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A Brief Examination of Union Membership Data

June 16, 2023

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SUMMARY

In the United States, the share of workers who are unionized relative to the total labor force (union density) has been declining for decades. This report analyzes union density in the United States. The data analysis starts by examining long-term trends in union density and membership dating back to the 1880s. This is followed by a presentation of union density trends by labor relations statute. This analysis is disaggregated further by analyzing union density by labor relations statute and occupational category. The data analysis portion of the report closes with the presentation of union election data from the National Labor Relations Board (NLRB). The appendix includes a comparison of union density and coverage in the United States to a number of member countries of the Organization for Economic Cooperation and Development (OECD).

Among other findings, this report shows the following:

- In 2022, 10.1% of all employed wage and salary workers were members of unions. In the private sector, union density was 5.7% for workers who were not employed in the airline or railroad industries. Union density was 40.7% for private-sector workers employed in the airline or railroad industries. The union density for public-sector workers was 33.2%.
- Employed wage and salary workers in the private sector exhibited greater percentage point declines in union density than public-sector workers between 1984 and 2022.
- The union density for public-sector workers is greater than the union density for private-sector workers (not employed in the airline or railroad industries) for every occupational category in the Current Population Survey (CPS). The differences are statistically significant for each of the occupational categories.
- In FY2022, 1,363 representation elections were conducted by the National Labor Relations Board (NLRB). While this number reflects an increase from FY2021, it is low by historical standards. The decline in union election activity is exhibited in every private-sector industry.

R47596

June 16, 2023

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Contents

Figures

Appendixes

Contacts

Introduction

In 2022, the share of workers who were unionized was 10.1%. This was a 23.4 percentage point decline from its post-World War II peak of 33.5% in 1954.[1] Despite this decline in prevalence of union membership, recent high-profile industrial disputes[2] and union organizing efforts in traditionally non-unionized sectors,[3] as well as the 58.1% increase in union elections between FY2021 and FY2022, have led to increased congressional interest in labor unions. A number of legislative proposals have been made in Congress recently that would amend the National Labor Relations Act (NLRA), the primary federal labor relations statute for private-sector employees.[4] Additionally, Congress has also held several hearings on the topic of labor unions over the past few years.[5]

While the overall decline in union density in recent decades has been documented, this report provides additional detail on the longer-term trends in union membership as well as the union membership trends for specific sectors of the U.S. economy. Specifically, this report

- provides an overview of union membership from the 1880s through the present;
- uses the Current Population Survey (CPS) to identify the trends in union density for specific sectors and occupational categories; and
- analyzes historical union election data from the National Labor Relations Board (NLRB) to identify the incidence of workers forming unions.

Federal Collective Bargaining Laws

There are three major federal statutes that govern collective bargaining rights (depending on the sector of employment):

- **Railway Labor Act (RLA)**:[6] This law was enacted in 1926 to grant employees in the railroad industry collective bargaining rights. The RLA was amended in 1936 to include employees in the airline industry.

[1] Richard Freeman, *Spurts in Union Growth: Defining Moments*, National Bureau of Economic Research, Working Paper no. 6012, April 1997 (hereinafter, *Spurts in Union Growth, 1997*.)

[2] See, for example, "G.M. Strike: 50,000 Union Workers Walk Out Over Wages and Idled Plants," *New York Times*, September 15, 2019, https://www.nytimes.com/2019/09/15/business/autoworkers-union-general-motors.html; and Aaron Gregg, "Workers on strike at Kellogg's cereal plants in U.S.," *Washington Post*, October 6, 2021, https://www.washingtonpost.com/business/2021/10/06/kelloggs-strike-cereal-plants/.

[3] See, for example, Heather Haddon, "Starbucks Workers at Buffalo-Area Store Vote in Favor of Unionizing," *Wall Street Journal*, December 9, 2021, https://www.wsj.com/articles/votes-to-be-counted-in-starbucks-union-drive-11639071187; and Rachel Lerman et al., "Amazon workers vote to join a union in New York in historic move," *Washington Post*, April 2, 2022, https://www.washingtonpost.com/technology/2022/04/01/amazon-union-staten-island/.

[4] The NLRA is also referred to as the Wagner Act, after its primary sponsor in Congress, Senator Robert Wagner of New York. Examples of legislation include the Richard L. Trumka Protecting the Right to Organize Act of 2023 (S. 567; the PRO Act) and the Teamwork for Employees and Managers Act of 2022 (S. 3585; the TEAM Act).

[5] U.S. Congress, House Committee on Education and Labor, *In Solidarity: Removing Barriers to Organizing*, hearing, 117th Cong., 2nd sess., September 14, 2022; and U.S. Congress, Senate Committee on Health, Education, Labor, and Pensions, *Defending the Right of Workers to Organize Unions Free from Illegal Corporate Union-Busting*, hearing, 118th Cong., 1st sess., March 8, 2023.

[6] 45 U.S.C. §151-188.

- **National Labor Relations Act (NLRA)**:[7] Enacted in 1935, the NLRA covers most private-sector employees who do not work in the railroad or airline industries. Major amendments to the NLRA occurred in 1947 (Taft-Hartley Act) and in 1959 (Landrum-Griffin Act). Generally, the NLRA preempts state-level laws relating to collective bargaining rights for employees covered by the act.[8]
- **Federal Service Labor-Management Relations Statute (FSLMRS)**:[9] The FSLMRS was enacted in 1978 and covers most non-managerial employees of most federal agencies.[10] Prior to the act's passage, federal employees received rights to unionize and collective bargaining through a series of Executive Orders.[11]

These three statutes are discussed in detail in CRS Report R42526, *Federal Labor Relations Statutes: An Overview*.

Outside of these statutes, the Postal Reorganization Act (PRA) of 1970[12] governs collective bargaining for employees of the U.S. Postal Service and a collection of state and local laws govern collective bargaining for public-sector workers.

Union Membership Trends: 1880-2022

Union density—union membership as a percentage of total employment—allows for comparisons to be made across groups of different sizes. Numerous factors affect union membership, including, but not limited to, demographics, industry, occupation, and the extent to which workers have a protected right to unionize and bargain collectively. This section starts by exploring union membership and density trends overall. It then analyzes trends by labor relations statute and level of government. This is followed by an analysis of union density by labor relations statute and occupational category. The section closes with a comparison of union density and union coverage across select Organization for Economic Cooperation and Development (OECD) countries.

[7] 29 U.S.C. §§151-169.

[8] One exception are state-level laws that ban union security agreements. Union security agreements require employees to pay union dues equal to the cost of representation as a condition of employment. Under this type of agreement, employees are not required to become formal members of the union. State laws banning these agreements are sometimes referred to as "*right-to-work*" laws. These state-level laws were forbidden under the NLRA until the 1947 Taft-Hartley Act amended the NLRA to allow states to ban union security agreements (29 U.S.C. §164(b)).

[9] 5 U.S.C. §§7101-7135.

[10] This group includes employees of most executive branch agencies and of the Library of Congress, the Government Publishing Office, and the Smithsonian Institution, but it does not include specified agencies, such as the Federal Bureau of Investigation or the Central Intelligence Agency. Most employees of Congress and the judicial branch are not covered by the FSLMRS. State and local laws govern state and local public employees. These employees are included in the public sector analysis in this report.

[11] For a brief synopsis of these Executive Orders, see Federal Labor Relations Authority, "50th Anniversary: Executive Order 10988," https://www.flra.gov/50th_Anniversary_EO10988.

[12] For sections relating to collective bargaining rights, see 39 U.S.C. §§1204-1208.

