Do labor unions have a future in the United States?
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In summer 2011 a labor dispute between National Football League owners and players threatened to derail the 2011 NFL season. The collective bargaining agreement between owners and the NFL players union had run out. To force players to take a smaller share of football's nine billion dollars of annual revenue and to accept an increased number of games in a season – which risked the health and safety of players and the length of their careers – the owners closed the workplace and stopped paying salaries. A similar dispute in the National Basketball Association led NBA owners to lockout workers, remove information about them from team Web pages, and stop paying their salaries. In most disputes between management and labor, workers strike until they and their employer reach agreement over pay and the terms of work. But sometimes, as in the NFL and NBA disputes, owners lock out workers to pressure the workers to accept what the owners want.i

Not so long ago, unions and collective bargaining touched the lives of virtually all Americans. Unions negotiated with management the wages and working conditions of a large proportion of the US work force and influenced the wages and conditions of many nonunion workers and firms as well. In 1955, when the two major US labor federations, the American Federation of Labor (AFL) and Congress of Industrial Organizations (CIO) merged to form a single federation, the AFL-CIO, about 38% of workers in the private sector were covered by collective contracts. If you were not a union member, someone in your family or someone on the street where you lived was a member. If you managed a large firm, some part of your firm dealt with unionized workers. If your firm was nonunion and wished to remain so you paid close attention to collective agreements between unions and other firms. Matching negotiated improvements in wages and benefits could keep your employees happy and nonunion.

The labor scene in 2011 was markedly different than in the 1950s and 1960s. Unions and collective bargaining covered a small and declining share of private sector workers. In 2011 just 6.9 percent of private sector workers were in unions, the smallest percentage since 1900. In some parts of the country, such as North Carolina, Tennessee, or South Dakota, the proportion of private sector workers unionized was 3% or less and falling.ii With so few unionized workers in the private sector the only connection many people had to unions was through the products made by union workers: as sports fans during the NFL or NBA disputes, or as fans of weekly TV series delayed during the 2007-2008 season, when film, television and radio writers struck to gain a bigger share of compensation from new media forms.iii

In 2011 workers in the public sector, virtually none of whom were organized in the 1950s, made up the majority of union members. Unionization of workers local, state, and federal governments unionized rapidly in the 1970s and 1980s so that 37% were union members in 2011 – a proportion over five times that in the private sector. The typical union member was teacher, policeman, firefighter, or other city or state employee rather than an automobile worker, steelworker, or construction worker.iv

The laws that regulate unions and collective bargaining differ between the private sector and the public sector. National law in the form of the National Labor Relations Act (NLRA) governs private sector labor management relations. State law, which differs by state, governs labor-management relations for the state and local employees who make up most public sector workers..iv Hawaii, New York, California, Massachusetts, and many other states
have laws favorable to public sector collective bargaining, with the result that most of their public sector workers have union contracts. Other states such as Alabama, Virginia, Texas, and South Carolina discourage public sector collective bargaining so that few if any of their public sector workers have collective agreements with their employers. Among teachers, for instance, collective bargaining determines the pay and working conditions of 95% of elementary and secondary school teachers in New York and 98% in Massachusetts while it determines pay and conditions for only 2% of the teachers in Alabama and 0% in Texas.

Following a conservative tide in the 2010 elections, public sector unions and collective bargaining came under attack. The 2008-2009 recession and weak recovery had reduced state and local revenues throughout the country and squeezed government budgets. Arguing that public sector collective bargaining was part of the problem and that unions hampered state efforts to balance budgets, the newly ascendent conservatives sought to dislodge unions from their one remaining stronghold. The efforts of Wisconsin Governor Scott Walker and the state legislature gained even more attention than the NFL and NBA lockouts. Democrat legislators opposed to Walker's bill left the state to prevent the legislature having the quorum necessary to enact the law. Union supporters demonstrated in the state capital against the bill. The legislation eventually passed at a midnight meeting. Ohio enacted a similar law, and conservative Republicans in many states introduced comparable bills to weaken public sector collective bargaining. Democrats opposed the legislation, which created the greatest partisan division over unions and bargaining in U.S. history.

The precipitous drop in private sector union density and the effort to eliminate public sector collective bargaining raise the title question of this essay. Extrapolating the decline of private sector unions, many labor and management experts believe that unions have little or no future. Extrapolating the effort to weaken public sector collective bargaining, many analysts wonder whether public sector unions can survive in a era of weak private sector unions, political polarization, and fiscal austerity.

