, 2012-2013

| Union Wage Premium: Ordinary Least Squares (OLS) and Quantile Regressions, 2012-2013 | | | | | | |
|--|-----------------------|------------------------------|------------------------------|-----------------------|------------------------------|------------------------------|
| United States | Illinois | | | | | |
| Mean | Mean | Percentile: 10 th | Percentile: 25 th | Median | Percentile: 75 th | Percentile: 90 th |
| 16.67%** | 21.40%** | 12.48%** | 16.89%** | 20.31%** | 27.40%** | 25.40%** |
| R ² =0.440 | R ² =0.441 | R ² =0.143 | R ² =0.222 | R ² =0.297 | R ² =0.328 | R ² =0.349 |

Two asterisks (**) indicate significance at the 5-percent level. One asterisk (*) indicates significance at the 10-percent level. Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2013. Statistics are adjusted by the outgoing rotation group earnings weight to match the total population 16 years of age or older. For more, see the Appendix.

The estimates are at odds with national findings from Schmitt (2008) in *The Union Wage Advantage for Low-Wage Workers*, but could vary due to a multitude of reasons. First, particularly high unemployment among lesser-educated Illinois workers (Manzo, 2013) could reduce the relative power of unions that organize low-wage workers in the state. Conversely, the comparative strength of high-skilled unions (such as teachers' unions, public administration unions, and construction unions) in Illinois may contribute to a greater benefit of unionization to higher-wage workers. Finally, the estimates could be askew if unionization raises fringe benefits more for lower-wage workers than for higher-wage workers. It is conceivable that higher-skilled workers would be offered a generous fringe benefits package even without the union effect while lower-skilled workers would face a smaller likelihood of receiving fringe benefits without a union (Mishel & Walters, 2003). In this instance, the benefits of unionization in terms of increased compensation could be similar even while the *form* of compensation is different. Unionization, in any case, raises the wages of all Illinois workers, as the premium is positive across the wage distribution.

How does the average Illinois union wage premium of 21.4 percent compare to the union effect in other states? Similar 2012-2013 ordinary least squares regression models are run to assess each of the 49 other states plus the District of Columbia against Illinois. The results, reported in Figure 27, lead to the conclusion that the Illinois union wage premium is the 8th-highest in the nation. Interestingly, the union wage premium is actually highest for Kansas (29.6 percent), North Dakota (26.0 percent), and Indiana (24.6 percent). A total of 16 states have union wage premiums that are found to be higher than the national average of 16.7 percent, and the hourly union effect is not statistically significantly different

from zero in 11 states. Importantly, the premium is not negative in any state. In sum, the estimates reveal that the effect of union membership remains particularly strong in Illinois.

FIGURE 27: UNION WAGE PREMIUMS BY STATE, OLS REGRESSIONS, 2012-2013

| Rank | State | Union Premium | Rank | State | Union Premium |
|------|----------------------|---------------|------|-----------------------------|---------------|
| | <i>United States</i> | 16.67% | 26 | Vermont | 14.89% |
| 1 | Kansas | 29.55% | 27 | Tennessee | 14.78% |
| 2 | North Dakota | 25.95% | 28 | Maine | 14.71% |
| 3 | Indiana | 24.62% | 29 | Connecticut | 14.43% |
| 4 | Minnesota | 23.67% | 30 | Washington | 14.00% |
| 5 | Wyoming | 23.52% | 31 | Michigan | 13.92% |
| 6 | Missouri | 22.86% | 32 | Florida | 13.16% |
| 7 | Mississippi | 21.47% | 33 | District of Columbia | 12.47% |
| 8 | Illinois | 21.40% | 34 | New Mexico [†] | 11.63% |
| 9 | Oklahoma | 20.28% | 35 | West Virginia | 11.23% |
| 10 | California | 19.94% | 36 | Hawaii | 11.00% |
| 11 | Oregon | 18.73% | 37 | South Carolina [†] | 10.01% |
| 12 | Ohio | 18.45% | 38 | Delaware [†] | 9.54% |
| 13 | Nebraska | 18.26% | 39 | Georgia [†] | 9.25% |
| 14 | North Carolina | 18.09% | 40 | Montana | 9.11% |
| 15 | Wisconsin | 17.03% | 41 | New York | 8.94% |
| 16 | Pennsylvania | 16.96% | 42 | Alabama [†] | 8.84% |
| 17 | Iowa | 16.63% | 43 | Rhode Island | 8.84% |
| 18 | Nevada | 16.40% | 44 | New Jersey | 8.48% |
| 19 | Virginia | 16.27% | 45 | Colorado | 7.75% |
| 20 | Texas | 16.26% | 46 | Arizona [†] | 6.86% |
| 21 | Kentucky | 15.83% | 47 | South Dakota [†] | 6.49% |
| 22 | New Hampshire | 15.62% | 48 | Louisiana [†] | 5.99% |
| 23 | Maryland | 15.49% | 49 | Alaska [†] | 5.21% |
| 24 | Idaho | 15.00% | 50 | Arkansas [†] | 2.96% |
| 25 | Massachusetts | 14.93% | 51 | Utah [†] | 2.93% |

One cross (†) indicates that the estimate is not statistically significant. All other estimates are significant at least at the 5-percent level. Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2012-2013. Statistics are adjusted by the outgoing rotation group earnings weight to match the total population 16 years of age or older. For more, see the Appendix.

CONCLUSIONS

Unionization has declined in Illinois, in the Chicago region, and in America. Today, there are approximately 116,000 fewer union members in Illinois than there were in 2003, contributing to the reduction of 1.26 million union workers across the nation over the past eleven years. Declining union membership has been driven primarily by decreases in male unionization, white non-Latino unionization, and private sector unionization. Additionally, declining union membership rates have affected all workers regardless of educational attainment, although master's degree-holders (the most unionized educational group) have seen the steepest drop since 2009.

News for the Illinois labor movement has not been all bad, however. Despite the long-term downward trends, both the unionization rate and total union membership ticked up in 2013 from the previous year. The unionization rate increased from 14.6 percent to 15.7 percent, resulting in an estimated 50,000 new union members. These statewide increases were driven by increases in Chicago MSA unionization,

female unionization, African-American unionization, public sector unionization, and unionization of older workers (specifically those aged 45 to 54 and those 65 or older).

