



# THE STATE OF THE UNIONS 2018

*A Profile of Unionization in Chicago, in Illinois, and in the United States*

September 2018

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Research Report

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## EXECUTIVE SUMMARY

Since 2008, unionization has declined in Illinois, in the Chicago region, and in the United States. There are approximately 111,000 fewer union members in Illinois today than there were in 2008, contributing to the 1.3 million-member drop in union workers across the nation over that time. Declining union membership in Illinois has primarily been the result of decreases in male unionization.

Consequently, the total number of labor unions and similar labor organizations has declined over the past decade. There are now 877 labor unions and similar organizations in Illinois, a decline of over 80 worker establishments over the past ten years. There are also nearly 1,700 fewer officers and staff working for labor unions and similar organizations today than one decade ago.

However, on the positive side, Illinois' labor movement posted new gains last year. From 2016 to 2017:

- The unionization rate increased from 14.5 percent to 15.0 percent;
- Union members increased from about 812,000 to about 828,000;
- Millennial workers between the ages of 25 and 34 saw an increase in union membership;
- Unionization increased in the Chicago metropolitan area by about 19,000 members.

Half of all public sector workers continue to be unionized in both Illinois (50.9 percent) and the Chicago metropolitan area (52.4 percent). Meanwhile, slightly more than one-third of all public sector workers are unionized across the nation (34.4 percent). In comparison, fewer than one-in-ten (9.8 percent) workers in Illinois' private sector are now union members, though this exceeds the 6.5 percent unionization rate for private sector workers across the United States. In the future, the recent *Janus v. American Federation of State, County, and Municipal Employees, Council 31, et al.* Supreme Court decision that prohibited fair-share "agency fee" clauses from collective bargaining agreements could dramatically weaken public sector unions in Illinois.

Union membership is influenced by a number of factors. Employment in the public sector, construction, transportation and utilities, mining, educational and health services, and public administration industries all raise the chances that a given worker is a union member. African American workers are also statistically more likely to be union members than their racial or ethnic counterparts. On the other hand, workers employed in professional and related occupations, management, business, and financial occupations, workers employed in sales occupations, and financial occupations are less likely to be unionized.

Labor unions increase individual incomes by lifting hourly wages- particularly for middle-income workers. In Illinois, unions raise worker wages by an average of 11.1 percent. The state's union wage effect is the 11<sup>th</sup>-highest in the nation. The union wage differential is higher for middle-class workers (10.2 percent to 11.5 percent) than the richest 10 percent of workers (8.7 percent), helping to reduce income inequality.

Unions play a vital role in Illinois' economy and communities. The Illinois labor movement, however, will continue to face both short- and long-term challenges due to the political environment, the makeup of the United States Supreme Court, and broader economic trends. Labor's response to these challenges will define its influence and effectiveness in the decades to come and will be critical to the long-run survival of Illinois' middle class.

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## INTRODUCTION

An annual assessment of the institutional footprint of organize labor in the United States, Illinois, and Chicago requires first an acknowledgment that over the past several years there has been an assault on worker organizing rights in many states. For example, since 2010, 16 states have passed laws restricting the collective bargaining rights of public employees (Lafer, 2013; Bruno, 2015). The most recent was a draconian law passed in Iowa that mirrors the damaging prohibitions enacted in Wisconsin in 2011 (Murphy, 2017). Another 19 states introduced so-called “right-to-work” (RTW) bills and five states (Indiana, Michigan, Wisconsin, West Virginia, and Kentucky) have passed RTW laws- with voters in Missouri overturning a RTW law by referendum (Bruno, 2015). In the Midwest states of Indiana, Michigan, and Wisconsin, “right-to-work” laws have statistically reduced the unionization rate by 2.1 percentage points and lowered hourly wages by 2.6 percent on average (Manzo & Bruno, 2017a).

The nature of a state’s political environment directly corresponds to partisan control of the governorship and legislative branches. Only in states where Democrats are a majority in one or more of the branches of government- such as in Illinois, Minnesota, California, and New York- have unions not suffered policy defeats. Where Republican governors and a majority of Republican legislators are in power, organized labor has faced sustained political opposition to dilute, roll back, or eliminate worker rights.

Wisconsin serves as a prime example. In 2011, Governor Scott Walker successfully pushed a bill through the GOP-controlled Assembly (i.e., Act 10) that reduced public sector worker benefits and hollowed out the bargaining rights of government employees. Republicans subsequently passed a RTW law and cut government spending. Prior to the Walker administration, 14.2 percent of Wisconsin’s workforce belonged to a union. As of 2017, that figure has dropped to 8.3 percent, significantly below the national average (Caldwell, 2017). By contrast, Governor Mark Dayton in Minnesota enacted policies that raised the minimum wage, strengthened labor standards, and boosted investments in infrastructure and education. From 2010 to 2017, Minnesota has added more jobs, seen higher income growth, made more progress in reducing poverty, had greater economic growth, and added over 26,000 union members (Cooper, 2018).

Now, the U.S. labor movement is responding to the *Janus v. American Federation of State, County, and Municipal Employees, Council 31, et al.* Supreme Court decision which directly weakens public sector unions in 22 states and the District of Columbia. The case was decided in a vote against fair share fees in the public sector, allowing workers the ability to “free ride” and receive services, benefits, and representation from unions for free without paying for them in the form of agency fees or union dues. As a significant number of employees decide to free ride, the financial resources of labor unions become depleted, eroding worker bargaining power. As a result, a recent report estimates that the *Janus* decision will reduce the public sector union membership rate by 8 percentage points, translating into a loss of 726,000 union members nationwide, and decrease the wages of state and local government employees by about 4 percent on average- exacerbating the pay penalty that already exists for workers in the public sector (Manzo & Bruno, 2018).

These challenges have come after a gradual decline of the labor movement in both membership and influence. Almost one-in-four U.S. workers (23.0 percent) were members of labor unions in 1980. Decades later, only one-in-ten employed persons in the United States (10.7 percent) are unionized in 2017 (Hirsch & Macpherson, 2018). Concurrently, as unionization rates have waned, income inequality has soared. Declining unionization and polarizing worker incomes are linked: The decline of organized labor accounts for between one-fifth and one-third of the growth in economic inequality (Western & Rosenfeld, 2011). The divergence between worker productivity and worker pay has also been largest in states where collective bargaining coverage has declined the most (Cooper & Mishel, 2015). Consequently, the decline of unionization has lowered labor’s share of the economic pie while redistributing income to owners, corporate profits, and capital (Manzo & Bruno, 2017b).

Despite partisan efforts to restrict worker organizing, unions remain a good investment for workers. For example, a 2016 report found that for every \$1 paid in membership dues and fees, an estimated \$6.12 in

after-tax income is returned to union members in Illinois (Manzo & Bruno, 2016). Unions also increase the likelihood that an Illinois worker has health insurance by 14 percentage points. These benefits translate into 43,000 additional jobs that are independently created by the higher earnings and increased consumer spending of union households. Similarly, a 2018 report found that union membership has raised American worker incomes every year for the past 80 years, with an average earnings increase of between 15 percent and 20 percent for union members (Farber et al., 2018).

This report, conducted by researchers at the Illinois Economic Policy Institute, the University of Illinois Project for Middle Class Renewal, and the University of California, Irvine, analyzes the course of unionization in Illinois, in the Chicago metropolitan statistical area (MSA), and in the United States from 2008 to 2017. It is the fifth annual report of its kind for union members in the Chicago area and in Illinois, following the May 2017 release of *The State of the Unions 2017: A Profile of Unionization in Chicago, in Illinois, and in America* (Manzo et al., 2018). The report tracks unionization rates 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 the United States. Additionally, data on labor unions and similar labor organizations are analyzed. The report concludes by recapping key findings.

## DATA AND LIMITATIONS

Except in one section, this Research Report exclusively utilizes data from the *Current Population Survey Outgoing Rotation Groups* (CPS-ORG). The CPS-ORG 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 (CEPR, 2018).

The 10-year dataset from 2008 to 2017 captures information on 3,166,628 individuals aged 16 to 85 in the United States. These observations include 1,879,959 persons with a job, of whom 191,265 reported that they were union members. Survey responses include information from 56,980 employed individuals in Illinois and 34,677 employed persons in the Chicago MSA since 2008. In 2017, respondents with at least one job totaled 5,292 in Illinois, 3,623 in the Chicago MSA, and 183,181 nationwide. "Chicago MSA" workers are defined as only those who live in the Illinois component of the Chicago-Naperville-Elgin 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. CPS-ORG data is also based on household survey responses. Certain individuals such as undocumented workers may also be underreported if they are more difficult to reach by survey officials. Finally, every surveyed worker does not reply to the union membership question. For example, in 2017, union membership data was only available for 4,802 of the 5,292 surveyed workers (90.7 percent) in Illinois. While this does not impact unionization *rates*, estimates are underreported for both total union workers and total nonunion employees.

Economic data from the *County Business Patterns* (CBP) series from the U.S. Census Bureau is used in this report (Census, 2018). The CBP provides annual statistics for businesses with paid employees that are used



to study economic activity and market trends. The data are published between 18 months and 24 months after the reference year, so there is a longer time lag compared to the release of CPS-ORG information.

## UNIONIZATION RATES AND TRENDS

Since 2008, unionization has declined in Illinois, the Chicago metropolitan area, and the United States (Figure 1). The total union membership rate was 16.6 percent in Illinois, 15.7 percent in the Chicago region, and 12.4 percent nationwide in 2008. Ten years later, the unionization rate has fallen across all regions. Illinois' rate has fallen to 15.0 percent, the Chicago area's rate has fallen to 13.5 percent, and the United States' rate has fallen to 10.7 percent. The gradual decline in the unionization rate has translated into a decrease in union membership of about 111,000 workers in Illinois since 2008, contributing to the national decline of 1.3 million union members over that time (Figure 2).