But extrapolating trends is not a reliable way to answer our title question. In 1932 in the midst of the Great Depression, the President of the American Economic Association, one of the country's top experts in unionism, predicted that unionism, which had been losing membership throughout the roaring 1920s, could not possibly expand in the depressed 1930s. This was just before unions had their greatest growth of membership in US history. In 1955 the President of the AFL-CIO, the top union leader in the country, dismissed unionization in the public sector on the grounds that “It is impossible to bargain collectively with the government.” A decade later unions began their growth spurt in the public sector.

To answer our title question we must look beyond extrapolations to the reasons why workers form unions, the way workers who want unions gain recognition from employers and collective bargaining contracts, and the attitudes of workers and business to unions.

Why do workers form a union? The main reason workers form unions is that they have interests in common that a union can help advance. These interests range from the physical conditions at the workplace to company-wide policies regarding wages and benefits ranging from family leave to vacation time to health care insurance and company pensions. By conveying their collective concerns to employers, unions influence the terms and conditions at work. This is the collective voice channel of unionism; voice referring to the channel of communication and discussion on issues where management would otherwise make
unilateral decisions; collective referring to the fact that the mechanism is through the elected union officials who represent workers as a group.\textsuperscript{x}

The second reason for forming a union is that bargaining as a group gives workers greater clout with an employer than bargaining individually. When workers are organized at a workplace, the union has some monopoly power with which to bargain for workers' interests against management, which invariably holds the upper hand in the firm. Negotiating with management as a group puts greater pressure on the employer than do individual workers bringing up an issue by themselves.

The history of unions in the US is a story of workers' struggle to organize unions and convince or force employers to recognize them for bargaining. From the early days of the Republic through enactment of the National Labor Relations Act, the way workers got management to recognize and negotiate with a union was through economic force. This often led to violent battles between the two sides. Firms would hire security guards and call in strikebreakers. If a dispute got particularly violent, the police, the National Guard, or even federal troops would intervene, almost always to support the employer. According to historians Philip Taft and Philip Ross, “The United States has experienced more frequent and bloody labor violence than any other industrial nation” with the “most virulent form of industrial violence [occurring] in situations in which efforts were made to destroy a functioning union or to deny a union recognition.”\textsuperscript{x}

The Depression sparked an upsurge of worker desires for unions. It may seem odd that workers would seek to unionize in a period of high joblessness when most efforts to unionize in better economic times had failed. But the Depression destroyed faith in business leadership and convinced many workers that unions offered the only way to improve their standard of life. Leaders of the AFL, the sole labor federation at the time, argued over how best to help workers organize. Most believed that only skilled craft workers had the economic muscle to win battles against management and shied away from organizing less skilled workers into unions based on the industry that employed them. Arguing for industrial unionism at the 1935 AFL Convention, United Mine Workers President John L. Lewis punched Carpenters Union President Bill Hutcheson,\textsuperscript{xi} then led the unions favoring industrial unionism out of the convention to form a new federation, the Congress of Industrial Organizations. Organizing in the US thus involved battles not only between workers and firms but between rival union groups.

The ensuing effort to organize industrial workers fits with the violent history of organizing in earlier periods. In one famous incident the United Auto Workers initiated a sit-down strikes against General Motors, in which workers occupied their workplace rather than leaving it. The company called on the police and National Guard to remove the workers, which produced a 40 day “Battle of the Running Bulls” in Flint Michigan.\textsuperscript{xii} The Roosevelt Administration proposed and Congress enacted the National Labor Relations Act in 1935 to shift organizing from the streets to the ballot box. The Act established the National Labor Relations Board (NLRB) to organize government sponsored secret ballot elections at workplaces for workers could vote for or against having a union. The Supreme Court declared the Act constitutional in 1937.

From the late 1930s to the mid 1950s, unions won the vast majority of NLRB elections, greatly increasing the proportion of workers who were union members. During the Cold War the US had the strongest labor movement in the free world – a fiercely anti-
communist movement that sought to convince workers worldwide to choose independent unions favorable to market economies rather than communist controlled unions in state-run economies. Most US employers accepted unions as a fixed part of the economic system and sought good relationships with them.