Sector, industry, and occupation of employment are important determinants of union membership. Unionization rates remain significantly higher for public sector workers than for private sector workers. Over half of all public sector workers are unionized in both Illinois and the Chicago metropolitan area and slightly more than one-third are unionized nationwide. In comparison, one-in-ten Illinois and Chicago MSA workers in the private sector are union members while less than seven percent of private sector American workers are unionized. Additionally, just five industries (education-health-social services, public administration, construction, manufacturing, and retail trade) account for almost nine-in-ten (87.1 percent) union workers in Illinois. Lastly, the five most unionized occupation groups are protective service jobs, education-training-library occupations, construction occupations, transportation and moving jobs, and community and social service occupations.

Union membership is influenced by a number of factors. Employment in the utilities industry, construction industry, and public sector each raise the chances that a given worker is a union member by over 13 percentage points. African-American workers are also statistically more likely to be union members than their counterparts. On the other hand, high school dropouts, non-citizens, and residents who live in rural communities are less likely to be unionized.

Finally, unions raise individual incomes by lifting per-hour wages and by increasing the number of hours worked each week. In Illinois, the average union worker earns \$3.72 more per hour (16.5 percent) than the average nonunion worker. Once education, demographics, and employment factors are controlled for, Illinois' union wage premium is even stronger, at 21.4 percent on average (and a median of 20.3 percent). Illinois' union wage premium surpasses the national average of 16.7 percent and is the 8th-highest in the nation.

Despite the long-term gradual decline in union membership, Illinois' labor movement has seen recent growth in the Chicago region, among females, among African-American workers, and in the public sector. Organized labor in the Land of Lincoln continues to have a strong impact on both the wages and hours of its members, especially compared to other states. Ultimately, unions still play a vital role in Illinois' economy, communities, and social life.

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The Illinois Economic Policy Institute (ILEPI), the University of Illinois Labor Education Program (LEP), and the University of Chicago School of Social Service Administration (SSA) do not own any photos included in this report.

APPENDIX

TABLE A: LOGISTIC REGRESSION ON PROBABILITY OF UNION MEMBERSHIP, AVERAGE MARGINAL EFFECTS, ILLINOIS AND U.S. WORKERS, 2013

| Prob(Union Member) | Illinois | | USA | |
|-------------------------|-------------|------------|-------------|------------|
| | Coefficient | (St. Err.) | Coefficient | (St. Err.) |
| Age | 0.0054* | (0.0028) | 0.0071*** | (0.0005) |
| Age ² | -0.0000 | (0.0000) | -0.0001*** | (0.0000) |
| Female | -0.0197 | (0.0167) | -0.0325*** | (0.0025) |
| Veteran | -0.0196 | (0.0274) | 0.0018 | (0.0038) |
| Married | -0.0041 | (0.0140) | 0.0072** | (0.0023) |
| Citizen | 0.0920*** | (0.0333) | 0.0406*** | (0.0060) |
| Immigrant | 0.0132 | (0.0251) | 0.0035 | (0.0044) |
| White | 0.0649 | (0.0478) | -0.0097** | (0.0044) |
| African-American | 0.1218*** | (0.0498) | -0.0096* | (0.0051) |
| Latino | 0.0617 | (0.0489) | -0.0160*** | (0.0050) |
| Center City | 0.0170 | (0.0224) | 0.0280*** | (0.0034) |
| Suburb | -0.0009 | (0.0192) | 0.0219*** | (0.0029) |
| Rural | -0.0795*** | (0.0272) | -0.0253*** | (0.0034) |
| Federal government | 0.1507*** | (0.0464) | 0.0883*** | (0.0054) |
| State government | 0.1548*** | (0.0330) | 0.1287*** | (0.0043) |
| Local government | 0.1749*** | (0.0269) | 0.1139*** | (0.0036) |
| Usual hours worked | 0.0041*** | (0.0008) | 0.0015*** | (0.0001) |
| Involuntarily part-time | 0.0054 | (0.0269) | -0.0010 | (0.0049) |
| Less than high school | -0.0600** | (0.0277) | -0.0228*** | (0.0045) |
| Some college | 0.0031 | (0.0171) | -0.0031 | (0.0028) |
| Associate's | 0.0246 | (0.0215) | 0.0122*** | (0.0032) |
| Bachelor's | -0.0376 | (0.0236) | -0.0014 | (0.0034) |
| Master's | -0.0035 | (0.0389) | -0.0016 | (0.0059) |
| Professional/Doctorate | 0.0000 | (0.0000) | 0.0522*** | (0.0132) |
| Industry Dummies | Y | | Y | |
| Occupation Dummies | Y | | N | |
| <u>Select OCCs/INDs</u> | | | | |
| Construction IND | 0.1040* | (0.0684) | 0.0914*** | (0.0090) |
| Utilities IND | 0.3090*** | (0.0906) | 0.1382*** | (0.0107) |
| Transp-warehouse IND | 0.0630 | (0.0635) | 0.1306*** | (0.0090) |
| Financial IND | 0.0207 | (0.0715) | -0.0618*** | (0.0101) |
| Educ-health-social IND | 0.0288 | (0.0617) | 0.0437*** | (0.0086) |
| Manufacturing IND | 0.0512 | (0.0635) | 0.0761*** | (0.0088) |
| Protective service OCC | 0.0981* | (0.0577) | | |
| Construction OCC | 0.1390** | (0.0544) | | |
| Constant | 0.1413*** | (0.0064) | 0.1001*** | (0.0010) |
| R ² | 0.2889 | | 0.1606 | |
| Observations | 2,166 | | 72,526 | |

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2013. The total number of observations of employed persons was 5,675 in Illinois and 186,115 nationwide. Nevertheless, only 2,166 observations of employed Illinois workers are included and only 72,526 observations of employed American workers are included because the logit model excludes cases with missing values on any variable used in the analysis.

A logistic (or logit) regression model allows for analysis of the probability of a “binary” yes-or-no variable occurring. In this case, the model reports the (positive or negative) direction of the effect that a factor has on the probability of being a union member and whether the output is statistically significant. To determine the magnitude of statistically significant factors, average marginal effects (AMEs) are generated and reported using the *dydx, margins* command in STATA. Analytic weights to match the sample size to the actual population are not allowed in logistic models. A logit model is preferred over a probit model because there is no prior knowledge that union membership is normally distributed. A probit model, however, would likely yield similar results.

