

# Employment changes in construction: secular, cyclical, and seasonal

*Construction employment growth roughly paralleled that of total employment during 1950–80; but, compared with the total economy, the demand for labor takes longer to recover from recessions*

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About 5.8 million persons, or 5.8 percent of the U.S. work force were employed by the construction industry in 1982. Their unemployment rate was 16.5 percent of the construction labor force (or 1.1 million persons), a rate double that for all industries combined. Have these workers traditionally had such high unemployment rates? What are the trends in the industry? And, how do business cycles and seasonal patterns affect construction activity?

Over the 1950–80 period, construction employment grew at about the same rate as total employment. However, during recessions, construction employment declined more than total employment, and during recoveries, it generally took longer to recoup. Seasonality, an important factor in construction activity, could cause employment to rise and fall by as many as 1 million workers over a 12-month period. However, the movement of jobs to the Sun Belt over the last three decades has helped to alleviate the effects of seasonality on unemployment in the industry.

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This article evaluates labor problems in the construction industry by examining the industry's long-term employment trends and its reaction to business cycles and seasonality. For this article, construction industry and occupational employment data include wage-and-salary, self-employed, unpaid family, and government workers.<sup>1</sup> In addition, *construction occupations* include workers outside the construction industry as well as those in the industry. For some construction occupations, more than 50 percent of the workers are employed outside the construction industry. (See table 1.)

## **Secular trends, 1950–80**

Employment growth in the construction industry matched the general employment growth of the economy during each decade of the 1950–80 period. (See table 2.) But, the growth in expenditures for new construction (2.5 percent per year in constant dollars) lagged behind the growth of the U.S. economy, as measured by real gross national product (3 percent per year). And during the 1970's, construction expenditures grew only 0.3 percent per year, while gross national product grew 3.2 percent. Many factors contribute to the growth difference between construction employment and construction expenditures, including difficulties in

measuring real expenditures and changes in labor productivity.<sup>2</sup>

The construction industry has three major components: private nonresidential, private residential, and government.<sup>3</sup> The percentage of construction expenditures attributable to each activity has changed over the decades. The following tabulation shows the percent of expenditures (in constant 1972 dollars) for each component of the industry during 1950-80:<sup>4</sup>

	1950	1960	1970	1980
Private nonresidential . . . .	29.0	32.8	37.4	40.2
Private residential . . . . .	49.2	37.5	33.9	38.3
Government . . . . .	21.9	29.7	28.6	21.6

During the 30-year period, expenditure growth was fairly steady in the construction of industrial and commercial buildings and in other private nonresidential structures. However, the share for housing (private residential) expenditures declined: almost half of all construction expenditures in 1950 was for housing, compared with slightly more than 38 percent in 1980. And even though housing boomed in the 1970's, expenditures for housing were still lower than those for private nonresidential structures. Government expenditures for highways and educational facilities increased sharply over the 1950-70 period, but declined in both relative and absolute terms over 1970-80. In addition, construction of other government structures was deferred in the recent decade because of budget problems.

Employment in the construction industry during the 1960's and 1970's benefited from a modestly upward trend in expenditures for maintenance and repair of

**Table 2. Employment trends in the construction industry and occupations, 1950-80**  
[Average annual percent change]

Industry or occupation	1950-60	1960-70	1970-80
All industries . . . . .	1.5	1.7	2.4
Construction industry . . . . .	1.2	1.8	3.1
<b>Occupations<sup>1</sup></b>			
Carpenters . . . . .	-0.9	0.2	3.7
Brickmasons . . . . .	1.3	-1.4	0.5
Electricians . . . . .	1.1	3.3	3.6
Painters . . . . .	-0.4	-1.4	3.9
Plumbers . . . . .	1.1	2.2	2.5
Construction laborers . . . . .	-0.9	1.0	3.8

<sup>1</sup> Includes workers outside the construction industry.

existing structures.<sup>5</sup> However, this trend stopped abruptly in 1980, as high interest rates and financing difficulties affected maintenance construction, as well as new construction.

*Occupational changes.* Construction occupations include craftworkers (such as carpenters, brickmasons, electricians, painters, and plumbers) and laborers (such as carpenters' helpers and electricians' helpers). In 1982, these workers accounted for about two-thirds of total employment in the construction industry; the remaining one-third were mostly managerial and clerical workers. (Employment trends in construction occupations are shown in table 2.)