Union Density and Union Membership

Overall Historical Trends

Figure 1 shows estimates for union density between 1880 and 2022.[13] These estimates are derived from several different series that were primarily produced by the Bureau of Labor Statistics (BLS). All the series were compiled and standardized by Richard Freeman in *Spurts in Union Growth.*[14] This standardization is an attempt to make the estimates comparable across time.[15] Caution is warranted when making definitive conclusions from these data.

The trends in union density can be characterized in roughly four periods. These periods do not represent precise turning points in overall union density but generally represent different patterns:

- 1880s-1930s: Prior to the passage of the NLRA in 1935, union density generally increased but fluctuated annually, averaging 5.0% from 1880 through 1900. The average increased to around 11.0% from 1901 through 1934.
- 1930s-1960s: Following the passage of the NLRA, union density increased steadily from 12.8% in 1935 to a peak of 34.2% in 1945.[16] Despite some minor annual variations, union density remained above 30.0% every year from 1943 until 1961, when it dropped to 29.2%.
- 1960s-1970s: In this period, union density declined from 30.4% to 23.4% with small, but steady, declines averaging about a 0.4 percentage point drop per year.
- 1980-2022: Union density continued to exhibit a steady decline, falling from 22.2% in 1980 to a low of 9.4% by 2022, which was the lowest rate since before the enactment of the RLA or the NLRA.[17]

[13] Union density is typically calculated as the proportion of union members to the total number of employed wage and salary workers. However, in **Figure 1** union density is calculated as the proportion of union members to total nonfarm employment due to data limitations (comparable employed wage and salary workers union membership data are only available beginning in 1983). Nonfarm employment includes wage and salary workers as well as self-employed workers, workers in private households, and workers on unpaid leave.

[14] *Spurts in Union Growth.*

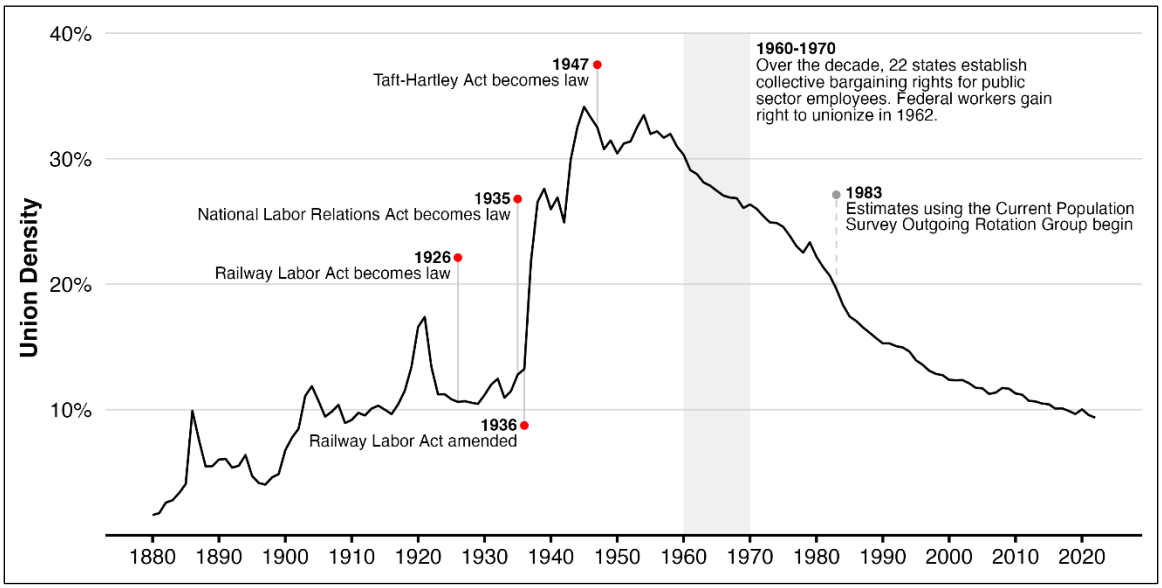
[15] For a full accounting of which data series were used and how they were standardized, see pages 54-55 of *Spurts in Union Growth*.

[16] **Figure 1** union density estimates are from Richard Freeman, *Spurts in Union Growth*. Other estimates may show a different peak in U.S. union density but generally show a similar trend in union density over time. For other union density time series see Leo Troy and Neil Sheflin, *U.S. Union Sourcebook: Membership, Structure, Finance, Directory* (West Orange, NJ: Industrial Relations Data and Information Services, 1985); and Henry Farber et. al., *Unions and Inequality in the Twentieth Century: New Evidence from Survey Data*, National Bureau of Economic Research, Working Paper no. 24587, April 2021.

[17] The union density estimate for 2022 (9.4%) that is reported in **Figure 1** is different than the union density estimate reported by the BLS for the same year (10.1%). This is because **Figure 1** uses total nonfarm employment as the denominator when calculating union density (total union members divided by total nonfarm employment). The BLS uses the total employed wage and salary workers as the denominator, which is a different measure of overall employment. Total nonfarm employment is used in **Figure 1** because of the limited availability of data on total employed wage and salary workers.

Figure 1. Union Density

1880-2022



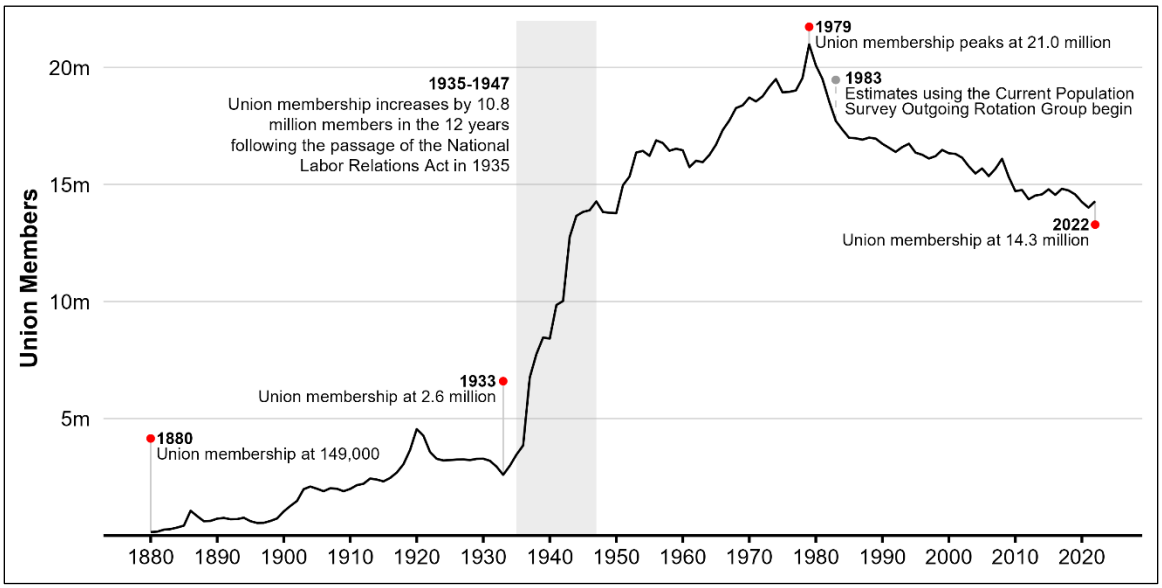
Source: Figure created by CRS using data from the Current Employment Statistics (CES) program, the CPS, and Richard Freeman, *Spurts in Union Growth: Defining Moments*, National Bureau of Economic Research, Working Paper no. 6012, April 1997. Starting in 1983, union membership estimates come from the CPS. Before 1983, the union membership estimates come from six different sources that are compiled and standardized by Freeman in *Spurts in Union Growth*. See **Appendix A** for a full description of these six sources. Starting in 1939, the employment estimates, which are used as the denominator in the formula for union density, come from the CES and are the nonseasonally adjusted total nonfarm employment estimates. Before 1939, the employment estimates come from three different sources that are compiled and standardized by Freeman in *Spurts in Union Growth*. See **Appendix A** for a full description of these four sources.