TABLE B: OLS AND QUANTILE REGRESSIONS OF THE IMPACT OF UNION MEMBERSHIP ON THE NATURAL LOG OF REAL HOURLY WAGES, 2012-2013

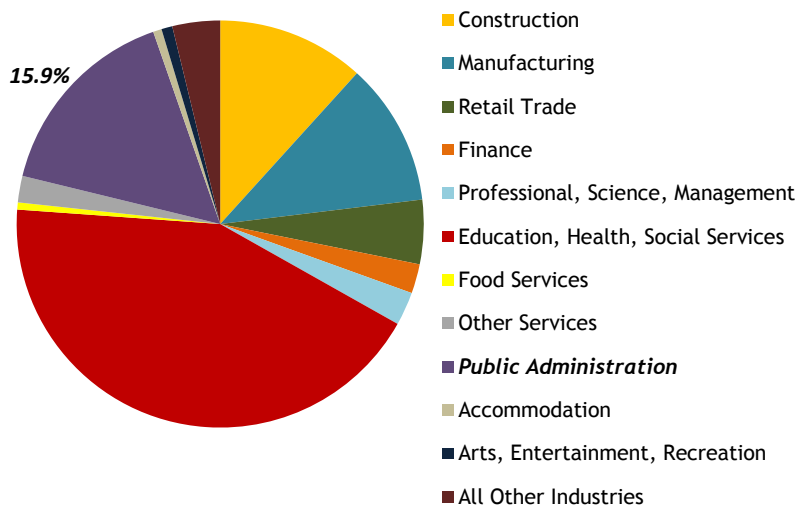
| Ln(Real Wage) | (1) USA Mean | | (1) Illinois Mean | | (2) Illinois Median, Q(.5) | | (3) Indiana Mean | |
|-------------------------|-----------------|------------|----------------------|------------|-------------------------------|------------|---------------------|------------|
| | Coefficient | (St. Err.) | Coefficient | (St. Err.) | Coefficient | (St. Err.) | Coefficient | (St. Err.) |
| Union member | 0.1667*** | (0.0048) | 0.2140*** | (0.0256) | 0.2031*** | (0.0011) | 0.2462*** | (0.0399) |
| Age | 0.0261*** | (0.0006) | 0.0185*** | (0.0032) | 0.0165*** | (0.0001) | 0.0273*** | (0.0043) |
| Age ² | -0.0002*** | (0.0000) | -0.0002*** | (0.0000) | -0.0002*** | (0.0000) | -0.0003*** | (0.0000) |
| Female | -0.0793*** | (0.0032) | -0.0649*** | (0.0184) | -0.0287*** | (0.0008) | -0.1172*** | (0.0258) |
| Veteran | 0.0154** | (0.0063) | 0.0488 | (0.0384) | 0.0552*** | (0.0017) | -0.0107 | (0.0443) |
| Married | 0.0508*** | (0.0031) | 0.0383** | (0.0178) | 0.0332*** | (0.0008) | 0.0932** | (0.0233) |
| Citizen | 0.0658*** | (0.0068) | 0.0143 | (0.0364) | 0.0863*** | (0.0016) | 0.1592* | (0.0917) |
| Immigrant | -0.0390*** | (0.0059) | -0.0600* | (0.0327) | -0.0512*** | (0.0014) | 0.0133 | (0.0832) |
| White | 0.0306*** | (0.0063) | 0.0110 | (0.0415) | 0.0025 | (0.0018) | 0.2703*** | (0.0775) |
| African-American | -0.0538*** | (0.0071) | -0.0748 | (0.0462) | -0.0629*** | (0.0020) | 0.1716** | (0.0839) |
| Latino | -0.0330*** | (0.0065) | -0.0197 | (0.0427) | -0.0001 | (0.0019) | 0.2155*** | (0.0797) |
| Center City | 0.0209*** | (0.0046) | 0.0457* | (0.0278) | 0.0479*** | (0.0012) | 0.0309 | (0.0358) |
| Suburb | 0.0264*** | (0.0041) | 0.0342 | (0.0245) | 0.0615*** | (0.0010) | 0.0203 | (0.0310) |
| Rural | -0.0222*** | (0.0049) | -0.0180 | (0.0306) | 0.0420*** | (0.0014) | 0.0125 | (0.0320) |
| Federal government | 0.0760*** | (0.0109) | -0.0032 | (0.0825) | -0.0688*** | (0.0036) | 0.0656 | (0.1088) |
| State government | -0.0465*** | (0.0086) | 0.0422 | (0.0556) | 0.0338*** | (0.0025) | -0.0466 | (0.0730) |
| Local government | 0.0247*** | (0.0070) | -0.0278 | (0.0439) | -0.0149*** | (0.0019) | 0.0042 | (0.0587) |
| Usual hours worked | 0.0065*** | (0.0002) | 0.0068*** | (0.0009) | 0.0069*** | (0.0000) | 0.0053*** | (0.0012) |
| Involuntarily part-time | -0.0679*** | (0.0050) | -0.0751*** | (0.0270) | -0.0365*** | (0.0012) | -0.0628*** | (0.0382) |
| Less than high school | -0.1045*** | (0.0047) | -0.1007*** | (0.0278) | -0.0735*** | (0.0013) | -0.0458 | (0.0368) |
| Some college | 0.0273*** | (0.0037) | 0.0217 | (0.0212) | 0.0234*** | (0.0009) | -0.0497* | (0.0268) |
| Associate's | 0.0656*** | (0.0046) | 0.0007 | (0.0285) | 0.0371*** | (0.0013) | 0.0602* | (0.0353) |
| Bachelor's | 0.1850*** | (0.0046) | 0.1991*** | (0.0264) | 0.2116*** | (0.0012) | 0.1442*** | (0.0403) |
| Master's | 0.3064*** | (0.0088) | 0.2417*** | (0.0485) | 0.2745*** | (0.0021) | 0.1455* | (0.0836) |
| Professional/Doctorate | 0.3699*** | (0.0159) | 0.4956*** | (0.1131) | 0.5982*** | (0.0050) | 0.1522 | (0.1295) |
| Industry Dummies | Y | | Y | | Y | | Y | |
| Occupation Dummies | Y | | Y | | Y | | Y | |
| State Dummies | Y | | N | | N | | N | |
| Constant | 1.8305*** | (0.0335) | 1.9696*** | (0.1062) | 1.8377*** | (0.0047) | 1.5615*** | (0.1768) |
| R ² | 0.4396 | | 0.4411 | | 0.2968 | | 0.4704 | |
| Observations | 72,494 | | 2,199 | | 2,199 | | 1,247 | |
| Weighted | Y | | Y | | Y | | Y | |