FIGURE 1: UNIONIZATION RATES AND TOTAL UNION MEMBERSHIP BY REGION, 2008-2017

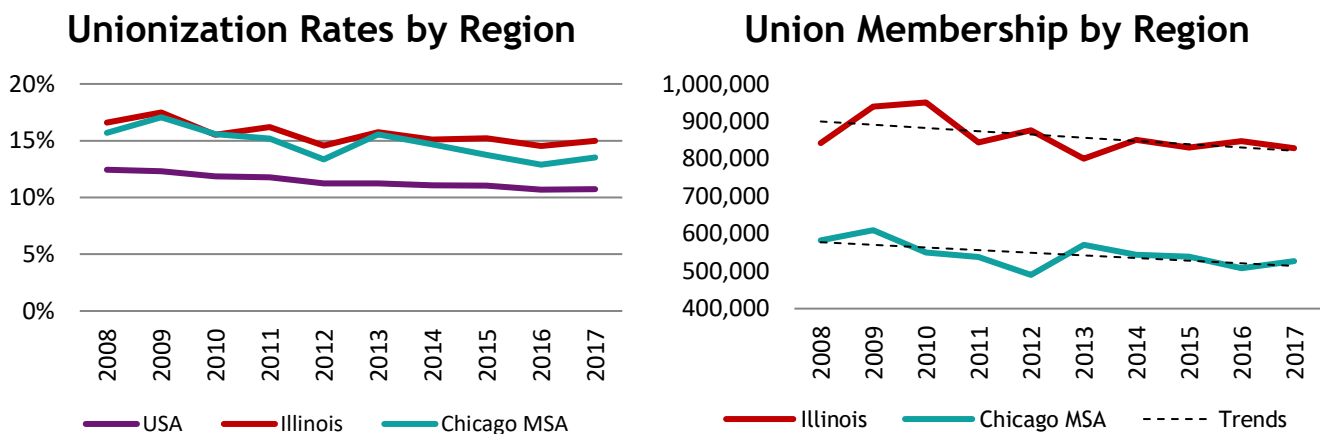


FIGURE 2: TOTAL UNION MEMBERS AND OVERALL UNIONIZATION RATES BY REGION, 2008-2017

Year	Illinois		Chicago MSA		USA	
	Members	Rate	Members	Rate	Members	Rate
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%
2014	829,757	15.09%	543,428	14.67%	14,569,936	11.08%
2015	846,984	15.22%	539,036	13.76%	14,786,281	11.05%
2016	812,397	14.54%	508,058	12.89%	14,549,640	10.69%
2017	828,006	15.00%	526,875	13.52%	14,811,525	10.69%
<b>Average</b>	<b>857,763</b>	<b>15.59%</b>	<b>545,639</b>	<b>14.69%</b>	<b>14,847,704</b>	<b>11.43%</b>

Unionization rates in both Illinois and the Chicagoland area increased slightly from 2016 to 2017. The 2016 unionization rates in Illinois (14.5 percent) and the Chicago area (12.9 percent) were lower than at any other point during the past decade. However, Illinois' union membership rate increased to 15.0 percent in 2017, with the state adding about 16,000 total union members over the year. The growth was concentrated in the Chicago metropolitan area, which added nearly 19,000 union members and where the unionization rate increased to 13.5 percent. The 10-year combined Illinois unionization rate was 15.6 percent, 4.2 percentage points higher than the 11.4 percent national rate. On a year-by-year basis, Illinois'

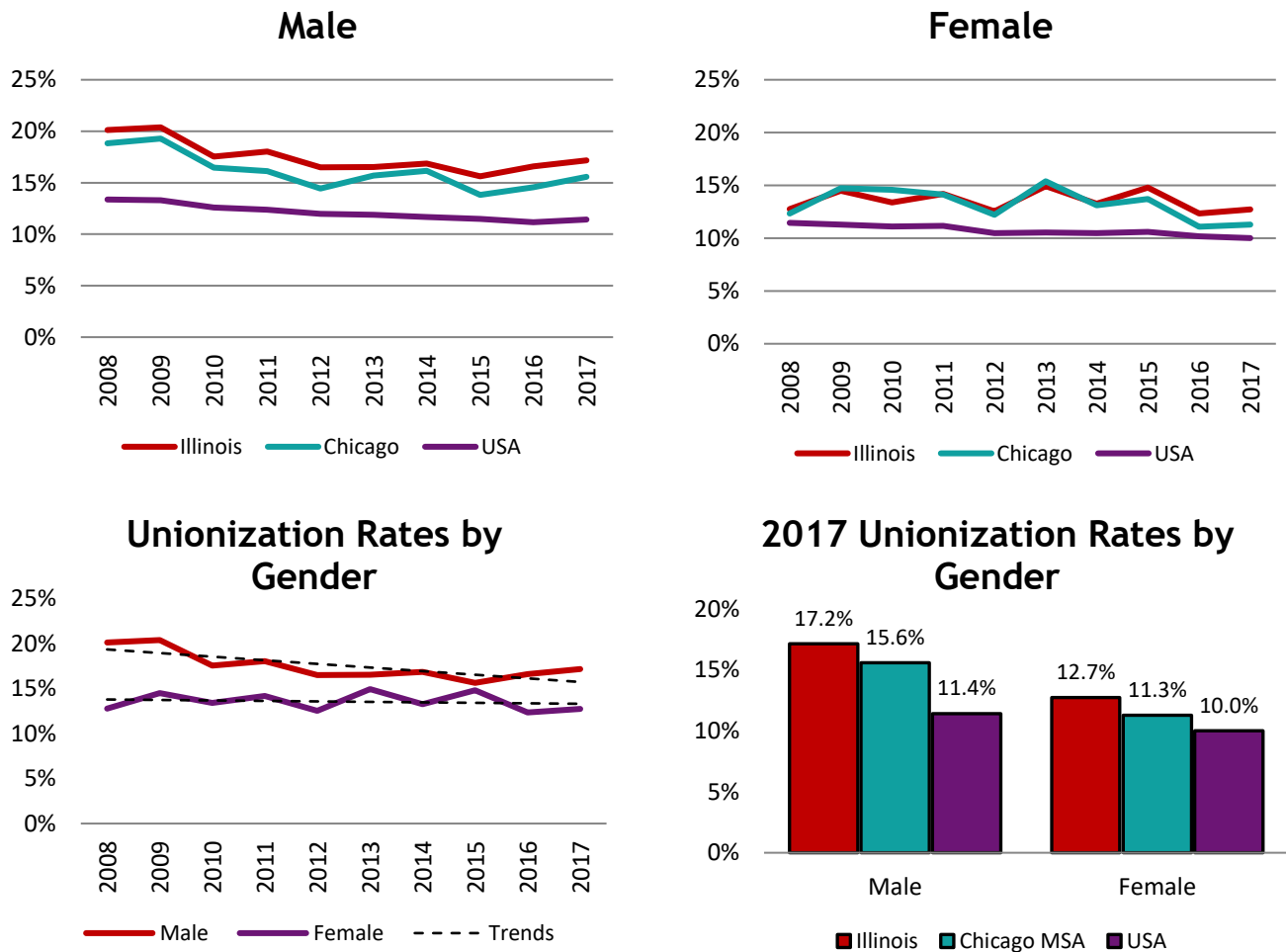
union membership rate has ranged from 3.3 to 5.2 percentage points higher than the national average (Figure 2).

### UNIONIZATION BY DEMOGRAPHICS

From 2015 to 2017, the unionization rate increased for male workers and slightly decreased for female workers in Illinois. The male unionization rate improved 1.5 percentage points over the two-year period from 15.6 percent to 17.2 percent. These gains, however, were offset by a decrease in the female unionization rate. Female union density in Illinois declined by 2.5 percentage points over the two-year period, from 14.8 percent to 12.7 percent (Figure 3).

The 2015 to 2017 changes in unionization by gender bucked the decadal trend in which falling rates of unionization have reflected declines in union membership among men (Figure 3). An estimated 20.1 percent of employed men were unionized in 2008, but the 2017 male unionization rate in Illinois fell to 17.2 percent. The male unionization rate has also decreased in both the Chicago region and the nation as a whole. Since 2008, male union density has dropped by 3.3 percentage points in the Chicago area and by 1.9 percentage points in the United States. The female unionization rate has not grown in Illinois since 2008, but female unionization has decreased by 1.1 percentage points in the Chicago region and by 1.4 percentage points nationwide over that time.

FIGURE 3: GRAPHS OF UNIONIZATION RATES BY GENDER, 2008-2017





African Americans are the most unionized racial or ethnic identity group (Figure 4). The unionization rate for African American workers is 20.2 percent in Illinois, 21.4 percent in the Chicago MSA, and 12.2 percent in the United States. In comparison, white non-Latino union density is 15.5 percent in the state, 13.0 percent in Illinois’ largest metropolitan area, and 11.1 percent across the nation. Respective unionization rates for Latino and Latina workers are currently much lower, at 11.4 percent, 11.6 percent, and 9.3 percent.

FIGURE 4: UNIONIZATION RATES BY RACIAL OR ETHNIC IDENTIFICATION BY REGION, 2017

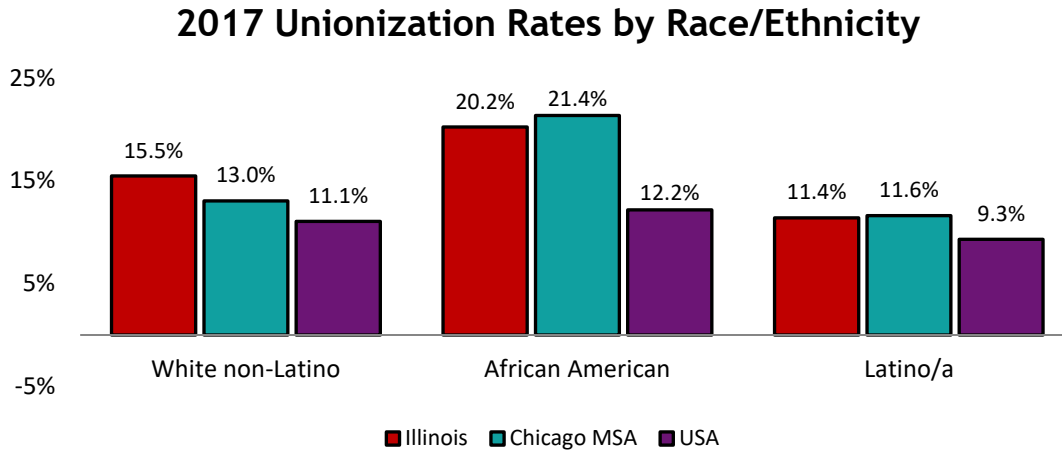
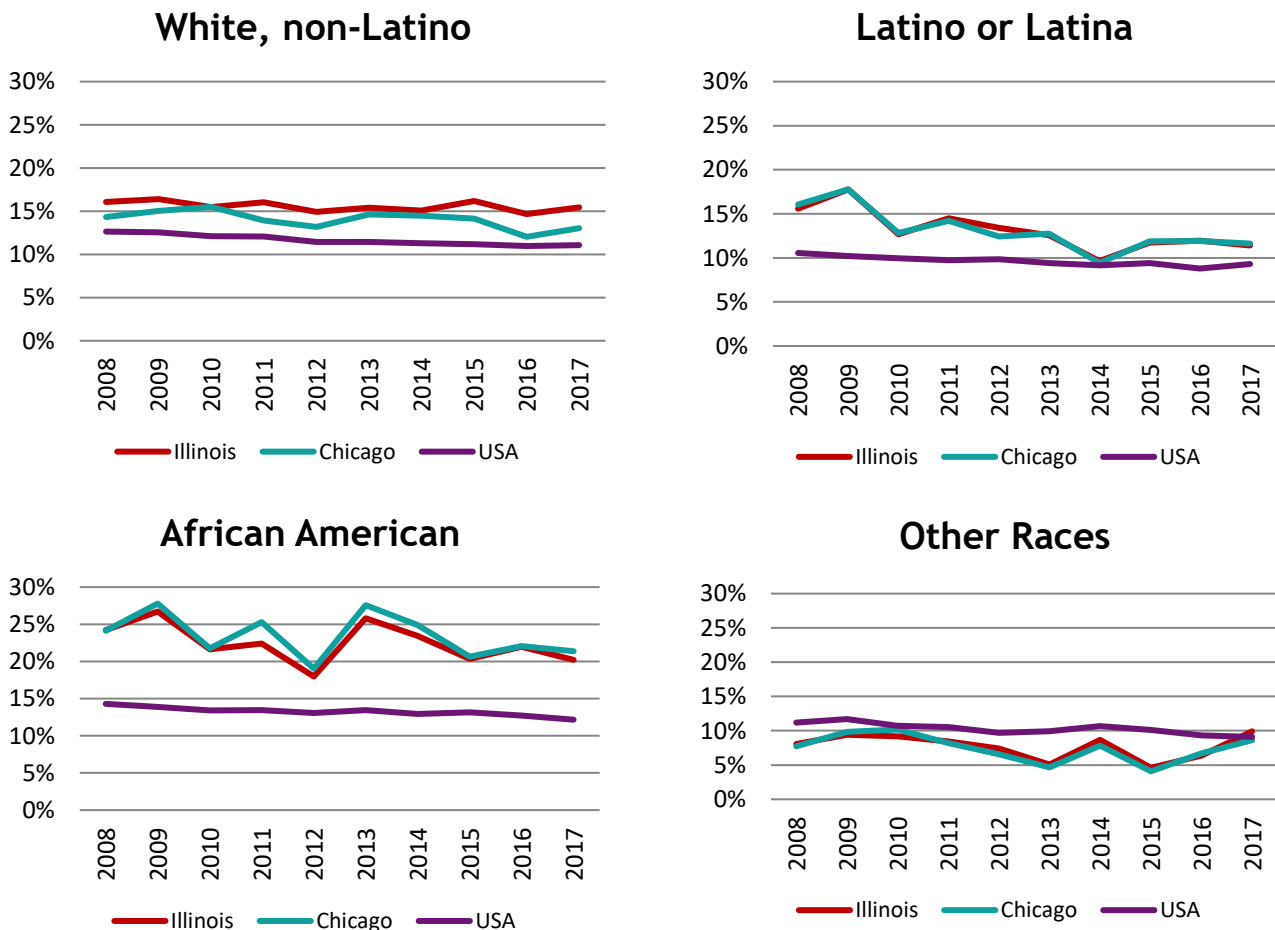