Over the 1950-80 period, the employment of carpenters, painters, and construction laborers paralleled expenditures growth in residential construction. Housing declined as a percentage of expenditures for new construction during 1950-70, as did the number of carpenters in the construction industry as a percent of total industry employment. During 1970-80, when housing increased modestly as a proportion of new construction, the employment growth rate of carpenters exceeded that of the construction industry. Throughout the 1950-80 period, about 75 to 80 percent of the carpenters (1.1 million in 1981) were employed in the construction industry; the remaining 20 to 25 percent were employed in manufacturing, trade, and service industries.

About half of the 628,000 electricians are employed in the construction industry; most of the others work in manufacturing. Therefore, the employment of electricians depends on trends in construction and in manufacturing. However, during the 1950-70 period, employment growth for electricians occurred almost solely in the construction industry; since 1970, their growth has been equally divided between construction and manufacturing.

A notable characteristic of the construction industry is the number of self-employed workers—they account for a larger percent of employment in construction than in other nonagricultural sectors. In 1982, the industry

**Table 1. Employment in all industries and in the construction industry, by occupation, 1982**  
[In thousands]

Occupation	Total employment	Construction employment	Construction employment as a percent of total employment	Percent of construction employment
Total employed . . . . .	99,526	5,756	5.8	100.0
Craft and kindred occupations . . . . .	12,272	3,167	25.8	55.0
Carpenters . . . . .	1,082	860	79.5	14.9
Brickmasons and stonemasons . . . . .	145	129	89.0	2.2
Cement and concrete finishers . . . . .	55	52	94.5	0.9
Electricians . . . . .	628	309	49.2	5.4
Excavating, grading, and road machinery operators . . . . .	399	266	66.7	4.6
Painters, construction and maintenance . . . . .	473	334	70.6	5.8
Plumbers and pipefitters . . . . .	482	301	62.4	5.2
Structural metal craftworkers . . . . .	81	58	71.6	1.0
Roofers . . . . .	133	130	97.7	2.3
Paperhangers, plasterers, and other construction crafts . . . . .	113	96	85.0	1.7
Laborer occupations, except farm . . . . .	4,518	722	16.0	12.5
Construction laborers . . . . .	786	691	87.9	12.0
Carpenters' helpers . . . . .	51	45	88.2	0.8
Other construction laborers . . . . .	735	646	87.9	11.2

SOURCE: Current Population Survey.

had 1.1 million self-employed persons, or 19 percent of all employment in the construction industry, and 13 percent of all self-employment in nonagricultural industries. Self-employment in the construction industry increased 5.5 percent per year between 1970 and 1980, about twice the rate of increase in total construction employment, and in self-employment for all industries.

The growing number of self-employed workers in construction reflects several factors, such as the increases in the number of residential construction additions and in maintenance and repair of all existing structures. Self-employment is more suited to these activities than to those involving the larger and more complex nonresidential structures. The recent growth (during the 1980 and 1981-82 recessions) in the number of self-employed also reflects the traditionally counter-cyclical nature of self-employment.

The likelihood of being a self-employed construction worker varies by occupation. About 30 percent of painters, carpenters, and brickmasons were self-employed in 1982, but only 8 percent of electricians were self-employed.

*Slower growth for suppliers.* The influence of the construction industry extends to industries which supply materials and components needed for buildings, roads, and other structures. Major suppliers of the construction industry include the producers of stone, clay, and glass products, lumber products, and selected fabricated metal products (for example, heating and plumbing fixtures).<sup>6</sup> (See table 3.) In 1981, the 11 industries which

sold at least 50 percent of their products to the construction industry employed more than 1.8 million workers.

Employment growth in the major supplying industries was slower than that in the construction industry over the 1960-80 period, reflecting, among other things, different rates of productivity growth. However, employment trends vary by supplying industry: over the last 20 years, employment in structural clay products declined, employment in cement and concrete products grew modestly, and employment in fabricated structural metal products, the largest supplier, grew the fastest.