Three asterisks (***) indicate significance at the 1% level, two asterisks (**) indicates significance at the 5% level, and one asterisk (*) indicates significance at the 10% level. Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2012-2013. The total number of observations of employed persons was 5,675 in Illinois and 186,115 nationwide. The data are adjusted by the outgoing rotation group earnings weight to match the total population 16 years of age or older.

Ordinary least squares and quantile regression models account for other variables to parse out the actual and unique causal effect that union membership has on hourly wages on average. The analyses control for a host of demographic, work, sector, industry, occupation, and education variables that could also have an impact a worker's wages. In the U.S. model, state indicator variables are included to factor in unmeasured state-specific characteristics. The sample, in all cases, is weighted to match the actual population. Regression (1) compares the impact of union membership on wages for Illinois compared to the nation from OLS analyses, regression (2) provides the median regression as an example of outputs from the quartile regressions for Illinois from Figure 26, and regression (3) uses Indiana as an example of OLS results from other states as in Figure 27. Note that, while the union wage premium is higher in Indiana, the effects of other variables (e.g., higher education) are stronger in Illinois. For full (2) and (3) regression outputs in a .txt format, please contact author Frank Manzo IV at fmanzo@illinoisepi.org.

The State of the Unions: Public Administration in Illinois

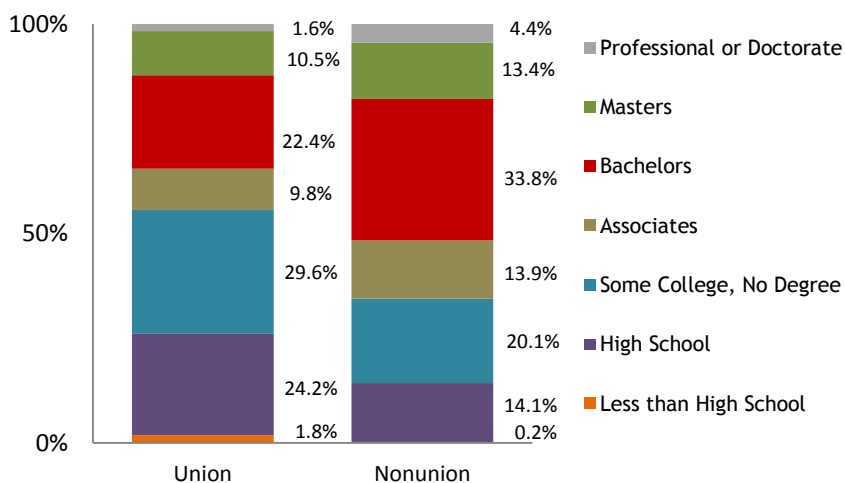
Illinois Union Members by Industry



| Variable | Public Administration |
|-------------------|-----------------------|
| Employed | 92.68% |
| In Labor Force | 97.68% |
| Unemployment Rate | 5.12% |
| Unionization Rate | 51.71% |

| Variable | Union | Nonunion |
|--------------------------|---------|----------|
| Estimated Workers | 120,000 | 111,000 |
| Hourly Wage | \$25.23 | \$26.37 |
| Union Wage Premium, \$ | -\$1.14 | |
| Union Wage Premium, % | -4.33% | |
| Usual Hours Worked | 35.9 | 34.5 |
| Age | 45.1 | 46.6 |
| Lives in the Chicago MSA | 70.2% | 71.6% |

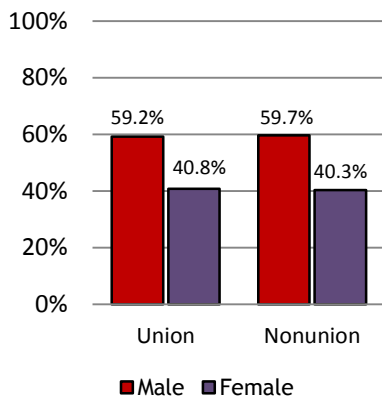
Workforce Education



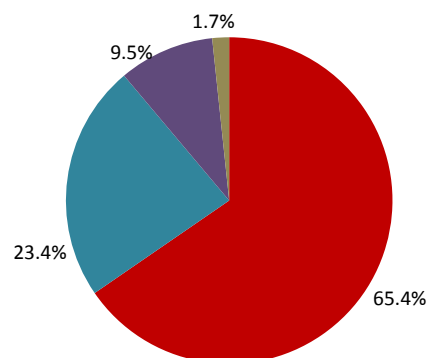
Data from the Bureau of Labor Statistics suggest that **union** workers in Illinois' public administration industry:

- Are 51.7 percent of the industry;
- Comprise 15.9 percent of the state's union membership;
- Face a 5.1 percent unemployment rate;
- Are slightly more female, more African-American, and more Latino or Latina;
- Disproportionately tend to work outside of the Chicago MSA;
- Generally have lower educational attainment levels;
- Work more hours per week; and
- Experience a 4.3 percent union wage *penalty*, although this finding could be the result of the lower average educational attainment or younger average ages.

