

1977 CENSUS OF CONSTRUCTION INDUSTRIES

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Industry Series

Preliminary Report

Heavy Construction Contractors, N.E.C. SIC 1629

During 1977, the establishments with payroll in this industry had business receipts of \$23.2 billion. Of this amount, \$21.6 billion were receipts for construction work, an increase of 95 percent compared with 1972. Their payments for construction work subcontracted to others amounted to \$3.9 billion leaving net construction receipts of about \$17.6 billion. Total average employment in the industry showed an increase of 40 percent from 1972 to 401.1 thousand employees. Payroll for 1977 amounted to \$7.0 billion. Value added at \$12.4 billion in 1977 was 124 percent more than in 1972.

The Heavy Construction Contractors, N.E.C. industry includes general contractors primarily engaged in the construction of heavy projects, not elsewhere classified, such as construction of chemical complexes, dams and reservoirs, harbor and port facilities, missile facilities, oil refineries, subways, water and sewage treatment plants, light and power plants, industrial ovens and incinerators, flood control projects, and dredging and demolition contractors. For a more detailed description, see the 1972 SIC Manual.¹

For this census, a "construction establishment" was defined as a relatively permanent office or other place of business at which or from which the usual business activities related to construction were conducted. A separate census report was required from each establishment but not from each construction site. Instead, the data for work at each site were included in the report from the appropriate office or branch office. Foreign construction activities were not included in this census.

The 1977 Census of Construction Industries is the sixth census of construction establishments in the United States. As in previous years, it was conducted jointly with the censuses of mineral industries, manufactures, retail trade, wholesale trade, and service industries under authority of title 13 of the United States Code. Although the first construction census was conducted covering 1929, only the data from the censuses of 1967 and 1972 are comparable with the 1977 data.

The 1977 estimates for establishments with payroll in all of

the construction industries are based on reports from a probability sample of approximately 181,000 establishments selected from about 536,000 construction establishments with payroll. The sample included all construction establishments with a payroll equivalent of 15 or more full-time employees and a sample of those with fewer employees. There were two exceptions: In SIC 1521, sampling was employed in establishments with less than 20 employees because of the large number of establishments in that industry; in SIC 1795, all known establishments were included because of the very small number of establishments in that industry. The data obtained from the sample were inflated to represent all construction establishments with payroll. Complete descriptions of the sampling and estimating procedures will be included in the final reports.

Since the data in this report are based on a sample, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same schedules and procedures. The standard error shown in the tables is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population was surveyed. As calculated for this report, the standard error partially incorporates the effect of random errors of response, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference is less than twice the standard error.

This report does not include figures for separate administrative offices, warehouses, garages, or other auxiliary units which service construction establishments of the same company.

¹ Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 4101-0066. Price \$6.75. 1977 Supplement. Stock No. 003-005-00176-0. Price 90 cents.

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Table 1. Detailed Statistics for Establishments With Payroll: 1977, 1972, and 1967

(Thousands of dollars. Detailed figures may not add to totals because of rounding. For meaning of abbreviations and symbols, see text)