FIGURE 5: GRAPHS OF UNIONIZATION RATES BY RACIAL OR ETHNIC IDENTIFICATION, 2008-2017



Over time, union membership has marginally declined for every major racial or ethnic identity group in Illinois (Figure 5). From 2008 to 2017, unionization in Illinois fell by 0.6 percentage points for white, non-Latino workers, 4.0 percentage points for African American workers, and 4.2 percentage points for Latino/a workers. The union membership rate for all other races, however, has increased by 1.8 percentage points over time. In the Chicago area, trends have mostly mirrored the overall state labor market. Over the 10-year period of analysis, the African American union membership rate has generally been higher in the Chicago area than in the rest of the state.

Unionization rates are much higher for middle-aged workers than for young workers (Figure 6). Regardless of region studied, unionization rates are highest for workers between the ages of 55 and 64 years old. Of workers in this age cohort, 19.4 percent are unionized in Illinois, 18.7 percent are unionized in the Chicago MSA, and 13.5 percent are unionized across the United States. For young workers aged 16-24, unionization rates are less than 6.9 percent for Illinois, the Chicago MSA, and the nation.

FIGURE 6: UNIONIZATION RATES BY AGE GROUP BY REGION, 2017

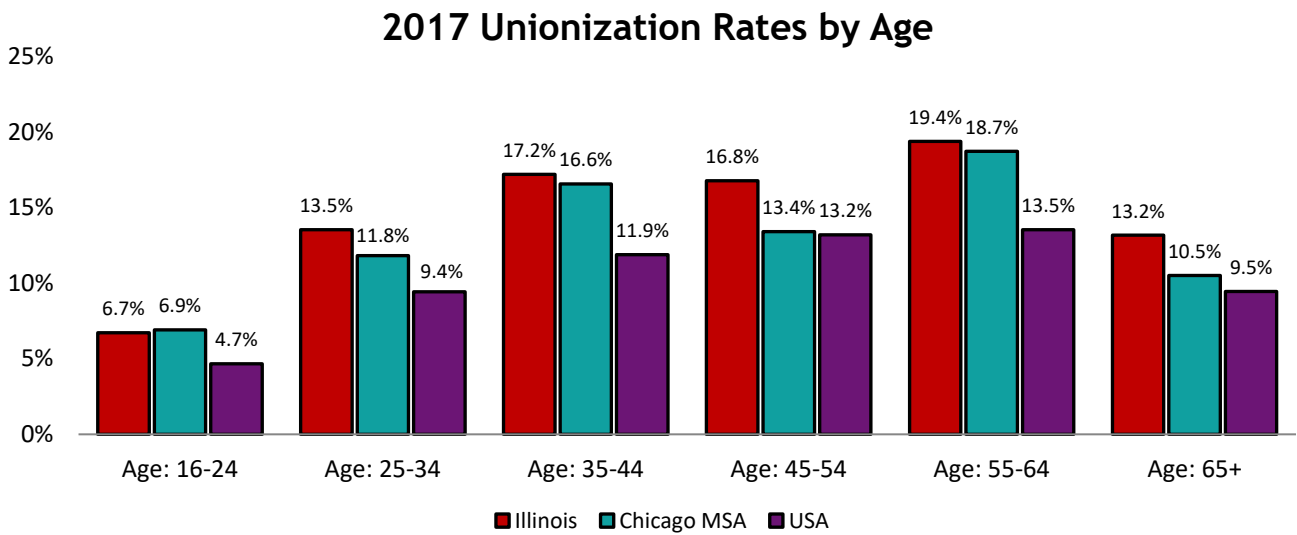
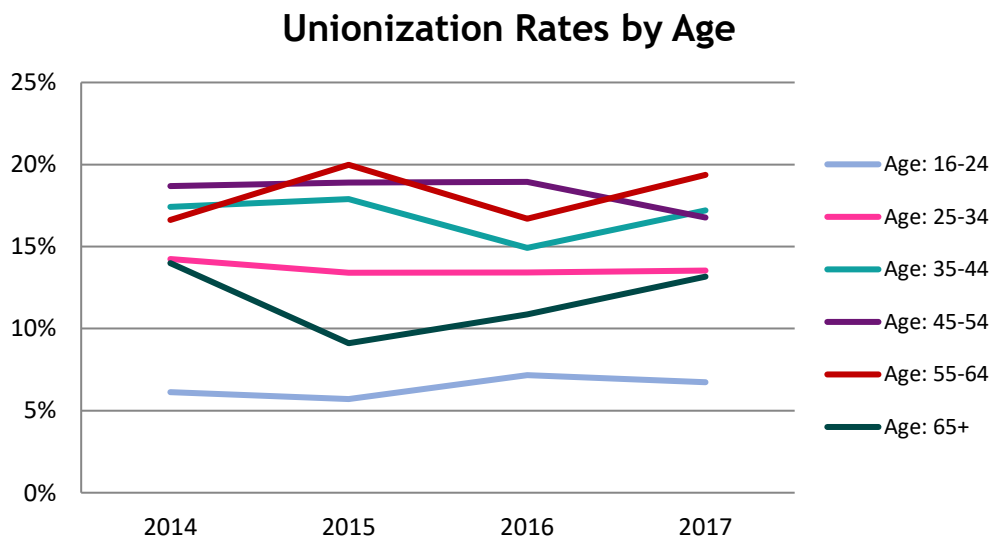


FIGURE 7: ILLINOIS UNIONIZATION RATES BY AGE GROUP, 2014-2017



Over the past four years, unionization rates have only increased for two age groups. From 2014 to 2017, the unionization rate of those 55 years old to 64 years old increased by 2.8 percentage points and workers aged 16 to 24 saw an increase of 0.6 percentage points. Unionization rates declined for all other age cohorts. However, in the past year from 2016 to 2017, unionization rates increased by 2.3 percentage points or more for three age cohorts: workers 35 years old to 44 years old, workers 55 years old to 64 years old, and workers 65 years or older (Figure 7). Overall, the average age of union workers is about 44 years old and the average age of nonunion workers is around 41 years old (Figure 8).

FIGURE 8: AVERAGE AGE OF UNION AND NONUNION WORKERS BY REGION, 2017

2017 Variable	Age (Years)	
	Nonunion	Union
Illinois	41.2	44.2
Chicago MSA	41.1	43.4
USA	41.0	44.3

Union membership varies across other demographic classifications as well (Figure 9). Among the most unionized groups are military veterans. Over one-in-four employed veterans are unionized in Illinois (27.8 percent) and over one-in-five veterans in the Chicago metropolitan area are union members (21.9 percent). For the United States, approximately 14.6 percent of employed veterans are members of unions. The unionization rate for married workers is also above the national average for the Chicago MSA and Illinois. Illinois and the Chicago MSA have higher unionization averages of foreign-born workers and native-born and naturalized citizens than the national average. Native-born and naturalized citizens are more likely to be union members than foreign-born workers in Illinois, Chicago MSA, and the nation.

Figure 10 reveals that geographic distance from an urban core can be a factor in union membership. In the Chicago area, workers who reside in the central city are slightly less likely to be unionized (13.4 percent) than those who live in the suburbs (13.6 percent). In Illinois overall, 12.8 percent of urban workers are members of unions, 15.0 percent of suburban workers are unionized, and 17.3 percent of rural workers belong to a union. The comparable figures for the United States are respectively 11.0 percent, 11.3 percent, and 9.1 percent.