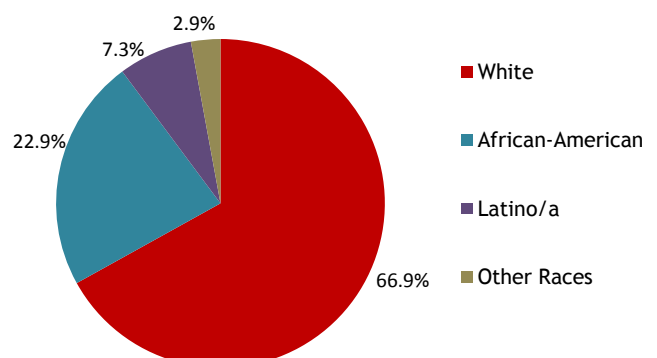
Gender of Workforce



Union Workforce



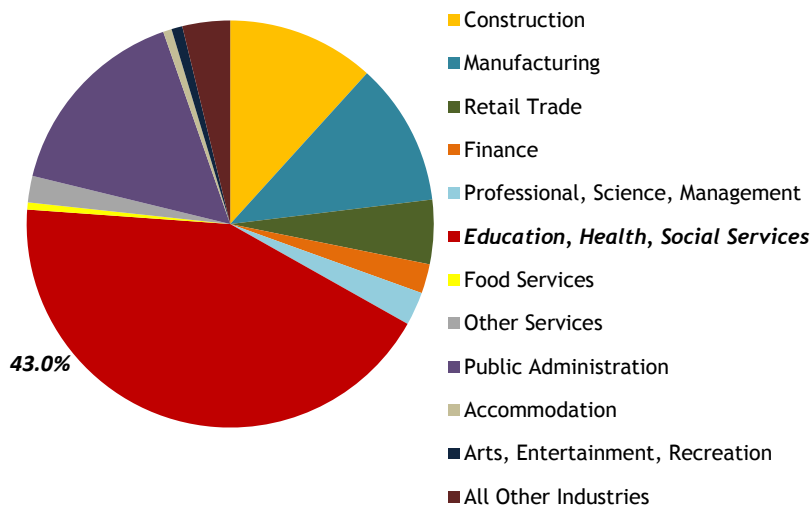
Nonunion Workforce



**NOTE: The 2013 CPS-ORG sample size for public administration industry workers in Illinois is 224, including 115 union and 108 nonunion workers. Be careful to consider the statistics true and definitive representations of the industry. Estimates are weighted to match the Illinois population.*

The State of the Unions: Education, Health, & Social Services Industry in Illinois

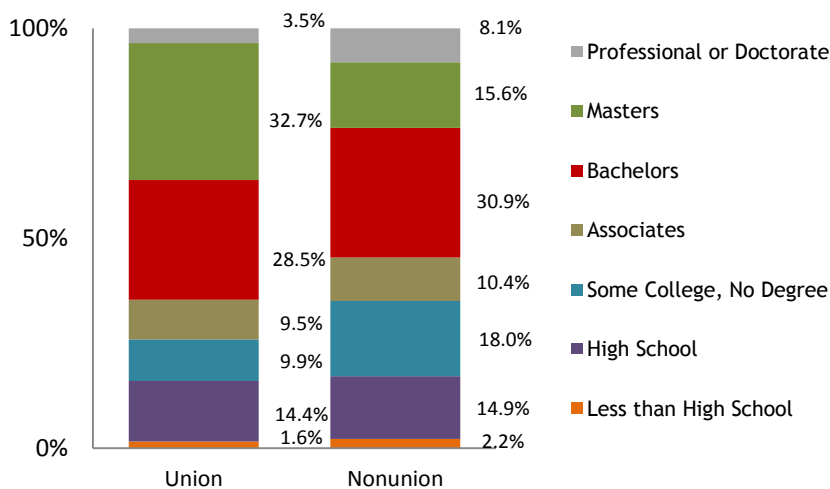
Illinois Union Members by Industry



| Variable | Educ-Health-Soc Serv |
|-------------------|----------------------|
| Employed | 91.06% |
| In Labor Force | 96.11% |
| Unemployment Rate | 5.25% |
| Unionization Rate | 25.94% |

| Variable | Union | Nonunion |
|--------------------------|---------|----------|
| Estimated Workers | 325,000 | 907,000 |
| Hourly Wage | \$26.86 | \$24.08 |
| Union Wage Premium, \$ | +\$2.78 | |
| Union Wage Premium, % | +11.56% | |
| Usual Hours Worked | 37.2 | 31.3 |
| Age | 44.5 | 41.7 |
| Lives in the Chicago MSA | 74.2% | 73.9% |

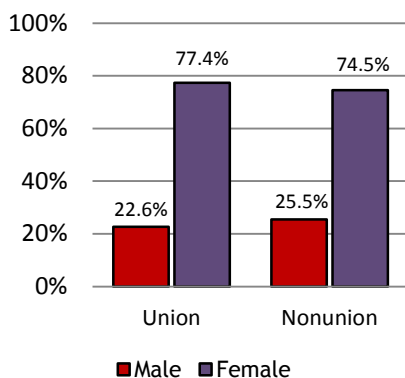
Workforce Education



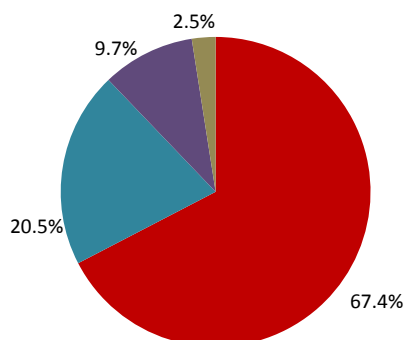
Data from the Bureau of Labor Statistics suggest that **union** workers in Illinois' education-health-social services industry:

- Are 25.9 percent of the industry;
- Comprise 43.0 percent of the state's union membership;
- Face a 5.3 percent unemployment rate;
- Are slightly more female, more African-American, and more Latino or Latina;
- Have much higher educational attainment levels;
- Work more hours per week; and
- Experience an 11.6 percent union wage *premium*, although this could be the result of the significantly higher average educational attainment.

