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Understanding the (relative) fall and rise of construction wages

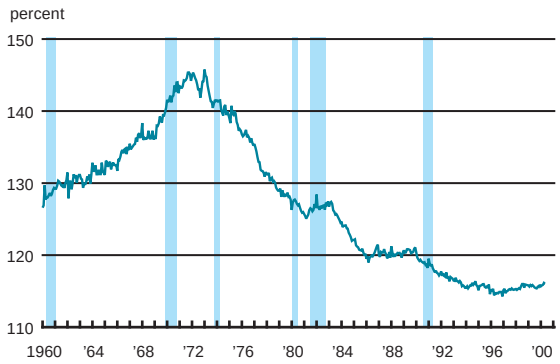
Over the last four years, wages of construction workers have risen modestly relative to those of other workers, partially reversing what had been a nearly continuous 25 year decline. As figure 1 shows, the ratio of average hourly earnings in the construction industry to that of all private production workers rose throughout the 1960s. In the early 1970s, when the construction industry was at the center of the concerns that led to the imposition of wage and price controls, construction workers earned about 45% more per hour than the average worker.[1] Following that peak, however, relative construction wages declined steadily until 1995 when they were only 15% above average. The recent rebound has seen that figure increase to about 17%.

The rebound in construction wages has come in the midst of a construction industry boom. Housing demand is at historically high levels and shortages of construction labor have been reported across the country. The construction sector has gained in its share of gross domestic product (GDP) and employment, as shown in figures 2 and 3. Moreover, the gap between the construction unemployment rate and the overall unemployment rate recently narrowed to its lowest level in the past three decades, indicating the tightest labor market in construction since the 1960s (see figure 4). Indeed, given the tightness of construction industry labor markets, it might seem surprising that construction wages have not risen even faster. Understanding the forces that have restrained wage growth during the recent boom as well as producing the long decline in relative wages since the early 1970s requires a look at how the industry has changed over the last three decades and how its role in the U.S. economy has developed.

Impact of economy-wide changes

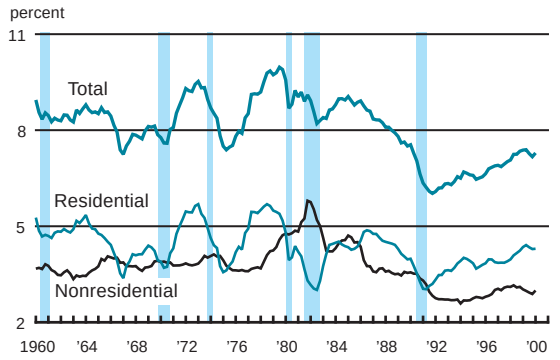
Certain economy-wide changes seem to have affected the construction industry more than other industries. Investment in structures increased in the 1990s, but declined significantly as a percent of GDP from the late 1970s to the early 1990s. The upward movement of residential construction has masked the often flat level of nonresidential construction (see figure 2). Although the 1980s experienced great economic growth, investment in structures lagged behind the rest of the economy. This seems to reflect the cyclical nature of the construction industry as overbuilding in the 1970s resulted in less activity in the following decade.

1. Construction to private hourly earnings



Note: Monthly data. Shaded areas indicate recessions as defined by the National Bureau of Ecomomic Research.
Source U.S. Department of Labor, Bureau of Labor Statistics, *Current Population Survey.*

2. Structures investment share of GDP

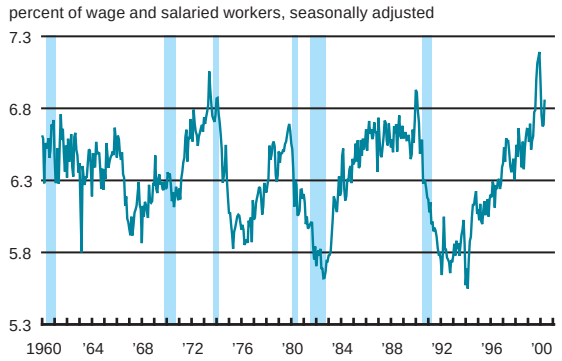


Note: Quarterly data. Shaded areas indicate recessions as defined by the National Bureau of Ecomomic Research.
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts.*

Regional economic growth in the last two decades was also uneven, as the South and West grew faster than the rest of the U.S. This geographic tilt to growth may have lowered relative wages in the construction industry since wages tended to be lower in the higher growth regions, aside from the Far West. Average hourly earnings in construction (though not available for all states) currently vary from highs of $26.87 for Alaska and $24.76 for New York to a low of $13.74 for North Carolina in April.[2]

National labor market trends have also played a part in restraining the relative wages of construction workers. For instance, the mix of workers in the U.S. has changed dramatically

3. Construction share of total employment



Note: Monthly data. Shaded areas indicate recessions as defined by the National Bureau of Ecomomic Research.

