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# Productivity Measures for Selected Industries, 1954-83

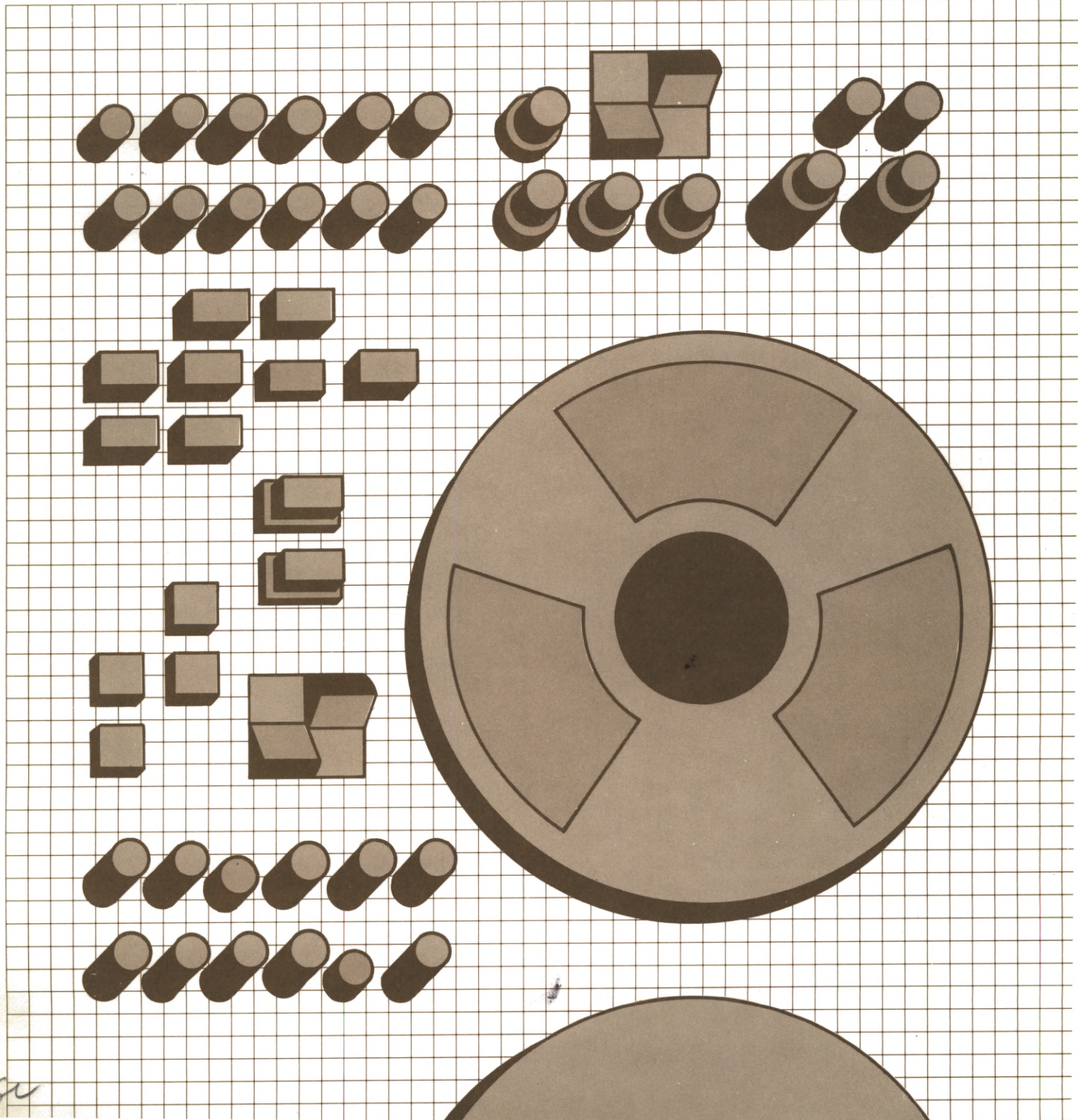


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U.S. Department of Labor  
Raymond J. Donovan, Secretary

Bureau of Labor Statistics  
Janet L. Norwood, Commissioner  
February 1985

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# Preface

This bulletin updates through 1983 indexes of output per employee hour and output per employee for the industries currently included in the U.S. Government's productivity measurement program. For most industries, indexes are presented in this bulletin beginning with 1954. For many of these industries, however, data can be obtained beginning with 1947 upon request.

Indexes are published for the first time for the following industries: Wood kitchen cabinets; internal combustion engines; machine tool accessories; and refrigeration and heating equipment. An article on the refrigeration and heating equipment industry appears in the December 1984 issue of the *Monthly Labor Review*. Articles on the other new industries will appear in forthcoming issues of the *Review*.

Each index is intended to represent only the change in output per employee hour for the designated industry or combination of industries. These industries are not necessarily a representative cross-section of U.S. industry. They should not be combined, therefore, to obtain an overall measure for the entire U.S. economy or for any sector. However, the Bureau of Labor Statistics does publish indexes of output per hour of all persons and related measures for the private business sector and the nonfarm business, manufacturing, and nonfinancial corporate sectors. These productivity series show the relationship between gross product originating in these sectors and employment and hours. (The data are presented in the Bureau of Labor Statistics news releases *Productivity and Costs* (quarterly), in the *Monthly Labor Review*, and in *Employment and Earnings*.)

The productivity measures in this bulletin describe the relationship between output in real terms and the labor

time involved in its production. They show the changes from year to year in the amount of labor time required to produce a unit of output. Although these measures relate output to employment and employee hours, they do not measure the specific contributions of labor, capital, or any other factor of production. Rather, they reflect the joint effect of a number of interrelated influences, such as changes in technology; capital investment per worker; level of output; utilization of capacity; layout and flow of material; managerial skill; and skills and effort of the work force. Some of the productivity measures use a labor input series based on hours paid and some use a labor input series based on hours at the plant.

Further information concerning the indexes published in this bulletin can be obtained by writing the Division of Industry Productivity and Technology Studies, Bureau of Labor Statistics, Washington, D.C. 20212. (Telephone: 202-523-9244.)

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# Highlights of Trends in Output Per Employee Hour

## Current developments

From 1982 to 1983, output per employee hour increased in more than three-quarters of the industries for which data are presented in this report. In contrast, from 1981 to 1982, productivity increased in only slightly more than one-half of the industries. This pattern was consistent with the performance of the nonfarm business sector as a whole, where productivity increased 3.5 percent in 1983 while growing by only 0.2 percent in 1982.

Among the large manufacturing industries, the steel industry had a record productivity gain of 27.7 percent, in sharp contrast to the industry's productivity decline of 18.8 percent in 1982. Steel output was up 14.7 percent in 1983 as demand increased, especially from the motor vehicle and appliance markets. Employee hours declined 10.2 percent as the industry continued its consolidations and plant closings.

The motor vehicle industry had a very large productivity gain of 14.2 percent. This increase was based on a growth in output of 30.6 percent and an increase in employee hours of 14.3 percent. Demand for motor vehicles was significantly higher than in 1982, when output declined 8.0 percent.

Among the other large manufacturing industries, tires and inner tubes experienced a substantial gain in productivity—9.6 percent. The industry's output was up 6.7 percent in 1983 due to the resurgence of the automobile industry as well as the increase in driving encouraged by lower gasoline prices. The petroleum refining industry also scored a significant gain in productivity in 1983, 5.3 percent, after four consecutive years of decline in both output and productivity. Other large manufacturing industries with productivity increases in 1983 were paper, paperboard, and pulp mills (9.0 percent); bottled and canned soft drinks (6.8 percent); and footwear (4.8 percent). All of these industries also had gains in output.

However, motors and generators, another large manufacturing industry, experienced a decline in productivity of 5.7 percent in 1983. Output in this industry fell 6.1 percent while employee hours declined by 0.3 percent. Much of this industry's output is consumed by industries that had not yet participated in the 1983 recovery.

Especially large declines in productivity were record-

ed by the two machine tool industries. The metal cutting machine tool industry experienced a 32.2-percent drop while metal forming machine tools fell 22.5 percent. Output in the industries fell 45.8 percent and 35.9 percent, respectively.

All of the mining industries had large gains in productivity. Iron mining (usable ore) posted the largest gain of all the industries for which measures are published—41.2 percent. Output was up 7.7 percent in this industry while hours fell off sharply. Coal mining had a productivity increase of 13.9 percent as output fell 6.4 percent and hours dropped 17.7 percent. Poor demand for coal in 1983 contributed to large layoffs and mine closings. Copper mining (recoverable metal) had a productivity gain of 10.8 percent as output fell 9.5 percent and hours declined even more. In nonmetallic minerals, productivity was up 7.9 percent as output grew due to increased construction activity in 1983.

Productivity was up in most transportation and utility industries. In railroads, productivity advanced 23.0 percent. Output in the railroad industry grew 6.8 percent as commodity shipments increased in 1983 while hours continued to decline, falling 13.1 percent, due in part to efficiencies gained by railroad deregulation and reorganization. Air transportation had a large productivity gain of 9.9 percent as output grew 8.5 percent. Productivity grew 2.2 percent in petroleum pipelines as hours fell more than output. Among bus carriers, however, productivity declined by 6.6 percent as output plummeted 11.7 percent. In telephone communications, productivity was up 12.7 percent as output grew 1.7 percent while hours declined by 9.8 percent. Electric utilities posted a gain of 1.7 percent, the first productivity gain in this industry since 1977. On the other hand, gas utilities had a large productivity decline of 8.1 percent as output dropped 10.5 percent.

Productivity changes were varied among the trade and service industries. Productivity was up 4.9 percent for new car dealers as output grew 8.5 percent, aided by a sharp increase in new car sales. Productivity increased 3.0 percent in gasoline service stations as output increased 2.4 percent and hours were down 0.6 percent. Eating and drinking places had a productivity gain of 2.4 percent based on a significant gain in output of 5.9 percent. While apparel stores as a whole had a productivity gain



of 1.1 percent in 1983, one of the component industries, shoe stores, had a decline of 1.3 percent. Small productivity gains were posted by hotels and motels (0.7 percent) and retail food stores (0.2 percent). Productivity declines occurred in drug stores (-0.8 percent) and laundry and cleaning services (-0.6 percent).

### Long-term trends

For nearly all of the industries in this report, productivity increased over the long term (1947-83 for many of the industries). Average annual increases ranged from a high of 7.5 percent for wet corn milling to a low of 0.2 percent for fabricated pipe and fittings. In the wet corn milling industry, growth in output and productivity was modest until 1972, when an explosion in output resulted from the rapid market penetration of high fructose and glucose corn syrup. The industry, previously highly capital intensive, became even more so with large infusions of capital. A number of new, highly automated plants were built. On the other hand, despite several technological advances, the fabricated pipe and fittings industry remains relatively labor intensive.

Metal forming machine tools, one of the two industries in which productivity has not grown over the long term, experienced an average annual decline in output per employee hour of 0.6 percent. A combination of factors worked against productivity growth in the industry, including the tendency of machine tool firms to keep highly skilled workers on the payroll even when output falls during cyclical slowdowns. Additionally, machine tools are not mass-produced, although they may make mass-production processes possible in user industries. The parts and components of finished machine tools are usually made in small batches and require large amounts of labor. In bus carriers, the one other industry which recorded a long-term decline in productivity, modest advances in technology and more "package" and charter services were offset by declining passenger demand and reduced bus speeds, thereby reducing output growth and, ultimately, productivity.

Although the rates of productivity change varied widely among the industries during the 1978-83 period (see chart 1 and table 1), more than two-thirds of the industries recorded lower average annual gains in this more recent period than during 1947-78. This experience matches the productivity record of the nonfarm business economy as a whole. From 1947 to 1978, productivity in this sector grew 2.3 percent per year while from 1978 to 1983 it grew only 0.5 percent per year. The slower growth in productivity among the industries included in this report was associated with the less rapid output growth in the later period.

However, there were a few notable exceptions to the falloff in productivity growth during the 1978-83 period. In addition to wet corn milling, the primary copper, lead, and zinc industry substantially improved its

rate of productivity growth in the last few years—6.1 percent a year from 1978 to 1983 as opposed to 2.2 percent annually from 1947 to 1978. Output in this industry fell at a rate of 7.3 percent from 1978 to 1983 while hours dropped more sharply, at a 12.7-percent rate. Declining consumption by the automobile and construction industries necessitated the closing of numerous inefficient plants over the 5-year period. Likewise, in the tire and inner tube industry many older, less efficient plants, many of which produced bias-ply tires, were closed in the late 1970's. Consequently, tire industry productivity increased sharply beginning in 1981, raising the average annual rate of growth for 1978-83 to 6.8 percent. During 1947-78, productivity had advanced at the more modest pace of 3.6 percent per year.

Among the industries that experienced productivity declines in the post-1978 period, cosmetics and toiletries dropped the most—from a gain of 4.6 percent annually during the earlier period to a decline of 5.9 percent per year for the 1978-82 period. Output was adversely affected by economic downturns during this period. Also experiencing large falloffs in productivity during 1978-83 were the petroleum refining and pipelines industries as output growth faded.

### New measures

*Wood kitchen cabinets (SIC 2434).* Output per employee hour in the manufacture of wood kitchen cabinets rose at an average annual rate of 2.1 percent between 1972 and 1982. This growth was virtually the same as for manufacturing as a whole, which experienced an average annual increase in productivity of 2.0 percent. The long-term rate of productivity growth in the industry resulted from a gain in output of 4.7 percent per year and an annual increase in employee hours of 2.5 percent.

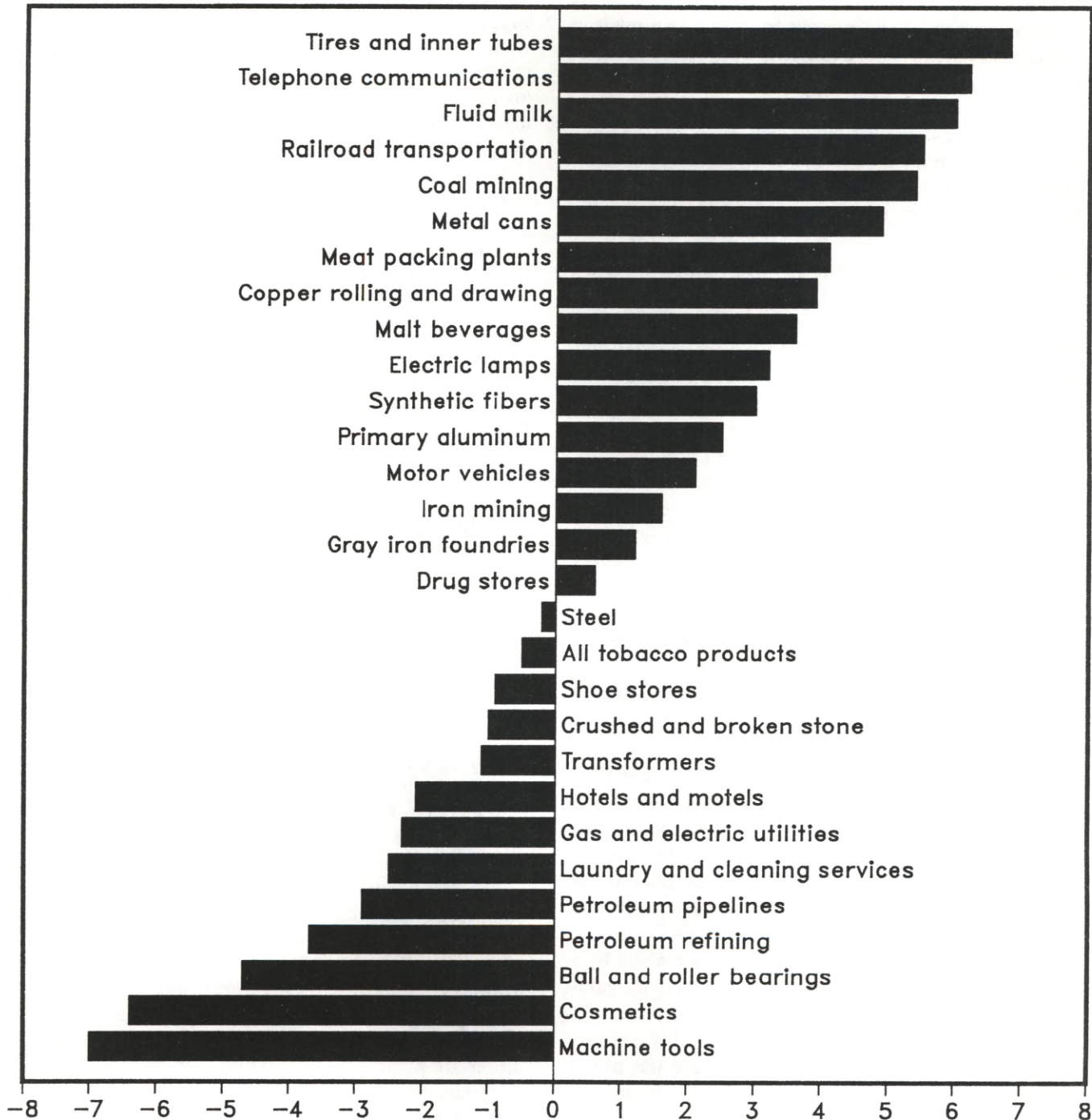
The industry's output is closely linked to new residential construction and replacement and rehabilitation markets. New housing starts, which constitute about one-fourth of the industry's major outlets, have declined from their all-time high in 1972. However, high rates of expenditure for replacement and remodeling, spurred in large part by brisk sales of existing homes, offset the impact of declining housing starts on the output of cabinets and vanities.

Factors underlying the long-term productivity advance in the making of kitchen cabinets include steady improvements in woodworking machinery and particleboard processing equipment; faster drying glues and coating materials; and more mechanized transfer apparatus. Capital expenditures (in constant dollars), while declining in the early 1980's, increased strongly during the latter half of the 1970's.