*Jobs moved to Sun Belt.* Over the last three decades, construction industry employment has shifted from the Midwest and Northeastern States to the "Sun Belt" States—Florida, Alabama, Mississippi, Louisiana, Texas, New Mexico, Arizona, and California. The following tabulation shows construction employment in selected Sun Belt States as a percent of national construction employment:

	1950	1960	1970	1980
Sun Belt States . . . . .	23.9	26.1	25.9	34.4
Florida . . . . .	2.9	4.3	4.9	6.1
Texas . . . . .	5.9	5.8	6.6	9.7
California . . . . .	9.9	10.1	8.4	10.2
Other Sun Belt States . . . . .	5.2	5.9	6.0	8.4

The Sun Belt's share of construction employment increased about 10 percentage points from 1950 to 1980, as did its share of total employment. During 1970-80, construction employment grew faster than the national in Nevada, Washington, and Alaska. In States which are growing faster than the Nation as a whole, construction typically accounts for a larger share of total employment. Many of the fastest growing standard metropolitan statistical areas (SMSA's) during 1970-80 were in the Sun Belt—Houston, Dallas-Fort Worth, San Diego, San Francisco-Oakland, and Los Angeles-Long Beach.

The 1970-80 increase in construction employment in several States reversed earlier downward trends. In Massachusetts, the reversal reflected—at least in part—the growth of high-technology and manufacturing industries in the region. In New York, the reversal reflected, among other things, the easing of New York City's budget problems.

### Response to recessions

During recessions, employment declines more sharply in the construction industry than in most other industries. Construction employment parallels swings in expenditures for residential structures, especially housing. Expenditures for housing, including mobile homes, declined by more than 40 percent between 1973 and 1975, and by about 45 percent between 1978 and 1982. The

**Table 3. Employment in major suppliers of materials and services to the construction industry, 1981, and average annual percent change 1960-80**

Industry	Employment in 1981		Average annual percent change	
	Total (in thousands)	Percent generated by construction expenditures	1960-70	1970-80
Construction industry . . . . .	4,176	—	2.0	1.9
Supplier industries, total . . . . .	1,766	—	.4	.9
Structural clay products . . . . .	41	97	-2.7	-2.3
Cement and concrete products . . . . .	233	95	.9	.6
Stone and clay mining . . . . .	92	80	-.5	-.2
Millwork, plywood, and wood products, not elsewhere classified . . . . .	292	77	2.3	1.5
Fabricated structural metal products . . . . .	508	76	2.3	1.8
Heating apparatus and plumbing fixtures . . . . .	69	73	.4	-.1
Sawmills and planing mills . . . . .	206	63	-2.9	.0
Paints and allied products . . . . .	63	54	1.1	-.6
Stone and clay products, not elsewhere classified . . . . .	147	52	1.1	1.1
Pottery and related products . . . . .	43	50	-.7	.4
Logging . . . . .	82	50	-2.6	2.0

SOURCE: *The Detailed Input-Output Structure of the United States, 1972*, Volume I (U.S. Department of Commerce, Bureau of Economic Analysis, 1972), and the Bureau of Labor Statistics, Office of Economic Growth.

housing industry has yet to recover from the 1980 recession, although it traditionally has led the peaks and troughs of the economy.

Construction employment also follows swings in expenditures for private nonresidential structures, particularly commercial buildings. During 1973–75, nonresidential construction expenditures declined by nearly 20 percent and did not recover their prerecession level until 1979. Expenditures for such structures increased to historically high levels in the 1980 recession and much of the 1981–82 recession. Hence, nonresidential construction expenditures helped to offset the decline in expenditures for private residential construction, thereby sustaining construction employment during the 1980–82 period.

Employment changes in a construction occupation depend on the occupation's concentration in the various construction activities. Carpenters, brickmasons, and construction laborers are concentrated in the housing segment of the construction industry. About a third of all carpenters and brickmasons are employed either by residential building contractors or by special trade contractors whose activities are closely tied to housing construction. Electricians, plumbers, and many other construction craftworkers are less concentrated in housing. Only about 12 percent of the electricians are dependent on residential construction activity.

During the first 12 months of the 1973–75 recession, the numbers of electricians and plumbers rose, as nonresidential construction activity declined only slightly. However, employment of these workers declined during the remainder of the recession when nonresidential construction fell. The number of carpenters declined throughout the 1973–75 recession, as housing declined quickly and sharply.

Between 1979, the last year of high levels of construction activity, and 1982, employment among carpenters has declined 17 percent; employment among electricians has declined 4 percent, and employment among plumbers has risen 5 percent. The decline for carpenters paralleled the sharp decline in housing; the modest change for electricians and plumbers paralleled the positive trends in private nonresidential construction. In fact, about half of the decline among electricians occurred in the manufacturing sector.