Source U.S. Department of Labor, Bureau of Labor Statistics, *Current Population Survey*.

over the last the three decades, as more women, minorities, and immigrants have entered the work force. Because they receive lower wages on average, these new entrants have dampened wage growth in general. But they have had an especially large impact in construction where a high proportion of jobs require low skill levels. Women accounted for 9.9% of construction workers in 1999, up from 5.6% in 1972.[3] Since for the construction trades, women's median weekly earnings were $423 in 1999, whereas men's median weekly earnings were $571, the increasing share of women in construction has restrained average wage growth.[4] Increasing shares of minorities and immigrants in construction have had similar implications for average construction wages. Immigrants are believed to have played an especially large role in helping to ease the labor crunch in construction.

Another important labor market factor has been the increase in the wage premium associated with higher levels of education.[5] Because construction workers tend not to have high levels of formal education, such increases in the returns to education have the effect of lowering their relative wage rates. The influx of less skilled immigrant workers may be one factor contributing to lower relative wages for less educated workers. For instance, some researchers contend that "almost half of the 10.9 percentage point decline in the relative wage of high school dropouts observed between 1980 and 1995 can be attributed to immigration."[6]

Impact of industry changes

The substitution of less-skilled workers has been facilitated by advances in construction process and method. Cost-saving technological changes in the construction industry have shifted the skill sets needed for projects. De-skilling in construction, especially off-site work like pre-fabrication, has lessened the need for high-wage skilled workers, allowing firms instead to hire laborers at lower wages. Builders talk of being able to "… manufacture a house in nine hours, erect it in 12 hours, and finish it in 48 hours—all using unskilled workers."[7] Technological progress has led to new construction materials and techniques, many of which reduce the need to hire more skilled workers. The seasonal cycles of the construction sector are having less impact due to new equipment and better knowledge of how to overcome Mother Nature. For instance, heaters and insulated work areas alleviate the effects of cold weather on construction workers. New drying techniques let builders use concrete all year round. Thus, workers are less able to demand a wage premium to compensate for a lack of hours during slow seasons.

Moreover, increased safety, at least partially attributable to better safety programs and new techniques, has lessened the wage premium related to the riskier nature of construction. From a peak in 1979 to a low in 1998, the incidence rate of nonfatal occupational injuries and illnesses declined in the U.S. In the construction industry, these rates declined from 16.2 to 8.8 per 100 full-time workers. This decline was steeper than the overall drop for private industry from 9.5 to 6.7 per 100 full-time workers. Interestingly, the manufacturing industry now has a higher incidence of occupational injuries and illnesses, even though the construction industry was less safe prior to 1994. However, in 1998 there were more occupational fatalities in construction (1,171 with 33% in falls) than in manufacturing (694).[8]

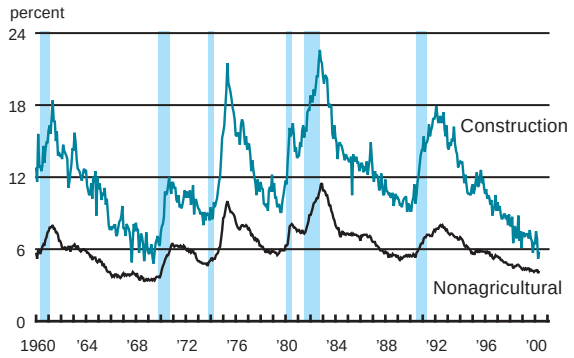
Effects on unionization

As the industry shifts toward using fewer skilled workers, the wage-boosting power of labor unions is eroding and labor markets are becoming more competitive. This shift especially follows from the many day laborers now hired in the informal sector of the economy. Faced with less market power on the side of labor, firms have been able to offer lower wages and still fill positions, at least until the current boom. Also, the traditional edge in productivity enjoyed by union workers has significantly lessened. "The reduced productivity gap gave owners and contractors tremendous incentives to switch from union to nonunion labor."[9] Union influence has diminished in the construction industry over the past three decades. As more nonunion employees were hired at a lower wage rate, the average hourly earnings in construction declined. Union construction workers earn over 50% more than nonunion workers.[10] The gap in benefits appears to be even greater, as unionized workers have much better benefits than nonunion workers.[11]