FIGURE 9: UNIONIZATION RATES OF SELECT DEMOGRAPHIC VARIABLES BY REGION, 2017

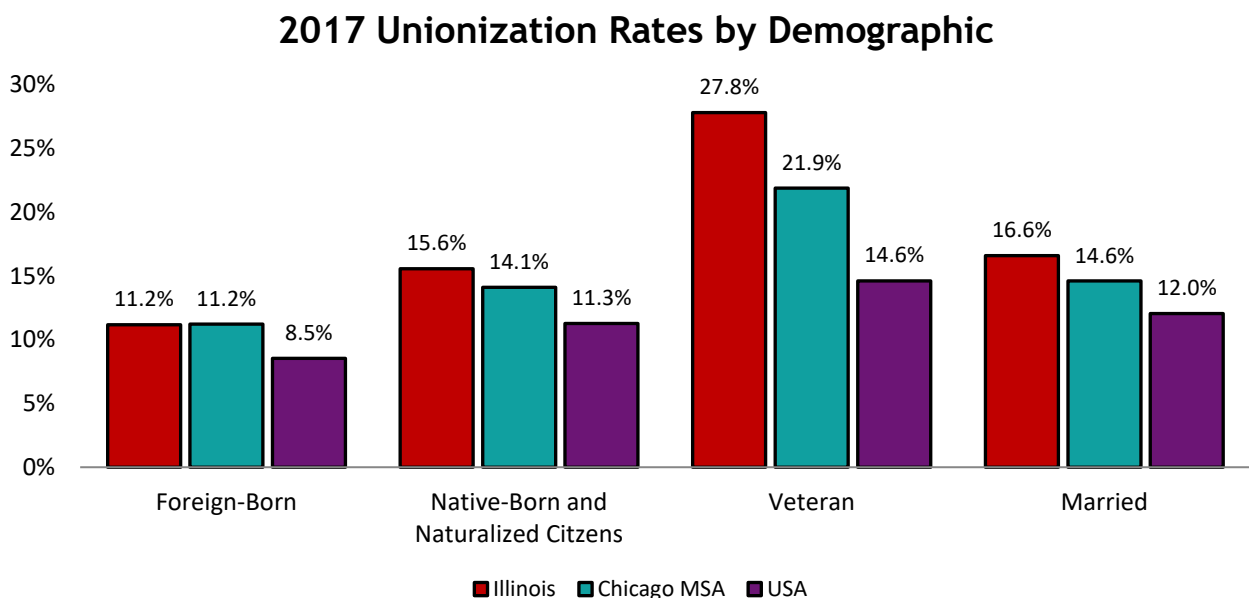
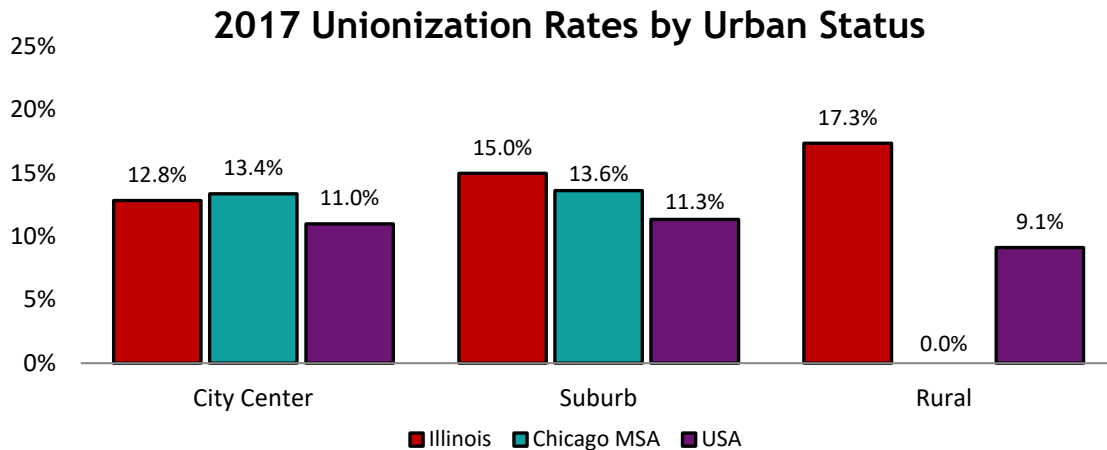


FIGURE 10: UNIONIZATION RATES BY URBAN STATUS BY REGION, 2017



**UNIONIZATION BY EDUCATION**

Workers with master’s degrees are the most unionized educational group in the United States overall (Figure 11). On average, 17.3 percent of master’s degree holders across the nation are union members. Approximately 20.8 percent of master’s degree holders are unionized in Illinois and 19.4 percent are unionized in the Chicago area. In Illinois, those with associate’s degrees are more unionized- at 22.3 percent- than those with master’s degrees. In the Chicago area, 21.1 percent of associate’s degree holders are union members. Workers without a high school degree and those with bachelor’s degrees comprise the two least unionized educational groups. In Illinois, only 9.2 percent of workers without a high school degree and 11.8 percent of workers with bachelor’s degrees are union members. In general, unionization rates are higher in Illinois than the national average across levels of educational attainment. However, the unionization rate is lower for individuals with professional and doctorate degrees in Illinois (10.4 percent) than the U.S. average for similarly-educated workers (10.9 percent).

FIGURE 11: UNIONIZATION RATES BY EDUCATIONAL ATTAINMENT OR STATUS BY REGION, 2017

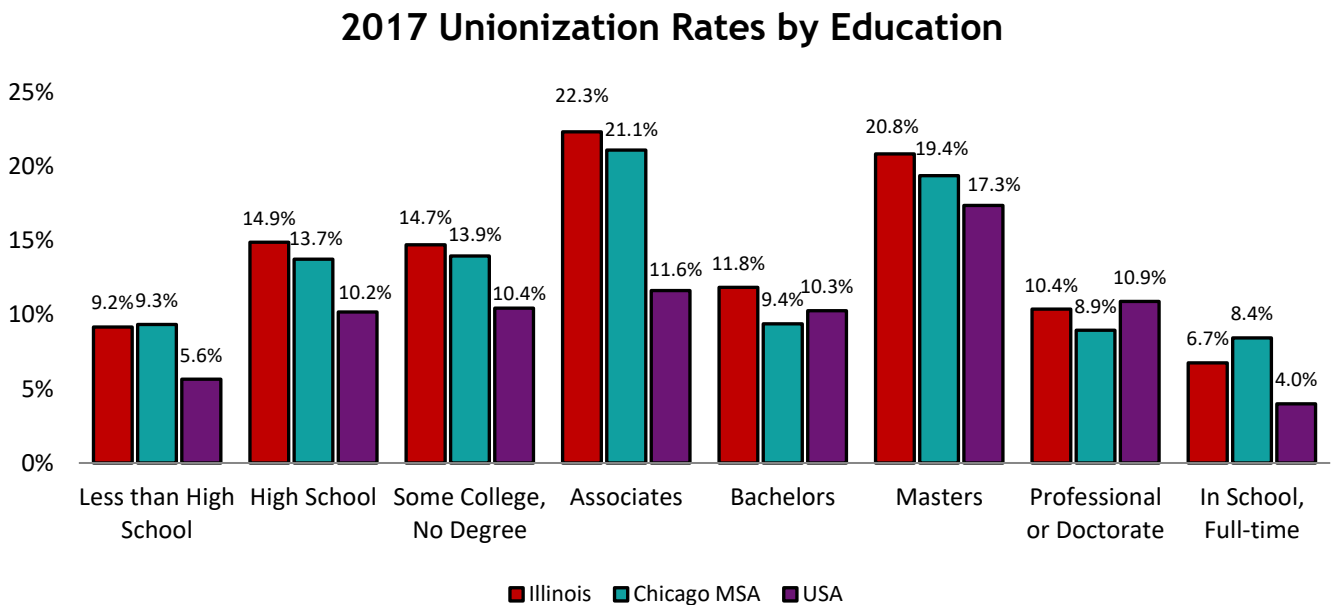


Figure 12 compares the three-year averages of union membership rates of educational attainment groups in Illinois for 2012-2014 and 2015-2017. The three years are grouped together to ensure statistical significance. Across the seven educational classifications, the union membership rate has decreased in four cases: Workers with a high school degree (-1.8 percentage points), with some college but no degree (-0.8 percentage points), with bachelor’s degrees (-0.7 percentage points), and with master’s degrees (-0.3 percentage points). The increase in unionization for individuals with associate’s degrees was 2.3 percentage points.

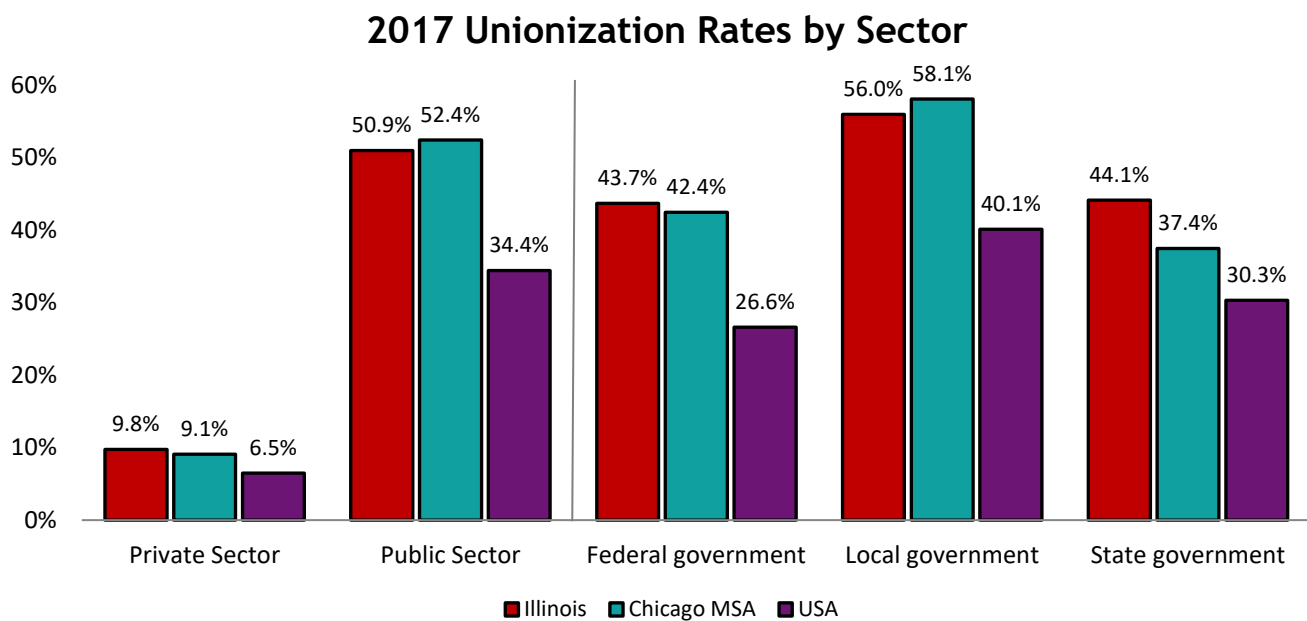
FIGURE 12: CHANGE IN UNIONIZATION RATES BY EDUCATION, THREE-YEAR AVERAGES, 2012-2017

Variable	Illinois		
	2012-14	2015-17	Change
Less than High School	8.8%	9.6%	+0.8%
High School	16.6%	14.9%	-1.8%
Some College, No Degree	15.3%	14.5%	-0.8%
Associates	16.8%	19.1%	+2.3%
Bachelors	12.5%	11.9%	-0.7%
Masters	23.1%	22.7%	-0.3%
Professional/Doctorate	8.1%	12.5%	+4.4%

### UNIONIZATION BY SECTOR, INDUSTRY, AND OCCUPATION

Unionization rates are significantly higher for public sector workers (Figure 13). About half of all public sector workers are unionized in both Illinois (50.2 percent) and the Chicago region (52.4 percent), as are over one-third nationwide (34.4 percent). In comparison, fewer than one-in-ten private sector workers is now a union member in Illinois (9.8 percent), the Chicago MSA (9.1 percent), the United States (6.5 percent).