Notes: For this figure, *union density* is defined as the total number of civilian nonfarm union members divided by the total civilian nonfarm employment, which is then multiplied by 100 to obtain the percent value.

Figure 2 shows the total *number* of union members in the United States between 1880 and 2022. The trajectory of union membership over this time period is similar to that of union density, except for the peak in membership. While peak union density occurred from the mid-1940s to the late 1950s, with levels above 30%, the peak for union membership was about 21 million in 1979. After the increase in union membership following the passage of the NLRA in 1935, the number of union members also generally increased until 1979.

Figure 2. Union Membership

1880-2022



Source: Figure created by CRS using data from the CPS and Richard Freeman, *Spurts in Union Growth: Defining Moments*, National Bureau of Economic Research, Working Paper no. 6012, April 1997. Starting in 1983, union membership estimates come from the CPS. Before 1983, the union membership estimates come from six different sources that are compiled and standardized by Freeman in *Spurts in Union Growth*. See **Appendix A** for a full description of these six sources.

Recent Trends by Sector

Recent discussions about union density in the United States have concentrated on its decline. Since peaking in the 1940s and 1950s, union density has fallen steadily. However, this aggregate trend in union density diverges when examining the trends in unionization by sector of statutory coverage. These disaggregated trends can be estimated using the CPS Public Use Micro Data Sample (PUMS). Comparable CPS PUMS-based estimates on union membership are publicly available starting in May 1983.[18] However, the 1983 PUMS only contain comparable data for a few months. This means that the sample sizes for some of the groups analyzed using the PUMS may be too small in 1983. Therefore, this analysis is confined to 1984-2022.

Figure 3 displays estimates of unionization trends from 1984-2022 by sector of statutory coverage (private-RLA, private-NLRA, and public). The CPS PUMS does not distinguish employed wage and salary workers by their sector of statutory coverage. Instead, private-sector employed wage and salary workers who report being employed in the airline or railroad industries are coded as "Private-RLA"; private-sector wage and salary employees not in either of these two industries are coded as "Private-NLRA"; and employed wage and salary employees in the public

[18] The CPS began asking a question about union membership to all respondents in the May CPS starting in 1973. This continued through 1980. In 1981, the CPS asked the union membership question to a quarter of respondents in the May CPS. The union membership question was omitted from every month of the 1982 CPS. In 1983, the union membership question began to be asked to a quarter of respondents every month. This grouping of respondents is called the Outgoing Rotation Group (ORG) and is comprised of all those respondents in their 4th and 8th months in the survey. Due to the variation in sample size across the different iterations of the union membership question, only sector-level union density estimates for 1983 onward are deemed comparable. For more information about the evolution of the union membership question, see Barry Hirsch and David Macpherson, "Union Membership and Coverage Database from the Current Population Survey: Note," *Industrial Labor Relations Review*, vol. 56, no. 2 (January 2003).

sector are coded as "Public."[19] Generally, **Figure 3** shows that the rate and pattern of decline differed across sectors:

- From 1984 through 2022, union density for private-sector workers covered by the NLRA dropped from 14.7% to 5.7%; this accounted for most of the decline in overall union density during this period given the significantly larger number of NLRA-covered workers than RLA-covered workers.
- Public-sector union density declined from 35.7% to 33.2%.
- RLA-covered workers' union density fell from 58.1% to 40.7%, with most of this decline occurring from 1984 to the late 1990s.

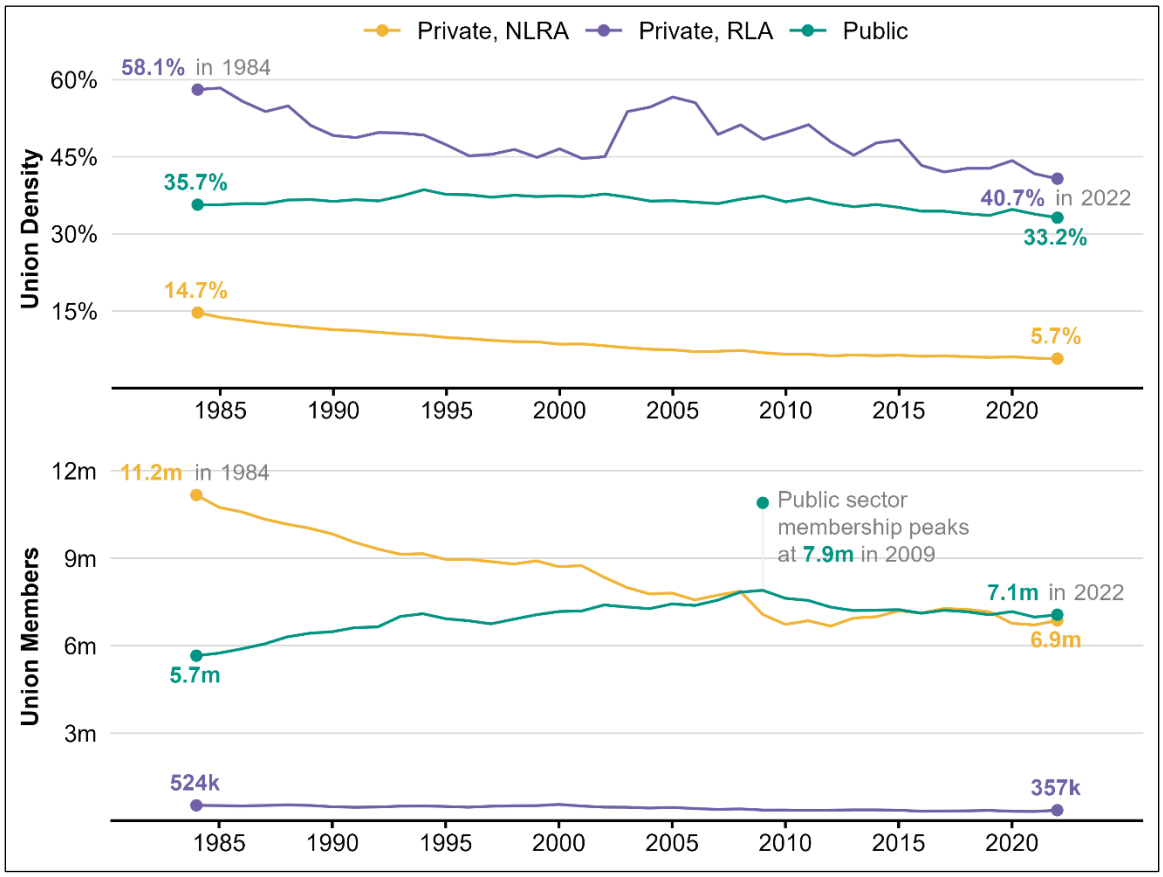
Figure 3 also shows the relative size of the three sectors:

- in the private sector covered by the NLRA, union membership fell by about 4.1 million from 1984 to 2022;
- in the public sector, overall density fell slightly from 1984 to 2022 but total membership rose from 5.7 million in 1984 to about 7.1 million in 2022, after peaking at 7.9 million in 2009; and
- in the private sector covered by the RLA, density and membership fell between 1984 and 2022; the membership in this sector is around 4.9% of overall private-sector membership.