Lower representation is a primary reason for the loss of wage power by unions. The building trades were over 40% unionized in 1972.[12] In 1999, only 19.1% of construction workers were union members, though this was a higher percentage than the membership low of 17.7% in 1995. Besides a national decrease in union representation, higher growth in states that have legislated the "right to work" of non-union employees, especially in the South, contributed to this decline.

Weakened prevailing wage laws, which essentially mandate union wages for workers on public works projects,

4. Private W + S unemployment rate



Notes: W + S is wage and salaried. Monthly data. Shaded areas indicate recessions as defined by the National Bureau of Economic Research.

Source U.S. Department of Labor, Bureau of Labor Statistics, *Current Population Survey.*

also factor into the lessening of union influence over wages in the construction industry. "Critics of these laws generally claim that the creation of an artificial (union-based) wage floor reduces competition and tends to inflate building costs."[13] However, in 1993 Congress increased the thresholds on the size of construction projects to which the Davis–Bacon Act of 1931 applies. For new construction under $100,000 and repair projects under $25,000 firms now do not have to pay prevailing wages. This has allowed construction firms to win more federal contracts without paying union wages, thus weakening union power.

Another area of change in prevailing wage laws allows helpers to replace higher paid apprentices at job sites. The helpers are less skilled than apprentices and can do more of the manual labor that otherwise would have to be done at greater cost. An additional tactic to lower costs is to hire apprentices outside of approved programs. Both of these tactics have led to court cases involving builders and government entities. A Supreme Court ruling in 1997 clarified that apprenticeship programs need proper certification at the state or federal level, which increases employer costs.[14] Typically, the hiring of apprentices or helpers still lowers wage bills, compared with hiring journeymen. Double-breasting by firms permits a single company to operate union and nonunion shops. "The open shop branch of a double-breasted firm is supposed to be a separate concern, with its own offices, management, and payroll. Unions have charged that in many cases these distinctions are artificial and that the union contract legally applies to the nonunion subsidiary."[15] Still the practice has spread as firms respond to prevailing wages and vanishing productivity advantages for union labor. The added flexibility enables a firm to bid for government contracts under prevailing wage laws, while also being competitive for private contracts.

Conclusion

The labor market for the construction industry has been especially tight after the construction boom of the 1990s. This has resulted in wage increases beyond those found in other industries, departing from the long-term trend of downward relative wages for construction workers. However, the long-term trend suggests continued de-skilling in the construction sector, which will lead to further downward pressure on wages. In view of this, the recent relative wage gains for construction workers may not be sustainable.

—David B. Oppedahl
Associate economist

[11]Michael H. Moskow, 1997, "Construction industry wage controls during the Nixon Administration," paper presented before the meeting of the Industrial Relations Research Association, December.

[2]Bureau of Labor Statistics data.

[3]Calculated from the Bureau of Labor Statistics, *Current Population Survey.*

[4]Available at http://stats.bls.gov/news.release/wkyeng.t07.htm.

[5]Economic Report of the President, Feb. 2000, pp. 135–137.

[6]George J. Borjas, 2000, *Issues in the Economics of Immigration*, University of Chicago Press, p. 6.

[7]Quote from Wally Randa in Matthew Power, 2000, "Assembly required," *Builder*, February, p. 67.

[8]Data from OSHA, available at www.bls.gov/oshcfoi1.htm and www.bls.gov/special.requests/ocwc/oshwc/osh/os/osnr0009.txt.

[9]Steven G. Allen, 1988, "Declining unionization in construction: The facts and reasons," *Industrial and Labor Relations Review*, Vol. 41, No. 3, p. 357.

[10]Based on data from the *Current Population Survey*, available on the Internet at http://stats.bls.gov/news.release/union2.nws.htm.