The NLRA, amended in various ways remains the law governing unionization today. The Board seeks “laboratory condition” elections to ascertain the desire of workers to unionize or not – elections that are not tainted by undue pressure or blatantly dishonest statements from management or unions. The law makes it illegal for the employer to threaten to close the workplace if the workers choose the union or to fire or otherwise discriminate against workers for favoring the union, and places some restrictions on union campaigning as well.

NLRB elections are far from laboratory conditions. Employers usually campaign vigorously to convince workers that they would do better to trust management to remedy problems than to have a union represent them. As part of management's campaign, employers can order workers to assemble during the work day to hear anti-union speeches or to watch anti-union videos, and to meet separately with supervisors who try to convince them to vote against the union. Many employers bring in union prevention firms (colloquially known as union-busters) who specialize in turning a union-majority into a minority through hard-nosed tactics. The elections substitute political battles within a company over unionization for physical battles in the streets and in workplaces.

The unionization of Harvard University's technical and clerical workers in the 1980s shows how workers come together as a group and unionize under US labor law. In 1973 some technicians went to their supervisor to ask for changes in their workplace. The supervisor said that management could not change practices in response to the desires of a few but that if the workers formed a union to represent everyone management would pay attention. The technicians organized the majority of workers at the workplace, but the University insisted that the majority cover not only those workers but the thousands of clerical and technical workers in the entire university -- most of who had never thought about unionizing. It took 15 years and substantial support from the American Federation of State, County, and Municipal Employees union, with whom the Harvard workers affiliated, and the AFL-CIO before the pro-union workers convinced a majority to vote for the Harvard Union of Clerical and Technical Workers. The University and Union have negotiated contracts amicably ever since.

The Harvard example is unique in some respects. The union campaigned on making Harvard a better place for all rather than on attacking management, as is common in many union-organizing campaigns. The union slogan for higher wages and benefits fit the prestigious university: “We can’t eat prestige”. But the Harvard experience is also representative of organizing efforts under the NLRA. When a majority of workers vote for the union to represent them, the NLRA requires that management and the union meet and bargain “in good faith” over key wage and working conditions. But the law does not require that they reach agreement. The union can demand large wage gains. The employer can demand large wage cuts. If the two sides do not modify their demands and agree, the employer can unilaterally set conditions. The workers can strike. If they strike, the firm can hire new workers to replace the strikers. Or the firm can lockout workers to pressure them to agree to its terms.

What do workers gain from unionizing? When unions seek to convince workers to vote union they invariably tout the gains that unions bring in wages, benefits, and workplace
conditions – what analysts call the union premium. One way to estimate the size of the union premium is to compare the pay of workers who are union with the pay of nonunion workers with the same measured characteristics – workers with the same age, gender, education, ethnicity, in the same industry, occupation, and region, and so on. Such comparisons find that unionized workers earn on average 15% or more than their nonunion counterpart. But this comparison may overstate the union impact on pay, since a firm that offers higher wages will attract a large queue of job applicants from which to choose. If the firms identify better workers from this queue on the basis of attributes that are not measured, comparisons of union and non-union workers with the same measured characteristics will overstate the effect of unions on the pay of workers with “truly identical” skills. It is also possible, however, that the union wage gains cause non-union firms to raise their pay to compete for the best workers, which makes the premium underestimate the increase in wages due to unions.

To deal with these problems and identify the impact of unions on workers with truly identical skills, analysts compare the pay of the same worker in a nonunion job with their pay on a union job. Such comparisons find a smaller but still substantial union wage effect on the order of 5% to 10%. Analysts also estimate the size of the union premium by comparing wages at a firm before and after the workers gain a collective bargaining contract. Estimated wage gains are often small because unions generally seek health insurance, pensions, non-wage benefits, and union security clauses on a first contract and push more on wages in later negotiations. Comparisons of unionized and nonunion workers and firms before and after unionization find that the effects of unions on pensions, health insurance, vacation time and other benefits are larger than on wages.

Going beyond pecuniary benefits, unions also provide a means for workers to discuss and negotiate with employers how management runs the workplace. Virtually every union contract establishes a grievance and arbitration system that allows workers due process to redress individual workplace problems. Management and the union will investigate jointly the problem and either come to a decision or hire an outside arbitrator to resolve the issue.

What about the dues that workers pay to unions? Dues vary among unions, generally being higher for highly skilled workers and lower for less skilled workers but average around 2% of earnings. Increases in pay and benefits on the order of 5-10% and costs of 2% or so make unionization profitable to workers.