[19] This approach to identifying the private-sector NLRA-covered workers and the public-sector workers is similar to how the BLS identifies these groups. The only difference is the exclusion of airline and railroad workers from the private-sector NLRA-covered group. For the RLA-covered workers, this approach is similar to the one used in a report by the Government Accountability Office (GAO) in 2002 to estimate the number of workers likely covered by the RLA. See GAO, *Collective Bargaining Rights: Information on the Number of Workers with and without Bargaining Rights*, GAO-02-835, September 13, 2002, p. 38.

Figure 3. Union Membership and Density by Sector of Statutory Coverage

1984-2022



Source: CRS estimates using microdata from the University of Minnesota IPUMS-CPS at https://cps.ipums.org/cps/.

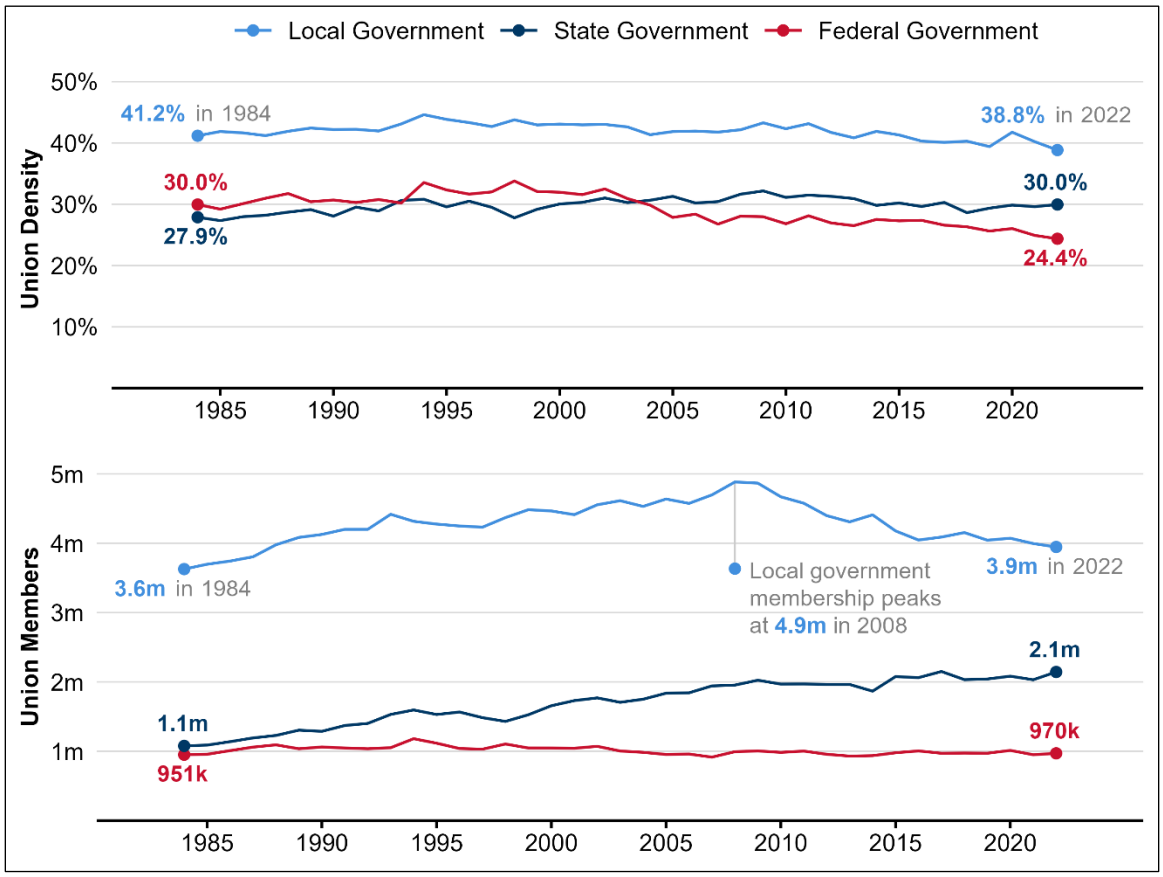
Notes: The estimates for public-sector union density include federal employees (including employees of the U.S. Postal Service) and state and local employees. State and local employees are not covered by the FSLMRS, but may be covered by state or municipal/local laws.

Figure 4 displays public-sector union density disaggregated by the level of government. Most federal government workers are covered by the FSLMRS. State and local government employees, if they have collective bargaining rights, would be covered by state or municipal/local laws. There are some state and municipal/local governments that ban collective bargaining by government employees.

Figure 4 shows that since 1984, union density has decreased by 5.6 percentage points among federal government workers, decreased by 2.4 percentage points among local government workers, and increased by 2.1 percentage points among state government workers. Local, state, and federal government workers have seen increases in union membership since 1984: 300,000, 1.0 million, and 19,000, respectively.

Figure 4. Union Density and Membership by Level of Government

1984-2022



Source: CRS estimates using microdata from the University of Minnesota IPUMS-CPS at https://cps.ipums.org/cps/.

Notes: The federal government category includes employees of the U.S. Postal Service.

Trends by Occupation and Sector

This section provides union density trends by occupational category.[20] Differences in occupational union density might occur for a range of reasons, such as the statute governing collective bargaining in the relevant sector, different tasks for a given occupation by sector, variations in employer resistance, and sector-specific norms.

[20] Occupational analysis is based on the Standard Occupational Classification (SOC) system. The SOC system is used by federal statistical agencies to classify all occupations performed for pay or profit. The most recent SOC classification data (2018) include 867 detailed occupations. For details, see Executive Office of the President, Office of Management and Budget (OMB), *Standard Occupational Classification Manual, United States, 2018*, Washington, DC, November 2017, https://www.bls.gov/soc/2018/soc_2018_manual.pdf. The CPS PUMS also has an industry variable based on the North American Industry Classification System (NAICS). Due to the limited amount of data on public-sector workers in this classification system, the analysis is based on occupations rather than industry.

Figure 5 compares the average union density by broad occupational category and sector of statutory coverage, across the 1984-1986 period and the 2020-2022 period.[21] A solid line connecting two estimates indicates that the difference between those two estimates is statistically significant.[22] For example, in the Architecture and Engineering occupations, the change in public sector unionization of +3.7 percentage points (from 19.7% to 22.4%) was not statistically significant, while the change in private sector unionization (from 5.9% to 2.9%) was statistically significant.

As noted, there are many reasons for differences in union density across similar occupational categories. The comparisons shown in **Figure 5** do not indicate that the labor law is the main determinant of these differences. For all occupational categories in **Figure 5**, private RLA-covered and public-sector workers had higher overall union densities than private NLRA-covered workers in the same occupational category in both 1984-1986 and 2020-2022. Consider the following example:

- For workers in the Transportation and Material Moving occupational class, union density was highest for RLA covered workers and had a statistically significant 18.2 percentage point decrease (from 75.0% during 1984-1986 to 55.2% during 2020-2022); public-sector NLRA-covered worker had the next highest union density decreasing from 38.1% to 37.9% (the change was not statistically significant). Finally, private NLRA-covered workers had the lowest levels of union density (from 27.7% to 10.6%) and this 11.1 percentage point decrease was statistically significant.

NLRA-covered workers exhibited a statistically significant decline in union density for many occupational categories in **Figure 5**. Workers covered by the RLA also experienced a statistically significant decline in union density for the occupational categories where there were reliable estimates for these workers, albeit from generally higher starting densities than NLRA-covered workers. Changes in public-sector union density, on the other hand, were modest and ran in both directions, with quite a few cases where the conclusion of no change could not be confidently rejected.