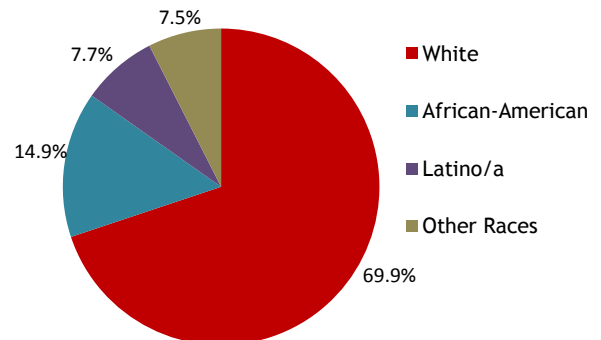
Gender of Workforce



Union Workforce



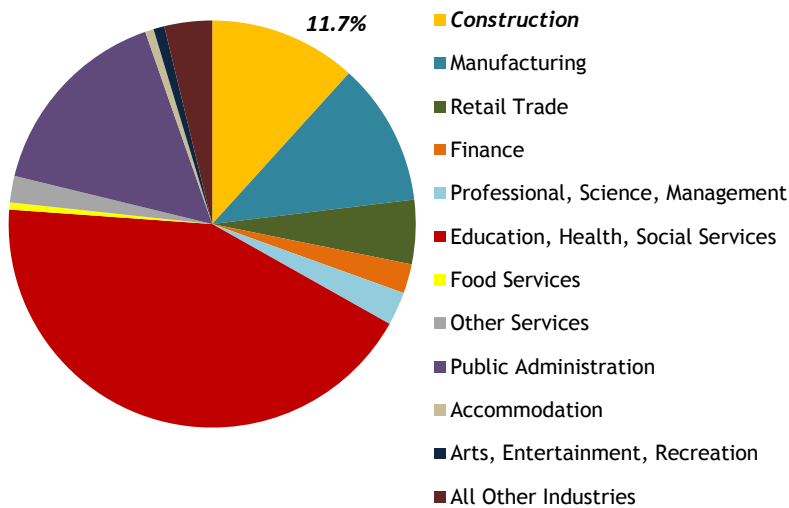
Nonunion Workforce



**NOTE: The 2013 CPS-ORG sample size for education-health-social sciences workers in Illinois is 1,211, including 317 union and 874 nonunion workers. Be careful to consider the statistics true and definitive representations of the industry. Estimates are weighted to match the Illinois population.*

The State of the Unions: Construction Industry in Illinois

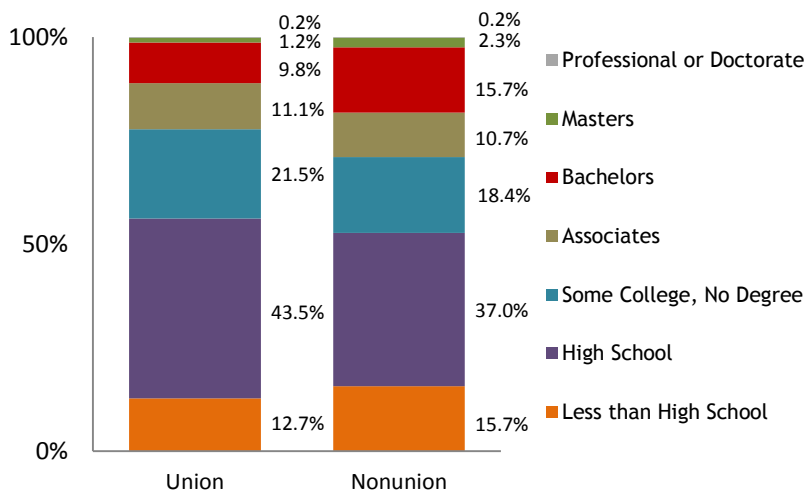
Illinois Union Members by Industry



| Variable | Construction |
|-------------------|--------------|
| Employed | 82.60% |
| In Labor Force | 97.09% |
| Unemployment Rate | 14.93% |
| Unionization Rate | 37.81% |

| Variable | Union | Nonunion |
|--------------------------|----------|----------|
| Estimated Workers | 89,000 | 145,000 |
| Hourly Wage | \$32.36 | \$21.97 |
| Union Wage Premium, \$ | +\$10.39 | |
| Union Wage Premium, % | +47.28% | |
| Usual Hours Worked | 39.3 | 36.5 |
| Age | 42.4 | 38.3 |
| Lives in the Chicago MSA | 73.8% | 75.7% |

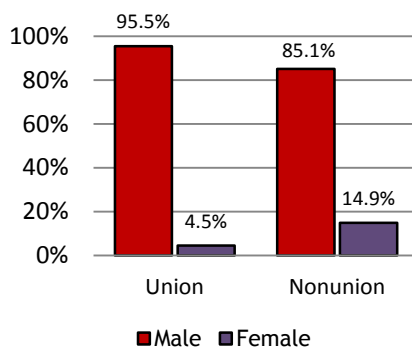
Workforce Education



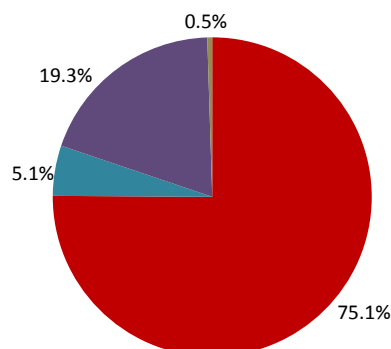
Data from the Bureau of Labor Statistics suggest that union workers in Illinois' construction industry:

- Are 37.8 percent of the industry;
- Comprise 11.7 percent of the state's union membership;
- Face a 14.3 percent unemployment rate;
- Are more male and more white non-Latino
- Disproportionately live outside of the Chicago MSA;
- Have slightly lower educational attainment levels;
- Work more hours per week; and
- Experience a 47.3 percent union wage *premium*, although this could be the result of a host of other factors, such as different occupations and risk hazards compared to nonunion workers.