So why are most workers nonunion? One reason is that there are large costs and risks to an organizing drive when the employer opposes it. The NLRA makes it illegal for management to fire or discriminate against union supporters, but the penalties for breaking the law are small. Enough managements often break that union activists risk their job and future with a firm by seeking to organize. Another reason is that many organizing campaigns resemble marital disputes, which create unpleasant conditions long after the campaign has ended. Finally, even if unions win an NLRB representation election they may not be able to gain a collective bargaining. On the order of 1/3rd of union victories in the elections do not produce a contract.

Some may wonder whether workers need unions to help them in a free market. If the market functioned perfectly, a worker could always take the “exit option” of quitting when they are unhappy about the firm and find comparable work elsewhere. Since it is expensive for firms to recruit and train workers for most jobs high quit rates pressure management to take account of workers' concerns in their decisions. But by itself exit is often an inefficient
way to improve situations. Workers build up skills that are specific to a given workplace, making quitting costly to the worker as well as the firm. In periods of high unemployment workers are unlikely to risk leaving their job to find another one. Workers who do quit have no incentive to tell the firm about the workplace problems that led them to leave, so management will not learn about what it might do better. Workers who stay at the firm may be unwilling to speak up individually for fear of being blamed as the bearer of ill tidings. Unions provide a mechanism for workers as a group to raise difficult issues with the firm.

Why do most firms oppose unions organizing their workers? The economics answer is simple. The higher wages and benefits and better working conditions shift profits from owners to workers. Management will try to raise productivity to offset the higher cost of labor but usually cannot do so fully. Communication with a union may provide a better flow of information about worker attitudes than an employee opinion survey and can promote compromises or concessions when the firm faces genuine problems. The higher wages and benefits and the union-initiated grievance system lowers quit rates, which reduces labor costs. But the cost increasing effects of unions almost always exceed the cost-reducing effects, giving most managements a monetary incentive to keep their firm nonunion.

In addition, unions reduce the power of management to control workplaces. Management must negotiate changes through collective bargaining or grievance procedures. When most firms engaged in collective bargaining, many managers took courses in negotiations and learned how to deal with unions. With collective bargaining becoming less frequent, business schools have replaced labor relations courses with human resource management or personnel courses that teach future managers to make decisions without bargaining with employees.

The incentive for management to oppose unionism differ in European Union countries from that in the US. In most EU countries collective bargaining agreements are largely between employer federations and unions of workers in an entire sector or region. The employer group – say, the federation of electrical machinery firms – will sign an agreement with the union that covers the sector. The agreement becomes legally binding on all firms and workers in the sector, whether they are members of the federation of firms or of the union or nonunion. Since every firm pays essentially the same negotiated wages and benefits, management has little incentive to campaign against workers joining a union. Managements compete on the basis of better productivity, innovations, or service – not on the basis of lower labor costs. At the same time workers who can free ride on the collective bargaining agreement have less incentive to form or join a union at their workplace than in the US.

This produces what seems paradoxical from an American perspective: huge proportions of workers covered by collective contracts coincident with modest proportions of workers who join unions. The exemplar is France, whose unionization rate is in the single digits yet where collective bargaining sets wages for some 90% of the work force. Collective bargaining coverage also greatly exceeds union density in the Netherlands, Austria, and several other EU countries, where contracts are extended to cover all firms and workers?

Why has unionism declined consistently in the US private sector? To get a better sense of the possible future of unions in the US, it is important to understand what set them along the path of continuous decline in density. Two factors that often receive attention are the shift in employment from blue collar industry jobs to white collar service sector jobs and President Ronald Reagan's breaking the Professional Air Traffic Controllers' (PATCO) Strike in 1981
(McCartin, 2011). Neither of these factors stands up to scrutiny as drivers of the decline in union density.

The composition of jobs in the US has shifted from manufacturing and related industries where union density has historically been high to white-collar and service jobs where union density has historically been low. But this has contributed little to downward trend in unionization. The best way to demonstrate that the changing composition of jobs is not a major factor is to look at the union density within sectors which have been hotbeds of union strength. If density fell largely within heavily-unionized sectors, something more than shifts in the composition of jobs must be at work. This is what the data show. From 1983 to 2010, the percentage of workers in unions dropped in motor vehicles production from 58.5% to 20.3%, in transportation and warehousing from 49.4% to 30.5%\textsuperscript{xvii}, and in construction from 28.0% to 14.6%. These declines exceed the drop in union density in the country over the same period!