**Chart 1. Growth in output per employee hour in selected industries, 1978-83**

(Average annual percent change)



*Internal combustion engines, n.e.c. (SIC 3519).* Productivity in the internal combustion engine industry grew at a rate of 2.1 percent per year from 1967 to 1982. This gain was below the average rate of 2.4 percent for all manufacturing industries over the same period. The long-term gain in this industry resulted from a rate of growth in output of 4.2 percent, significantly above the all-manufacturing average of 2.4 percent over this period, and a 2.1-percent rate of increase in employee hours.

This industry manufactures a wide variety of internal combustion engines, ranging from small, single-cylinder gasoline engines used in such products as chainsaws and lawnmowers to very large multicylinder diesel engines used to power ships and locomotives and to generate electricity. It also includes such products as outboard motors, largely used for propulsion of recreational boats, and diesel engines for automobiles and trucks.

Productivity growth in this industry was aided by the introduction of new, more automatic equipment for



machining engine components. However, this growth was modified by the impact of cyclical downturns in the economy. Although the markets for the engines made in this industry are diverse, a majority of them are affected by slowdowns in economic activity, leading to sharp declines in industry output and corresponding declines in productivity. Conversely, when economic activity picks up, demand for internal combustion engines increases sharply and the industry posts significant gains in output and productivity.

*Machine tool accessories (SIC 3545).* Productivity in the machine tool accessories industry grew at an average annual rate of 1.4 percent during 1963-82, somewhat below the average of 2.4 percent for all manufacturing. The annual rate of increase in the industry's output was 2.4 percent and in hours, 1.0 percent.

The machine tool accessories industry produces a wide range of products. By far the largest product group consists of cutting tools, which accounted for over 60 percent of all product shipments in 1977. The other two product groups are precision measuring tools (which include such instruments as dial indicators, micrometers, and calipers) and attachments and accessories for machine tools and metalworking machinery. The latter group includes such devices as turning tool holders and chucks. No single segment of the market has been predominant in determining trends in industry output, but the motor vehicle and aerospace industries are among the most important.

Productivity in the manufacture of machine tool accessories has benefited greatly from advances in controls for production machinery. The adoption of direct computer control for machine tools by some manufacturers has benefited productivity by eliminating the preparation of tape, formerly used by numerically controlled machines, and by providing greater speed and flexibility of operation. Multipurpose machine tools, or machining centers, have also aided productivity gains. The machining center is a machine tool that can perform a variety of operations on a part. This contrasts with more conventional techniques where the part is transferred from one machine to another, with each performing a specialized function.

*Heating and refrigeration equipment (SIC 3585).* Output per employee hour in the manufacture of air-conditioning, refrigeration, and warm-air heating equipment (except electric) rose at an average annual rate of 1.3 percent between 1967 and 1982. This rate is lower than the 2.4-percent average for all manufacturing. Output in this industry climbed 3.4 percent a year during the period; employee hours, 2.1 percent.

The manufacture of air-conditioning and refrigeration equipment and of warm-air furnaces involves the production of heat transfer apparatus for residential, commercial, and industrial applications, as well as for hospitals, marine vessels, freight and passenger vehicles, and many specialized applications. In addition, the industry manufactures compressors and condensers, not only for its own final output but also for home refrigerators.

Over the long run, the industry's output has been sustained by accelerating expansion in the use of central and room air-conditioning in homes, as well as more gradual increases in offices and other commercial space, hospitals, and probably also in factories. Increases in the size of homes and other structures made for shifts in demand for warm-air furnaces, which function from the same air circulation system as central air-conditioners. Furthermore, the introduction of more energy-efficient heat transfer equipment since about the mid-1970's has also sustained gains in output.

Another reason underlying the industry's output growth has been the increase in exports. As a proportion of value of shipments, exports by the industry nearly doubled between the late 1960's and the late 1970's—from 8 percent to 14 percent (reaching 19 percent in 1982). For manufacturing as a whole, the export share in the value of shipments increased less markedly—from 6 percent in 1972 to 10 percent in 1980.

The production of air-conditioners, refrigeration equipment, and warm-air furnaces involves the cutting and forming of metal, as well as welding, brazing, and soldering of components. The efficiency of the industry's metalworking equipment has been significantly enhanced by an elevenfold rise in the number of numerically controlled machine tools. In addition to plant layout, auxiliary operations such as materials handling, painting, testing, and packaging have received increased attention in recent years.



Table 1. Selected Industries: Employment, 1983, and average annual rates of change in output per employee hour, 1978-83

SIC code	Industry	Employment, 1983 (thousands)			Output per employee hour: Average annual rate of change, 1978-83 (percent) <sup>1</sup>		
		All employees	Production workers	Non-production workers	All employees	Production workers	Non-production workers <sup>2</sup>
<b>Mining</b>							
1011	Iron mining, crude ore . . . . .	10	7	3	2.2	6.3	-9.1
1011	Iron mining, usable ore . . . . .	10	7	3	1.6	5.6	-9.6
1021	Copper mining, crude ore . . . . .	19	14	5	1.9	3.5	-2.5
1021	Copper mining, recoverable metal . . . . .	19	14	5	4.2	5.8	-0.4
111, 121	Coal mining . . . . .	195	157	38	5.4	5.9	2.8
121	Bituminous coal and lignite mining . . . . .	192	154	38	5.5	6.1	2.9
14	Nonmetallic minerals, except fuels . . . . .	106	80	26	-2.2	-1.1	-6.2
142	Crushed and broken stone . . . . .	34	27	7	-1.0	0.5	-7.5
<b>Manufacturing</b>							
2011, 13	Red meat products . . . . .	216	170	46	2.5	2.4	3.1
2011	Meat packing plants . . . . .	143	117	26	4.1	3.9	5.1
2013	Sausages and other prepared meats . . . . .	72	54	18	-1.2	-1.5	-0.5
2026	Fluid milk . . . . .	89	( <sup>3</sup> )	( <sup>3</sup> )	6.0	( <sup>3</sup> )	( <sup>3</sup> )
203	Preserved fruits and vegetables . . . . .	233	192	41	*0.6	*1.2	*-2.3
2033	Canned fruits and vegetables . . . . .	86	71	15	*0.3	*0.8	*-2.5
204	Grain mill products . . . . .	131	89	42	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
2041	Flour and other grain mill products . . . . .	25	15	10	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
2043	Cereal breakfast foods . . . . .	18	14	4	*3.1	*3.7	*-0.5
2044	Rice milling . . . . .	6	4	2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
2045	Blended and prepared flour . . . . .	7	6	1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
2046	Wet corn milling . . . . .	10	8	2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
2047, 48	Prepared feeds for animals and fowls . . . . .	65	42	23	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
205	Bakery products . . . . .	215	128	87	*0.7	*1.0	*0.2
2061, 62, 63	Sugar . . . . .	27	21	6	0.7	0.6	1.1
2061, 62	Raw and refined cane sugar . . . . .	16	12	4	1.3	1.0	2.3
2063	Beet sugar . . . . .	11	9	2	-0.3	-0.4	-0.4
2065	Candy and confectionery products . . . . .	55	45	10	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
2082	Malt beverages . . . . .	49	30	19	3.6	5.1	0.2
2086	Bottled and canned soft drinks . . . . .	131	42	89	3.9	6.3	2.7
2111, 21, 31	All tobacco products . . . . .	57	43	14	-0.5	1.1	-7.3
2111, 31	Cigarettes, chewing and smoking tobacco . . . . .	51	38	13	-1.3	0.2	-7.6
2121	Cigars . . . . .	6	5	1	5.2	5.6	1.2
2251, 52	Hosiery . . . . .	68	61	7	1.4	1.4	1.4
2281	Yarn mills, except wool . . . . .	77	70	7	*2.7	*3.1	*-1.8
2421	Sawmills and planing mills, general . . . . .	162	144	18	4.1	4.4	1.5
2431	Millwork . . . . .	74	60	14	*-0.3	*1.1	*-5.7
2434	Wood kitchen cabinets . . . . .	49	39	10	*-2.2	*0.1	*-11.0
2435, 36	Veneer and plywood . . . . .	60	53	7	*2.9	*3.2	*0.5
2435	Hardwood veneer and plywood . . . . .	23	20	3	*0.3	*1.2	*-6.2
2436	Softwood veneer and plywood . . . . .	37	33	4	*4.6	*4.5	*4.7
251	Household furniture . . . . .	277	230	47	1.6	1.8	( <sup>3</sup> )
2511, 17	Wood household furniture . . . . .	130	112	18	*-1.6	*-1.2	*-4.9
2512	Upholstered household furniture . . . . .	86	69	17	*1.8	*2.3	*-0.8
2514	Metal household furniture . . . . .	27	22	5	*3.1	*3.8	*0.3
2515	Mattresses and bedsprings . . . . .	29	22	7	*1.6	*2.6	*-1.5
252	Office furniture . . . . .	56	43	13	*1.8	*3.3	*-3.1
2521	Wood office furniture . . . . .	26	21	5	*-1.7	*-1.3	*-3.2
2522	Metal office furniture . . . . .	30	22	8	*3.9	*6.0	*-3.0
2611, 21, 31, 61	Paper, paperboard, and pulp mills . . . . .	258	195	63	1.7	2.0	0.5
2643	Paper and plastic bags . . . . .	47	37	10	*-1.7	*-1.4	*-2.9
2651	Folding paperboard boxes . . . . .	41	32	9	-1.1	-0.9	-1.6
2653	Corrugated and solid fiber boxes . . . . .	99	73	26	2.4	2.7	1.6
2823, 24	Synthetic fibers . . . . .	89	63	26	3.0	3.9	0.4
2834	Pharmaceutical preparations . . . . .	158	76	82	*2.0	*2.4	( <sup>3</sup> )
2841	Soaps and detergents . . . . .	43	28	15	*-0.9	*-1.2	*-0.4
2844	Cosmetics and other toiletries . . . . .	62	41	21	*-5.9	*-7.8	*-2.3
2851	Paints and allied products . . . . .	60	29	31	2.1	3.0	0.9
2911	Petroleum refining . . . . .	158	99	59	-3.7	-2.5	-6.4
3011	Tires and inner tubes . . . . .	96	69	27	6.8	6.9	6.5
3079	Miscellaneous plastics products . . . . .	485	382	103	*2.4	*3.1	*-0.2
314	Footwear . . . . .	127	108	19	-0.4	-0.2	-1.6
3221	Glass containers . . . . .	57	50	7	3.5	3.7	1.9
3241	Hydraulic cement . . . . .	26	20	6	1.3	2.2	-2.1
325	Structural clay products . . . . .	36	27	9	2.4	2.7	0.9
3251, 53, 59	Clay construction products . . . . .	28	21	7	3.1	3.5	1.4
3251	Brick and structural clay tile . . . . .	16	12	4	1.7	2.5	-2.2
3253	Ceramic wall and floor tile . . . . .	9	7	2	*4.0	*4.3	*2.5
3255	Clay refractories . . . . .	8	5	3	-0.2	0.3	-1.9

**Table 1. Selected Industries: Employment, 1983, and average annual rates of change in output per employee hour, 1978-83—Continued**

SIC code	Industry	Employment, 1983 (thousands)			Output per employee hour: Average annual rate of change, 1978-83 (percent) <sup>1</sup>		
		All employees	Production workers	Non-production workers	All employees	Production workers	Non-production workers <sup>2</sup>
<b>Manufacturing—Continued</b>							
3271, 72	Concrete products .....	78	57	21	+0.6	+0.3	+3.0
3273	Ready-mixed concrete .....	89	( <sup>3</sup> )	( <sup>3</sup> )	+3.0	( <sup>3</sup> )	( <sup>3</sup> )
331	Steel .....	343	258	85	-0.2	1.4	-5.0
3321	Gray iron foundries .....	91	72	19	1.2	2.4	-4.2
3324, 25	Steel foundries .....	40	28	12	+2.0	( <sup>4 5</sup> )	+9.3
3331, 32, 33	Primary copper, lead, and zinc .....	15	11	4	6.1	7.0	2.8
3331	Primary copper .....	10	8	2	4.3	5.3	-0.1
3334	Primary aluminum .....	26	20	6	2.5	4.4	-4.0
3351	Copper rolling and drawing .....	25	18	7	3.9	5.4	-1.0
3353, 54, 55	Aluminum rolling and drawing .....	54	41	13	1.8	2.8	-2.0
3411	Metal cans .....	50	43	7	4.9	5.1	3.4
3423	Hand and edge tools .....	37	27	10	+2.0	+0.1	+8.5
3441	Fabricated structural metal .....	77	53	24	+0.2	( <sup>4 5</sup> )	+0.8
3494	Valves and pipe fittings .....	83	54	29	+0.2	+1.7	+4.2
3498	Fabricated pipe and fittings .....	21	16	5	+1.9	+0.7	+5.9
3519	Internal combustion engines .....	68	43	25	+4.2	+1.5	+10.4
352	Farm and garden machinery .....	108	70	38	+1.0	+2.3	+8.3
3523	Farm machinery and equipment .....	88	56	32	+0.9	+2.6	+8.7
3524	Lawn and garden equipment .....	20	14	6	+1.5	+0.3	+6.4
3531	Construction machinery and equipment .....	82	43	39	+3.8	+0.2	+11.6
3541, 42	Machine tools .....	69	40	29	-7.0	-3.6	-12.9
3541	Metal cutting machine tools .....	52	30	22	-7.2	-3.6	-13.3
3542	Metal forming machine tools .....	17	10	7	-6.4	-3.7	-11.6
3545	Machine tool accessories .....	51	35	16	+2.3	+0.2	+7.1
3561, 63	Pumps and compressors .....	73	39	34	+1.1	+1.7	+5.2
3561	Pumps and pumping equipment .....	49	28	21	+1.3	+1.5	+5.6
3562	Ball and roller bearings .....	43	32	11	-4.7	-3.7	-7.8
3563	Air and gas compressors .....	23	12	11	+0.3	+3.0	-3.5
3585	Refrigeration and heating equipment .....	112	78	34	+0.1	+1.3	+2.6
3612	Transformers .....	48	33	15	-1.1	-0.7	-2.1
3613	Switchgear and switchboard apparatus .....	60	43	17	-0.1	0.8	-2.3
3621	Motors and generators .....	98	75	23	-0.3	0.9	-4.1
3631, 32, 33, 39	Major household appliances .....	85	68	17	3.9	4.2	3.0
3631	Household cooking equipment .....	26	20	6	5.9	6.4	4.4
3632	Household refrigerators and freezers .....	26	21	5	4.1	4.5	1.8
3633	Household laundry equipment .....	19	15	4	1.9	1.7	3.4
3639	Household appliances, n.e.c. ....	13	12	1	2.0	1.5	4.3
3641	Electric lamps .....	28	24	4	3.2	3.4	1.8
3645, 46, 47, 48	Lighting fixtures .....	64	48	16	+2.2	+1.3	+4.8
3651	Radio and television receiving sets .....	67	46	21	+8.2	+8.9	+6.4
371	Motor vehicles and equipment .....	758	572	186	2.1	2.8	-0.1
3825	Instruments to measure electricity .....	99	58	41	+3.7	+6.7	+0.2
<b>Other</b>							
401 class I	Railroad transportation, revenue traffic .....	342	291	51	5.5	6.2	1.3
401 class I	Railroad transportation, car-miles .....	342	291	51	3.9	4.6	-0.2
4111, 413, 414 parts	Bus carriers, class I .....	29	( <sup>3</sup> )	( <sup>3</sup> )	-3.0	( <sup>3</sup> )	( <sup>3</sup> )
4213 part	Intercity trucking .....	622	( <sup>3</sup> )	( <sup>3</sup> )	+1.3	( <sup>3</sup> )	( <sup>3</sup> )
4213 part	Intercity trucking (general freight) .....	390	( <sup>3</sup> )	( <sup>3</sup> )	+2.9	( <sup>3</sup> )	( <sup>3</sup> )
4511, 4521 part	Air transportation .....	336	( <sup>3</sup> )	( <sup>3</sup> )	+2.1	( <sup>3</sup> )	( <sup>3</sup> )
4612, 13	Petroleum pipelines .....	21	15	6	-2.9	-2.2	( <sup>3</sup> )
4811	Telephone communications .....	965	706	259	6.2	( <sup>3</sup> )	( <sup>3</sup> )
491, 92, 93	Gas and electric utilities .....	806	642	164	-2.3	-1.9	( <sup>3</sup> )
491, 493 part	Electric utilities .....	590	( <sup>3</sup> )	( <sup>3</sup> )	-1.5	( <sup>3</sup> )	( <sup>3</sup> )
492, 493 part	Gas utilities .....	216	( <sup>3</sup> )	( <sup>3</sup> )	-4.2	( <sup>3</sup> )	( <sup>3</sup> )
54	Retail food stores <sup>6</sup> .....	2821	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
5511	Franchised new car dealers .....	721	( <sup>3</sup> )	( <sup>3</sup> )	0.7	( <sup>3</sup> )	( <sup>3</sup> )
5541	Gasoline service stations <sup>6</sup> .....	663	( <sup>3</sup> )	( <sup>3</sup> )	2.9	( <sup>3</sup> )	( <sup>3</sup> )
56	Apparel and accessory stores <sup>6</sup> .....	1088	( <sup>3</sup> )	( <sup>3</sup> )	2.9	( <sup>3</sup> )	( <sup>3</sup> )
5611	Men's and boys' clothing stores <sup>6</sup> .....	124	( <sup>3</sup> )	( <sup>3</sup> )	3.6	( <sup>3</sup> )	( <sup>3</sup> )
5621	Women's ready-to-wear stores <sup>6</sup> .....	364	( <sup>3</sup> )	( <sup>3</sup> )	6.1	( <sup>3</sup> )	( <sup>3</sup> )
5651	Family clothing stores <sup>6</sup> .....	200	( <sup>3</sup> )	( <sup>3</sup> )	4.4	( <sup>3</sup> )	( <sup>3</sup> )
5661	Shoe stores <sup>6</sup> .....	224	( <sup>3</sup> )	( <sup>3</sup> )	-0.9	( <sup>3</sup> )	( <sup>3</sup> )
58	Eating and drinking places <sup>6</sup> .....	5354	( <sup>3</sup> )	( <sup>3</sup> )	-0.5	( <sup>3</sup> )	( <sup>3</sup> )
5912	Drug and proprietary stores <sup>6</sup> .....	523	( <sup>3</sup> )	( <sup>3</sup> )	0.6	( <sup>3</sup> )	( <sup>3</sup> )
602	Commercial banking .....	1509	1120	389	-1.8	( <sup>3</sup> )	( <sup>3</sup> )
7011	Hotels, motels, and tourist courts <sup>6</sup> .....	1246	( <sup>3</sup> )	( <sup>3</sup> )	-2.1	( <sup>3</sup> )	( <sup>3</sup> )
721	Laundry and cleaning services <sup>6</sup> .....	409	( <sup>3</sup> )	( <sup>3</sup> )	-2.5	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> Based on the linear least squares trends of the logarithms of the index numbers.