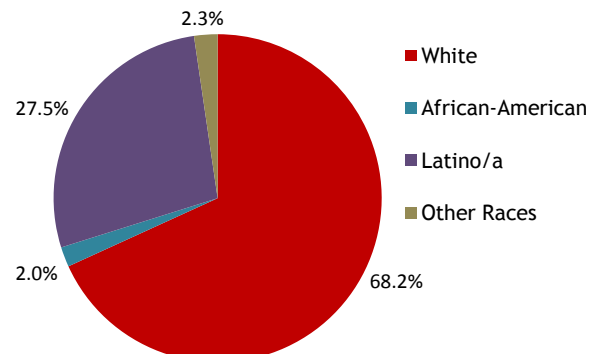
Gender of Workforce



Union Workforce



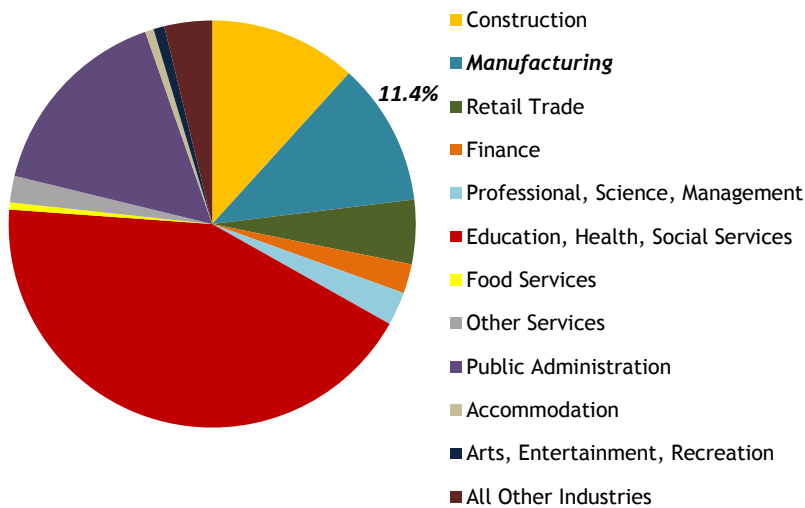
Nonunion Workforce



*NOTE: The 2013 CPS-ORG sample size for construction industry workers in Illinois is 222, including 85 union and 136 nonunion workers. Be careful to consider the statistics true and definitive representations of the industry. Estimates are weighted to match the Illinois population.

The State of the Unions: Manufacturing Industry in Illinois

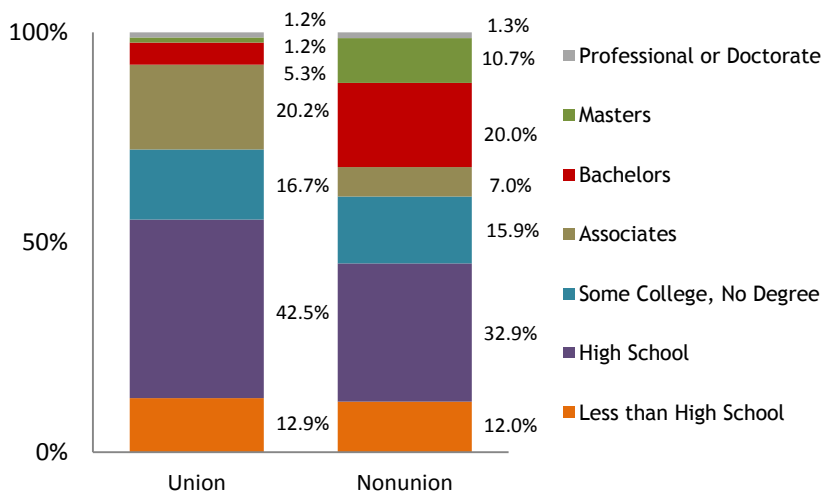
Illinois Union Members by Industry



| Variable | Manufacturing |
|-------------------|---------------|
| Employed | 89.04% |
| In Labor Force | 97.82% |
| Unemployment Rate | 8.97% |
| Unionization Rate | 12.76% |

| Variable | Union | Nonunion |
|--------------------------|---------|----------|
| Estimated Workers | 86,000 | 582,000 |
| Hourly Wage | \$22.46 | \$24.44 |
| Union Wage Premium, \$ | -\$1.98 | |
| Union Wage Premium, % | -8.10% | |
| Usual Hours Worked | 39.9 | 39.2 |
| Age | 45.5 | 43.8 |
| Lives in the Chicago MSA | 46.6% | 76.7% |

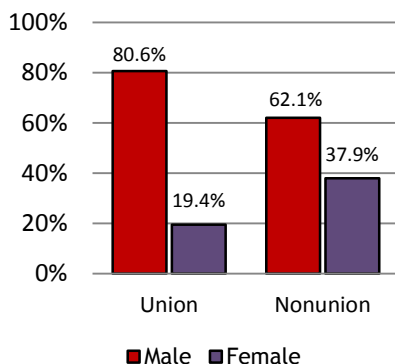
Workforce Education



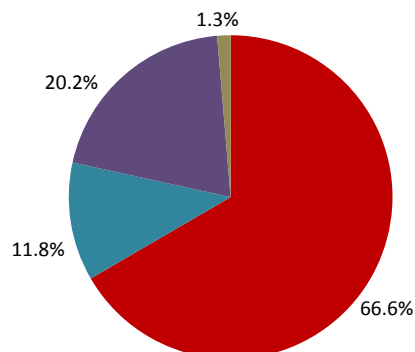
Data from the Bureau of Labor Statistics suggest that union workers in Illinois' manufacturing industry:

- Are 12.8 percent of the industry;
- Comprise 11.4 percent of the state's union membership;
- Face a 9.0 percent unemployment rate;
- Are more male, more white non-Latino, and more African-American;
- Disproportionately live outside of the Chicago MSA;
- Have significantly lower educational attainment levels;
- Work slightly more hours per week; and
- Experience an 8.1 percent union wage *penalty*, although this could be due to the lower level of average educational attainment.