FIGURE 13: UNIONIZATION RATES BY SECTOR OR LEVEL OF GOVERNMENT BY REGION, 2017

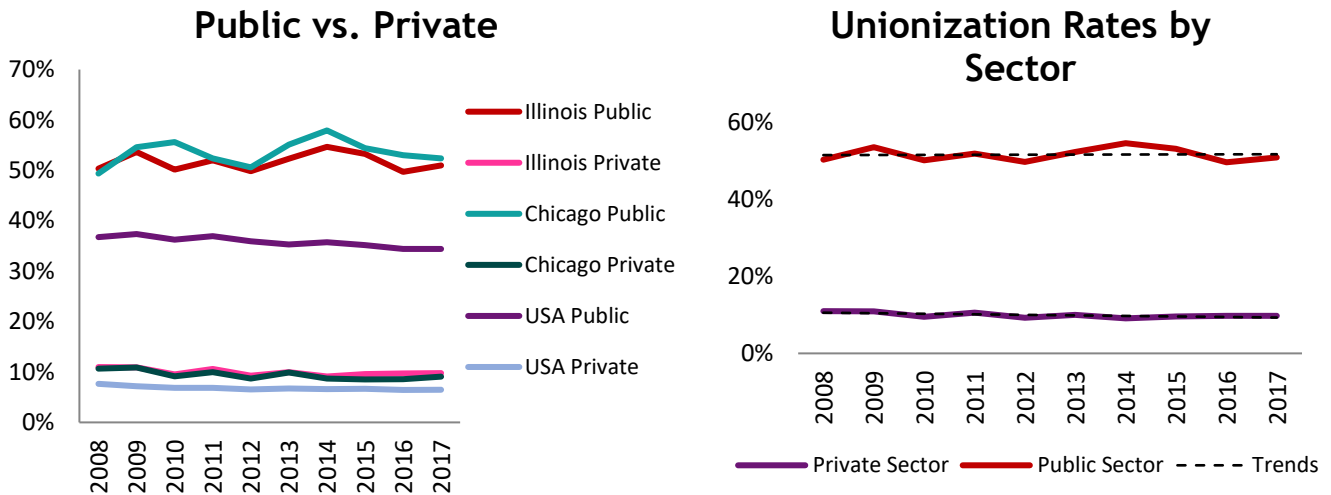


Across all regions studied, the most unionized public sector group is local government employees, with nearly six-in-ten of these workers belonging to a union in Illinois (56.0 percent) and the Chicago MSA (58.1 percent). State government generally commands the second-highest unionization rate among workers in

the three levels of American government. Among public sector workers in Illinois, the unionization rate is lowest for federal government employees. However, federal government union membership rates are over four times as high as the private sector workforce, at 43.7 percent in Illinois.

Public sector union membership modestly experienced gains in Illinois from 2008 to 2017 (Figure 14). In 2008, union membership rates were 50.3 percent for public sector workers and 11.0 percent for private sector workers. Today, the union membership rate for public sector workers is 0.6 percentage points higher than it was in 2008, or 50.9 percent. Meanwhile, private sector unionization has declined by 1.2 percentage points.

FIGURE 14: UNIONIZATION RATES BY SECTOR BY REGION, 2008-2017



Union membership varies significantly by industry (Figure 15). The top four industries by unionization rates in Illinois are public administration (44.2 percent); construction (40.7 percent); transportation and warehousing (31.9 percent); and the combined educational and health services industry (23.8 percent). The national manufacturing workforce, associated historically as a leader in industrial unionization, is now only 9.1 percent organized, compared to 6.1 percent in the Chicago region and 10.0 percent across Illinois. The least-unionized industries generally are financial activities, leisure and hospitality, and professional and business services.

Figures 16 and 17 present industry breakdowns of total union membership in Illinois compared to total employment in the state. In Figure 16, industries are organized in descending order by unionization rate and weighted estimates are rounded to the nearest thousand. Note that the estimates include all *occupations* within an industry. The construction industry, for example, includes white-collar workers who typically are not union members, such as lawyers, office support workers, and architects. The top five industries with the most union members in Illinois are educational and health services (315,000 members), transportation and warehousing (121,000 members), construction (91,000 members), public administration (89,000 members), and manufacturing (74,000 members) (Figure 16).

A cautionary note should be mentioned: Grouping the data by industry results in relatively small sample sizes. Nevertheless, they are informative in that they shed light on the state’s union membership and provide general parameters on the composition of the union workforce.



FIGURE 15: UNIONIZATION RATES BY INDUSTRY BY REGION, 2017

### 2017 Unionization Rates by Industry

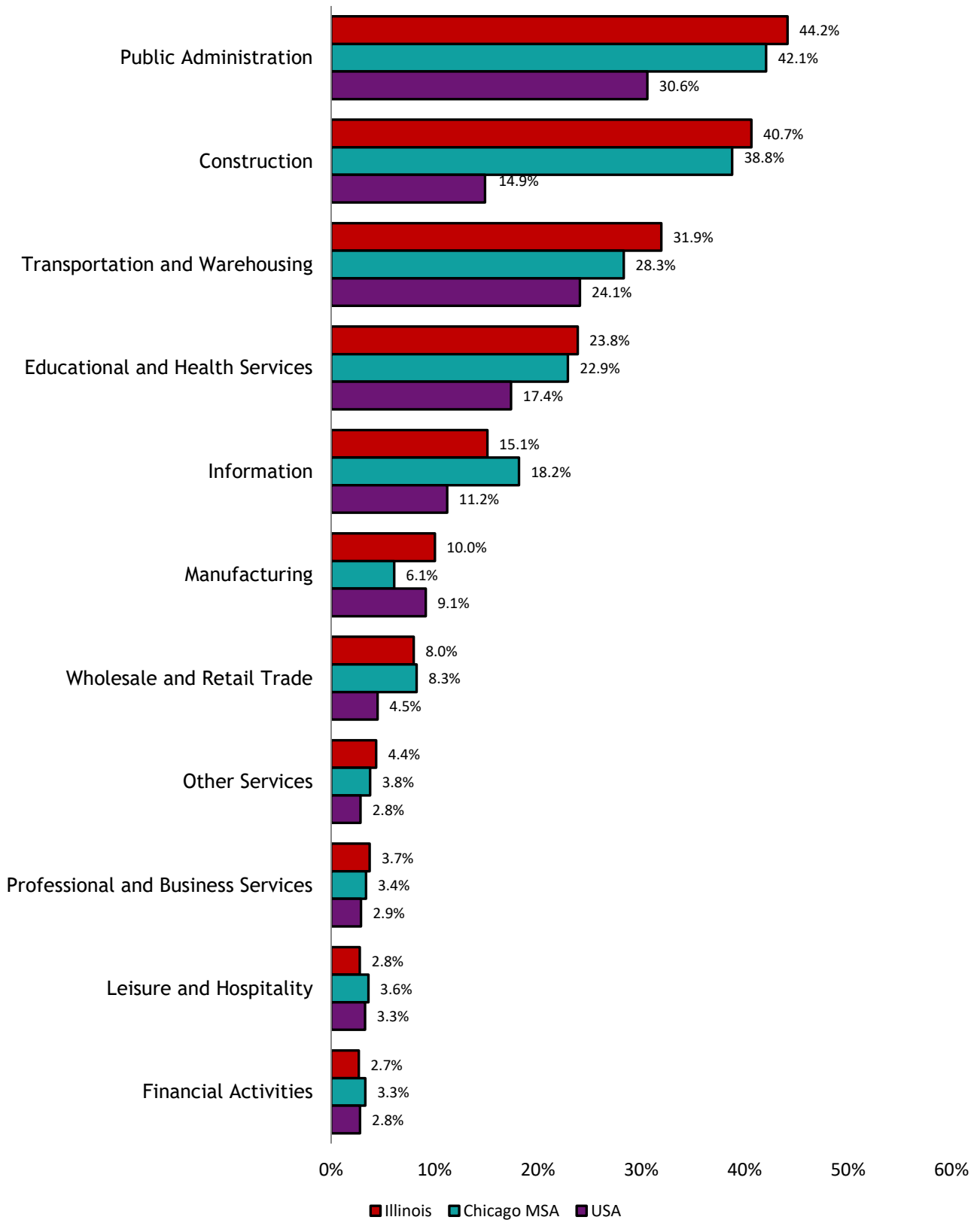


FIGURE 16: ILLINOIS INDUSTRY UNIONIZATION RATES, EMPLOYMENT, AND UNION MEMBERS, 2017

Illinois (2017)	Unionization Rate	Total Employment	Total Union Members	Total Sample
Public Administration	44.2%	202,000	89,000	183
Construction	40.7%	223,000	91,000	194
Transportation & Warehousing	31.9%	380,000	121,000	319
Educational & Health Services	23.8%	1,320,000	315,000	1,167
Information	15.1%	94,000	14,000	81
Manufacturing	10.0%	737,000	74,000	639
Wholesale & Retail Trade	8.0%	767,000	61,000	658
Other Services	4.4%	237,000	10,000	205
Professional & Business Services	3.7%	620,000	23,000	540
Leisure & Hospitality	2.8%	504,000	14,000	430
Financial Activities	2.7%	397,000	11,000	351

FIGURE 17: COMPOSITION OF ILLINOIS UNION WORKFORCE BY INDUSTRY, 2017

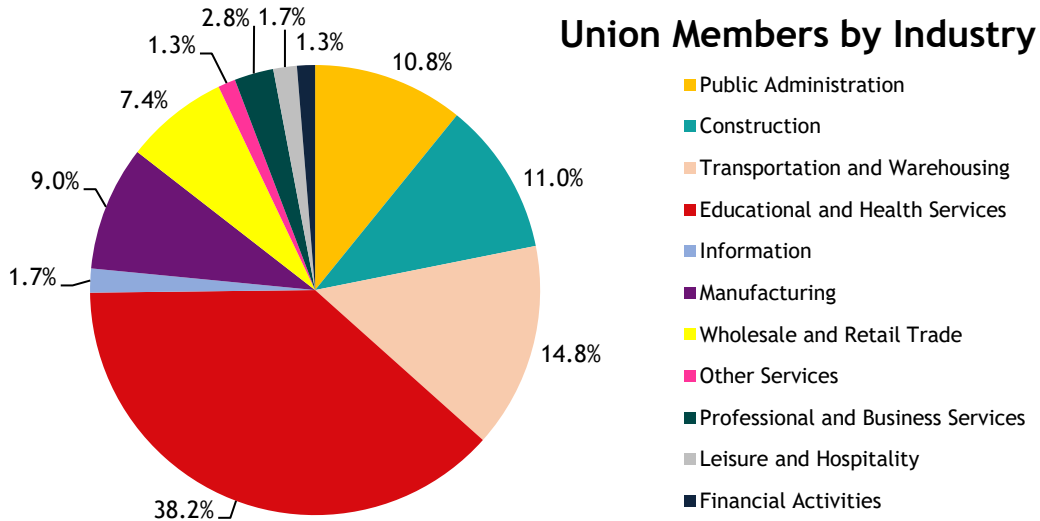


FIGURE 18: UNIONIZATION RATES BY OCCUPATION BY REGION, 2017

Occupation (2017)	Illinois	Chicago MSA	USA
Management, Business, & Financial	3.5%	2.6%	4.4%
Professional & Related	20.3%	18.7%	16.0%
Service	15.4%	13.2%	9.9%
Sales & Related	5.5%	4.5%	3.2%
Office & Administrative Support	10.5%	10.5%	8.7%
Construction & Extraction	49.2%	45.6%	19.3%
Installation, Maintenance, & Repair	25.1%	27.7%	15.5%
Production	14.7%	12.9%	12.4%
Transportation & Material Moving	24.3%	23.2%	14.7%

Lastly, Figure 18 depicts unionization rates by occupation. In Illinois, the most unionized occupation groups are construction and extraction occupations such as carpenters and operating engineers (49.2 percent);

installation, maintenance, and repair occupations such as mechanics (25.1 percent); transportation and moving jobs such as public transit workers and truck drivers (24.3 percent); professional and related occupations including teachers (20.3 percent); and service workers such as police officers (15.5 percent). Compared to the nation, unionization rates in these five occupations are significantly higher in Illinois. Union membership in construction and extraction occupations, as an example, is 29.9 percentage points higher in Illinois than the comparable United States average. The least-unionized occupations are sales and related; management, business, and financial; and office and administrative support jobs in Illinois.