<sup>2</sup> Rates of change for nonproduction worker hours are subject to a wider margin of error than other rates shown.

<sup>3</sup> Not available.

<sup>4</sup> 1978-82

<sup>5</sup> Less than 0.05 percent.

<sup>6</sup> Output per employee.

<sup>7</sup> Nonsupervisory personnel.

<sup>8</sup> Supervisory personnel and force account construction workers.

<sup>9</sup> Data relate to all persons, including proprietors, partners, and unpaid family workers.



# Methods and Data Sources

The *indexes of output per employee hour* are computed by dividing an index of output by an index of aggregate employee hours. Corresponding measures also are computed relating output to the number of employees. Thus, the industry indexes presented measure changes in the relationship between output and employment or employee hours.

The *output indexes* are based primarily on the physical quantity of the products of the industry combined with fixed-period weights. Unit employee hour weights are used whenever possible to aggregate the data.

For many industries, however, unit labor weights are not available at the detailed product level, so substitute weights must be used. The most common substitute weights are unit values, which are assumed to be proportional to unit employee hours. For many manufacturing industries, however, employee hour weights at the product-class level can be developed from the available data. In such cases, a dual-level weighting system is used—unit value weights at the product level and employee hour weights at the product-class level.

Although the weights relate to fixed periods, they are updated periodically, usually in conjunction with economic censuses which are now conducted every 5 years. The most current weights used were derived from the 1977 economic censuses. For three industries—railroads, iron mining, and copper mining—two alternative productivity measures, using different concepts of industry output, are presented.

Periodically, the output indexes for most of the measures are adjusted to levels based on data reported in the economic censuses for mining, manufacturing, and business. The most current adjustments presented in this report reflect data from the 1977 economic censuses. *Employment and employee hour indexes* are developed primarily from basic data compiled by the Bureau of Labor Statistics (BLS) and the Bureau of the Census. In concept, indexes based on employee hour data from the Bureau of the Census relate to plant hours only. Employee hour data from BLS include not only hours at work but also payroll hours such as vacations, holidays, and sick leave paid by the establishment directly to the employee.<sup>1</sup> In general, because of increases in paid leave during the period, output per employee hour worked would tend to show a somewhat higher rate of gain than output per employee hour paid.

However, actual differences may result from statistical limitations in the data as well as from differences in concepts. Industries for which BLS data are used for the measures of employment and hours have been revised to reflect adjustments to new universe levels.

This report includes indexes of output per employee hour and output per employee. In most cases, the indexes are shown for all employees, production workers, and nonproduction workers.<sup>2</sup> Although both the BLS and Bureau of the Census provide data on production worker hours, neither source provides annual data by industry on nonproduction worker or all-employee hours. Therefore, the nonproduction worker hours are estimated.

The estimates of aggregate nonproduction worker hours for the manufacturing industries are derived from published employment data and from estimates of average annual hours paid or worked per nonproduction worker. Prior to 1968, the estimates of average annual hours paid were calculated by multiplying the number of workweeks in the year by the scheduled weekly hours. Estimated hours for vacations, holidays, disability, and personal time off were subtracted from average annual hours paid to obtain an estimate of average annual hours worked. Vacation and holiday trends were based on studies by the U.S. Department of Health, Education, and Welfare, and on data from BLS surveys. Personal time off was estimated as a constant on the basis of data obtained from various sources. From 1968 to 1977, the estimates of average annual hours paid and average annual hours worked have been based on data collected in the BLS survey, *Employee Compensation in the Private Nonfarm Economy*. Because this survey has been discontinued, the estimates of hours paid and hours worked for later years have been based on the data collected for 1977. These estimates will be revised as other data become available.

For eleven trade and service industries—retail food stores; gasoline service stations; eating and drinking places; drug stores and proprietary stores; total retail

<sup>1</sup> Indexes for the railroad transportation industry are based on data from the Interstate Commerce Commission and are related primarily to hours at work.

<sup>2</sup> The term "production workers" covers manufacturing and mining employees who work at the plant or mine and who are generally in nonsupervisory occupations. The remaining employees, such as professional, technical, clerical, supervisory, etc., are identified as "non-production workers."



apparel stores and four component industries; hotels, motels, and tourist courts; and laundry and cleaning services—measures of the hours of partners, proprietors, and supervisory workers were developed. Except for hotels, motels, and tourist courts, estimates were also made for the hours of unpaid family workers. Average weekly hours worked for partners, proprietors, and unpaid family workers were obtained from unpublished data collected in the Current Population Survey. Average weekly hours worked by supervisory employees were obtained from the censuses of population. Estimates for intercensal years were derived using extrapolation and linear interpolation techniques.

All employee hour estimates for the manufacturing industries are derived by summing the aggregate hours for production workers and the estimated hours for nonproduction workers. Hours of all persons are derived by summing the aggregate hours for paid employees, partners, proprietors, and unpaid family workers.

Manufacturing and mining indexes involving nonproduction worker hours are subject to a wider margin of error than are the indexes involving only production worker hours because it is necessary to estimate the average hours of nonproduction workers. In general, any error in these estimates would have a relatively insignificant effect on the trend in the hours for all employees.

The output indexes and employee hour components of the industry productivity indexes are based on data from a number of different sources, which are identified

in the accompanying tables. For most of the industries, the 1983 output indexes are based on the data sources that are regularly used. However, for some industries, the normal data sources are not yet available, and other information, such as the Federal Reserve Board output indexes, the *Current Industrial Reports* of the Bureau of the Census, and trade association data, were used. For those industries for which the Bureau of the Census is the primary source of employment and employee hours, the 1983 indexes were developed by linking employment and employee hour data from BLS, since 1983 census data are not yet available. Therefore, all 1983 output per employee hour measures are considered preliminary and are subject to revision. The indexes refer to the standard reference base 1977 = 100 and, beginning in 1972, conform to the 1972 Standard Industrial Classification (SIC) definitions.

The average annual rates of change published in this bulletin are based on the linear least squares trends of the logarithms of the index numbers. Average annual rates of change for any time periods shown in this report are available on request from the Bureau of Labor Statistics.

More detailed information on the methods, limitations, and data sources is contained in the *BLS Handbook of Methods*, BLS Bulletin 2134-1 (1982), chapter 14, and in a number of individual industry reports. Industry reports as well as additional information are available on request from the Bureau of Labor Statistics.

# Charts and Tables

Charts and tables for indexes of output per employee hour and related data

SIC code	Industry	Chart	Page	Table	Page
<b>Mining</b>					
1011	Iron mining, crude ore .....	2	12	2,3	13
1011	Iron mining, usable ore .....	3	14	4,5	15
1021	Copper mining, crude ore .....	4	16	6,7	17
1021	Copper mining, recoverable metal .....	5	18	8,9	19
111, 121	Coal mining .....	6	20	10,11	21
121	Bituminous coal and lignite mining .....	7	22	12,13	23
14	Nonmetallic minerals, except fuels .....	8	24	14,15	25
142	Crushed and broken stone .....	9	26	16,17	27
<b>Manufacturing</b>					
2011, 13	Red meat products .....	10	28	18,19	29
2011	Meat packing plants .....	11	30	20,21	31
2013	Sausages and other prepared meats .....	12	32	22,23	33
2026	Fluid milk .....	13	34	24	35
203	Preserved fruits and vegetables .....	14	36	25,26	37
2033	Canned fruits and vegetables .....	15	38	27,28	39
204	Grain mill products .....	16	40	29,30	41
2041	Flour and other grain mill products .....	17	42	31,32	43
2043	Cereal breakfast foods .....	18	44	33,34	45
2044	Rice milling .....	19	46	35,36	47
2045	Blended and prepared flour .....	20	48	37,38	49
2046	Wet corn milling .....	21	50	39,40	51
2047, 48	Prepared feeds for animals and fowls .....	22	52	41,42	53
205	Bakery products .....	23	54	43,44	55
2061, 62, 63	Sugar .....	24	56	45,46	57
2061, 62	Raw and refined cane sugar .....	25	58	47,48	59
2063	Beet sugar .....	26	60	49,50	61
2065	Candy and confectionery products .....	27	62	51,52	63
2082	Malt beverages .....	28	64	53,54	65
2086	Bottled and canned soft drinks .....	29	66	55,56	67
2111, 21, 31	All tobacco products .....	30	68	57,58	69
2111, 31	Cigarettes, chewing and smoking tobacco .....	31	70	59,60	71
2121	Cigars .....	32	72	61,62	73
2251, 52	Hosiery .....	33	74	63,64	75
2281	Nonwool yarn mills .....	34	76	65,66	77
2421	Sawmills and planing mills, general .....	35	78	67,68	79
2431	Millwork .....	36	80	69,70	81
2434	Wood kitchen cabinets .....	37	82	71,72	83
2435, 36	Veneer and plywood .....	38	84	73,74	85
2435	Hardwood veneer and plywood .....	39	86	75,76	87
2436	Softwood veneer and plywood .....	40	88	77,78	89
251	Household furniture .....	41	90	79,80	91
2511, 17	Wood household furniture .....	42	92	81,82	93
2512	Upholstered household furniture .....	43	94	83,84	95
2514	Metal household furniture .....	44	96	85,86	97
2515	Mattresses and bedsprings .....	45	98	87,88	99
252	Office furniture .....	46	100	89,90	101
2521	Wood office furniture .....	47	102	91,92	103
2522	Metal office furniture .....	48	104	93,94	105
2611, 21, 31, 61	Paper, paperboard, and pulp mills .....	49	106	95,96	107
2643	Paper and plastic bags .....	50	108	97,98	109
2651	Folding paperboard boxes .....	51	110	99,100	111
2653	Corrugated and solid fiber boxes .....	52	112	101,102	113
2823, 24	Synthetic fibers .....	53	114	103,104	115
2834	Pharmaceutical preparations .....	54	116	105,106	117
2841	Soaps and detergents .....	55	118	107,108	119
2844	Cosmetics and other toiletries .....	56	120	109,110	121
2851	Paints and allied products .....	57	122	111,112	123
2911	Petroleum refining .....	58	124	113,114	125
3011	Tires and inner tubes .....	59	126	115,116	127
3079	Miscellaneous plastics products .....	60	128	117,118	129
314	Footwear .....	61	130	119,120	131
3221	Glass containers .....	62	132	121,122	133
3241	Hydraulic cement .....	63	134	123,124	135
325	Structural clay products .....	64	136	125,126	137

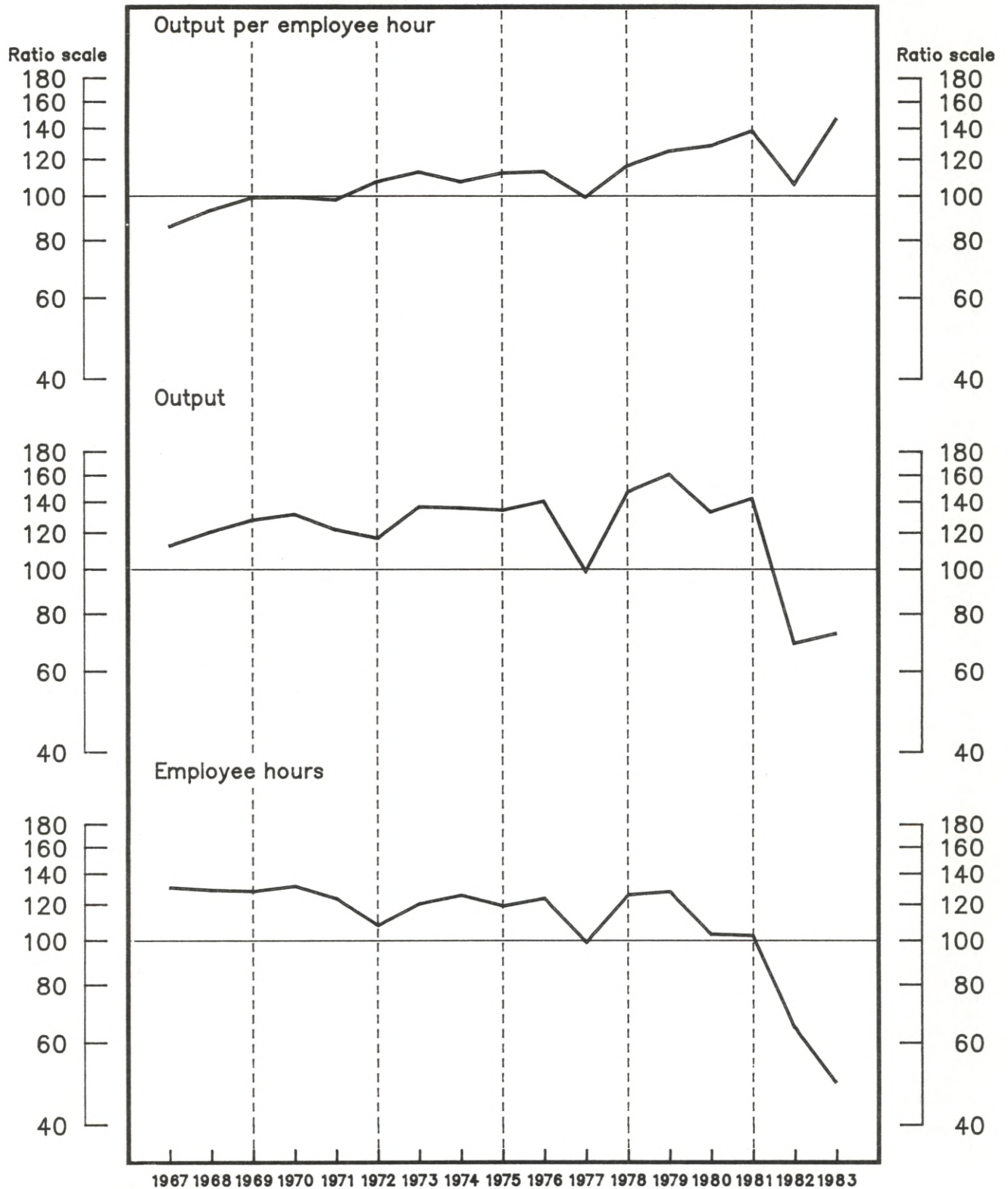


Charts and tables for indexes of output per employee hour and related data—Continued

SIC code	Industry	Chart	Page	Table	Page
<b>Manufacturing—Continued</b>					
3251, 53, 59	Clay construction products . . . . .	65	138	127,128	139
3251	Brick and structural clay tile . . . . .	66	140	129,130	141
3253	Ceramic wall and floor tile . . . . .	67	142	131,132	143
3255	Clay refractories . . . . .	68	144	133,134	145
3271, 72	Concrete products . . . . .	69	146	135,136	147
3273	Ready-mixed concrete . . . . .	70	148	137	149
331	Steel . . . . .	71	150	138,139	151
3321	Gray iron foundries . . . . .	72	152	140,141	153
3324, 25	Steel foundries . . . . .		154	142,143	155
3331, 32, 33	Primary copper, lead and zinc . . . . .	74	156	144,145	157
3331	Primary copper . . . . .	75	158	146,147	159
3334	Primary aluminum . . . . .	76	160	148,149	161
3351	Copper rolling and drawing . . . . .	77	162	150,151	163
3353, 54, 55	Aluminum rolling and drawing . . . . .	78	164	152,153	165
3411	Metal cans . . . . .	79	166	154,155	167
3423	Hand and edge tools . . . . .	80	168	156,157	169
3441	Fabricated structural metal . . . . .	81	170	158,159	171
3494	Valves and pipe fittings . . . . .	82	172	160,161	173
3498	Fabricated pipe and fittings . . . . .	83	174	162,163	175
3519	Internal combustion engines . . . . .	84	176	164,165	177
352	Farm and garden machinery . . . . .	85	178	166,167	179
3523	Farm machinery and equipment . . . . .	86	180	168,169	181
3524	Lawn and garden equipment . . . . .	87	182	170,171	183
3531	Construction machinery and equipment . . . . .	88	184	172,173	185
3541, 42	Machine tools . . . . .	89	186	174,175	187
3541	Metal cutting machine tools . . . . .	90	188	176,177	189
3542	Metal forming machine tools . . . . .	91	190	178,179	191
3545	Machine tool accessories . . . . .	92	192	180,181	193
3561, 63	Pumps and compressors . . . . .	93	194	182,183	195
3561	Pumps and pumping equipment . . . . .	94	196	184,185	197
3563	Air and gas compressors . . . . .	95	198	186,187	199
562	Ball and roller bearings . . . . .	96	200	188,189	201
3562	Refrigeration and heating equipment . . . . .	97	202	190,191	203
3612	Transformers . . . . .	98	204	192,193	205
3613	Switchgear and switchboard apparatus . . . . .	99	206	194,195	207
3621	Motors and generators . . . . .	100	208	196,197	209
3631, 32, 33, 39	Major household appliances . . . . .	101	210	198,199	211
3631	Household cooking equipment . . . . .	102	212	200,201	213
3632	Household refrigerators and freezers . . . . .	103	214	202,203	215
3633	Household laundry equipment . . . . .	104	216	204,205	217
3639	Household appliances, n.e.c. . . . .	105	218	206,207	219
3641	Electric lamps . . . . .	106	220	208,209	221
3645, 46, 47, 48	Lighting fixtures . . . . .	107	222	210,211	223
3651	Radio and television receiving sets . . . . .	108	224	212,213	225
371	Motor vehicles and equipment . . . . .	109	226	214,215	227
3825	Instruments to measure electricity . . . . .	110	228	216,217	229
<b>Other</b>					
401 class I	Railroad transportation, revenue traffic . . . . .	111	230	218,219	231
401 class I	Railroad transportation, car-miles . . . . .	112	232	220,221	233
411, 413, 414 parts	Bus carriers, class I . . . . .	113	234	222	235
4111 part	Intercity trucking . . . . .	114	236	223	237
4213 part	Intercity trucking (general freight) . . . . .	115	238	224	239
4511, 4521 part	Air transportation . . . . .	116	240	225	241
4612, 13	Petroleum pipelines . . . . .	117	242	226,227	243
4811	Telephone communications . . . . .	118	244	228	245
491, 92, 93	Gas and electric utilities . . . . .	119	246	229,230	247
491, 493 part	Electric utilities . . . . .	120	248	231	249
492, 493 part	Gas utilities . . . . .	121	250	232	251
54	Retail food stores . . . . .	122	252	233	253
5511	Franchised new car dealers . . . . .	123	254	234	255
5541	Gasoline service stations . . . . .	124	256	235	257
56	Apparel and accessory stores . . . . .	125	258	236	259
5611	Men's and boys' clothing stores . . . . .	126	260	237	261
5621	Women's ready-to-wear stores . . . . .	127	262	238	263
5651	Family clothing stores . . . . .	128	264	239	265
5661	Shoe stores . . . . .	129	266	240	267
58	Eating and drinking places . . . . .	130	268	241	269
5912	Drug and proprietary stores . . . . .	131	270	242	271
602	Commercial banking . . . . .	132	272	243	273
7011	Hotels, motels, and tourist courts . . . . .	133	274	244	275
721	Laundry and cleaning services . . . . .	134	276	245	277