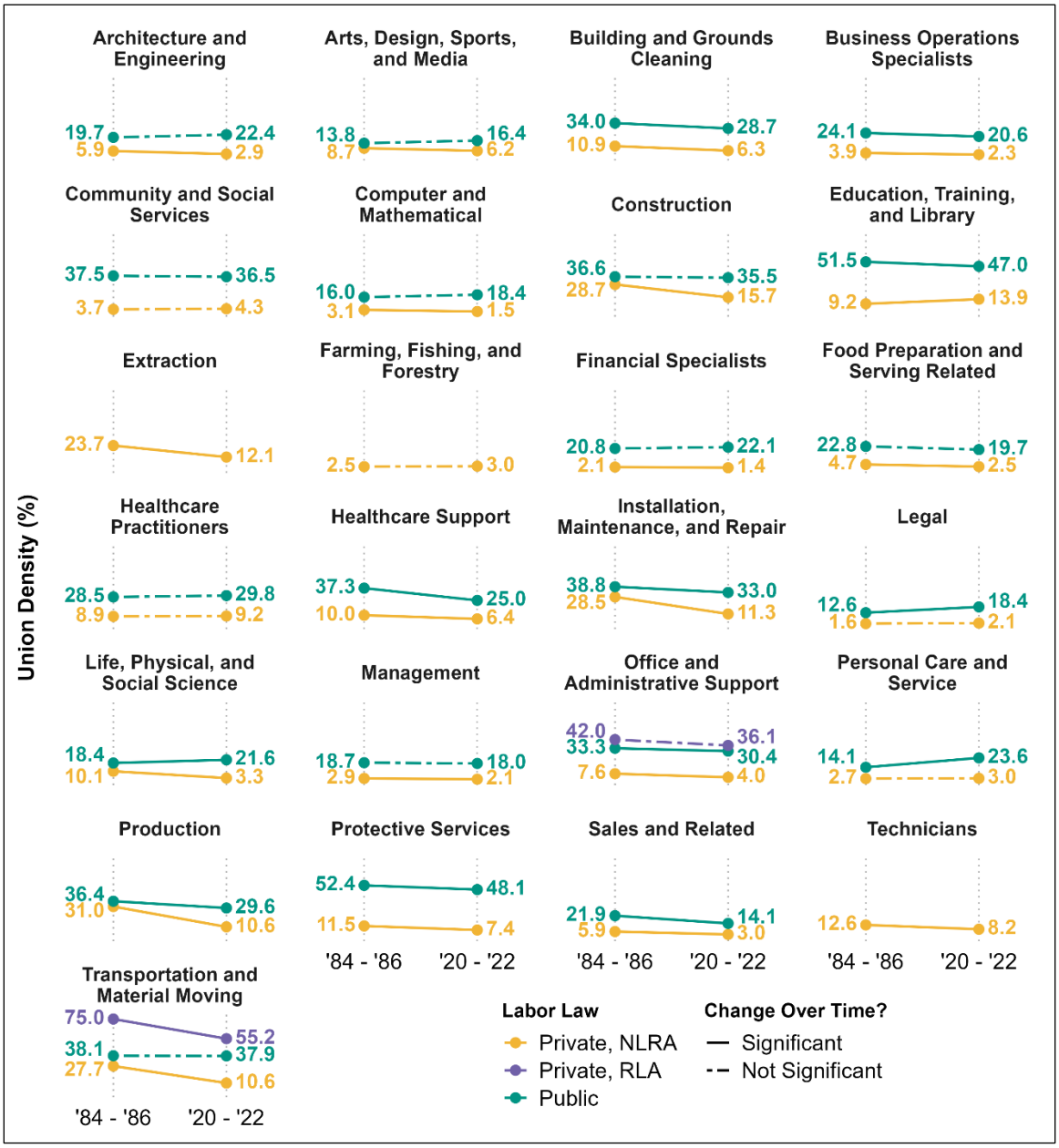
Figure 5 indicates that within an occupational category, RLA-covered and public-sector workers generally have higher union densities than NLRA-covered workers, and that RLA-covered workers and NLRA-covered workers are much more likely to have experienced a statistically significant decline in union density over the two periods of interest.

[21] Three-year averages are used due to the small sample sizes of some occupational classifications for public-sector and RLA-covered workers. Additional methodological details are in **Appendix A**. Because of occasional updates to the SOC system it is important that the occupation classifications in the CPS IPUMS data be standardized across the different iterations of the SOC system to make consistent comparisons over time. In this section, the variable "OCC2010" is used to compare the levels of union density by labor relations statute coverage for broad occupational classes as well as select occupations. For a description of the standardized occupation variable see https://cps.ipums.org/cps-action/variables/group?id=core_work. For a type of labor law coverage to be included in the panel for an occupational class, the 95% confidence interval around the union density estimate must be within five percentage points on either side of the estimate. There are two exceptions to this rule, which are discussed in detail in **Appendix A**.

[22] In this case, a *statistically significant difference* is defined as the probability of concluding that two estimates are different when they are in fact the same, being less than or equal to 5%.

Figure 5. Union Density by Occupational Class and Labor Relations Statute Coverage

Three-Year Averages for 1984-1986 and 2020-2022



Source: CRS estimates using microdata from the University of Minnesota IPUMS-CPS at https://cps.ipums.org/cps/.

Notes: Union density estimates for a specific type of labor relations statute are included in the panel associated with an occupational class only if the 95% confidence interval for both the 1984-1986 and the 2020-2022 estimates was less than five percentage points on either side of both estimates. There were two exceptions to this rule: Office and Administrative Support and Transportation and Material Moving. These exceptions are discussed in more detail in **Appendix A**

National Labor Relations Board-Conducted Union Elections

The NLRB is tasked with enforcing the NLRA. As a part of its enforcement responsibilities, the NLRB conducts a variety of elections that are petitioned for by workers or employers.[23] There are three types of petitions that the NLRB considers prior to conducting an election: representation petitions seeking certification (RC); employer petitions (RM); and decertification petitions (RD).[24] RC petitions are filed by workers seeking to be represented by a union. RM petitions are filed by employers seeking to determine support for a new union or continuing support for an incumbent union. RD petitions are filed by workers who believe that their current bargaining representative no longer represents the interests of employees in the bargaining unit. RC and RD petitions must be accompanied by a showing of interest from at least 30% of employees. This showing of interest occurs generally through authorization cards signed by the employees.[25] The figures in this section highlight the trends for various elements of NLRB-conducted elections.

Figure 6 displays the number of NLRB representation elections conducted each fiscal year between FY1936 and FY2022.[26] The data in **Figure 6** reflect representation elections that were petitioned for by workers and subsequently conducted.[27] Since the passage of the Taft-Hartley Act in 1947, petitions for these types of elections have been known as RC petitions. **Figure 6** shows a relatively high level of representation elections between FY1936 and FY1981, with an average of 5,544 per fiscal year over this period.[28] Following FY1981, the number of representation elections dropped and generally continued to decline over the next four decades. The average number of representation elections between FY1982 and FY2022 was 2,345, which is less than half (42.3%) of the average over the previous four decades. In FY2022, there were 1,363 representation elections. This was a substantial increase in the number of representation elections from FY2021, where 862 were conducted; however, it was still well below the averages for FY1936-FY1981 (5,544) and FY1982-FY2022 (2,345).

[23] Union elections for workers in the airline or railroad industries are conducted by the National Mediation Board and are subject to the rules and regulations of the Railway Labor Act. These elections are beyond the scope of this report.

[24] For more information on these petitions, see https://www.nlrb.gov/sites/default/files/attachments/pages/node-174/outlineoflawandprocedureinrepresentationcases2017update.pdf#page=64.