Item	Heavy construction contractors, not elsewhere classified (1629)			Standard error of estimate (percent)		
	1977	1972	1967	1977	1972	1967
Number of establishments.....	8,341	8,110	7,469	3	3	4
Proprietors and working partners.....	4,450	4,775	5,207	5	5	5
All employees:						
March.....	376,130	267,098	278,197	1	1	1
May.....	406,588	283,082	294,372	1	1	1
August.....	415,668	299,501	307,426	1	1	1
November.....	405,765	291,352	291,061	1	1	1
Average.....	401,139	286,211	292,945	1	1	1
Construction workers:						
March.....	293,989	216,599	220,535	1	1	1
May.....	323,942	230,788	235,037	1	1	1
August.....	332,087	245,745	246,568	1	1	1
November.....	321,621	236,802	230,383	1	1	1
Average.....	318,013	233,449	233,264	1	1	1
Other employees:						
March.....	82,141	50,499	57,569	1	1	1
May.....	82,647	52,294	59,339	1	1	1
August.....	83,581	53,756	60,886	1	1	1
November.....	84,145	54,550	61,093	1	1	1
Average.....	83,152	52,768	59,912	1	1	1
Payroll, all employees.....	7,045,804	3,665,520	2,632,973	(Z)	1	1
Payroll, construction workers.....	5,238,919	2,875,686	1,996,659	1	1	1
Payroll, other employees.....	1,806,885	789,834	636,796	(Z)	1	1
First quarter payroll, all employees.....	1,547,481	(NA)	(NA)	(Z)	(NA)	(NA)
Employer costs for fringe benefits.....	1,316,891	(NA)	(NA)	(Z)	(NA)	(NA)
Legally required expenditures.....	701,944	(NA)	(NA)	1	(NA)	(NA)
Voluntary expenditures.....	614,947	(NA)	(NA)	(Z)	(NA)	(NA)
All business receipts.....	23,176,707	11,483,106	8,488,373	1	1	1
Total construction receipts.....	21,568,714	11,047,756	8,015,015	1	1	1
Receipts for work subcontracted in from others.....	1,171,846	882,645	491,133	1	2	1
Other business and land receipts.....	1,607,993	435,350	473,267	1	1	1
Net construction receipts.....	17,645,832	8,962,585	6,818,318	1	1	1
Value added.....	12,381,904	5,522,251	4,158,771	1	1	1
Selected payments.....	10,794,804	5,960,855	4,330,203	1	1	1
Materials, components, and supplies.....	6,483,854	13,875,684	13,132,549	1	1	1
Construction work subcontracted to others.....	3,922,883	2,085,171	1,196,627	1	1	1
Selected power, fuels, and lubricants.....	388,068	(NA)	(NA)	1	(NA)	(NA)
Electricity.....	42,522	(NA)	(NA)	1	(NA)	(NA)
Natural gas.....	16,029	(NA)	(NA)	1	(NA)	(NA)
Gasoline and diesel fuel.....	279,385	(NA)	(NA)	1	(NA)	(NA)
Lubricating oils and greases.....	38,446	(NA)	(NA)	1	(NA)	(NA)
Other.....	11,732	(NA)	(NA)	1	(NA)	(NA)
Rental payments for machinery, equipment, and structures.....	499,538	(NA)	(NA)	1	(NA)	(NA)
For machinery and equipment.....	439,143	250,351	193,693	1	2	1
For structures.....	60,395	(NA)	(NA)	1	(NA)	(NA)
Selected purchased services.....	413,564	(NA)	(NA)	1	(NA)	(NA)
Communication.....	76,056	(NA)	(NA)	2	(NA)	(NA)
Repairs to structures and related facilities.....	15,960	(NA)	(NA)	2	(NA)	(NA)
Repairs to machinery and equipment.....	321,548	(NA)	(NA)	1	(NA)	(NA)
Capital expenditures.....	652,982	309,273	272,633	1	2	1
New.....	521,870	255,554	212,121	1	2	1
Structures and related facilities.....	94,493	21,496	35,668	1	2	2
Machinery and equipment, including automobiles and trucks.....	427,377	234,058	176,453	1	2	2
Automobiles and trucks intended primarily for highway use.....	73,902	(NA)	(NA)	2	(NA)	(NA)
Used.....	131,113	53,719	59,584	2	4	3
Structures and related facilities.....	4,752	12,315	14,571	8	7	9
Machinery and equipment, including automobiles and trucks.....	126,361	41,404	45,013	3	4	3
Fixed assets and depreciation:						
Gross book value of depreciable assets at end of year.....	4,352,109	2,153,166	(NA)	1	1	(NA)
Accumulated depreciation at end of year.....	2,223,202	1,145,354	(NA)	1	1	(NA)
Net value of depreciable assets at end of year.....	2,128,908	1,007,812	(NA)	1	2	(NA)
Depreciation charges during year.....	401,377	212,320	(NA)	1	2	(NA)
Structures, additions, and related facilities:						
Gross book value of depreciable assets at end of year.....	726,876	251,512	(NA)	1	1	(NA)
Accumulated depreciation at end of year.....	244,537	86,893	(NA)	1	1	(NA)
Net value of depreciable assets at end of year.....	482,339	164,619	(NA)	1	1	(NA)
Depreciation charges during year.....	32,969	16,528	(NA)	1	2	(NA)
Machinery and equipment:						
Gross book value of depreciable assets at end of year.....	3,625,234	1,901,654	(NA)	1	1	(NA)
Accumulated depreciation at end of year.....	1,978,665	1,058,461	(NA)	1	1	(NA)
Net value of depreciable assets at end of year.....	1,646,569	843,193	(NA)	1	2	(NA)
Depreciation charges during year.....	368,408	195,792	(NA)	1	2	(NA)

¹Includes data for power, fuels, and lubricants, now shown separately.