Chart 2. Iron mining, crude ore (SIC 1011): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 2. Iron mining, crude ore (SIC 1011): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	( <sup>2</sup> )	36.2	( <sup>2</sup> )	37.2	32.8	63.8
1955 .....	52.5	45.5	95.6	49.9	43.9	86.7
1956 .....	53.0	46.1	93.8	50.1	44.1	85.5
1957 .....	52.7	45.4	98.2	49.0	43.0	87.1
1958 .....	48.3	43.0	75.6	41.5	37.3	64.3
1959 .....	49.4	44.8	70.3	44.6	40.6	64.0
1960 .....	59.4	51.5	108.4	56.3	49.4	99.0
1961 .....	67.1	60.2	100.8	61.5	56.1	87.5
1962 .....	73.1	65.2	113.3	69.2	62.8	101.0
1963 .....	83.3	72.9	141.9	77.3	69.0	122.6
1964 .....	89.6	77.8	160.3	85.5	75.7	142.3
1965 .....	85.3	74.4	147.9	82.8	73.7	133.9
1966 .....	84.4	74.3	139.1	84.0	75.8	126.5
1967 .....	86.1	76.2	137.9	85.3	77.5	123.6
1968 .....	93.5	84.3	137.5	92.6	85.1	126.6
1969 .....	99.7	90.5	141.2	97.4	90.6	126.0
1970 .....	99.9	90.2	146.4	98.1	91.4	126.7
1971 .....	98.6	89.4	139.6	93.9	87.6	120.1
1972 .....	108.0	98.2	153.4	103.2	96.9	128.4
1973 .....	113.2	103.1	159.2	112.2	104.3	146.6
1974 .....	107.9	98.1	152.2	110.6	102.1	149.1
1975 .....	112.7	102.4	158.5	110.8	103.7	140.9
1976 .....	113.5	103.5	157.2	111.3	104.0	141.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	116.8	107.2	158.3	118.0	110.3	151.2
1979 .....	125.5	115.4	168.2	125.7	118.5	154.8
1980 .....	129.0	123.6	147.5	119.7	117.0	128.4
1981 .....	139.0	132.1	164.0	131.1	127.6	143.3
1982 .....	106.9	113.0	92.4	101.5	108.9	83.6
1983 <sup>3</sup> .....	147.3	163.8	113.9	136.5	154.1	100.8
Average annual percent change:						
1947-83 .....	( <sup>2</sup> )	4.2	( <sup>2</sup> )	3.8	4.3	1.3
1978-83 .....	2.2	6.3	-9.1	.5	4.4	-10.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 3. Iron mining, crude ore (SIC 1011): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	67.9	( <sup>1</sup> )	187.8	( <sup>1</sup> )	182.4	207.0	106.4
1955 .....	88.5	168.5	194.5	92.6	177.2	201.5	102.1
1956 .....	91.0	171.6	197.2	97.0	181.8	206.3	106.4
1957 .....	100.1	190.1	220.5	101.9	204.1	233.0	114.9
1958 .....	68.4	141.7	159.1	90.5	164.7	183.6	106.4
1959 .....	64.0	129.6	142.7	91.1	143.5	157.7	100.0
1960 .....	96.9	163.1	188.3	89.4	172.0	196.1	97.9
1961 .....	85.7	127.7	142.4	85.0	139.4	152.8	97.9
1962 .....	90.3	123.5	138.6	79.7	130.5	143.9	89.4
1963 .....	96.5	115.9	132.3	68.0	124.8	139.9	78.7
1964 .....	109.0	121.6	140.1	68.0	127.5	143.9	76.6
1965 .....	111.1	130.2	149.3	75.1	134.2	150.8	83.0
1966 .....	113.1	134.0	152.2	81.3	134.7	149.3	89.4
1967 .....	113.1	131.4	148.4	82.0	132.6	146.0	91.5
1968 .....	121.3	129.7	143.9	88.2	131.0	142.6	95.8
1969 .....	128.6	129.0	142.1	91.1	132.1	141.9	102.1
1970 .....	132.2	132.3	146.6	90.3	134.7	144.7	104.3
1971 .....	122.6	124.4	137.1	87.8	130.5	139.9	102.1
1972 .....	117.5	108.8	119.7	76.6	113.9	121.3	91.5
1973 .....	137.2	121.2	133.1	86.2	122.3	131.5	93.6
1974 .....	136.4	126.4	139.0	89.6	123.3	133.6	91.5
1975 .....	135.0	119.8	131.8	85.2	121.8	130.2	95.8
1976 .....	141.2	124.4	136.4	89.8	126.9	135.8	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	148.0	126.7	138.1	93.5	125.4	134.2	97.9
1979 .....	161.5	128.7	139.9	96.0	128.5	136.3	104.3
1980 .....	133.9	103.8	108.3	90.8	111.9	114.4	104.3
1981 .....	143.3	103.1	108.5	87.4	109.3	112.3	100.0
1982 .....	69.4	64.9	61.4	75.1	68.4	63.7	83.0
1983 <sup>2</sup> .....	72.9	49.5	44.5	64.0	53.4	47.3	72.3
Average annual percent change:							
1947-83 .....	1.5	( <sup>1</sup> )	-2.6	( <sup>1</sup> )	-2.2	-2.7	.2
1978-83 .....	-15.8	-17.6	-20.7	-7.3	-16.2	-19.3	-6.2

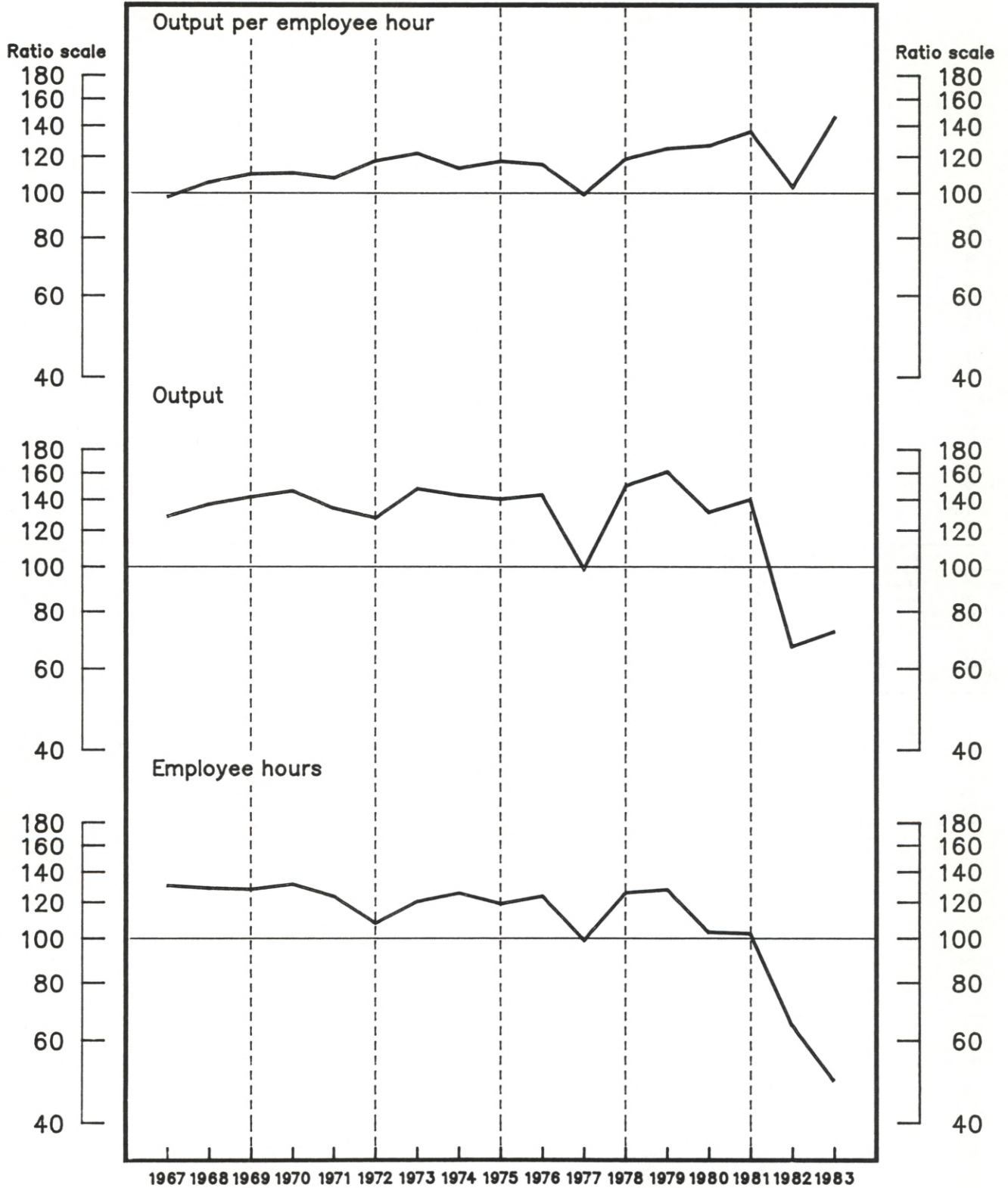
<sup>1</sup> Data not available.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Chart 3. Iron mining, usable ore (SIC 1011): Output per hour and related data, 1967-83**  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 4. Iron mining, usable ore (SIC 1011): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	( <sup>2</sup> )	48.8	( <sup>2</sup> )	50.2	44.3	86.1
1955 .....	72.0	62.4	131.1	68.5	60.2	118.9
1956 .....	69.3	60.3	122.6	65.4	57.6	111.7
1957 .....	68.7	59.2	128.2	64.0	56.1	113.7
1958 .....	60.3	53.7	94.5	51.9	46.6	80.4
1959 .....	59.3	53.9	84.4	53.6	48.8	76.9
1960 .....	70.1	60.8	128.0	66.5	58.3	116.9
1961 .....	73.2	65.7	110.0	67.1	61.2	95.5
1962 .....	78.1	69.6	121.0	73.9	67.0	107.8
1963 .....	87.8	76.9	149.7	81.6	72.8	129.4
1964 .....	96.6	83.9	172.8	92.2	81.7	153.4
1965 .....	95.3	83.1	165.2	92.5	82.3	149.5
1966 .....	98.4	86.7	162.2	97.9	88.3	147.5
1967 .....	98.6	87.3	157.9	97.7	88.7	141.5
1968 .....	106.1	95.6	156.0	105.0	96.5	143.6
1969 .....	110.6	100.4	156.6	108.0	100.6	139.8
1970 .....	111.1	100.3	162.8	109.1	101.6	140.9
1971 .....	108.4	98.3	153.5	103.3	96.4	132.0
1972 .....	118.1	107.4	167.8	112.8	105.9	140.4
1973 .....	122.6	111.6	172.4	121.5	113.0	158.8
1974 .....	113.8	103.5	160.5	116.6	107.6	157.2
1975 .....	117.8	107.1	165.6	115.8	108.4	147.3
1976 .....	115.9	105.7	160.6	113.6	106.2	144.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	119.2	109.3	161.5	120.4	112.5	154.2
1979 .....	125.6	115.6	168.4	125.8	118.6	155.0
1980 .....	127.5	122.2	145.7	118.2	115.6	126.8
1981 .....	136.8	130.0	161.3	129.6	125.6	141.0
1982 .....	104.0	109.9	89.9	98.7	106.0	81.3
1983 <sup>3</sup> .....	146.9	163.4	113.6	136.1	153.7	100.6
Average annual percent change:						
1947-83 .....	( <sup>2</sup> )	3.0	( <sup>2</sup> )	2.6	3.1	.1
1978-83 .....	1.6	5.6	-9.6	-1	3.8	-10.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 5. Iron mining, usable ore (SIC 1011): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	91.6	( <sup>1</sup> )	187.8	( <sup>1</sup> )	182.4	207.0	106.4
1955 .....	121.4	168.5	194.5	92.6	177.2	201.5	102.1
1956 .....	118.9	171.6	197.2	97.0	181.8	206.3	106.4
1957 .....	130.6	190.1	220.5	101.9	204.1	233.0	114.9
1958 .....	85.5	141.7	159.1	90.5	164.7	183.6	106.4
1959 .....	76.9	129.6	142.7	91.1	143.5	157.7	100.0
1960 .....	114.4	163.1	188.3	89.4	172.0	196.1	97.9
1961 .....	93.5	127.7	142.4	85.0	139.4	152.8	97.9
1962 .....	96.4	123.5	138.6	79.7	130.5	143.9	89.4
1963 .....	101.8	115.9	132.3	68.0	124.8	139.9	78.7
1964 .....	117.5	121.6	140.1	68.0	127.5	143.9	76.6
1965 .....	124.1	130.2	149.3	75.1	134.2	150.8	83.0
1966 .....	131.9	134.0	152.2	81.3	134.7	149.3	89.4
1967 .....	129.5	131.4	148.4	82.0	132.6	146.0	91.5
1968 .....	137.6	129.7	143.9	88.2	131.0	142.6	95.8
1969 .....	142.7	129.0	142.1	91.1	132.1	141.9	102.1
1970 .....	147.0	132.3	146.6	90.3	134.7	144.7	104.3
1971 .....	134.8	124.4	137.1	87.8	130.5	139.9	102.1
1972 .....	128.5	108.8	119.7	76.6	113.9	121.3	91.5
1973 .....	148.6	121.2	133.1	86.2	122.3	131.5	93.6
1974 .....	143.8	126.4	139.0	89.6	123.3	133.6	91.5
1975 .....	141.1	119.8	131.8	85.2	121.8	130.2	95.8
1976 .....	144.2	124.4	136.4	89.8	126.9	135.8	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	151.0	126.7	138.1	93.5	125.4	134.2	97.9
1979 .....	161.7	128.7	139.9	96.0	128.5	136.3	104.3
1980 .....	132.3	103.8	108.3	90.8	111.9	114.4	104.3
1981 .....	141.0	103.1	108.5	87.4	109.3	112.3	100.0
1982 .....	67.5	64.9	61.4	75.1	68.4	63.7	83.0
1983 <sup>2</sup> .....	72.7	49.5	44.5	64.0	53.4	47.3	72.3
Average annual percent change:							
1947-83 .....	.4	( <sup>1</sup> )	-2.6	( <sup>1</sup> )	-2.2	-2.7	.2
1978-83 .....	-16.3	-17.6	-20.7	-7.3	-16.2	-19.3	-6.2