A relationship also exists between the employment stability of an occupation and its skill level. For example, carpenters' helpers experienced wider swings in employment than carpenters, a situation which arises when firms hold on to skilled workers.

During recovery periods, the rate of construction employment growth is faster than for other employment, but construction takes longer than most other industries to regain prerecession levels. For example, the construction industry did not return to its November 1973 em-

ployment level until 1978—more than 2 years after other industries had returned to their November 1973 employment level.

In the past, housing has picked up rapidly during recovery phases while large-scale projects, such as commercial buildings, have taken longer to recover. Consequently, the numbers of carpenters, brickmasons, painters, and construction laborers increase sharply in a recovery, while the number of electricians increases only slightly.

Although national construction employment declined between January 1980 and January 1982, seven States—Alaska, Florida, Louisiana, Montana, New Mexico, New York, and Texas—had increases. Florida's growth reflects, in part, immigration from other States and from abroad; the growth in Texas, Montana, Alaska, and Louisiana are related to population movements and the development of energy resources. Construction employment grew more slowly or declined more than total employment in all States, except Alaska and Montana.

The sensitivity of supplying industries to the business cycle depends on the construction activity upon which the industries are dependent. To illustrate, employment in fabricated structural metal products (which are used largely in nonresidential construction) did not decline until the latter part of the 1973–75 recession, and declined only modestly during the 1980 and 1981–82 recessions. In contrast, employment in the lumber industry (which is associated primarily with housing construction) declined sharply in all three recessions.

### Effects of seasonality

Seasonality is a notable characteristic of the construction industry. During a 12-month period, employment in the industry can rise and fall by more than a million workers. (See table 4.) The change is concentrated among private wage-and-salary workers—self-employed and government construction workers show far less seasonality. Construction laborers and painters are occupations most affected by seasonal factors, followed by carpenters and brickmasons. Electricians and plumbers are the least affected. The patterns for managers and clerical workers are only slightly different than that for their counterparts in other industries.

Construction seasonality reflects both the weather and the timing of projects. Outdoor activities such as new housing and highway construction decline during the winter in northern States. Housing is probably the most seasonal construction activity because it employs a considerable number of construction laborers, carpenters, and painters—three occupational groups most affected by seasonality. Builders can adjust the timing of many other construction projects to minimize the impact of cold weather. Commercial building construction continues without significant interruptions during cold

**Table 4. Seasonal patterns in the construction industry and selected occupations**

[In percent]

Industry or occupation	1978-III to 1979-I	1979-I to 1979-III
All industries .....	-0.1	3.5
Construction industry .....	-14.5	18.8
<b>Occupations<sup>1</sup></b>		
Carpenters .....	-13.2	18.3
Brickmasons .....	-18.2	23.4
Electricians .....	3.4	6.3
Painters .....	-29.2	36.3
Plumbers .....	-3.4	6.5
Construction laborers .....	-29.6	36.6

<sup>1</sup> Includes workers outside the construction industry.

weather in many colder sections of the country.

Because of its seasonal nature, construction is an important source of summer jobs for students. About 80 percent of the employment decline for construction laborers in winter months consists of persons leaving the labor force. The decline is concentrated among persons age 16 to 24.

The population shift to States and cities in the Sun Belt has implications for seasonality in the construction industry. The seasonal change in construction employment in Arizona, California, and Florida, and in Houston, Dallas-Fort Worth, and Los Angeles-Long Beach is about half the nationwide average; in contrast, Illinois, Minnesota, and Michigan have about twice the nationwide average. Most of the seasonal variations are related to weather, although weather alone is not always a good indication of seasonality. For example, New York City has only slightly more seasonal variations than Dallas-Fort Worth. This is because of New York City's mix of construction activity—more new office structures, and additions and alterations to existing nonresidential structures, and fewer single-family homes.

*Less variation in supplying industries.* The major industries supplying the construction industry have considerably smaller seasonal employment variations than the construction industry. However, manufacturing industries which supply the construction industries have a slightly greater seasonal pattern than manufacturing industries that do not. Among the major suppliers, the concrete, gypsum, and plaster products industry has the greatest seasonal variation in employment.

The seasonal patterns of construction and its supplying industries reflect their production characteristics. There are two characteristics which minimize the seasonal patterns for the major suppliers relative to the construction industry. First, it is less expensive for a supplying industry to build up and draw down its inventory of finished goods than to start and stop its production line; it is very difficult for a construction

industry to maintain an inventory of finished goods. Second, work tasks in the supplying industries are essentially the same throughout the year and, thus, they can employ the same persons year round. In contrast, tasks at a construction site vary as work progresses, with electricians, plumbers, carpenters, and brickmasons working at different stages of the project. Thus, these craftworkers are not likely to be continuously employed at one site.