## **PREDICTING UNION MEMBERSHIP IN ILLINOIS**

A statistical model is developed to predict the chances that any given worker is a union member in Illinois, using data from 2015 through 2017. The model, which is detailed in Table A of the Appendix, reports how statistically significant variables increase or decrease one's probability of being a union member. The analysis includes data on almost 13,000 Illinois workers, and weights are applied to match the sample to the actual Illinois population. Given that Illinois averaged about 6.12 million workers over this time, the sample size would yield a normal  $\pm 0.9$  percent margin of error in a standard survey report.

**FIGURE 19: PROBABILITY OF BEING A UNION MEMBER IN ILLINOIS, LARGEST FACTORS, 2015-2017**

<b>Probability of Union Membership</b>	<b>Illinois Mean</b>
<i>Predictor</i>	<i>Percentage Point Change</i>
Sector: Local government	+22.47%
Sector: State government	+18.66%
Sector: Federal government	+13.56%
Industry: Mining	+11.69%
Industry: Construction	+10.47%
Industry: Transportation & utilities	+10.30%
Race: African American	+7.86%
Industry: Educational & health services	+5.99%
Occupation: Construction & extraction	+5.92%
Occupation: Professional & related	-5.41%
Industry: Financial activities	-5.55%
Industry: Professional & business services	-5.61%
Industry: Leisure & hospitality	-6.86%
Occupation: Office & administrative support	-10.27%
Occupation: Sales & related	-12.21%
Occupation: Management, business, & financial	-17.50%
<i>Constant</i>	14.51%
<i>Observations</i>	12,781

Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2015-2017. Only statistically significant variables with a coefficient of over  $\pm 5.0$  percent are displayed in the figure. Occupation dummies are relative to "production" occupations and industry dummies are relative to "manufacturing." For more, see the Appendix.

Many factors increase the likelihood that an employed person is a union member in Illinois (Figure 19). Relative to workers in the private sector, employment in local government, the largest contributor to an individual's chances of being a union member, raises the probability by 22.5 percentage points on average. State and federal government employment respectively increase the union probability by 18.7 and 13.6 percentage points relative to private sector workers. Employment in the mining industry lifts the likelihood that a worker is a union member by 11.7 percentage points relative to workers in the manufacturing industry. Working in construction, transportation and utilities, and educational and health services all

improve the chances of being a union member by between 5.9 and 10.5 percentage points, relative to manufacturing. Note that the industry variables include both public and private sector workers, and the independent effects of public sector employment are captured in the local government, state government, and federal government variables. The industry factors reveal that employment growth in the public sector or through infrastructure investments (which would primarily affect construction, transportation, utilities, and mining) would likely increase overall unionization in Illinois.

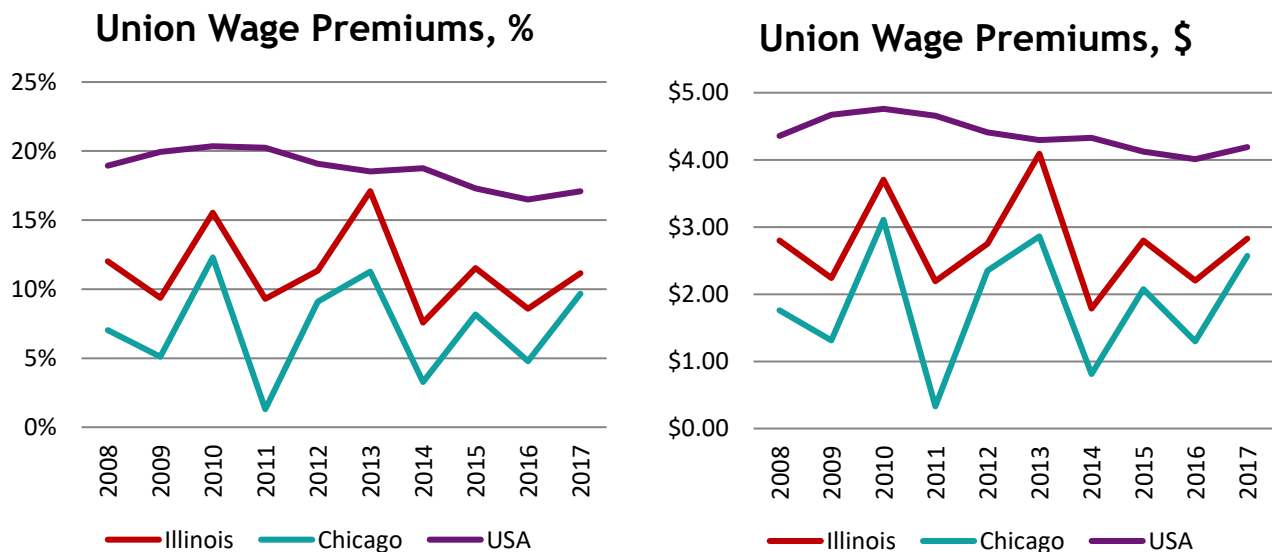
Beyond sector and industry influencers, race and ethnicity factor into the chances that a given worker in Illinois is unionized. African American workers are statistically the most likely racial or ethnic group to be union members in Illinois. African Americans are 7.9 percentage points more likely, on average, to be union members than all other non-white groups.

Some occupational and industry factors contribute negatively to the probability that a worker is in a union. Compared to the manufacturing industry, the professional and related services, leisure and hospitality, and financial activities industry reduce the chances by between 5.5 and 6.9 percentage points. Additionally, workers in professional and related, office, administrative support, sales, management, business, and financial occupations are all 5.4 to 17.5 percentage points less likely to be union members than similar workers in production occupations.

## WORKER WAGES

Unionized workers typically earn more than their nonunion counterparts (Figure 20). Figure 20 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 that 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 approximately \$4.00 per hour, or by about 17 percent. The gap between union and nonunion wages appears to be smaller in Illinois, which is generally a high-wage state for both union and nonunion workers. The wage difference in Illinois increased over the past year, up from a \$2.16 hourly benefit in Illinois to a \$2.83 hourly benefit as of 2017. Today, the wage difference is also \$2.57 per hour in Chicago on average (Figure 21). Unions raise individual incomes by lifting wages per hour.

FIGURE 20: UNION WAGE DIFFERENCES BY REGION, PERCENTAGE AND DOLLAR VALUES, 2008 TO 2017



The data presented in Figure 20 may overstate or understate the union wage effect because union members may be more or less likely to have characteristics associated with higher wages such as age, education, job experience, and geographic location. Regression analyses (OLS and quantile regressions) are utilized to control for these and similar factors in order to isolate the independent effect of unionization on wages and report them in Figure 21. The national average further controls for an individual respondent’s state of residence. Data are for employed persons aged 16 and older from 2015 through 2017 and are based on the natural logarithm of hourly wages to “normalize the data” in percentage terms. For more on the union wage premium regressions, see Table B in the Appendix.

**FIGURE 21: WAGES OF UNION AND NONUNION WORKERS BY REGION, 2017**

Variable	Illinois		Chicago MSA		USA	
	Nonunion	Union	Nonunion	Union	Nonunion	Union
Wage	\$25.34	\$28.17	\$26.58	\$29.15	\$24.51	\$28.70
Union Difference, %		+11.16%		+9.67%		+17.09%
Union Difference, \$		+\$2.83		+\$2.57		+\$4.19

After controlling for education, demographics, and employment factors, the union wage premium generally aligns with the differences reported in Figures 20 and 21 (Figure 22). On average, unions are found to increase a worker’s per-hour wage by 10.3 percent in the United States. In Illinois, the union wage premium is an estimated 11.1 percent on average, holding all else constant (including occupation and industry). Both results are statistically significant at the 1-percent level.

**FIGURE 22: REGRESSIONS OF UNION WAGE PREMIUMS FOR THE UNITED STATES AND ILLINOIS, 2015-2017**

Union Wage Premium: Ordinary Least Squares (OLS) and Quantile Regressions, 2015-2017							
USA		Illinois					
Mean	Mean	Bottom 10%	Bottom 25%	Median	Top 25%	Top 10%	Top 1%
10.28%***	11.07%***	9.27%***	10.76%***	10.20%***	11.53%***	8.65%***	6.41%
R <sup>2</sup> =0.447	R <sup>2</sup> =0.441	R <sup>2</sup> =0.173	R <sup>2</sup> =0.257	R <sup>2</sup> =0.302	R <sup>2</sup> =0.312	R <sup>2</sup> =0.294	R <sup>2</sup> =0.188

Three asterisks (\*\*\*) indicate significance at the 1-percent level. Two asterisks (\*\*) indicates significance at the 5-percent level. Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2015-2017. 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.

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 an 11.1 percent increase in the *average* Illinois worker’s wage, the benefit is generally highest for those at the middle of the state’s hourly income distribution (Figure 22). In fact, over the past three years, union membership statistically increases hourly earnings by 11.5 percent for workers in the top 25 percent and 10.8 percent for workers in the bottom 25 percent of the wage distribution. The union wage difference is 10.2 percent for the median worker. The bottom 10 percent see a higher union wage premium at 9.3 percent than the top 10 percent of workers (8.7 percent). Union membership has no statistical impact on the top 1 percent of wage earners in Illinois. The estimates corroborate national findings from Schmitt (2008) in *The Union Wage Advantage for Low-Wage Workers*. The data strongly indicate that unionization benefits low-income and middle-class workers most and helps to reduce income inequality.

How does the average Illinois union wage premium of 11.1 percent compare to the union effect in other states? Similar 2015-2017 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 23, lead to the conclusion that the Illinois union wage premium is the 13<sup>th</sup>-highest in the nation. Additionally, a total of 14 states have union wage premiums that are found to be higher than the national average of 10.3 percent. Importantly, a positive union wage premium exists in every state.