Table 2. Construction Receipts for Establishments With Payroll by Type of Construction: 1977 and 1972

(Thousands of dollars. Detailed figures may not add to totals because of rounding. For meaning of abbreviations and symbols, see text)

Item	Heavy construction contractors, not elsewhere classified (1629)		Standard error of estimate (percent)	
	1977	1972	1977	1972
Construction receipts.....	21,568,714	11,047,756	1	1
Building construction.....	1,042,831	543,414	1	1
Industrial buildings and warehouses.....	583,370	237,457	1	1
Office and bank buildings.....	95,042	100,621	1	1
Hospitals and institutional buildings.....	114,249	84,956	1	1
Other buildings.....	250,170	120,380	3	3
Nonbuilding construction.....	19,798,297	10,410,867	1	1
Highways, streets, and related facilities.....	397,565	237,109	1	2
Bridges, tunnels, and elevated highways.....	267,969	176,798	1	4
Dams and reservoirs.....	693,900	515,703	1	2
Marine construction.....	906,822	424,116	1	2
Harbor and port facilities.....	303,521	205,454	2	3
Conservation and development construction.....	704,048	456,981	2	4
Sewers, water mains, and related facilities.....	229,490	136,417	2	3
Pipe line, other than sewer or water lines.....	810,343	179,055	1	3
Mass transit construction.....	1,099,661	455,382	1	2
Blast furnaces, petroleum refineries, and chemical complexes.....	6,027,203	2,339,006	(Z)	1
Power plants.....	5,918,850	3,826,147	(Z)	1
Sewage treatment and water treatment plants.....	1,856,689	1,036,966	1	2
Miscellaneous heavy construction.....	224,822	(NA)	4	(NA)
Other nonbuilding construction.....	357,414	421,733	1	3
Construction work not specified by kind.....	727,607	93,475	2	10

Note: See text for explanation of duplication.

Data for separate central administrative offices and auxiliaries are collected in the enterprise statistics survey, a part of the economic censuses.

This report is one in a series presenting preliminary data collected in the 1977 Census of Construction Industries. The universe for this census included all establishments classified in the construction industries (SIC's 15, 16, 17, and 6552). This report will be superseded by a more detailed final report. In addition to data for establishments with payroll presented here, the final Industry Summary report and the reports in the Geographic Area Series will present limited data for construction establishments with no payroll during 1977.

The totals of construction receipts reported by all construction establishments in each of the several industry, State, or other groupings in this census contain varying amounts of duplication, since the construction work (and the receipts) of one firm may be subcontracted out to other construction firms and, therefore, will be included in the subcontractor's receipts. To avoid this duplication, a "net construction receipts" figure has been derived by subtracting the payments made for construction work subcontracted to others from the construction receipts.

Usually, "value added" is the best measure for comparing the relative economic importance of industries or areas. It elimi-

nates the duplication in receipts because of subcontracting. It also eliminates from the output measure the cost of materials, which differs in relative importance among areas and industries. For this census, "value added" is equal to all business receipts less payments for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for industries for which land receipts are significant, "value added" is equal to all business receipts less land receipts, payments for construction work subcontracted to others, and payments for materials, components, supplies, and fuels.

The symbols in the tables mean:

- Represents zero.
- D Withheld to avoid disclosing figures for individual companies; figures are included in higher level totals.
- S Withheld because estimates did not meet publication standards on the basis of either the associated standard error or a consistency review.
- Z Standard error of estimate is greater than zero but less than 1 percent.
- a Sampling error is greater than 40 percent.
- NA Not available; data were not collected.

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