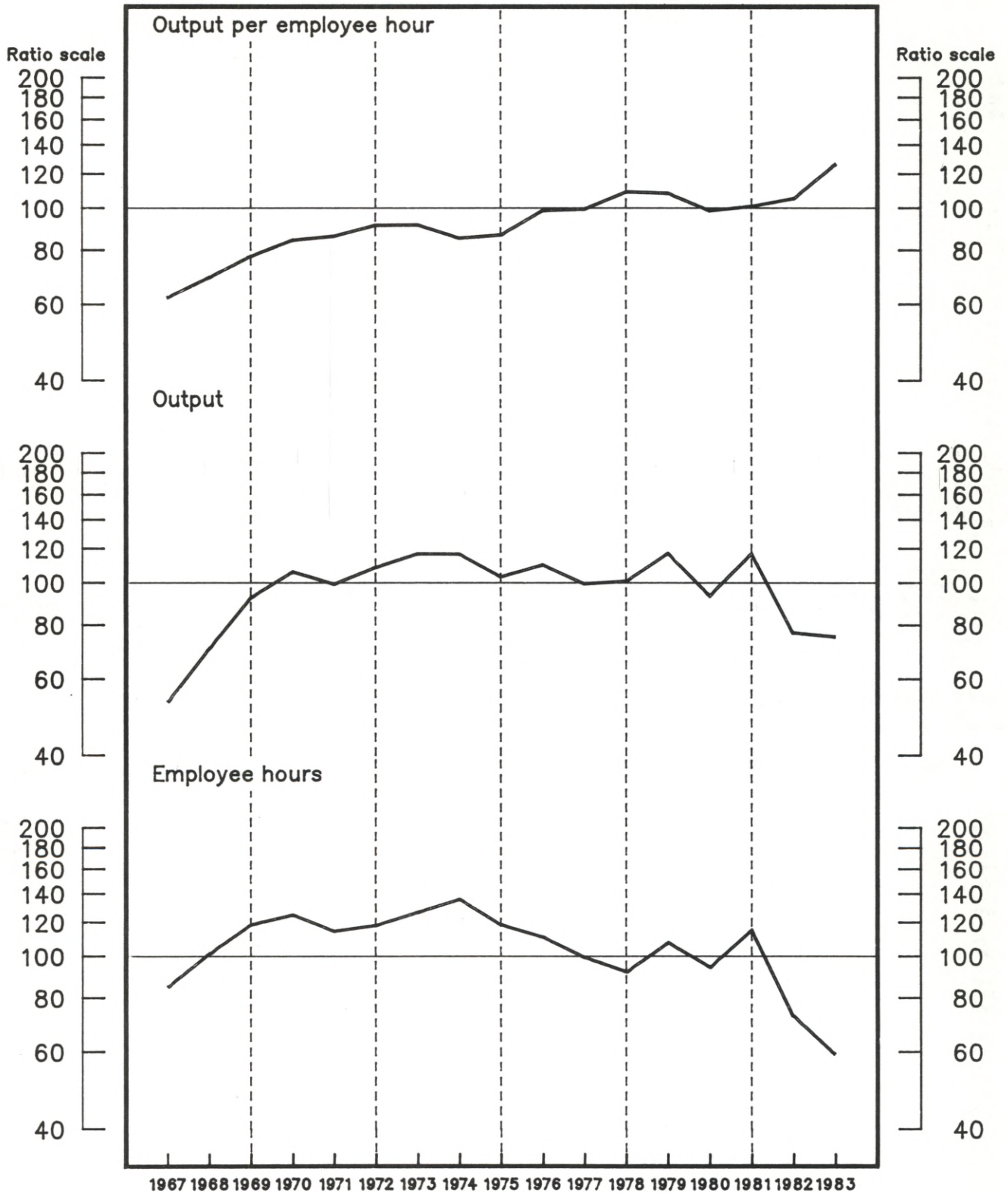
<sup>1</sup> Data not available.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

Chart 4. Copper mining, crude ore (SIC 1021): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 6. Copper mining, crude ore (SIC 1021): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	( <sup>2</sup> )	36.6	( <sup>2</sup> )	45.9	40.8	76.2
1955 .....	46.1	41.4	72.0	53.3	47.9	83.3
1956 .....	47.6	42.4	78.9	54.2	48.4	87.6
1957 .....	51.4	46.6	76.2	55.0	50.0	81.4
1958 .....	55.6	51.7	73.1	56.7	52.8	74.9
1959 .....	55.3	53.1	63.3	61.3	58.8	70.8
1960 .....	57.2	54.6	67.1	65.9	62.9	77.8
1961 .....	60.4	56.0	80.1	68.1	63.2	90.5
1962 .....	66.1	61.3	88.0	73.2	67.9	97.3
1963 .....	66.2	61.4	88.1	73.7	68.5	97.3
1964 .....	72.3	67.4	93.9	80.0	74.9	103.4
1965 .....	72.3	66.6	99.0	81.0	74.9	109.2
1966 .....	73.7	67.8	101.8	82.4	76.4	109.7
1967 .....	62.5	64.1	57.7	70.5	71.4	67.7
1968 .....	69.6	70.1	68.0	84.9	85.3	83.5
1969 .....	77.9	73.8	94.4	93.0	88.5	111.1
1970 .....	84.8	80.0	104.1	97.6	93.1	115.2
1971 .....	86.6	85.4	90.5	97.8	96.8	101.1
1972 .....	91.8	86.4	114.2	98.1	93.8	114.9
1973 .....	92.0	85.6	120.4	97.7	92.9	117.3
1974 .....	85.7	82.0	99.9	90.2	86.7	103.1
1975 .....	87.2	86.4	89.6	89.5	88.6	92.3
1976 .....	99.2	98.0	103.1	101.3	100.7	102.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	109.6	109.1	111.1	113.5	113.3	114.2
1979 .....	108.8	106.9	115.2	118.8	117.7	122.3
1980 .....	99.1	98.5	100.6	105.3	104.7	107.4
1981 .....	101.5	100.6	104.5	109.9	108.4	114.8
1982 .....	105.8	110.6	93.0	106.6	110.9	94.8
1983 <sup>3</sup> .....	126.9	135.5	105.2	131.5	140.1	109.7
Average annual percent change:						
1947-83 .....	( <sup>2</sup> )	4.0	( <sup>2</sup> )	3.1	3.6	.7
1978-83 .....	1.9	3.5	-2.5	1.3	2.7	-2.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

**Table 7. Copper mining, crude ore (SIC 1021): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output <sup>1</sup>	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	38.1	( <sup>2</sup> )	104.2	( <sup>2</sup> )	83.0	93.4	50.0
1955 .....	45.8	99.3	110.6	63.6	86.0	95.7	55.0
1956 .....	53.7	112.7	126.8	68.1	99.1	111.0	61.3
1957 .....	52.9	103.0	113.5	69.4	96.1	105.9	65.0
1958 .....	46.8	84.1	90.5	64.0	82.5	88.7	62.5
1959 .....	42.5	76.8	80.0	67.1	69.3	72.3	60.0
1960 .....	55.5	97.0	101.6	82.7	84.2	88.3	71.3
1961 .....	58.8	97.4	105.0	73.4	86.3	93.0	65.0
1962 .....	62.1	93.9	101.3	70.6	84.8	91.4	63.8
1963 .....	60.8	91.8	99.0	69.0	82.5	88.7	62.5
1964 .....	64.6	89.4	95.9	68.8	80.7	86.3	62.5
1965 .....	72.3	100.0	108.5	73.0	89.3	96.5	66.2
1966 .....	78.2	106.1	115.4	76.8	94.9	102.4	71.3
1967 .....	53.3	85.3	83.1	92.3	75.6	74.6	78.7
1968 .....	71.0	102.0	101.3	104.4	83.6	83.2	85.0
1969 .....	93.0	119.4	126.0	98.5	100.0	105.1	83.7
1970 .....	106.6	125.7	133.2	102.4	109.2	114.5	92.5
1971 .....	99.8	115.2	116.8	110.3	102.0	103.1	98.7
1972 .....	109.2	118.9	126.4	95.6	111.3	116.4	95.0
1973 .....	117.3	127.5	137.0	97.4	120.0	126.2	100.0
1974 .....	117.2	136.7	142.9	117.3	130.0	135.2	113.7
1975 .....	103.8	119.1	120.2	115.8	116.0	117.2	112.5
1976 .....	110.6	111.5	112.9	107.3	109.2	109.8	107.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.4	92.5	92.9	91.3	89.3	89.5	88.8
1979 .....	117.7	108.2	110.1	102.2	99.1	100.0	96.2
1980 .....	94.0	94.9	95.4	93.4	89.3	89.8	87.5
1981 .....	117.7	116.0	117.0	112.6	107.1	108.6	102.5
1982 .....	77.1	72.9	69.7	82.9	72.3	69.5	81.3
1983 <sup>3</sup> .....	75.5	59.5	55.7	71.8	57.4	53.9	68.8
Average annual percent change:							
1947-83 .....	3.6	( <sup>2</sup> )	-3	( <sup>2</sup> )	.5	( <sup>4</sup> )	3.0
1978-83 .....	-6.9	-8.7	-10.1	-4.6	-8.1	-9.4	-4.5

<sup>1</sup> Represents output in terms of copper ore sold or treated.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

<sup>4</sup> Less than .05 percent.

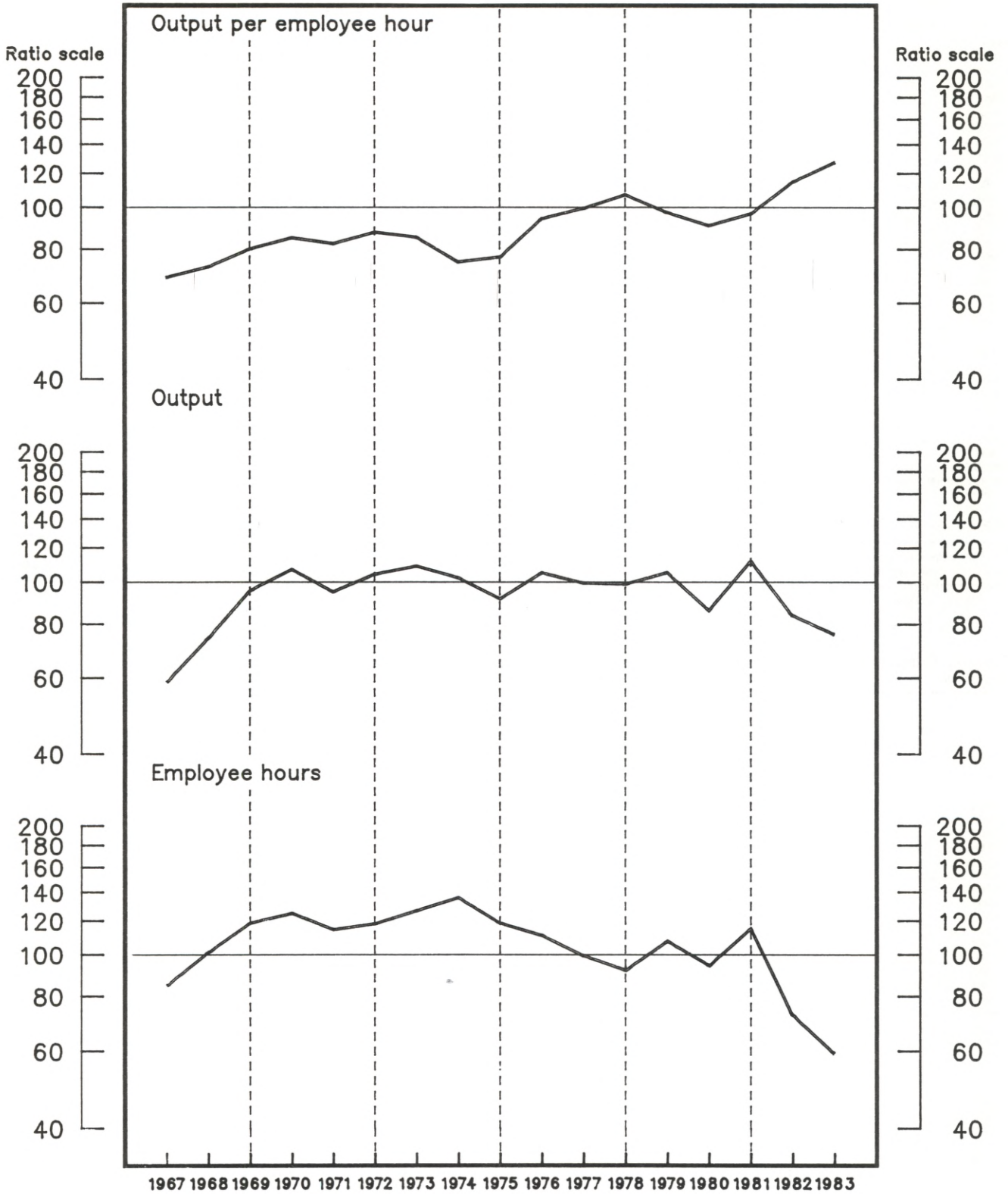
NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

Chart 5. Copper mining, recoverable metal (SIC 1021): Output per hour and related data, 1967-83

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 8. Copper mining, recoverable metal (SIC 1021): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	( <sup>2</sup> )	48.9	( <sup>2</sup> )	61.4	54.6	102.0
1955	61.6	55.3	96.2	71.2	63.9	111.3
1956	60.1	53.4	99.4	68.3	61.0	110.4
1957	64.6	58.6	95.8	69.2	62.8	102.3
1958	71.5	66.4	93.9	72.8	67.8	96.2
1959	65.8	63.1	75.3	72.9	69.8	84.2
1960	68.4	65.3	80.2	78.7	75.1	93.0
1961	73.5	68.2	97.5	83.0	77.0	110.2
1962	80.3	74.4	106.8	88.9	82.5	118.2
1963	81.2	75.3	108.0	90.3	84.0	119.2
1964	85.7	79.9	111.3	94.9	88.8	122.6
1965	83.3	76.8	114.1	93.3	86.3	125.8
1966	83.0	76.3	114.7	92.8	86.0	123.6
1967	69.2	71.0	63.9	78.0	79.1	75.0
1968	73.2	73.7	71.6	89.4	89.8	87.9
1969	80.6	76.3	97.7	96.2	91.5	114.9
1970	85.5	80.7	105.0	98.4	93.9	116.2
1971	82.9	81.8	86.6	93.6	92.6	96.8
1972	88.1	82.9	109.6	94.2	90.0	110.3
1973	85.8	79.9	112.3	91.2	86.7	109.4
1974	75.2	71.9	87.6	79.1	76.0	90.4
1975	77.2	76.5	79.4	79.3	78.5	81.8
1976	94.7	93.5	98.4	96.7	96.2	98.2
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	107.6	107.1	109.0	111.4	111.2	112.0
1979	97.8	96.1	103.5	106.8	105.8	110.0
1980	91.3	90.8	92.7	97.0	96.4	99.0
1981	97.2	96.3	100.1	105.2	103.8	110.0
1982	115.4	120.7	101.4	116.3	121.0	103.4
1983 <sup>3</sup>	127.9	136.6	106.0	132.6	141.2	110.6
Average annual percent change:						
1947-83	( <sup>2</sup> )	2.5	( <sup>2</sup> )	1.6	2.1	-0.8
1978-83	4.2	5.8	-0.4	3.5	4.9	-0.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 9. Copper mining, recoverable metal (SIC 1021): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output <sup>1</sup>	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	51.0	( <sup>2</sup> )	104.2	( <sup>2</sup> )	83.0	93.4	50.0
1955	61.2	99.3	110.6	63.6	86.0	95.7	55.0
1956	67.7	112.7	126.8	68.1	99.1	111.0	61.3
1957	66.5	103.0	113.5	69.4	96.1	105.9	65.0
1958	60.1	84.1	90.5	64.0	82.5	88.7	62.5
1959	50.5	76.8	80.0	67.1	69.3	72.3	60.0
1960	66.3	97.0	101.6	82.7	84.2	88.3	71.3
1961	71.6	97.4	105.0	73.4	86.3	93.0	65.0
1962	75.4	93.9	101.3	70.6	84.8	91.4	63.8
1963	74.5	91.8	99.0	69.0	82.5	88.7	62.5
1964	76.6	89.4	95.9	68.8	80.7	86.3	62.5
1965	83.3	100.0	108.5	73.0	89.3	96.5	66.2
1966	88.1	106.1	115.4	76.8	94.9	102.4	71.3
1967	59.0	85.3	83.1	92.3	75.6	74.6	78.7
1968	74.7	102.0	101.3	104.4	83.6	83.2	85.0
1969	96.2	119.4	126.0	98.5	100.0	105.1	83.7
1970	107.5	125.7	133.2	102.4	109.2	114.5	92.5
1971	95.5	115.2	116.8	110.3	102.0	103.1	98.7
1972	104.8	118.9	126.4	95.6	111.3	116.4	95.0
1973	109.4	127.5	137.0	97.4	120.0	126.2	100.0
1974	102.8	136.7	142.9	117.3	130.0	135.2	113.7
1975	92.0	119.1	120.2	115.8	116.0	117.2	112.5
1976	105.6	111.5	112.9	107.3	109.2	109.8	107.5
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	99.5	92.5	92.9	91.3	89.3	89.5	88.8
1979	105.8	108.2	110.1	102.2	99.1	100.0	96.2
1980	86.6	94.9	95.4	93.4	89.3	89.8	87.5
1981	112.7	116.0	117.0	112.6	107.1	108.6	102.5
1982	84.1	72.9	69.7	82.9	72.3	69.5	81.3
1983 <sup>3</sup>	76.1	59.5	55.7	71.8	57.4	53.9	68.8
Average annual percent change:							
1947-83	2.2	( <sup>2</sup> )	-0.3	( <sup>2</sup> )	.5	( <sup>4</sup> )	3.0
1978-83	-4.9	-8.7	-10.1	-4.6	-8.1	-9.4	-4.5

<sup>1</sup> Represents output in terms of copper recovered from copper ore, old tailings, and precipitates.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