[11]Albert Schwenk, 1996, "Trends in the differences between union and nonunion workers in pay using the Employment Cost Index," *Compensation and Working Conditions*, September, pp. 27–33.

[12]Daniel Quinn Mills, 1972, *Industrial Relations and Manpower in Construction*, MIT Press, p. 16.

[13]Gerald Finkel, 1997, *The Economics of the Construction Industry*, Armonk, NY: M.E. Sharpe, p. 129.

[14]Supreme Court of the United States, 1997, No. 95-789, February 18.

[15]Allen, op. cit., p. 358.

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Tracking Midwest manufacturing activity

Manufacturing output indexes (1992=100)

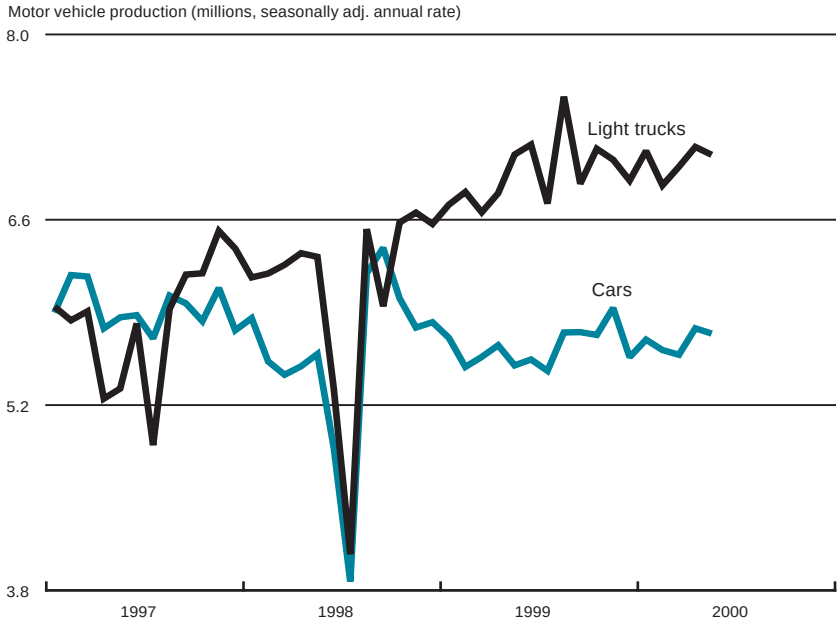
	April	Month ago	Year ago
CFMMI	163.9	163.2	152.3
IP	149.5	148.3	140.2

Motor vehicle production (millions, seasonally adj. annual rate)

	June	Month ago	Year ago
Cars	5.7	5.8	5.5
Light trucks	7.1	7.2	7.1

Purchasing managers' surveys: net % reporting production growth

	May	Month ago	Year ago
MW	55.2	59.3	60.9
U.S.	56.3	58.2	58.7



Light truck production decreased slightly from 7.2 million units in May to 7.1 million units in June. Car production remained constant at 5.8 million units in May and 5.7 million units in June.

The Chicago Fed Midwest Manufacturing Index (CFMMI) rose 0.4% from March to April, reaching a seasonally adjusted level of 163.9 (1992=100). Revised data show the index was at 163.2 in March, and had risen 1.1% from February. In comparison, the Federal Reserve Board's Industrial Production Index for manufacturing (IP) increased 0.8% in April, after rising 0.9% in March. The Midwest purchasing managers' composite index (a weighted average of the Chicago, Detroit, and Milwaukee surveys) for production decreased to 55.2% in May from 59.3% in April. The purchasing managers' index decreased in Chicago and Milwaukee, but increased slightly in Detroit.

Sources: The Chicago Fed Midwest Manufacturing Index (CFMMI) is a composite index of 16 industries, based on monthly hours worked and kilowatt hours. IP represents the Federal Reserve Board's Industrial Production Index for the U.S. manufacturing sector. Autos and light trucks are measured in annualized units, using seasonal adjustments developed by the Board. The purchasing managers' survey data for the Midwest are weighted averages of the seasonally adjusted production components from the Chicago, Detroit, and Milwaukee Purchasing Managers' Association surveys, with assistance from Kingsbury International, LTD., Comerica, and the University of Wisconsin–Milwaukee.

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