In a dynamic market economy, moreover, the mix of jobs always changes. A healthy union movement would adjust to changes in the mix of job by organizing workers in emerging sectors, as unions did for industrial workers in the 1930s and 1940s and for public sector workers in the 1970s. During the period of declining density, with the exception of the health care sector, unions failed to organize workers in the expanding traditionally non-union industries.

In 1981 PATCO, one of the few unions that supported President Reagan in the 1980 Presidential election, called an illegal strike to force the President and Congress to agree to its bargaining demands. The President fired the strikers and kept air traffic going by using military air traffic controllers. The federal government decertified PATCO as the representative of workers. But Reagan did not attack private sector unions nor legal strikes nor the right of air traffic controllers to organize a union that operated within the law. When the air traffic controllers chose a new union to represent them in 1987 the Reagan Administration bargained with it.\textsuperscript{xviii} For all the attention given to the PATCO strike, it had no noticeable effect on union density. From the mid-1950s through 2010, the percentage of private sector workers in unions fell under Republican and Democratic administrations alike; in boom times and in recessions; under National Labor Relations Boards favorable to unions and Boards favorable to business.

An explanation for the trend lies in fundamental changes in the economy in which US business and labor operated and in the incentives affecting business and labor toward unionism and their power to act on those incentives.

From the end of World War II through the 1960s US firms had a virtual monopoly of modern technology and production. Europe and Japan were recovering from the destruction of the war. China was a communist run economy experiencing episodes of political instability and the inefficiencies of centralized planning. The Soviet Union produced missiles and bombs and little else of commercial value. India and most developing countries had barely entered the industrial era. As a result US firms dominated production in most products and services, making US the world's leading export nation. Unions derive power from the economic strength of the companies and industries they organize. When unionized firms have market power and/or high profitability, unions are better able to shift profits to workers.
Then the economic world changed. Europe recovered and began to close the economic gap with the US. Japan developed so rapidly that Professor Ezra Vogel of Harvard published a book in 1979 entitled “Japan as Number One”. Then Korea developed rapidly and moved from producing cheap clothes to manufacturing to high tech. The US shifted from being a substantial exporter in global markets to running huge trade deficits year after year. In the 1990s US firms began outsourcing many jobs to low wage countries that joined the global economy, notably China and India. Firms stiffened their opposition to union organizing.

The problems that hit the automobile industry and United Automobile Workers were archetypical. Dominated by GM, Ford, and Chrysler, the three big Detroit based firms faced little international competition in the 1950s and 1960s and had the profitability to agree to union demands for sizable wages and benefits, which brought many workers into the middle class. But then European firms, particularly Volkswagen, then Japanese firms such as Toyota, and finally Korean firms entered the automobile market, with imports and manufacturing in nonunion plants in the US. In 2009 both GM and Chrysler needed government bailout moneys to survive. The UAW negotiated wage concessions, took responsibility for health care plans, and otherwise gave up much of what it had negotiated for workers in better times.

Over the same period, many leading US firms empowered workers to make more decisions at workplaces through employee involvement committees and sought incentive their workers with profit-sharing and employee share ownership. Workers in nonunion firms with greater firm organized employee participation are less likely to vote union in an NLRB election than workers in firms without such programs. Honda kept its assembly line workers nonunion by its HR practices despite high levels of unionization in the automobile industry.

But not all firms practice positive labor relations. Surveys show that large numbers of nonunion workers – from 1/3rd to ½, depending on the year and survey design – say they would vote for a union at their workplace if an election were held immediately. Many nonunion workers also say, however, that they would prefer a joint management and labor committee that meets and discusses workplace matters rather than to negotiate a collective contract. Firms cannot utilize this mode of worker representation because the NLRA, in an effort to prevent Depression era firms from setting up sham “company unions”, made it illegal for management to initiate organizations to represent workers on labor issues.

The US is not alone in experiencing a drop in union density and influence in the private sector of the economy, though it has experienced the longest and steadiest downward trend. In the 1970s union density increased in many advanced countries (but not in the US) as workers flocked to unions to negotiate wage increases to match inflationary prices. But from 1980 to the 2000s the unionized share of the work force fell in nearly all advanced countries: it fell from 39.7% to 26.3% in the European Union, from 31.1% to 19.7% in Japan, and from 49.5% to 22.9% in Australia. In contrast to the US where the percentage of workers covered by collective contracts fell as union density fell, however, the rate of collective bargaining coverage remained high in EU countries. The reason is the extension of collective bargaining contracts to all workers in the relevant sectors noted earlier.