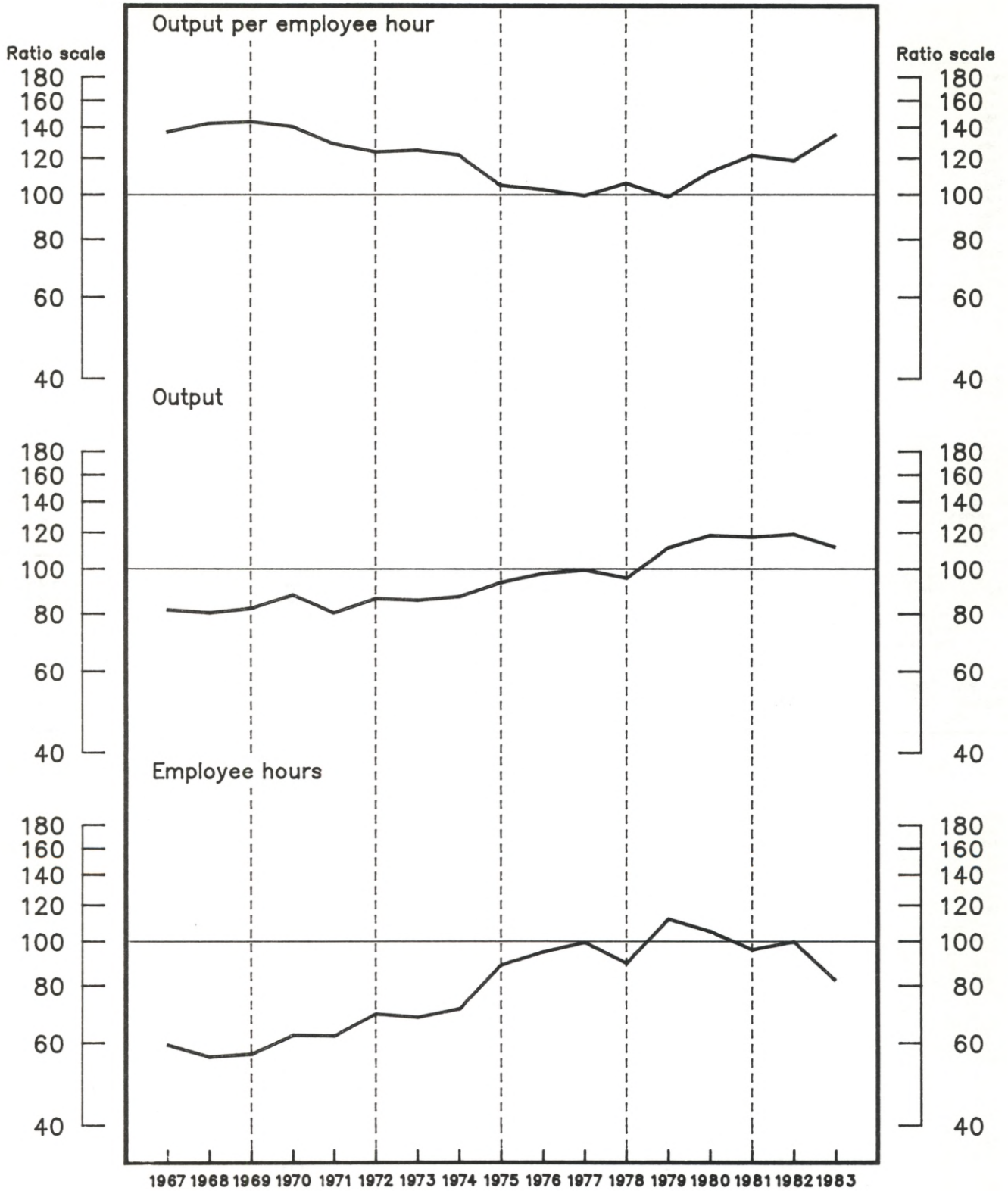
<sup>4</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

Chart 6. Coal mining (SIC 111, 121): Output per hour and related data, 1967-83  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 10. Coal mining (SIC 111, 121): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	( <sup>2</sup> )	64.2	( <sup>2</sup> )	53.8	49.3	111.1
1955	74.9	68.3	164.7	66.0	60.3	145.1
1956	78.6	71.7	169.7	69.5	63.6	149.6
1957	79.0	72.4	160.7	67.5	62.0	136.1
1958	85.3	80.1	133.3	67.4	63.4	106.6
1959	86.3	82.4	118.6	73.3	70.0	101.3
1960	91.7	88.4	117.5	78.1	75.3	99.8
1961	101.5	98.3	124.1	87.0	84.3	106.3
1962	108.9	105.4	133.5	96.3	93.2	118.0
1963	115.0	110.7	147.5	106.7	103.1	133.3
1964	121.6	117.4	151.7	113.5	109.8	140.3
1965	128.3	125.0	152.8	122.6	119.6	144.7
1966	134.7	132.0	153.4	130.7	128.2	147.1
1967	137.4	134.4	155.9	133.1	130.6	149.1
1968	143.5	141.8	155.1	137.6	136.0	147.7
1969	144.7	142.4	157.9	137.4	135.6	149.4
1970	141.1	137.5	165.4	137.1	133.8	159.7
1971	129.5	130.1	126.2	125.1	125.9	120.6
1972	124.4	121.4	143.5	121.4	119.1	136.1
1973	125.5	123.7	137.2	119.8	118.3	128.4
1974	122.5	121.3	130.0	109.9	109.1	115.3
1975	105.3	104.7	109.2	99.6	99.2	102.3
1976	103.1	102.8	104.7	98.4	98.4	98.6
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.4	109.6	91.6	103.2	106.7	86.9
1979	99.4	101.3	90.2	97.3	99.6	86.2
1980	112.5	115.3	98.9	108.8	112.1	93.2
1981	122.2	125.6	105.9	118.4	121.9	100.9
1982	119.1	123.7	98.4	113.9	118.7	92.4
1983 <sup>3</sup>	135.6	143.2	104.3	129.6	137.3	97.9
Average annual percent change:						
1947-83	( <sup>2</sup> )	3.0	( <sup>2</sup> )	3.1	3.6	-1.1
1978-83	5.4	5.9	2.8	5.0	5.5	2.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 11. Coal mining (SIC 111, 121): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	64.1	( <sup>1</sup> )	99.9	( <sup>1</sup> )	119.2	129.9	57.7
1955	73.3	97.8	107.3	44.5	111.0	121.5	50.5
1956	79.6	101.3	111.0	46.9	114.5	125.1	53.2
1957	77.3	97.9	106.8	48.1	114.6	124.6	56.8
1958	64.4	75.5	80.4	48.3	95.5	101.6	60.4
1959	64.5	74.7	78.3	54.4	88.0	92.2	63.7
1960	64.5	70.3	73.0	54.9	82.6	85.7	64.6
1961	62.3	61.4	63.4	50.2	71.6	73.9	58.6
1962	64.9	59.6	61.6	48.6	67.4	69.6	55.0
1963	70.5	61.3	63.7	47.8	66.1	68.4	52.9
1964	74.2	61.0	63.2	48.9	65.4	67.6	52.9
1965	77.0	60.0	61.6	50.4	62.8	64.4	53.2
1966	79.6	59.1	60.3	51.9	60.9	62.1	54.1
1967	82.0	59.7	61.0	52.6	61.6	62.8	55.0
1968	80.8	56.3	57.0	52.1	58.7	59.4	54.7
1969	82.6	57.1	58.0	52.3	60.1	60.9	55.3
1970	88.3	62.6	64.2	53.4	64.4	66.0	55.3
1971	80.8	62.4	62.1	64.0	64.6	64.2	67.0
1972	86.7	69.7	71.4	60.4	71.4	72.8	63.7
1973	86.0	68.5	69.5	62.7	71.8	72.7	67.0
1974	87.6	71.5	72.2	67.4	79.7	80.3	76.0
1975	94.0	89.3	89.8	86.1	94.4	94.8	91.9
1976	98.3	95.3	95.6	93.9	99.9	99.9	99.7
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	96.0	90.2	87.6	104.8	93.0	90.0	110.5
1979	111.8	112.5	110.4	124.0	114.9	112.3	129.7
1980	118.9	105.7	103.1	120.2	109.3	106.1	127.6
1981	117.9	96.5	93.9	111.3	99.6	96.7	116.8
1982	119.6	100.4	96.7	121.5	105.0	100.8	129.4
1983 <sup>2</sup>	112.0	82.6	78.2	107.4	86.4	81.6	114.4
Average annual percent change:							
1947-83	1.0	( <sup>1</sup> )	-2.0	( <sup>1</sup> )	-2.1	-2.5	2.1
1978-83	2.8	-2.5	-3.0	( <sup>2</sup> )	-2.1	-2.6	.2

<sup>1</sup> Data not available.

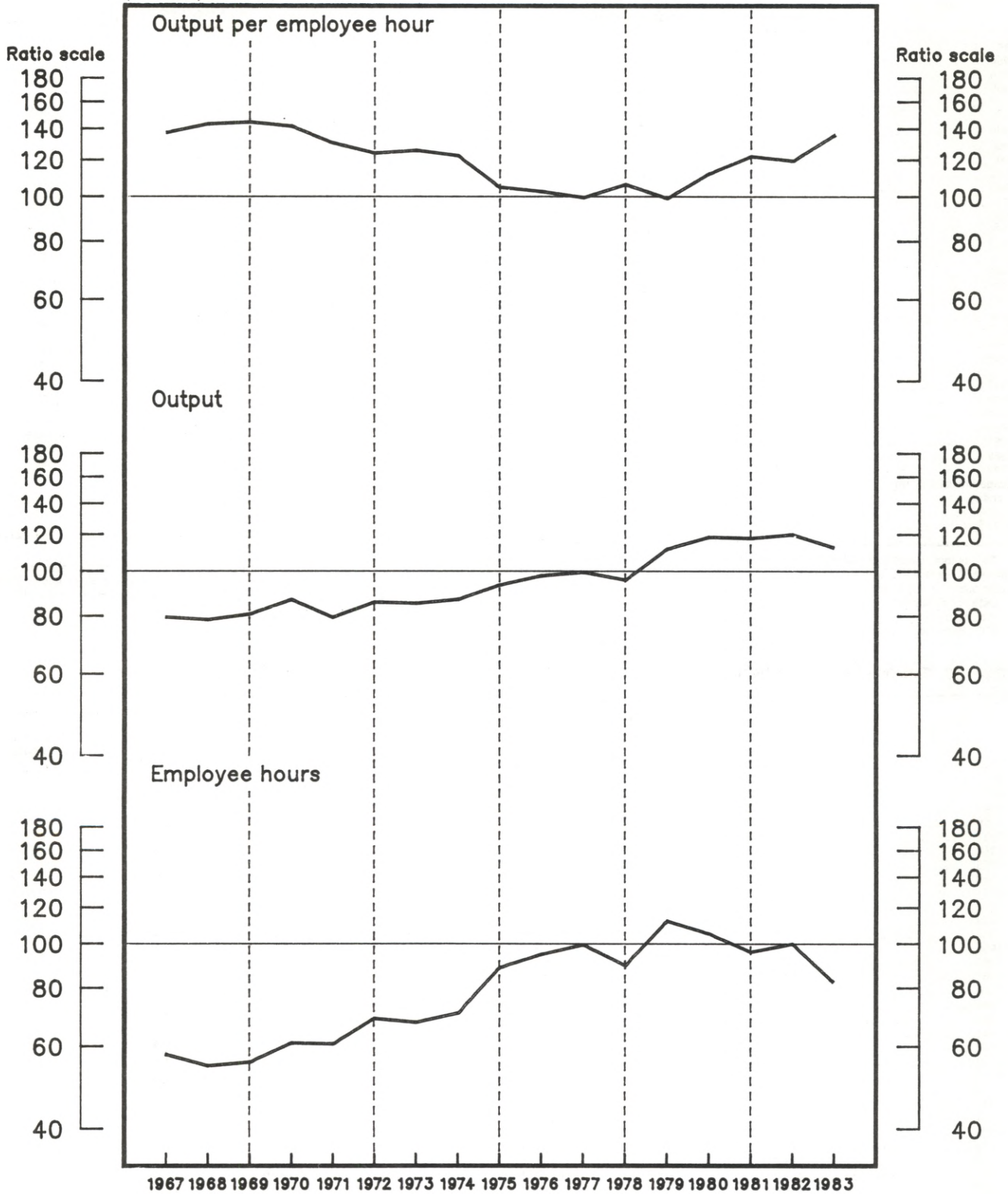
<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

Chart 7. Bituminous coal and lignite mining (SIC 121): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 12. Bituminous coal and lignite mining (SIC 121): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	( <sup>2</sup> )	64.8	( <sup>2</sup> )	55.0	50.2	125.2
1955 .....	76.5	69.3	181.6	68.2	62.0	160.4
1956 .....	78.4	71.3	177.0	70.3	64.1	156.7
1957 .....	79.3	72.7	162.0	68.8	63.3	138.7
1958 .....	85.6	80.3	135.6	68.3	64.1	109.2
1959 .....	86.4	82.3	119.4	74.1	70.7	102.6
1960 .....	92.3	88.6	119.5	79.2	76.2	102.4
1961 .....	102.3	99.0	125.4	87.9	85.2	107.8
1962 .....	109.3	105.7	134.0	96.8	93.9	118.9
1963 .....	114.9	110.7	147.3	106.8	103.3	133.9
1964 .....	122.0	118.1	148.8	114.8	111.0	142.2
1965 .....	129.3	126.0	151.5	124.7	121.5	146.7
1966 .....	135.2	132.6	151.1	132.2	129.7	147.6
1967 .....	138.0	135.0	157.0	134.3	131.8	151.0
1968 .....	144.0	142.2	155.6	138.4	137.0	148.3
1969 .....	145.3	143.0	159.0	138.9	137.0	150.7
1970 .....	142.3	138.4	167.7	138.6	135.2	162.1
1971 .....	131.0	131.4	128.3	126.2	127.0	122.4
1972 .....	124.6	121.6	144.2	121.6	119.3	136.9
1973 .....	126.3	124.4	137.6	120.2	118.7	129.1
1974 .....	123.0	121.8	130.7	110.1	109.3	115.3
1975 .....	105.2	104.5	109.7	99.5	98.9	102.5
1976 .....	103.0	102.7	104.7	98.4	98.3	99.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.7	109.8	92.1	103.3	106.9	87.0
1979 .....	99.6	101.4	90.1	97.5	99.8	86.1
1980 .....	112.6	115.5	98.8	108.9	112.1	93.0
1981 .....	122.7	126.2	106.2	118.9	122.6	101.2
1982 .....	120.0	124.8	98.9	114.9	119.8	92.9
1983 <sup>3</sup> .....	136.5	144.1	105.0	130.8	138.7	98.6
Average annual percent change:						
1947-83 .....	( <sup>2</sup> )	3.1	( <sup>2</sup> )	3.1	3.6	-1.3
1978-83 .....	5.5	6.1	2.9	5.2	5.7	2.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 13. Bituminous coal and lignite mining (SIC 121): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	56.7	( <sup>1</sup> )	87.5	( <sup>1</sup> )	103.0	113.0	45.3
1955 .....	67.2	87.9	97.0	37.0	98.6	108.4	41.9
1956 .....	72.4	92.4	101.5	40.9	103.0	112.9	46.2
1957 .....	71.3	89.9	98.1	44.0	103.6	112.6	51.4
1958 .....	59.4	69.4	74.0	43.8	87.0	92.6	54.4
1959 .....	59.6	69.0	72.4	49.9	80.4	84.3	58.1
1960 .....	60.1	65.1	67.8	50.3	75.9	78.9	58.7
1961 .....	58.3	57.0	58.9	46.5	66.3	68.4	54.1
1962 .....	61.1	55.9	57.8	45.6	63.1	65.1	51.4
1963 .....	66.3	57.7	59.9	45.0	62.1	64.2	49.5
1964 .....	70.4	57.7	59.6	47.3	61.3	63.4	49.5
1965 .....	74.1	57.3	58.8	48.9	59.4	61.0	50.5
1966 .....	77.2	57.1	58.2	51.1	58.4	59.5	52.3
1967 .....	79.9	57.9	59.2	50.9	59.5	60.6	52.9
1968 .....	78.9	54.8	55.5	50.7	57.0	57.6	53.2
1969 .....	81.1	55.8	56.7	51.0	58.4	59.2	53.8
1970 .....	87.2	61.3	63.0	52.0	62.9	64.5	53.8
1971 .....	79.9	61.0	60.8	62.3	63.3	62.9	65.3
1972 .....	86.1	69.1	70.8	59.7	70.8	72.2	62.9
1973 .....	85.6	67.8	68.8	62.2	71.2	72.1	66.3
1974 .....	87.3	71.0	71.7	66.8	79.3	79.9	75.7
1975 .....	93.8	89.2	89.8	85.5	94.3	94.8	91.5
1976 .....	98.2	95.3	95.6	93.8	99.8	99.9	99.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	96.2	90.2	87.6	104.4	93.1	90.0	110.6
1979 .....	112.3	112.8	110.7	124.6	115.2	112.5	130.4
1980 .....	119.1	105.8	103.1	120.5	109.4	106.2	128.0
1981 .....	118.4	96.5	93.8	111.5	99.6	96.6	117.0
1982 .....	120.6	100.5	96.6	121.9	105.0	100.7	129.8
1983 <sup>2</sup> .....	113.0	82.8	78.4	107.6	86.4	81.5	114.6
Average annual percent change:							
1947-83 .....	1.5	( <sup>1</sup> )	-1.5	( <sup>1</sup> )	-1.5	-2.0	2.8
1978-83 .....	2.9	-2.4	-3.0	( <sup>2</sup> )	-2.1	-2.6	.2

<sup>1</sup> Data not available.