[25] At least 30% of the signatures obtained by the workers must be ruled valid by the NLRB before an election can take place. If the NLRB rules certain signatures to be invalid—and thus drops the percentage below 30%—the NLRB will not conduct an election. For more information on NLRB election procedures, see https://www.nlrb.gov/about-nlrb/what-we-do/conduct-elections.

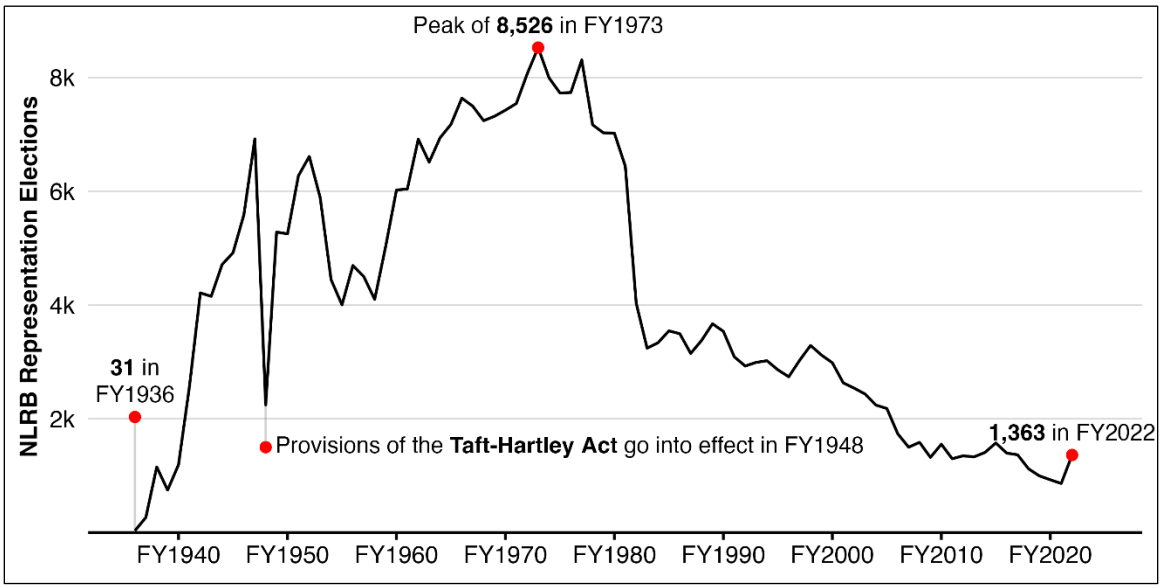
[26] The data start in FY1936 because the NLRB was created by the NLRA upon its enactment on July 5, 1935.

[27] It is possible for an election to be petitioned for but ultimately not conducted.

[28] Following the passage of the Taft-Hartley Act in 1947, there was a drop in the number of representation elections in FY1948, which was the first fiscal year in which the provisions in the Taft-Harley Act applied to union elections.

Figure 6. NLRB Representation Elections

FY1936-FY2022



Source: CRS analysis of NLRB union election data. The data for FY1936 through FY2010 are from the NLRB Annual Reports at https://www.nlrb.gov/reports/agency-performance-reports/historical-reports/annual-reports. The data for FY2011 and FY2012 are from the NLRB Election Reports at https://www.nlrb.gov/reports/agency-performance/election-reports. The data for FY2013 through FY2022 are from the NLRB Representation Petitions Activity Reports at https://www.nlrb.gov/reports/nlrb-case-activity-reports/representation-cases/intake/representation-petitions-rc.

Notes: The data in this figure reflect the overall number of representation elections that were held by the NLRB in a given fiscal year. Data for FY1936 through FY1947 include all elections reported in the NLRB Annual Reports. Data for every fiscal year after FY1947 include only RC elections, which are those that were petitioned by workers wanting to unionize.

Appendix A. Data

Current Population Survey (CPS) Outgoing Rotation Group

Generally, recent data on union membership are derived from the CPS. The CPS is a large-scale household survey conducted monthly by the U.S. Census Bureau. The CPS provides detailed data on a range of labor force and demographic information, and is used to calculate the national monthly unemployment rate. For every month of the CPS, a subset of respondents is asked if they are a member of a labor union or if they are represented by a union (i.e., individual has no union affiliation but their job is covered by a union contract). This subset is called the Outgoing Rotation Group (ORG) and consists of individuals who are in their fourth and eighth months in the survey.[29] Members of the ORG have been asked the union membership questions since 1983.

For estimates that were produced from the CPS Public Use Micro Data Sample (PUMS), the PUMS was first filtered to the ORG before performing any additional filters or establishing any formal estimates.[30] The BLS uses the PUMS to develop estimates for union density and membership for a variety of different demographic, geographic, industry, and occupational groups.[31] In this report, the PUMS was used to develop estimates for overall union density and membership as well as union density and membership by occupational category, labor relations statute coverage, and level of government. The only figure displaying union density and membership that includes data that do not come from the CPS microdata is **Figure 1**.

Figures 1 and 2 Data: Historical Trends in Union Membership

There are seven underlying data sources used in the data presented in **Figure 1** and **Figure 2**. The CPS is used for the most recent data (1983-2022). Additionally, there are six other union membership data series that were compiled and standardized by Freeman in *Spurts in Union Growth*, and are used in the first two figures. In addition to compiling these data sources, Freeman also adjusts the data to try and make the estimates comparable over time. For a full description of how this is done, see page 54 of *Spurts in Union Growth*. The seven union membership data series that are compiled to create the data in **Figure 1** and **Figure 2** are listed below:

1. 1880-1896: the academic paper titled *New Estimates of Union Membership in the United States, 1880-1914*.[32]
2. 1897-1929: the report from the U.S. Census Bureau titled *Historical Statistics of the United States, Colonial Times to 1957,* which uses data from the BLS.[33]

[29] Respondents to the CPS take the survey for four months, get an eight-month break, and then return to the survey for four more months. The fourth month in the survey is the month right before the eight-month break. The eight month in the survey is the final month the individual is in the survey.

[30] The ORG consists of workers who were age 15 and older, were employed, were not self-employed or unpaid family workers, and were in their fourth or eighth month in the CPS.

[31] The BLS publishes many of these estimates in its annual Union Members report. For more information on the report see https://www.bls.gov/news.release/union2.toc.htm.

[32] Gerald Friedman, "US Historical Statistics: New Estimates of Union Membership in the United States, 1880-1914," *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, vol. 32, no. 2 (January 1999).

[33] U.S. Census Bureau, *Historical Statistics of the United States, Colonial Times to 1957*, July 1960, p. 97. For a PDF version of this report, see https://www2.census.gov/library/publications/1960/compendia/hist_stats_colonial-1957/hist_stats_colonial-1957-chD.pdf#page=31.

3. 1930-1977: the BLS report *1979 Directory of National Unions and Employee Associations*.[34]
4. 1978-1980: the May CPS microdata.
5. 1981: the Bureau of National Affairs publication titled *1993 Union Membership and Earnings Data Book*.[35]
6. 1982: the CPS did not contain any union membership questions; therefore, Freeman assumes that the change in membership between 1981 and 1983 was proportionate to the change reported in a different set of union membership estimates,[36] and then applies the necessary calculations to produce an estimate for 1982.
7. 1983-2022: the CPS-ORG microdata.