FIGURE 23: UNION WAGE PREMIUMS BY STATE, OLS REGRESSIONS, 2015-2017

Rank	State	Union Premium	Rank	State	Union Premium
	<i>United States</i>	10.28%	26	Louisiana	7.95%
1	Nevada	16.88%	27	Rhode Island	7.82%
2	Indiana	16.11%	28	North Dakota	7.69%
3	South Carolina	14.76%	29	Vermont	7.69%
4	California	12.68%	30	Oklahoma	7.68%
5	New Jersey	12.65%	31	Virginia	7.67%
6	Arkansas	12.44%	32	West Virginia	7.29%
7	Wisconsin	11.95%	33	Kansas	7.15%
8	Idaho	11.87%	34	Alaska	7.09%
9	Mississippi	11.54%	35	South Dakota	6.99%
10	Montana	11.39%	36	Michigan	6.97%
11	Missouri	11.33%	37	Minnesota	6.96%
12	Tennessee	11.22%	38	Massachusetts	6.81%
13	Illinois	11.07%	39	New Mexico	6.55%
14	Georgia	10.30%	40	Colorado	6.27%
15	Pennsylvania	10.11%	41	Utah	6.17%
16	Hawaii	9.98%	42	New York	6.16%
17	Ohio	9.97%	43	Iowa	6.02%
18	Maryland	9.84%	44	District of Columbia	5.90%
19	Oregon	9.53%	45	Connecticut	5.70%
20	Arizona	9.32%	46	Maine	5.67%
21	Texas	9.17%	47	Nebraska	5.56%
22	Washington	9.03%	48	New Hampshire	5.36%
23	Kentucky	8.60%	49	Florida	5.34%
24	Delaware	8.42%	50	Alabama	5.29%
25	Wyoming	8.19%	51	North Carolina	1.45%

All estimates are significant at the 1-percent level except for the following: Oklahoma, South Dakota, New Mexico, Utah, Iowa, Connecticut, Maine, Nebraska, and New Hampshire (which are all significant at the 5-percent level) and North Carolina (which is not statistically significant). Source: CPS-ORG, Center for Economic and Policy Research Uniform Data Extracts, 2015-2017. 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.

## UNION WAGE PREMIUM BY INDUSTRY AND OCCUPATION

Certain industries and occupations have higher union wage premiums than others. The sizeable differences in wage premiums by major industry and major occupation are displayed in Figures 24 and 25. Notably, the most-unionized industries and occupations tend to have the highest wage premiums.

Figure 24 displays the three industries with the highest union wage premiums. Industries are defined as a group of establishments, firms, and occupations which produce similar products or provide similar services. Industries include all occupational classifications, from blue-collar workers to white-collar employees to CEOs. The construction industry has the highest union wage premium at 34.5 percent. The information industry, including newspaper organizations, comes in second with a union wage premium of 24.3 percent while transportation and warehousing industries rank third with a 15.3 percent increase in wages from union membership (Figure 24).

At the occupational level, workers in construction and extraction careers experience the largest wage premium in Illinois (Figure 25). After controlling for other factors, construction and extraction workers



who belong to a union earn 44.8 percent more per hour than comparable nonunion workers. While construction and extraction jobs continue to be among the most dangerous occupations in the country, trade unions in Illinois support rigorous apprenticeship training and bargain for high workplace standards to ensure safety and quality on construction projects, which contributes significantly to unionized construction workers earning higher wages than their nonunion counterparts. Installation, maintenance, and repair workers also tend to earn a significantly higher wage when unionized, with a wage premium of 37.8 percent. Transportation and material moving workers rank third in the union wage premium, with an average hourly wage increase of 20.6 percent.

FIGURE 24: UNION WAGE PREMIUM BY INDUSTRY IN ILLINOIS, 2015-2017

Industry	Union Wage Premium
Construction	34.54%
Information	24.26%
Transportation & Warehousing	15.33%

FIGURE 25: UNION WAGE PREMIUM BY OCCUPATION IN ILLINOIS, 2015-2017

Occupation	Wage Premium
Construction & Extraction	44.78%
Installation, Maintenance, & Repair	37.82%
Transportation & Material Moving	20.63%

## DATA ON LABOR UNION ESTABLISHMENTS

The total number of “labor unions and similar labor organizations” has declined in Illinois over the past decade. Figure 26 presents *County Business Patterns* data on the number of establishments and paid employees as well as officers in these organizations. An establishment is a single physical location where business is conducted or where services or operations are performed. Establishments include all the union halls, employees’ associations, worker centers, and similar offices of local or national labor unions, collective-bargaining units, and similar organizations.

FIGURE 26: UNIONS AND SIMILAR ORGANIZATIONS, ESTABLISHMENTS AND EMPLOYMENT, 2007-2016

Illinois	NAICS Code: 81393 - Labor Unions and Similar Labor Organizations	
Year	Establishments	Paid Employees
2007	961	11,615
2008	937	13,059
2009	939	13,245
2010	942	11,304
2011	941	10,549
2012	918	10,546
2013	912	10,833
2014	891	10,316
2015	881	10,278
2016	877	9,957
<b>2007-2016 Change</b>	<b>-84</b>	<b>-1,658</b>

The total number of independent organizations in 2016, the latest year for which data are available, was 877. This is down considerably from the 961 establishments of labor unions and similar labor organizations

in Illinois in 2007. Over the past ten years, there has been a decline of 84 worker establishments (-8.7 percent) in Illinois, despite a rise in overall employment in the state.

Consequently, the number of officers and staff working directly for labor unions has fallen from 11,615 workers in 2007 to 9,957 workers in 2016 (-14.3 percent). There are nearly 1,700 fewer individuals working for labor unions and similar organizations today than a decade ago. As unionization has decreased, revenue from membership dues has relatively declined, resulting in these nonprofit organizations merging, dissolving, and laying off workers (Figure 26).

## **CONCLUSIONS**

Since 2008, unionization has declined in Illinois, in the Chicago region, and in the United States. There are approximately 111,000 fewer union members in Illinois today than there were in 2008, contributing to the 1.3 million-member drop in union workers across the nation over that time. Declining union membership in Illinois has primarily been the result of decreases in male unionization.

Consequently, the total number of labor unions and similar labor organizations has declined over the past decade. There are 877 labor unions and similar organizations in Illinois, a decline of over 80 worker establishments over the past ten years. There are also nearly 1,700 fewer officers and staff working in labor unions and similar organizations today than one decade ago.

However, on the positive side, Illinois' labor movement posted new gains last year. From 2016 to 2017, the unionization rate increased from 14.5 percent to 15.0 percent and the number of union members increased from about 812,000 to about 828,000. The increase in unionization was concentrated in the Chicago metropolitan area, which added nearly 19,000 union members.

About half of all public sector workers continue to be unionized in both Illinois (50.9 percent) and the Chicago metropolitan area (52.4 percent). Meanwhile, slightly more than one-third of all public sector workers are unionized across the nation (34.4 percent). In comparison, fewer than one-in-ten (9.8 percent) workers in Illinois' private sector are now union members. In the future, the recent *Janus v. American Federation of State, County, and Municipal Employees, Council 31, et al.* Supreme Court decision could have a negative impact on public sector unions in Illinois.

Union membership is influenced by a number of factors. Employment in the public sector, construction, transportation and utilities, mining, educational and health services, and public administration industries all raise the chances that a given worker is a union member. African American workers are also statistically more likely to be union members than their racial or ethnic counterparts. On the other hand, workers employed in professional and related occupations, management, business, and financial occupations, workers employed in sales occupations, and financial occupations are less likely to be unionized.

Labor unions increase individual incomes by lifting hourly wages- particularly for middle-income workers. In Illinois, unions raise worker wages by an average of 11.1 percent. The state's union wage effect is the 11<sup>th</sup>-highest in the nation. The union wage differential is higher for middle-class workers (10.2 percent to 11.5 percent) than the richest 10 percent of workers (8.7 percent), helping to reduce income inequality.

Organized labor plays a vital role in Illinois' economy and communities. The Illinois labor movement, however, will continue to face both short- and long-term challenges. In the short term, there are political pressures to weaken unions through various legislative, legal, and corporate measures. Over the long term, reversing the economic trend of declining union membership rates remains a critical if uncertain task. Labor's response to these challenges could define its influence and effectiveness in the decades to come.

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## REFERENCES

- Bruno, Robert. (2015). "The Changing Landscape and future of Labor Relations: A View from Organized Labor." *Illinois Public Employee Relations Report*, 32, 3, available at <https://scholarship.kentlaw.iit.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1098&context=iperr>.
- Caldwell, Patrick. (2017) "Who Moved My Teachers?" *Mother Jones*, available at <http://www.motherjones.com/politics/2017/03/scott-walker-trump-wisconsin-teacher-union>.
- Census. (2018). *Business Patterns*. 2007-2016. American FactFinder, available at [factfinder.census.gov](http://factfinder.census.gov).
- Center for Economic and Policy Research (CEPR). (2018). 2008-2017 CPS ORG Uniform Extracts, Version 2.3. Washington, DC.
- Cooper. David. (2018). *As Wisconsin's and Minnesota's Lawmakers Took Divergent Paths, So Did Their Economies*. Economic Policy Institute, available at <https://www.epi.org/publication/as-wisconsin-and-minnesotas-lawmakers-took-divergent-paths-so-did-their-economies-since-2010-minnesotas-economy-has-performed-far-better-for-working-families-than-wisconsin/>.
- Cooper, David and Lawrence Mishel. (2015). *The Erosion of Collective Bargaining Has Widened the Gap Between Productivity and Pay*. Economic Policy Institute, available at <http://www.epi.org/publication/collective-bargainings-erosion-expanded-the-productivity-pay-gap/>.
- Farber, Henry, Daniel Herbst, Ilyana Kuziemko, Suresh Naidu. (2018). *Unions and Inequality Over the Twentieth Century: New Evidence from Survey Data*. Princeton University, available at <http://www.nber.org/papers/w24587>.
- Gordon, Lafer. (2013). "The Legislative Attack on American Wages and Labor Standards, 2011-2012." *Economic Policy Institute Briefing Paper #364*, available at <http://www.epi.org/publication/attack-on-american-labor-standards/>.
- Hirsch, Barry T. and David A. Macpherson. (2017). "Union Membership, Coverage, Density, and Employment Among All Wage and Salary Workers, 1973-2016." *Unionstats.com*. Georgia State University and Trinity University. Database from the Current Population Survey, available at [www.unionstats.com](http://www.unionstats.com).
- Eren, Ozkan and I. Serkan Ozbeklik. (2014). "Union Threat and Nonunion Wages: Evidence from the Case Study of Oklahoma." Louisiana State University Working Paper, Submitted to *Economic Inquiry*, available at [http://faculty.bus.lsu.edu/oeren/eren\\_ozbeklik\\_paper3.pdf](http://faculty.bus.lsu.edu/oeren/eren_ozbeklik_paper3.pdf).
- Manzo IV, Frank and Robert Bruno. (2018). *After Janus: The Impending Effects on Public Sector Workers from a Decision Against Fair Share*. Illinois Economic Policy Institute; Project for Middle Class Renewal, University of Illinois at Urbana-Champaign, available at <https://illinoisepi.org/site/wp-content/themes/hollow/docs/wages-labor-standards/pmcr-ilepi-rtw-in-the-midwest-2010-to-2016.pdf>.
- Manzo IV, Frank and Robert Bruno. (2017) (a). *The Impact of "Right-to-Work" Laws on Labor Market Outcomes in Three Midwest States: Evidence from Indiana, Michigan, and Wisconsin (2010-2016)*. Illinois Economic Policy Institute; Project for Middle Class Renewal, University of Illinois at Urbana-Champaign, available at <https://illinoisepi.org/site/wp-content/themes/hollow/docs/wages-labor-standards/ilepi-pmcr-union-decline-and-economic-redistribution-midwest-final.pdf>.
- Manzo IV, Frank and Robert Bruno. (2017) (b). *Union Decline and Economic Redistribution: A Report on Twelve Midwest States*. Illinois Economic Policy Institute; Project for Middle Class Renewal, University of Illinois at Urbana-Champaign, available at <https://illinoisepi.files.wordpress.com/2018/05/ilepi-pmcr-after-janus-final.pdf>.