The US is distinct from other advanced countries not so much by its declining proportion of workers in unions as by the declining proportion of wages and conditions set by collective bargaining and by greater employer opposition to unions.

Conclusion
So, do labor unions have a future in the US?

Most analysts answer no. The downward trend in private sector union density shows no sign of abating, much less of turning around. Unions have failed to get the Congress to enact labor law reforms that would make organizing easier. Union leaders have put organizing at the top of the union agenda, but without any notable organizing successes. Public sector unions face attacks on collective bargaining amidst fiscal austerity that threatens their ability to function.

But workplaces invariably create collective interests, and collective interests invariably produce collective actions. In years past unions have arisen from the grave, confounding expert analysts and surprising their own leaders as well as corporations and government. Unions grow in sudden sharp spurts in economic crises where workers see them as the only viable voice defending worker interests.

Could the crisis created by the 2008 financial disaster and the ensuing jobless recovery and fiscal deficit problems change the union situation as the Great Depression did in the past?

It is possible, and not just in the sense that “anything that is not ruled out by the laws of science is possible”. The 2010-2011 attack on public sector collective bargaining galvanized union activists and their allies to an extent the US had not seen since the Depression Era. It produced mass demonstrations in Wisconsin, a landslide vote in Ohio to repeal legislation restricting collective bargaining in that state, and an effort the Governor and several legislators in Wisconsin. The Wisconsin demonstrations arguably set the stage for the Occupy Wall Street protests in the fall of 2011 that made income inequality and the well being of the middle class a national issue.

What we know from past union growth spurts is that to meet the needs of workers in a crisis unions have to reinvent their structures, strategies, and tactics. If unions have a future in the US, they will not be your parents' or grandparents' union movement but one that fits today's Internet-based society, global economy, and financial world.

Unions are searching for new forms to carry out their historic function of representing the interests of workers. If they find one that succeeds, they have the potential to rebuild themselves as a vibrant social force. If they fail, employees outside of the union movement, social entrepreneurs or even managers concerned about worker well-being, may find a way to rebuild labor's voice in the US economy.

How might such a future employee organization/union movement differ from the unions of today? One possibility is that it would rely less on collective bargaining and more on social movement pressures to represent workers. In the 2000s the AFL-CIO's Working America signed up 3 million members by canvassing workers door to door and enrolling members over the Internet to join a community coalition to represent workers outside of collective bargaining. In 2010 the United Food and Commercial Workers Union formed an organization to represent Walmart workers absent a collective contract. In 2011 customers upset over the Bank of America charging people for using debit cards used Internet-based social media to protest and forced the company to back-down. Will unions or some innovative worker or social entrepreneur find a way to turn the Internet-based social media into a force that represents workers with little link to traditional union structures?

In a period of economic distress, it would be foolish to count unions or other employee-based organizations out as analysts did in the Depression era.
BIBLIOGRAPHY:


Vogel, Ezra Japan as Number One, 1979 Harvard University Press, Cambridge Mass


The Bureau of Labor Statistics (BLS) reports annually on union membership and collective bargaining. 


In 1962 President John F. Kennedy issued executive order 10988 that recognized unions of federal employees for collective bargaining over the terms of work but not over wages or benefits. In 2011 the BLS estimated that 28.1% of federal employees were union members.

Moe (2011), Table 2-2. Data from National Center for Education Statistics, Schools and Staffing, where values average statistics in 2003-2004 and 2007-2008

Bennett and Kauffman (2007) have the best review of quantitative studies of unions in these and other areas.


Blanchflower and Bryson (2007).

Bennett and Kauffman (2007) have the best review of quantitative studies of unions in these and other areas.

Unionstats.com.

Wikipedia “Professional Air Traffic Controllers Organization”


Vogel, 1999

Bartel, Ichniowski, Shaw and Correa (2009)

Freeman and Rogers (2006).


Freeman and Rogers (2006).

Jelle Visser (2006), Table 4.

Fulton (2011) estimates that about 2/3rds of EU workers remained covered by collective contracts in the 2000s.