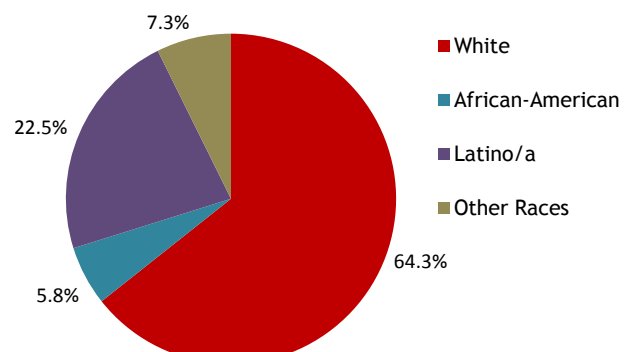
Gender of Workforce



Union Workforce



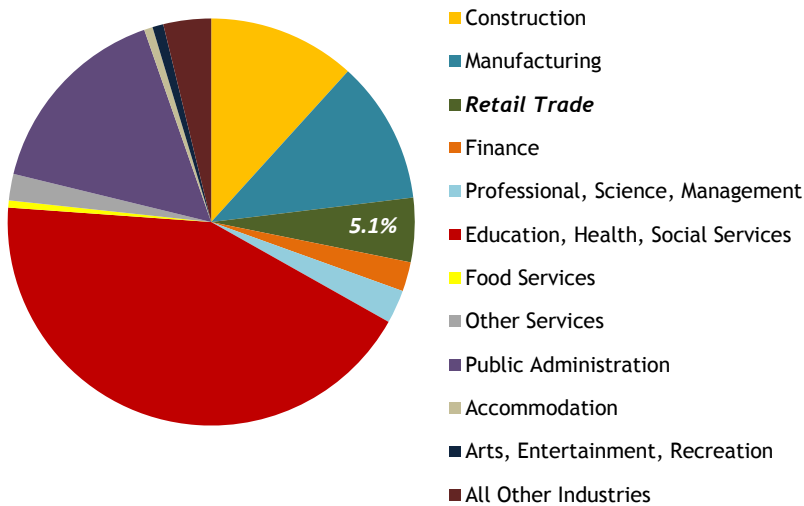
Nonunion Workforce



*NOTE: The 2013 CPS-ORG sample size for manufacturing industry workers in Illinois is 647, including 82 union and 561 nonunion workers. Be careful to consider the statistics true and definitive representations of the industry. Estimates are weighted to match the Illinois population.

The State of the Unions: Retail Trade in Illinois

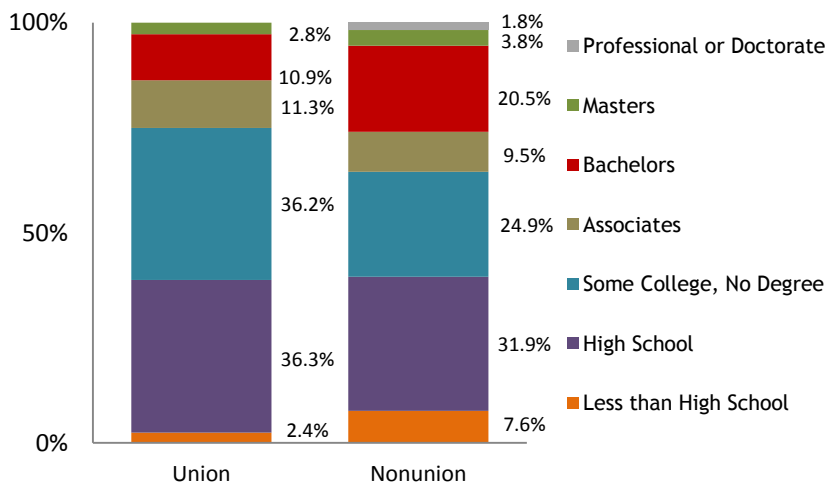
Illinois Union Members by Industry



| Variable | Retail Trade |
|-------------------|--------------|
| Employed | 87.98% |
| In Labor Force | 95.75% |
| Unemployment Rate | 8.12% |
| Unionization Rate | 6.14% |

| Variable | Union | Nonunion |
|--------------------------|---------|----------|
| Estimated Workers | 39,000 | 588,000 |
| Hourly Wage | \$18.84 | \$16.55 |
| Union Wage Premium, \$ | +\$2.29 | |
| Union Wage Premium, % | +13.81% | |
| Usual Hours Worked | 33.8 | 29.6 |
| Age | 43.4 | 39.1 |
| Lives in the Chicago MSA | 80.1% | 72.4% |

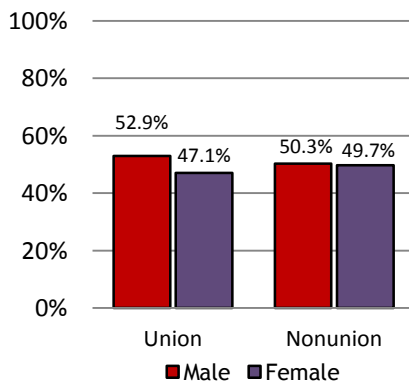
Workforce Education



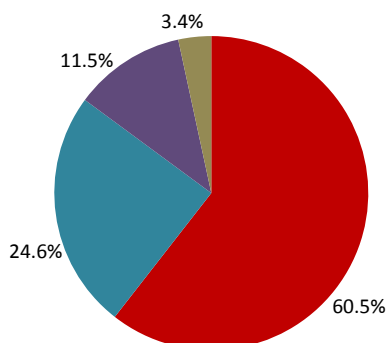
Data from the Bureau of Labor Statistics suggest that union workers in Illinois' retail trade industry:

- Are 6.1 percent of the industry;
- Comprise 5.1 percent of the state's union membership;
- Face an 8.1 percent unemployment rate;
- Are more male and more African-American;
- Disproportionately live in the Chicago MSA;
- Have fewer advanced degrees but are more likely to have at least a high school degree;
- Work more hours per week; and
- Experience a 13.1 percent union wage premium, although this could be due to a host of other factors, such as higher wages for those who work in Chicago compared to the rest of the state.

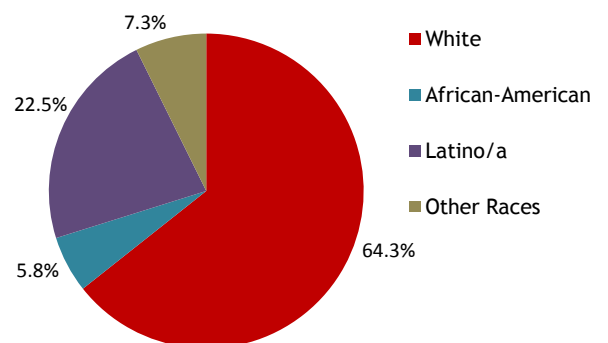
Gender of Workforce



Union Workforce



Nonunion Workforce



*NOTE: The 2013 CPS-ORG sample size for retail trade workers in Illinois is 589, including 35 union and 553 nonunion workers. Be careful to consider the statistics true and definitive representations of the industry. Estimates are weighted to match the Illinois population.