### Assessing the sensitivity

As noted, the sensitivity of the construction industry to the business cycle and to seasonal patterns affects the prospects for continuous employment in the industry. The unemployment rate in the construction industry has consistently been higher than that in other non-agricultural industries. Unemployment among construction workers varies by sector and by occupation. (See table 5.) The rate for private wage-and-salary construction workers is nearly three times higher than that for government construction workers. The rate for construction laborers is always higher than that for the industry as a whole, and the rate for electricians is always lower.

Other differences in unemployment between the construction industry and other nonagricultural industries include: more construction workers than nonagricultural workers experience at least one spell of unemployment during a 12-month period (for example, 38 versus 18 percent in 1981, the latest data available); more have two or more spells of unemployment (45 versus 32 percent); and more work for two or more employers during a 12-month period (25 versus 13 percent). These characteristics vary among the construction occupations. For example, fewer electricians than carpenters experience multiple spells of unemployment during a 12-month period; more plumbers than carpenters work year round.

Regional unemployment rates for construction workers range from being nearly equal to that for all nonagricultural workers to being three or more times

**Table 5. Unemployment rates for the construction industry and selected occupations, 1982**

Industry or occupation	Unemployment rate
All industries .....	8.7
Construction industry .....	16.5
Private wage and salary workers .....	20.0
Government wage and salary workers .....	6.8
<b>Occupations<sup>1</sup></b>	
Construction laborers .....	28.9
Brickmasons .....	21.4
Carpenters .....	18.6
Painters .....	17.0
Plumbers .....	10.6
Electricians .....	8.5

<sup>1</sup> Includes workers outside the construction industry.

**Table 6. Average annual earnings of persons whose primary job was in construction occupations, 1981**

Occupation	All workers	Year-round workers only
All occupations .....	\$15,800	\$18,900
Construction occupations: <sup>1</sup>		
Electricians .....	20,900	23,200
Plumbers .....	18,900	21,000
Brickmasons .....	14,800	19,000
Painters .....	12,100	17,800
Carpenters .....	13,100	17,000
Construction laborers .....	9,200	13,600

<sup>1</sup> Includes workers outside the construction industry.

higher. In Houston and Dallas-Fort Worth, 1981 unemployment rates for construction workers were only slightly higher than those for all workers. In these two cities, laid-off construction workers apparently were able to find jobs in other industries because construction employment declined during the 1980 and 1981-82 recessions, while total employment grew. In Milwaukee, Cincinnati, and Pittsburgh, construction workers had 1981 unemployment rates more than three times the rate for all workers. The following tabulation shows 1981 unemployment rates in the construction industry and in all industries combined:

	All industries	Construction industry
U.S. average .....	6.8	12.8
Houston .....	3.7	4.1
Dallas-Fort Worth .....	4.1	5.0
Boston .....	5.3	11.7
Los Angeles-Long Beach ..	6.1	12.0
Milwaukee .....	6.6	21.6
New York .....	7.0	11.5
Pittsburgh .....	7.3	23.0
Chicago .....	7.5	17.3

In 1981, supplying industries, except for housing-dependent lumber mills, had unemployment rates close to that for manufacturing. As the recession deepened in 1982, the supplying industries' unemployment rates rose closer to that for construction.

**Earnings.** Periodic spells of unemployment affect the annual earnings of construction workers. The impact of

varying unemployment rates can be detected for electricians, who experience low unemployment, and carpenters, who experience relatively high unemployment. Most electricians who had full-time jobs work year round (71 percent in 1981), while fewer carpenters who worked primarily at full-time jobs were employed year round (45 percent in 1981). As a consequence, there was relatively little difference between the earnings of the average electrician and those of an electrician who worked year round. (See table 6.) But there was a relatively large difference between the annual average earnings of a carpenter who worked year round and those of the average carpenter.