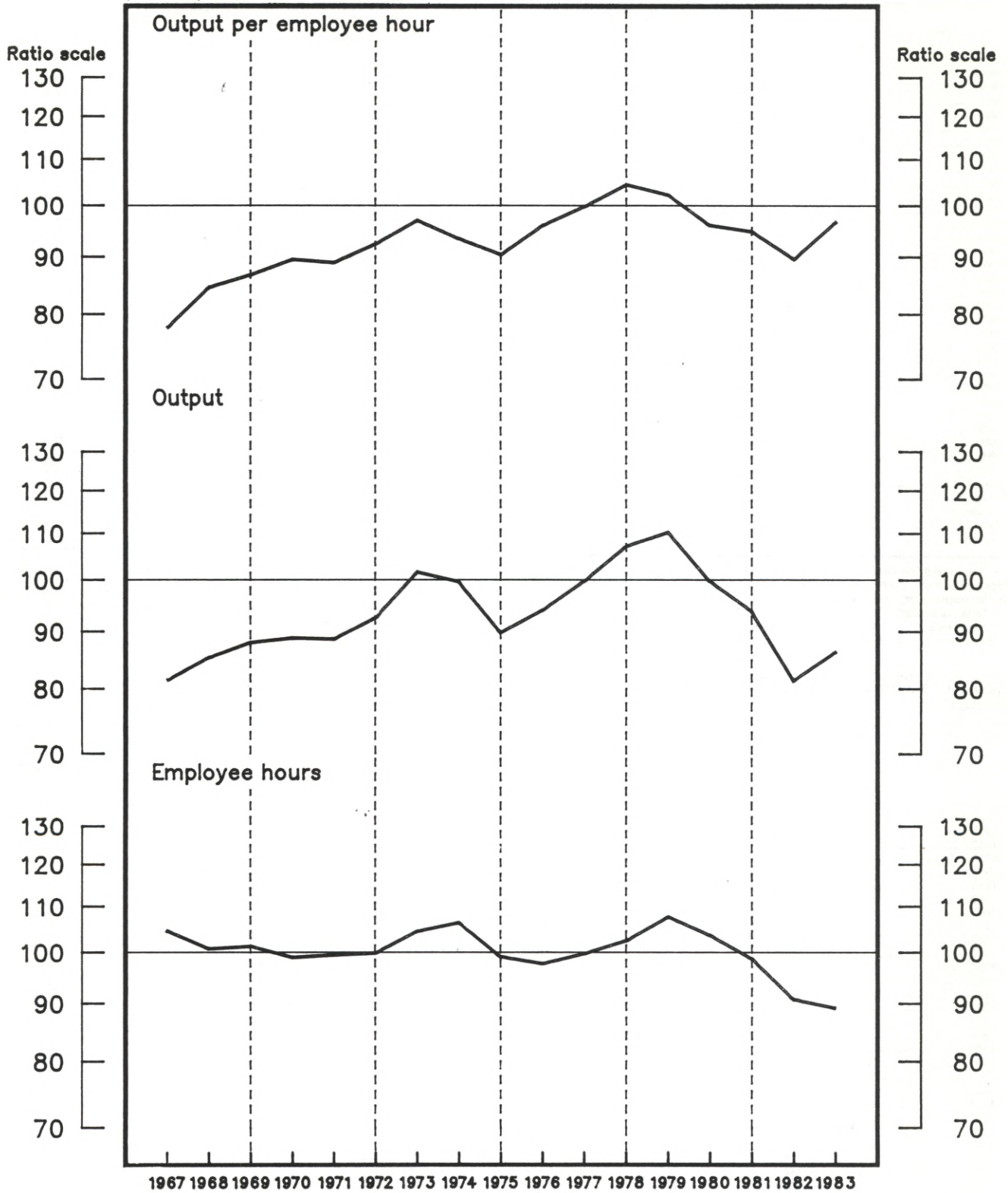
<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Chart 8. Nonmetallic minerals, except fuels (SIC 14): Output per hour and related data, 1967-83**  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 14. Nonmetallic minerals, except fuels (SIC 14): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	(?)	51.1	(?)	54.0	50.3	75.6
1955 .....	(?)	53.4	(?)	57.0	53.0	80.2
1956 .....	(?)	54.3	(?)	58.1	54.0	81.9
1957 .....	(?)	56.5	(?)	59.2	55.5	79.9
1958 .....	60.4	57.0	77.6	58.7	55.4	76.2
1959 .....	61.5	58.1	79.9	61.4	57.8	80.5
1960 .....	61.6	58.5	77.1	60.5	57.4	76.2
1961 .....	64.2	61.3	78.1	63.3	60.4	78.2
1962 .....	67.5	64.3	83.2	67.1	63.9	82.8
1963 .....	70.3	67.5	83.3	70.5	67.5	84.3
1964 .....	73.6	70.9	86.5	74.7	71.7	88.8
1965 .....	75.2	72.0	90.6	77.2	73.8	94.2
1966 .....	78.9	75.4	94.9	80.9	77.4	97.4
1967 .....	77.9	75.2	89.5	79.1	76.3	91.9
1968 .....	84.7	81.7	97.2	85.2	82.4	98.5
1969 .....	86.9	83.8	100.9	88.9	85.8	103.6
1970 .....	89.7	86.8	102.2	89.9	87.2	102.5
1971 .....	89.1	87.1	96.8	89.6	87.7	97.7
1972 .....	92.6	90.7	100.0	92.4	91.1	98.5
1973 .....	97.2	96.0	101.6	99.4	98.2	105.4
1974 .....	93.6	92.9	96.1	95.0	93.8	99.8
1975 .....	90.6	91.6	86.5	89.4	89.6	88.9
1976 .....	96.2	96.4	95.1	95.2	95.5	94.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.6	104.2	106.0	105.1	104.7	106.5
1979 .....	102.4	102.1	103.3	103.5	103.1	104.8
1980 .....	96.2	97.7	91.1	94.3	95.5	90.2
1981 .....	95.0	98.4	83.7	91.9	94.9	81.8
1982 .....	89.8	94.0	76.5	86.2	90.1	74.2
1983 <sup>3</sup> .....	96.9	101.5	82.2	95.0	99.3	81.5
Average annual percent change:						
1954-83 .....	(?)	2.6	(?)	-2.2	2.6	.6
1978-83 .....	-2.2	-1.1	-6.2	-3.0	-1.9	-6.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 15. Nonmetallic minerals, except fuels (SIC 14): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	49.0	( <sup>1</sup> )	95.8	( <sup>1</sup> )	90.7	97.4	64.8
1955 .....	53.3	( <sup>1</sup> )	99.9	( <sup>1</sup> )	93.5	100.5	66.5
1956 .....	57.8	( <sup>1</sup> )	106.5	( <sup>1</sup> )	99.4	107.0	70.6
1957 .....	58.4	( <sup>1</sup> )	103.3	( <sup>1</sup> )	98.7	105.3	73.1
1958 .....	58.2	96.4	102.1	75.0	99.2	105.1	76.4
1959 .....	63.8	103.7	109.9	79.8	103.9	110.4	79.3
1960 .....	64.2	104.2	109.7	83.3	106.1	111.9	84.3
1961 .....	65.5	102.0	106.8	83.9	103.4	108.4	83.8
1962 .....	68.4	101.3	106.3	82.2	101.9	107.0	82.6
1963 .....	71.1	101.2	105.4	85.4	100.9	105.3	84.3
1964 .....	74.9	101.7	105.6	86.6	100.3	104.5	84.3
1965 .....	79.7	106.0	110.7	88.0	103.2	108.0	84.6
1966 .....	84.5	107.1	112.0	89.0	104.5	109.2	86.8
1967 .....	81.6	104.8	108.5	91.2	103.2	107.0	88.8
1968 .....	85.5	101.0	104.6	88.0	100.3	103.7	86.8
1969 .....	88.2	101.5	105.2	87.4	99.2	102.8	85.1
1970 .....	89.0	99.2	102.5	87.1	99.0	102.1	86.8
1971 .....	88.8	99.7	102.0	91.7	99.1	101.2	90.9
1972 .....	92.7	100.1	102.2	92.7	100.3	101.8	94.1
1973 .....	101.8	104.7	106.0	100.2	102.4	103.7	96.6
1974 .....	99.8	106.6	107.4	103.8	105.1	106.4	100.0
1975 .....	90.0	99.3	98.2	104.0	100.7	100.5	101.2
1976 .....	94.2	97.9	97.7	99.1	98.9	98.6	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.4	102.7	103.1	101.3	102.2	102.6	100.8
1979 .....	110.5	107.9	108.2	107.0	106.8	107.2	105.4
1980 .....	99.9	103.8	102.2	109.7	105.9	104.6	110.7
1981 .....	94.0	98.9	95.5	112.3	102.3	99.0	114.9
1982 .....	81.6	90.9	86.8	106.7	94.7	90.6	109.9
1983 <sup>2</sup> .....	86.5	89.3	85.2	105.2	91.1	87.1	106.2
Average annual percent change:							
1954-83 .....	2.3	( <sup>1</sup> )	-.3	( <sup>1</sup> )	.1	-.3	1.6
1978-83 .....	-5.7	-3.5	-4.7	.6	-2.7	-3.9	1.2

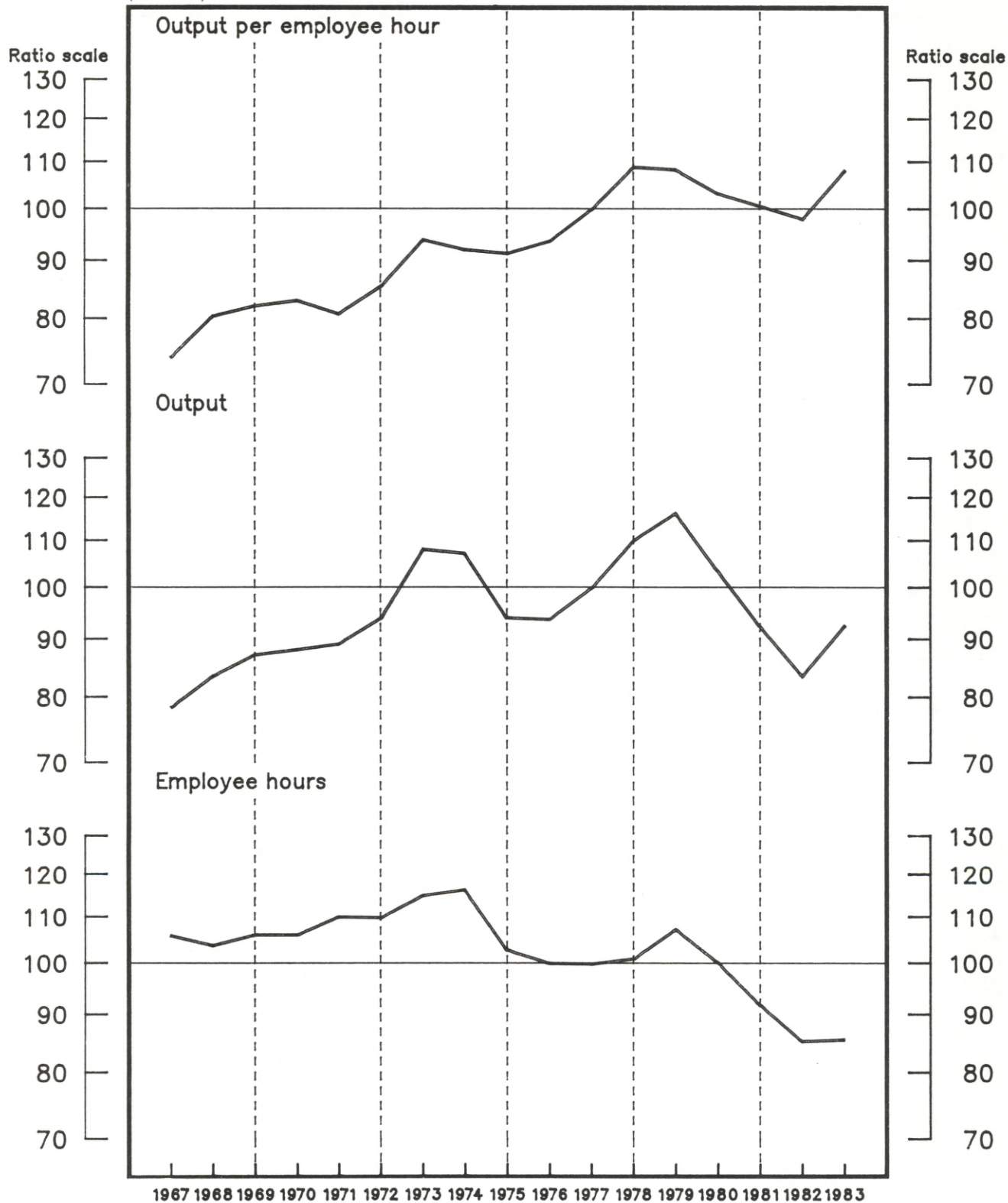
<sup>1</sup> Data not available.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

Chart 9. Crushed and broken stone (SIC 142): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 16. Crushed and broken stone (SIC 142): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	53.6	52.1	62.1	53.1	51.7	60.9
1959 .....	55.1	53.6	64.0	56.2	54.7	64.4
1960 .....	55.5	54.3	62.5	55.2	54.0	61.8
1961 .....	56.6	55.3	64.5	57.0	55.6	64.5
1962 .....	59.6	57.8	70.6	60.4	58.7	70.3
1963 .....	61.7	60.3	69.7	63.2	61.8	70.6
1964 .....	66.6	65.3	74.1	68.4	67.0	76.1
1965 .....	69.9	68.0	81.2	73.6	71.7	84.4
1966 .....	74.2	72.4	84.9	78.0	76.4	87.0
1967 .....	74.0	72.9	79.9	77.0	76.0	82.1
1968 .....	80.5	79.1	87.7	83.2	82.0	88.9
1969 .....	82.2	80.6	91.8	86.2	84.7	94.3
1970 .....	83.1	82.6	85.3	84.9	84.8	85.6
1971 .....	80.9	81.3	78.9	83.3	84.0	79.7
1972 .....	85.5	84.8	88.8	86.2	86.0	87.5
1973 .....	94.0	93.9	94.6	97.7	97.7	98.0
1974 .....	92.1	92.7	88.8	95.2	95.8	92.2
1975 .....	91.4	93.7	81.8	90.1	91.5	84.1
1976 .....	93.7	94.3	90.6	93.3	94.1	89.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	109.0	107.8	114.8	110.5	109.5	115.4
1979 .....	108.4	106.9	116.3	111.3	110.0	118.2
1980 .....	103.3	103.1	104.5	102.6	102.4	103.6
1981 .....	100.7	103.0	90.6	97.5	99.6	88.5
1982 .....	98.1	102.8	80.2	95.1	99.6	77.9
1983 <sup>2</sup> .....	108.2	114.2	85.7	106.7	112.7	85.0
Average annual percent change:						
1958-83 .....	3.0	3.2	1.8	2.9	3.1	1.7
1978-83 .....	-1.0	.5	-7.5	-2.0	-.5	-8.0

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

**Table 17. Crushed and broken stone (SIC 142): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	54.6	101.9	104.7	87.9	102.9	105.6	89.6
1959 .....	59.6	108.1	111.1	93.1	106.1	109.0	92.6
1960 .....	61.8	111.3	113.9	98.9	112.0	114.4	100.0
1961 .....	60.6	107.0	109.6	94.0	106.4	109.0	94.0
1962 .....	64.0	107.4	110.8	90.7	105.9	109.0	91.0
1963 .....	66.4	107.7	110.2	95.3	105.1	107.4	94.0
1964 .....	70.5	105.8	108.0	95.1	103.1	105.3	92.6
1965 .....	76.8	109.9	113.0	94.6	104.4	107.1	91.0
1966 .....	81.8	110.2	113.0	96.4	104.9	107.1	94.0
1967 .....	78.4	106.0	107.6	98.1	101.8	103.1	95.5
1968 .....	83.6	103.9	105.7	95.3	100.5	101.9	94.0
1969 .....	87.3	106.2	108.3	95.1	101.3	103.1	92.6
1970 .....	88.2	106.2	106.8	103.4	103.9	104.0	103.0
1971 .....	89.2	110.2	109.7	113.0	107.1	106.2	111.9
1972 .....	94.0	110.0	110.9	105.8	109.0	109.3	107.4
1973 .....	108.2	115.1	115.2	114.4	110.7	110.7	110.4
1974 .....	107.3	116.5	115.7	120.9	112.7	112.0	116.4
1975 .....	94.1	102.9	100.4	115.0	104.4	102.8	111.9
1976 .....	93.8	100.1	99.5	103.5	100.5	99.7	104.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	110.2	101.1	102.2	96.0	99.7	100.6	95.5
1979 .....	116.4	107.4	108.9	100.1	104.6	105.8	98.5
1980 .....	103.6	100.3	100.5	99.1	101.0	101.2	100.0
1981 .....	92.5	91.9	89.8	102.1	94.9	92.9	104.5
1982 .....	83.7	85.3	81.4	104.3	88.0	84.0	107.5
1983 <sup>1</sup> .....	92.6	85.6	81.1	108.0	86.8	82.2	109.0
Average annual percent change:							
1958-83 .....	2.4	-.6	-.8	.6	-.5	-.7	.6
1978-83 .....	-5.5	-4.5	-5.9	2.1	-3.6	-5.0	2.8

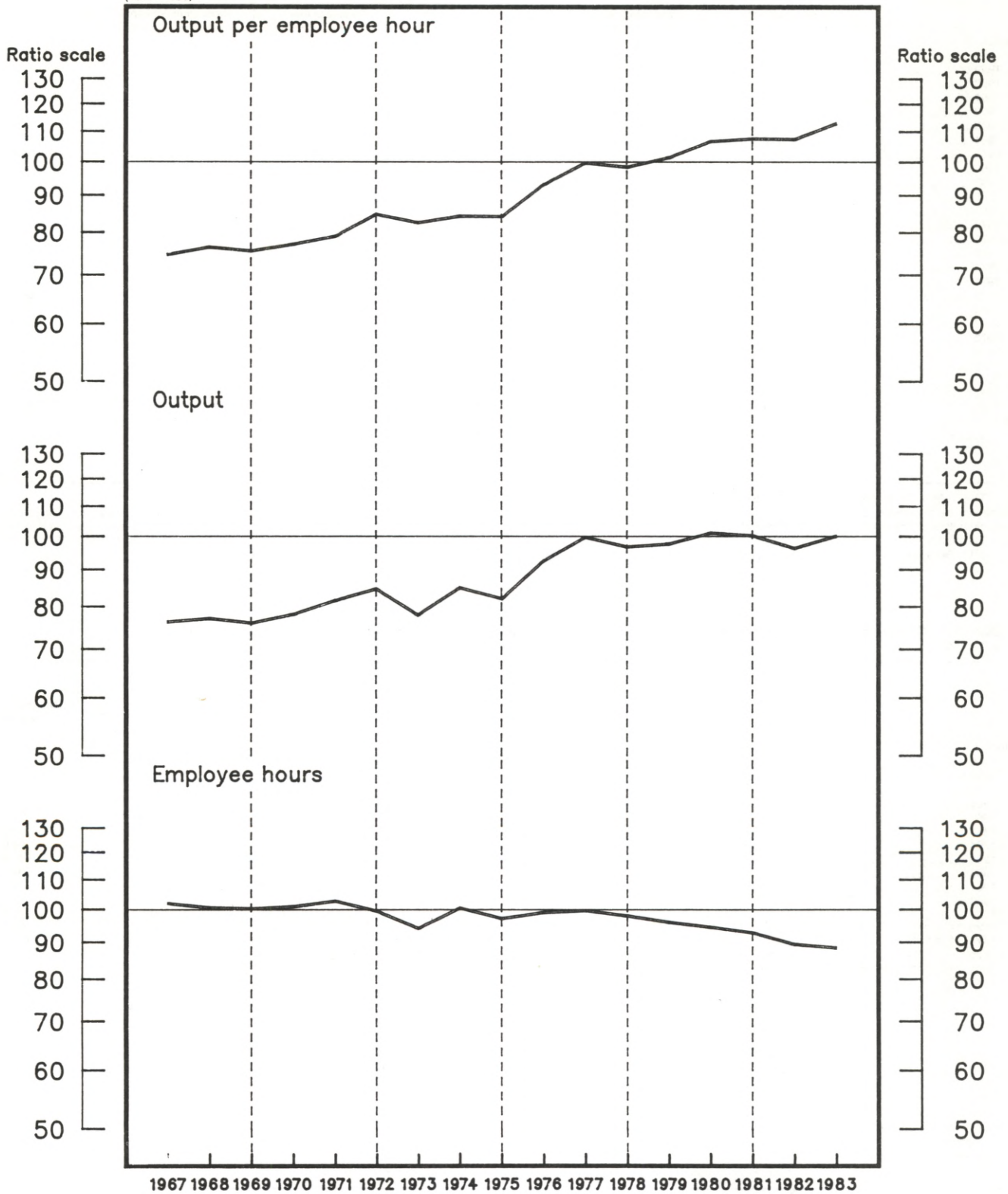
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the

Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics supplemented with data from the Mine Safety and Health Administration, U.S. Department of Labor.