In addition to union membership, there is a second group of variables that is used in **Figure 1** to calculate union density. This variable is the nonseasonally adjusted total nonfarm employment. The BLS has a data series for this variable that comes from the CES program and spans 1939-2023. These are the data that are used as the denominator for union density between 1939 and 2022. Outside of this interval, three data series are used to create a full time series for total nonfarm employment for 1880-2022. All the data series included in this time series are listed below:

1. 1880-1888: series A-106 from the Department of Commerce report titled *The National Income and Product Accounts of the United States, 1929-1965*.[37]
2. 1889-1899: series A-70 and A-87 from the Department of Commerce report titled *The National Income and Product Accounts of the United States, 1929-1965*.[38]
3. 1900-1938: series A-87 from the Department of Commerce report titled *The National Income and Product Accounts of the United States, 1929-1965*.[39]
4. 1939-2022: the CES program administered by the BLS.[40]

[34] U.S. Bureau of Labor Statistics, *Directory of National Unions and Employee Associations, 1979*, September 1980, p. 58. For a PDF of this report, see https://fraser.stlouisfed.org/files/docs/publications/bls/bls_2079_1980.pdf#page=65.

[35] The 1981 CPS estimate is not used because only a quarter of respondents to the May CPS were asked the union membership questions for that year, making the sample size small.

[36] Leo Troy and Neil Sheflin, *U.S. Union Sourcebook: Membership, Structure, Finance.*

[37] U.S. Department of Commerce, *The National Income and Product Accounts of the United States, 1929-1965: Statistical Tables*, August 1966. Here, Freeman uses population growth data (series A-106), assumes that nonfarm employment grew proportionately to the population, and then applies this assumption backward from his nonfarm employment estimates for 1889-1899 to obtain the total nonfarm employment for 1880-1888.

[38] Freeman applies the index of person hours in nonagricultural industries for each individual year between 1889 and 1899 (series A-70) to the total nonfarm employment value in 1900 (series A-87).

[39] Series A-87 directly reports the total nonfarm employment for 1900-1938.

[40] The CES program is a monthly survey of approximately 122,000 businesses and government agencies. The survey asks questions relating to employment, hours, and earnings of workers on payroll at business establishments and government agencies.

Figures 3-5 Data: Union Density by Statute Coverage

Labor Relations Statute of Coverage

The use of the CPS PUMS is necessary to identify the union density for private and public-sector workers. The PUMS data provides the CLASSWKR variable,[41] which identifies whether a respondent was self-employed, in the Armed Forces, worked without pay in a family business, or was an employee in the public or private sectors in their primary job. To identify the union density for workers covered by the RLA, the PUMS universe was filtered to those individuals who were identified as being employed in the airline or railroad industries in the private sector.[42] All other private-sector workers were coded as being covered by the NLRA. To ensure adequate sample sizes in the occupational category analysis, workers covered by the PRA, state and local labor relations statutes, and the FSLMRS are aggregated into a single category encompassing all public-sector workers.

Occupational Category

The CPS uses the Standard Occupational Classification (SOC) system of the U.S. Census Bureau to classify the occupation of each individual respondent. Because the composition and nature of occupations changes over time, the SOC must be updated to reflect these changes. Therefore, the occupation variable that is provided in the CPS PUMS cannot be used to compare changes in union density by occupation over time. To overcome this limitation, the OCC2010 variable in the IPUMS-CPS tool is used. This variable is a harmonized version of the CPS PUMS occupation variable, meaning that the original SOC occupational classifications across the different months of the CPS are put into a constant set of occupational classifications that does not change over time. The harmonization in OCC2010 allows for the union density of occupations to be compared between different time periods.

For **Figure 5**, the occupational categories are derived by grouping the specific harmonized occupations into the categories specified by IPUMS-CPS.[43] Because the unweighted single-year sample sizes for some of the public-sector and RLA-covered workers were relatively small for certain occupational categories, three years of PUMS data were used to produce union density estimates for all the occupational categories in **Figure 5**. The estimates presented in the figure reflect the average union density for each of the groups of interest over each respective three-year period (1984-1986 and 2020-2022). The quality of the occupational estimates was enhanced further by calculating the standard errors for each occupational category and labor relations statute combination. These standard errors were used to determine the 95% confidence interval for each individual union density estimate. If this interval extended to or beyond five percentage points above or below the union density estimate, both estimates for that labor relations statute were removed from the figure for the corresponding occupational category.

There were two occupational category and labor relations statute combinations that were an exception to this rule. Both involved RLA-covered workers. The first was the 2020-2022 union

[41] For a detailed explanation of CLASSWKR see https://cps.ipums.org/cps-action/variables/CLASSWKR#description_section.

[42] This is a similar approach used in a report by the U.S. Government Accountability Office (GAO) in 2002 to estimate the number of workers likely covered by the RLA. See GAO, *Collective Bargaining Rights: Information on the Number of Workers with and without Bargaining Rights*, GAO-02-835, September 13, 2002, p. 38. GAO, using data from the CPS, estimated there about 1.3 million workers in the railroad and airline industries in 2001.

[43] For more information on these occupational categories see https://cps.ipums.org/cps-action/variables/OCC2010#description_section.

density for RLA-covered workers in the Office and Administrative Support occupational category. Here, the 95% confidence interval was plus or minus 7.5 percentage points.[44] The second was the 2020-2022 union density for RLA-covered workers in the Transportation and Material Moving occupational category. The 95% confidence interval for this group was plus or minus 5.0 percentage points. Both estimates were included for three reasons. First, the confidence interval around the estimates was still close to the plus or minus 5% cutoff. Second, the 1984-1986 estimates for both groups were within the cutoff (plus or minus 3.9 and 4.1 percentage points, respectively). Third, employment in the rail industry has declined over time, thus the goal was to eliminate the possibility of capturing this employment phenomena while excluding the phenomenon of trends in union density for occupations in this industry.

In addition to calculating the standard errors and confidence intervals around these estimates, the statistical significance (at the 5% level of significance) of the change over time was determined.[45] A dotted line connecting any two estimates in **Figure 5** indicates that the difference between the 1984-1986 average and the 2020-2022 average was not statistically significant.

[44] The 95% confidence interval is determined by multiplying the standard error of an estimate by 1.96. This value is subtracted from the estimate to get the lower bound for the interval and it is added to the estimate to get the upper bound for the interval. A 95% confidence interval means that of all possible samples that could be used to determine a given estimate, the true population estimate would fall within that interval for 95% of those samples.

[45] The significance level in this case refers to the probability of concluding that two estimates are different when they are actually the same. For this report, the difference between two estimates is considered significant only if the probability of incorrectly concluding that these estimates are different is less than or equal to 5%. For more information on determining the statistical significance of estimates from Census Bureau surveys see https://www2.census.gov/library/publications/2017/demo/p60-259sa.pdf.

Appendix B. International Trends in Union Density and Coverage

Analyzing trends in union density in other countries can help identify global trends in union representation. However, there are key distinctions between the United States and other countries that warrant caution when comparing union density data. The first distinction, displayed in **Figure B-1**, is the variation in levels of union coverage. Union coverage is the percentage of workers who are covered by a union contract and includes workers who are not members of the union. The level of union coverage can differ greatly from the level of union density in certain countries, and it can be almost the same in others. For example, the United States has a small difference between union coverage and density, while Austria has a large difference between union coverage and density.