**Growth and unemployment ahead**

In 1982, there were numerous problems for construction-related employment. High interest rates and the uncertainties related to the 1981-82 recession continued to dampen expenditures for new and for maintenance and repair construction, causing high unemployment rates in the industry and in construction. However, as demonstrated during 1950-80, and particularly during the 1975-77 recovery period, the industry is capable of recovery from a recessionary downturn. Once the recovery from the 1981-82 recession occurs, an aging infrastructure of highways and sewer lines and the need to repair and replace buildings constructed after World War II indicate a positive growth trend in construction expenditures. However, because construction employment is significantly affected by housing, the exact timing and year-to-year pattern of the growth is difficult to predict. Bureau of Labor Statistics projections show construction employment growth of 1.8 percent per year over the 1980-90 period, about the same rate as that for total employment (1.5 percent per year).<sup>7</sup> Certainly, future construction growth trends are subject to uncertainties such as inflation rates, regional growth patterns, unemployment levels, and Federal fiscal and monetary policies. Despite the projected growth, one would expect the higher than average unemployment rates and the repeated episodes of unemployment to continue because there have not been any institutional changes to mitigate the seasonal and cyclical factors which cause the industry's high unemployment rates. □

— FOOTNOTES —

<sup>1</sup> This article uses numerous data sources. The principal source for the construction industry and construction-related occupations is the monthly Current Population Survey (CPS) which is compiled from household interviews and which provides details on the characteristics of persons employed and unemployed during a given month. These employment and unemployment data are tabulated both by industries and by occupations. The CPS, in its March supplement, provides information on the number of weeks worked, the number of employers, and the number of spells of unemployment during a 12-month period. The principal source for the supplying industries and for regional

trends is the Bureau of Labor Statistics establishment survey. This survey, which is compiled from employer records, provides current information on wage-and-salary employment in the private and public sectors.

There are several important differences between the CPS and the establishment survey in the measurement of employment. First, the CPS counts the number of persons who are employed; the establishment survey counts jobs. Because of this difference, a person holding two or more jobs would be counted two or more times in the establishment survey but only once, in his or her primary job, in the CPS. A

second difference is that the CPS provides estimates of persons employed as private wage-and-salary workers, government wage-and-salary workers, self-employed workers, and unpaid family workers for all industries and for all occupations, while the establishment survey provides estimates of only private wage-and-salary workers for the construction industry. Estimates of private wage-and-salary workers from the two surveys differ in the short run but are comparable in the long run.

<sup>2</sup> For discussions of productivity measurement and other issues in the construction industry, see National Commission on Productivity, *Measuring Productivity in the Construction Industry* (Conference sponsored by the National Commission on Productivity and the Construction Industry Collective Committee), September 1972; H. Kemble Stokes, "An Examination of the Productivity Decline in the Construction Industry," *Construction Productivity Frontiers*, April 1980; and J.E. Cremeans, "Productivity in the Construction Industry," *Construction Review*, May-June 1982.

<sup>3</sup> Residential structures include new permanent housing units, mobile homes, and additions and alterations to existing homes. Nonresidential buildings include business structures, such as industrial, commercial, and hospitals; public utilities, such as electric generating plants, telephone facilities, and pipelines; farm structures; and mining exploration, such as petroleum and natural gas wells. Government structures include educational and other buildings, highways and streets, and sewer and water facilities. Government structures also include force-account construction, that is, construction done by government employees.

<sup>4</sup> Data are from the U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

<sup>5</sup> Maintenance and repair expenditures include both the activity performed by nonconstruction industries and government agencies (force-account construction), the value of materials in residential maintenance and repair which is performed by households on a do-it-yourself basis, and the activity by the construction industries themselves.

<sup>6</sup> These data are based on the Bureau of Economic Analysis' 1972 input-output study. "Construction" as defined by the Bureau of Economic Analysis (BEA), is not confined to contract construction. As stated in the BEA's Definitions and Conventions of the 1972 Input-Output Study, "The output of the construction industries, whether new or maintenance and repair, includes both construction work performed on a contract basis for an industry or for a final demand sector and work achieved through the utilization of the work force of the industry or the final demand sector (for example, government). The construction work performed by the work force of the consuming industry or final demand sector is called force-account construction.

"The addition of force-account construction to each type of contract construction makes total construction for each type become an activity as well as an industry. Construction has no secondary products and the inclusion of force-account construction means that no other industry has any secondary output of construction. The commodity and the industry are identical and each type is then an activity."

<sup>7</sup> See *Economic Projections to 1990*, Bulletin 2121 (Bureau of Labor Statistics, 1982).

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#### A note on communications

The *Monthly Labor Review* welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and analytical, not polemical in tone. Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.

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