- Manzo IV, Frank and Robert Bruno. (2016). *The Application and Impact of Labor Union Dues in Illinois: An Organizational and Individual-Level Analysis*. Illinois Economic Policy Institute; Project for Middle Class Renewal, University of Illinois at Urbana-Champaign, available at <https://illinoisepi.org/site/wp-content/themes/hollow/docs/wages-labor-standards/ILEPI-PMCR-Application-and-Impact-of-Union-Dues-in-Illinois-FINAL.pdf>.
- Manzo IV, Frank and Robert Bruno. (2015). *The Impact of Local “Right-to-Work” Zones: Predicting Outcomes for Workers, the Economy, and Tax Revenue in Illinois*. Illinois Economic Policy Institute and Project for Middle Class Renewal, University of Illinois at Urbana-Champaign, available at <https://illinoisepi.org/site/wp-content/themes/hollow/docs/wages-labor-standards/The-Impact-of-Local-Right-to-Work-Zones.pdf>.
- Manzo IV, Frank, Robert Bruno, and Virginia Parks. (2017). *The State of the Unions 2017: A Profile of Unionization in Chicago, in Illinois, and in America*. Illinois Economic Policy Institute; Labor Education Program, University of Illinois at Urbana-Champaign; Occidental College, available at <https://illinoisepi.org/site/wp-content/themes/hollow/docs/wages-labor-standards/ilepi-pmcr-oc-state-of-the-unions-il-2017-final2.pdf>.
- Milkman, Ruth and Stephanie Luce. (2016). *The State of the Unions 2016: A Profile of Organized Labor in New York City, New York State, and the United States*. Joseph S. Murphy Institute for Worker Education and Labor Studies and the Center for Urban Research, City University of New York Graduate Center, available at [https://www.gc.cuny.edu/CUNY\\_GC/media/CUNY-Graduate-Center/PDF/Communications/Union\\_Density2016\\_C5.pdf](https://www.gc.cuny.edu/CUNY_GC/media/CUNY-Graduate-Center/PDF/Communications/Union_Density2016_C5.pdf).
- Murphy, Erin. (2017). “Iowa’s Public-Sector Unions Brace for Impact of New Collective Bargaining Law.” *The Gazette*, available at <http://www.thegazette.com/subject/news/iowas-public-sector-unions-brace-for-impact-of-new-collective-bargaining-law-20170220>.
- Schmitt, John. (2008). *The Union Wage Advantage for Low-Wage Workers*. Center for Economic and Policy Research, available at [http://cepr.net/documents/publications/quantile\\_2008\\_05.pdf](http://cepr.net/documents/publications/quantile_2008_05.pdf).
- Sommeiller, Estelle and Mark Price. (2015). *The Increasingly Unequal States of America: Income Inequality by State, 1917 to 2012*. Economic Analysis and Research Network, available at <http://www.epi.org/publication/income-inequality-by-state-1917-to-2012/>.
- Western, Bruce and Jake Rosenfeld. (2011). “Unions, Norms, and the Rise in U.S. Wage Inequality.” *American Sociological Review*, 76(4). 513-537, available at <http://www.asanet.org/images/journals/docs/pdf/asr/WesternandRosenfeld.pdf>.

## **COVER PHOTO CREDITS**

- Bottom Line. (2012). “The States with the Largest Unionized Work Forces.” *NBC News*. Available at <https://www.nbcnews.com/businessmain/states-largest-unionized-work-forces-1C7100633>.
- Fortino, Elyn. (2015). “Study: Illinois Union Membership Down 97,000 Workers Over Past Decade.” *Progress Illinois*. Available at <http://www.progressillinois.com/quick-hits/content/2015/05/18/study-illinois-union-membership-down-97000-workers-over-past-decade>.
- Schlink, Lyndsie. (2017). “Deborah McPhee (center) is a professor at Illinois State University.” *WGLT*. Available at <http://wgl.t.org/post/isu-professor-designs-new-model-teach-teachers#stream/0>.
- Construction Industry Service Corporation (CISCO). (2017). “About.” Available at <http://www.cisco.org/join/>.
- Illinois Update. (2017). “Working for All Illinois.” Available at [goo.gl/xt31x1](http://goo.gl/xt31x1).

**APPENDIX**

TABLE A: PROBIT REGRESSION ON PROBABILITY OF UNION MEMBERSHIP, AVERAGE MARGINAL EFFECTS, ILLINOIS WORKERS, 2015-2017

Prob(Union Member)	Illinois	
	Coefficient	(St. Err.)
Age	0.0059***	(0.0013)
Age <sup>2</sup>	-0.0001***	(0.0000)
Female	-0.0160**	(0.0065)
Citizen	0.0443***	(0.0135)
White, non-Latino	0.0358**	(0.0142)
African American	0.0786***	(0.0160)
Latino or Latina	0.0201	(0.0159)
Chicago MSA	0.0004	(0.0088)
Center City	-0.0065	(0.0112)
Suburb	-0.0114	(0.0099)
Federal government	0.1356***	(0.0182)
State government	0.1866***	(0.0116)
Local government	0.2247***	(0.0090)
Usual hours worked	0.0018***	(0.0000)
Less than high school	0.0011	(0.0140)
Some college, no degree	0.0094	(0.0087)
Associate's	0.0289***	(0.0101)
Bachelor's	-0.0023	(0.0092)
Master's	0.0313***	(0.0107)
Professional/Doctorate	-0.0430**	(0.0169)
Industry/Occupation Dummies	Y	Y
Constant	0.1451***	(0.0027)
R <sup>2</sup>	0.2696	
Observations	12,781	

A probit 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. Sampling weights to match the sample size to the actual population are applied.

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, 2015-2017. The total number of observations of employed persons was 12,781 in Illinois. Sampling weights are applied to the probit model.

TABLE B: OLS AND QUANTILE REGRESSIONS OF THE IMPACT OF UNION MEMBERSHIP ON THE NATURAL LOG OF REAL HOURLY WAGES, 2015-2017

Ln(Real Wage)	(1) USA Mean		(1) Illinois Mean		(2) Illinois Median, Q(.5)		(3) Minnesota Mean	
	Coefficient	(St. Err.)	Coefficient	(St. Err.)	Coefficient	(St. Err.)	Coefficient	(St. Err.)
Union member	0.1028***	(0.0030)	0.1107***	(0.0142)	0.1020***	(0.0170)	0.0696***	(0.0177)
Age	0.0386***	(0.0004)	0.0421***	(0.0022)	0.0391***	(0.0023)	0.0403***	(0.0026)
Age <sup>2</sup>	-0.0004***	(0.0000)	-0.0004***	(0.0000)	-0.0004***	(0.0000)	-0.0004***	(0.0000)
Female	-0.1607***	(0.0020)	-0.1594***	(0.0102)	-0.1556***	(0.0119)	-0.1335***	(0.0136)
Veteran	0.0003	(0.0041)	0.0195	(0.0246)	0.0444	(0.0270)	-0.0364	(0.0292)
Citizen	0.0692***	(0.0045)	0.0503***	(0.0218)	0.0670***	(0.0257)	-0.0079	(0.0338)
Immigrant	-0.0208***	(0.0037)	-0.0677***	(0.0185)	-0.0742***	(0.0207)	-0.0651**	(0.0285)
White	0.0036	(0.0039)	-0.0211	(0.0203)	-0.0434*	(0.0232)	0.0392	(0.0293)
African American	-0.1168***	(0.0045)	-0.1736	(0.0247)	-0.1690***	(0.0274)	-0.0916***	(0.0335)
Latino	-0.0740***	(0.0041)	-0.0869***	(0.0219)	-0.1034***	(0.0253)	-0.0607**	(0.0341)
Chicago MSA			0.0846***	(0.0139)	0.0721***	(0.0182)		
Center City	0.0487***	(0.0025)	0.0148	(0.0177)	0.0395*	(0.0227)	0.0966***	(0.0177)
Suburb	0.0665***	(0.0022)	0.0280	(0.0156)	0.0557***	(0.0205)	0.1264***	(0.0126)
Federal government	0.0376***	(0.0061)	0.0486	(0.0370)	0.1024**	(0.0462)	-0.0269	(0.0604)
State government	-0.1085***	(0.0043)	-0.1149***	(0.0273)	-0.0869***	(0.0315)	-0.1168***	(0.0302)
Local government	-0.0915***	(0.0038)	-0.0902***	(0.0215)	-0.0858***	(0.0253)	-0.0923***	(0.0239)
Usual hours worked	0.0045***	(0.0001)	0.0051***	(0.0006)	0.0067***	(0.0006)	0.0059***	(0.0007)
Involuntarily part-time	-0.1425***	(0.0045)	-0.1004***	(0.0250)	-0.1299***	(0.0290)	-0.1749***	(0.0353)
Less than high school	-0.1358***	(0.0032)	-0.1170***	(0.0176)	-0.1070***	(0.0242)	-0.0907***	(0.0353)
Some college	0.0339***	(0.0024)	0.0432***	(0.0127)	0.0370**	(0.0166)	0.0239	(0.0163)
Associate's	0.0853***	(0.0030)	0.0901***	(0.0162)	0.0946***	(0.0203)	0.0820***	(0.0181)
Bachelor's	0.3043***	(0.0028)	0.3147***	(0.0149)	0.3265***	(0.0173)	0.3198***	(0.0196)
Master's	0.4135***	(0.0038)	0.4264***	(0.0189)	0.4575***	(0.0216)	0.3964***	(0.0258)
Professional/Doctorate	0.5431***	(0.0062)	0.5573***	(0.0328)	0.5741***	(0.0324)	0.5898***	(0.0429)
Industry Dummies	Y		Y		Y		Y	
Occupation Dummies	Y		Y		Y		Y	
State Dummies	Y		N		N		N	
Constant	1.4586***	(0.0139)	1.3091***	(0.0709)	1.2953***	(0.1000)	1.6071***	(0.0816)
R <sup>2</sup>	0.4474		0.4407		0.3235		0.4683	
Observations	406,975		12,660		12,660		6,539	
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, 2015-2017. The total number of observations of employed persons was 12,781 in Illinois. 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 22, and regression (3) uses Minnesota as an example of OLS results from other states as in Figure 23. For full (2) and (3) regression outputs in a .txt format, please contact author Frank Manzo IV at [fmanzo@illinoisepi.org](mailto:fmanzo@illinoisepi.org).