One source of the difference between union density and union coverage is whether a country primarily has sectoral or enterprise collective bargaining. Sectoral bargaining allows for workers to form unions across an entire industry (e.g., fast food restaurants) and to negotiate a master contract that applies to all workers in that industry.[46] Enterprise bargaining only allows for workers to form a union at a single establishment (e.g., a single fast food restaurant location) and negotiate with the employer at that single location. Under sectoral bargaining regimes, workers do not usually need to be a union member to be covered by the industry-wide union contract. Under enterprise bargaining regimes, workers usually do need to be union members to be covered by the establishment-based union contract, with the exception in the United States being public-sector workers and private-sector workers in states that ban union security agreements.[47]

Beyond the differences in union coverage and union density, there are other elements of note in **Figure B-1**. First, there is a general trend of declining union density across the different countries. However, the magnitude of the decline varies significantly. There are also large variations in the level of union density across the different countries. In the most recent year of data available for each country, union density ranges from 67.0% in Denmark[48] to 10.3% in the United States.[49] The final trend to note is the variation in trends in union coverage, particularly for countries that had an established sectoral bargaining system for at least a few years in the time series. In this subset of countries, there are those that have exhibited a stable and high level of union coverage and those that exhibited a high level of union coverage but are now experiencing a sharp decline. Many of the countries that have exhibited a sharp decline, and even those that have exhibited a modest decline, experienced some form of statutory change that made sectoral

[46] Sectoral bargaining systems often also allow for negotiations at the establishment level that cover certain approved workplace and/or pay and benefits policies. There are a variety of different types of sectoral bargaining systems, a discussion of which is beyond the scope of this report. However, all sectoral bargaining systems are similar in that collective bargaining can occur above the establishment level (e.g., an entire region, an entire industry, an entire country).

[47] In its 2018 decision, *Janus v. American Federation of State, County, and Municipal Employees, Council 31*, the U.S. Supreme Court overruled its 1977 decision in *Abood v. Detroit Board of Education*, which had established union security agreements in the public sector as constitutional. Because of this 2018 decision, union security agreements are now considered unconstitutional for all public-sector workers. The RLA preempts state laws banning union security agreements (45 U.S.C. §152, Eleventh), thus allowing workers covered by the RLA to establish union security agreements with their employer.

[48] The most recent year of data available for Denmark in the OECD series is 2019.

[49] The most recent year of data available for the United States in the OECD series is 2020.

bargaining less pervasive or eliminated it altogether. These countries include, but are not limited to, Australia,[50] Ireland,[51] New Zealand,[52] Sweden,[53] and the United Kingdom.[54]

[50] Chris Wright and Colm McLaughlin, "Trade Union Legitimacy and Legitimation Politics in Australia and New Zealand," *Industrial Relations*, vol. 60, no. 3 (July 2021).

[51] International Labour Organization, *Labor Law Profile: Ireland*, https://www.ilo.org/ifpdial/information-resources/national-labour-law-profiles/WCMS_158901/lang—en/index.htm.

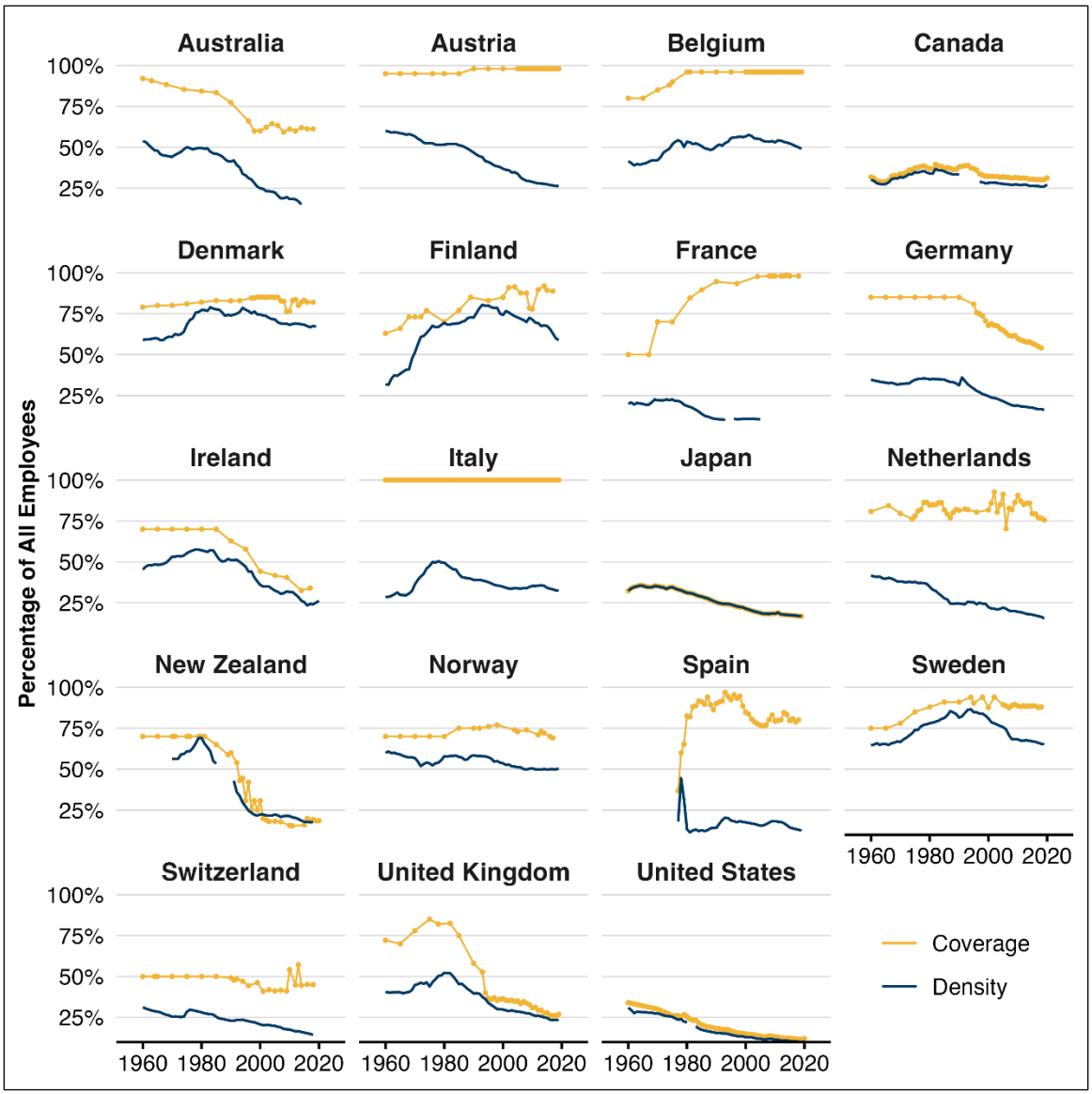
[52] Chris Wright and Colm McLaughlin, "Trade Union Legitimacy and Legitimation Politics in Australia and New Zealand," *Industrial Relations*, vol. 60, no. 3 (July 2021).

[53] Dominique Anxo, *Industrial Relations and Crisis: The Swedish Experience*, International Labour Office, February 2017.

[54] Alexander Colvin and Owen Darbishire, "Convergence in Industrial Relations Institutions: The Emerging Anglo-American Model?", *Industrial Labor Relations Review*, vol. 66, no. 5 (October 2013).

Figure B-1. Trends in Union Density and Coverage in OECD Countries

Select Annual Data, 1960-2020



Source: Figure created by CRS using union density data in the Trade Union Dataset from the OECD, available at https://stats.oecd.org/Index.aspx?DataSetCode=TUD. The union coverage data is also from the OECD Trade Union Dataset, available at https://stats.oecd.org/index.aspx?DataSetCode=CBC. For a full description of how these data were compiled and their limitations, see Jelle Viser, *OECD/AIAS ICTWSS Data Base: Detailed notes on definitions, measurements, and sources,* Organization for Economic Cooperation and Development, January 2021.

Notes: The union coverage data are limited for the early years in the time series. Points are used to mark the years for which union coverage data are available. The union density data are missing for some years for certain countries and are indicated by breaks in the trend line.

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