Chart 10. Red meat products (SIC 2011, 2013): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 18. Red meat products (SIC 2011, 2013): Indexes of output per employee hour and output per employee, 1967-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1967 .....	74.8	76.5	69.0	76.3	78.4	69.7
1968 .....	76.6	76.6	76.5	76.8	78.5	71.2
1969 .....	75.7	76.1	74.3	76.0	77.8	70.3
1970 .....	77.3	77.0	78.5	78.1	78.9	75.4
1971 .....	79.3	78.1	84.6	80.6	80.0	82.9
1972 .....	85.0	84.1	88.7	85.3	84.5	88.6
1973 .....	82.8	83.0	81.7	82.5	82.6	82.0
1974 .....	84.5	84.6	84.4	85.6	85.8	84.9
1975 .....	84.4	85.0	82.2	84.5	85.0	82.6
1976 .....	93.4	93.6	92.2	94.3	94.8	92.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.7	98.6	99.3	98.2	97.8	99.3
1979 .....	101.7	100.8	104.9	101.9	101.1	104.9
1980 .....	107.0	106.0	111.3	106.3	104.9	111.3
1981 .....	107.9	106.3	114.9	107.5	105.6	114.9
1982 .....	107.7	106.4	112.9	106.6	105.0	112.9
1983 <sup>2</sup> .....	113.2	112.4	116.6	112.6	111.6	116.6
Average annual percent change:						
1967-83 .....	2.8	2.7	3.2	2.7	2.5	3.5
1978-83 .....	2.5	2.4	3.1	2.4	2.3	3.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

**Table 19. Red meat products (SIC 2011, 2013): Indexes of output, employee hours, and employees, 1967-83**  
(1977 = 100)

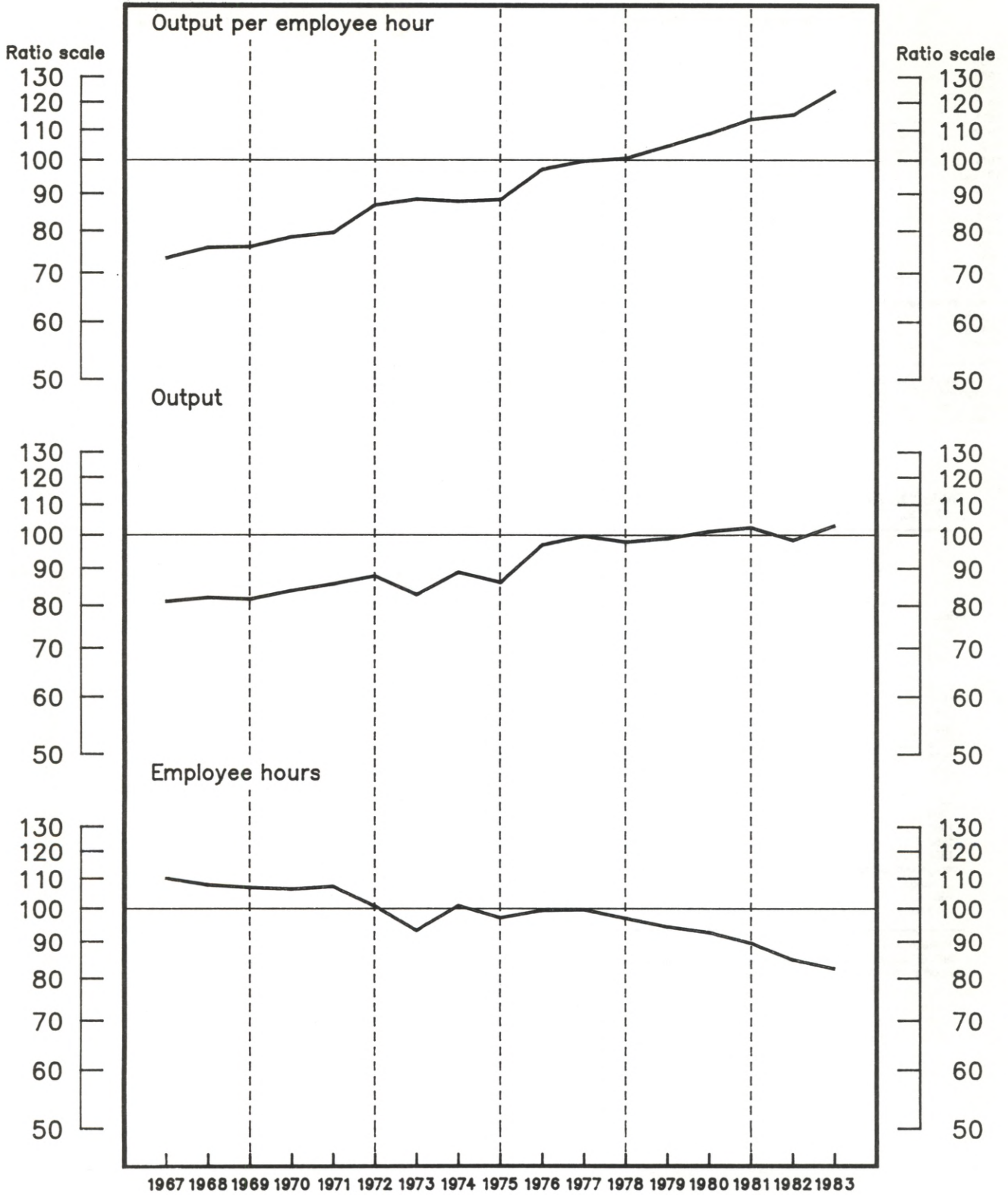
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1967 .....	76.5	102.3	100.0	110.8	100.2	97.6	109.7
1968 .....	77.3	100.9	100.9	101.1	100.7	98.5	108.6
1969 .....	76.2	100.6	100.1	102.6	100.2	98.0	108.4
1970 .....	78.3	101.3	101.7	99.8	100.2	99.3	103.8
1971 .....	81.8	103.1	104.8	96.7	101.5	102.3	98.7
1972 .....	84.9	99.9	101.0	95.7	99.5	100.5	95.8
1973 .....	78.2	94.5	94.2	95.7	94.8	94.7	95.4
1974 .....	85.2	100.8	100.7	101.0	99.5	99.3	100.4
1975 .....	82.3	97.5	96.8	100.1	97.4	96.8	99.6
1976 .....	92.8	99.4	99.1	100.6	98.4	97.9	100.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	97.0	98.3	98.4	97.7	98.8	99.2	97.7
1979 .....	97.9	96.3	97.1	93.3	96.1	96.8	93.3
1980 .....	101.4	94.8	95.7	91.1	95.4	96.7	91.1
1981 .....	100.5	93.1	94.5	87.5	93.5	95.2	87.5
1982 .....	96.6	89.7	90.8	85.6	90.6	92.0	85.6
1983 <sup>1</sup> .....	100.4	88.7	89.3	86.1	89.2	90.0	86.1
Average annual percent change:							
1967-83 .....	2.1	-7	-6	-1.1	-6	-4	-1.4
1978-83 .....	.4	-2.1	-2.0	-2.6	-2.0	-1.9	-2.6

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

Chart 11. Meat packing plants (SIC 2011): Output per hour and related data, 1967-83 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 20. Meat packing plants (SIC 2011): Indexes of output per employee hour and output per employee, 1967-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1967 .....	73.6	76.1	64.4	74.6	77.4	65.0
1968 .....	76.1	77.1	71.8	76.1	78.8	66.9
1969 .....	76.3	77.6	71.2	76.4	78.9	67.4
1970 .....	78.7	79.0	77.5	79.6	80.9	74.6
1971 .....	79.8	78.6	85.0	81.3	80.9	83.4
1972 .....	87.1	86.0	91.8	87.2	86.2	91.7
1973 .....	88.7	88.7	88.4	88.2	88.0	88.7
1974 .....	88.1	87.6	89.7	89.0	88.7	90.3
1975 .....	88.6	88.6	88.7	88.2	88.0	89.1
1976 .....	97.5	97.4	97.7	97.9	97.9	97.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.9	100.9	100.9	100.4	100.2	100.9
1979 .....	104.9	104.1	108.4	104.9	104.1	108.4
1980 .....	109.1	107.6	116.0	108.6	106.8	116.0
1981 .....	114.2	112.2	123.7	113.6	111.4	123.7
1982 .....	115.8	114.0	125.3	115.0	112.8	125.3
1983 <sup>2</sup> .....	124.8	123.6	129.6	123.7	122.4	129.6
Average annual percent change:						
1967-83 .....	3.3	3.1	4.1	3.2	2.8	4.4
1978-83 .....	4.1	3.9	5.1	4.0	3.7	5.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

<sup>2</sup> Preliminary.

**Table 21. Meat packing plants (SIC 2011): Indexes of output, employee hours, and employees, 1967-83**  
(1977=100)

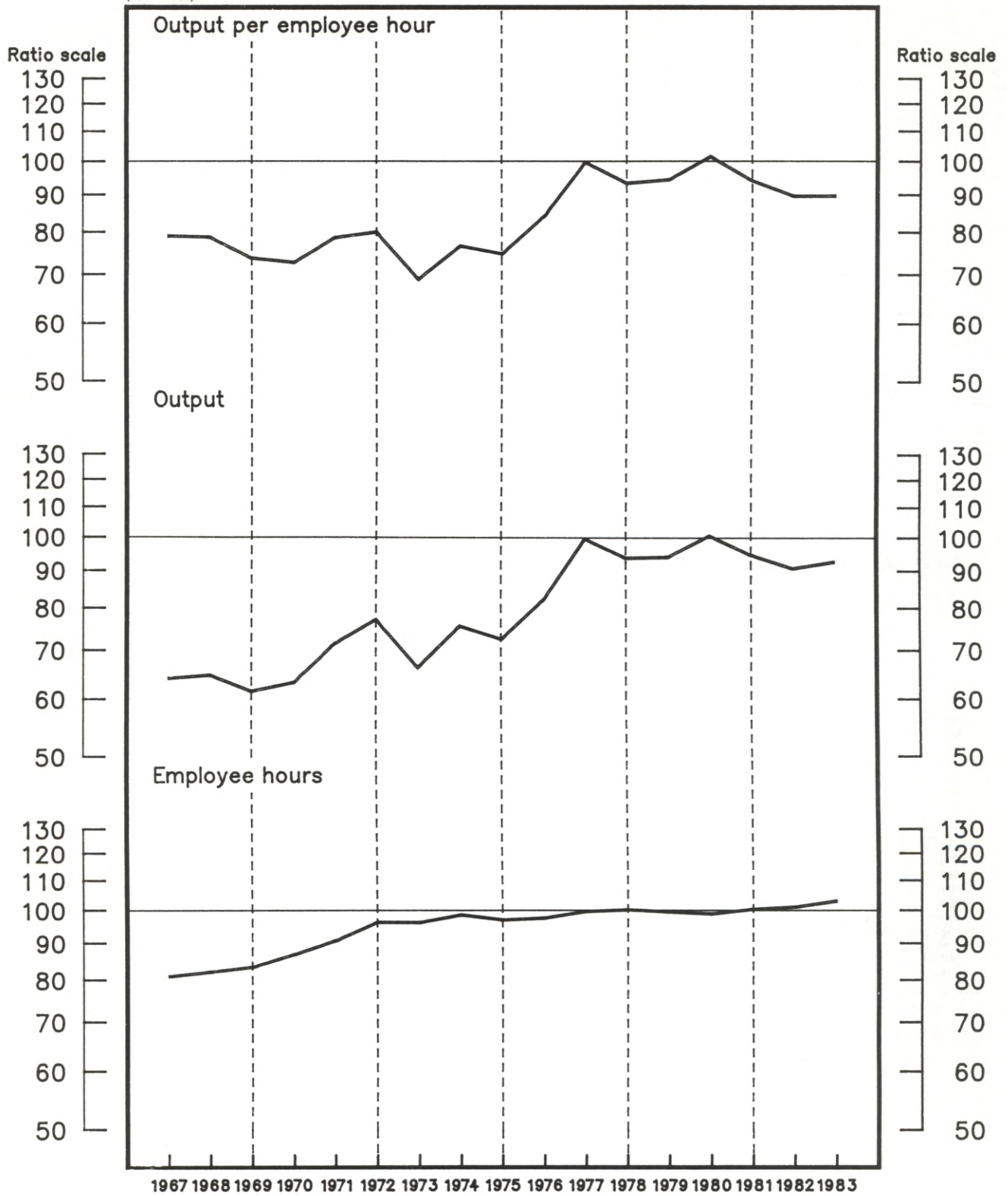
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1967 .....	81.3	110.5	106.8	126.3	109.0	105.1	125.1
1968 .....	82.3	108.2	106.7	114.6	108.1	104.5	123.0
1969 .....	81.9	107.3	105.5	115.0	107.2	103.8	121.5
1970 .....	84.1	106.8	106.5	108.5	105.7	104.0	112.8
1971 .....	85.9	107.7	109.3	101.0	105.6	106.2	103.0
1972 .....	88.1	101.2	102.4	96.0	101.0	102.2	96.1
1973 .....	83.1	93.7	93.7	94.0	94.2	94.4	93.7
1974 .....	89.2	101.3	101.8	99.4	100.2	100.6	98.8
1975 .....	86.4	97.5	97.5	97.4	98.0	98.2	97.0
1976 .....	97.3	99.8	99.9	99.6	99.4	99.4	99.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.2	97.3	97.3	97.3	97.8	98.0	97.3
1979 .....	99.3	94.7	95.4	91.6	94.7	95.4	91.6
1980 .....	101.5	93.0	94.3	87.5	93.5	95.0	87.5
1981 .....	102.7	89.9	91.5	83.0	90.4	92.2	83.0
1982 .....	98.7	85.2	86.6	78.8	85.8	87.5	78.8
1983 <sup>1</sup> .....	103.3	82.8	83.6	79.7	83.5	84.4	79.7
Average annual percent change:							
1967-83 .....	1.7	-1.5	-1.3	-2.3	-1.4	-1.1	-2.6
1978-83 .....	.7	-3.3	-3.0	-4.2	-3.1	-2.9	-4.2

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

Chart 12. Sausages and other prepared meats (SIC 2013): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 22. Sausages and other prepared meats (SIC 2013): Indexes of output per employee hour and output per employee, 1967-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees <sup>2</sup>	Production workers	Nonproduction workers
Index:						
1967 .....	79.2	80.1	76.9	81.5	83.1	77.8
1968 .....	78.9	77.2	83.8	78.9	79.2	78.1
1969 .....	73.8	72.9	76.5	74.4	75.1	72.5
1970 .....	72.8	72.0	75.1	73.1	73.5	72.2
1971 .....	78.8	78.2	80.4	78.6	78.4	78.8
1972 .....	80.2	79.8	81.4	81.0	80.8	81.3
1973 .....	69.1	69.7	67.6	69.3	69.8	67.8
1974 .....	76.7	78.2	73.1	77.7	79.3	73.6
1975 .....	74.8	77.0	69.6	75.8	78.4	69.9
1976 .....	84.2	85.6	80.5	85.8	87.9	80.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	93.6	92.9	95.6	92.9	91.9	95.6
1979 .....	94.6	93.4	98.0	95.0	93.8	98.0
1980 .....	101.8	101.1	103.7	100.9	99.8	103.7
1981 .....	94.3	92.4	99.7	93.8	91.8	99.7
1982 .....	89.8	88.6	93.5	89.1	87.5	93.5
1983 <sup>2</sup> .....	89.9	88.1	95.5	90.2	88.3	95.5
Average annual percent change:						
1967-83 .....	1.8	1.7	1.9	1.6	1.4	2.2
1978-83 .....	-1.2	-1.5	-5	-1.2	-1.4	-5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

**Table 23. Sausages and other prepared meats (SIC 2013): Indexes of output, employee hours, and employees, 1967-83**  
(1977=100)

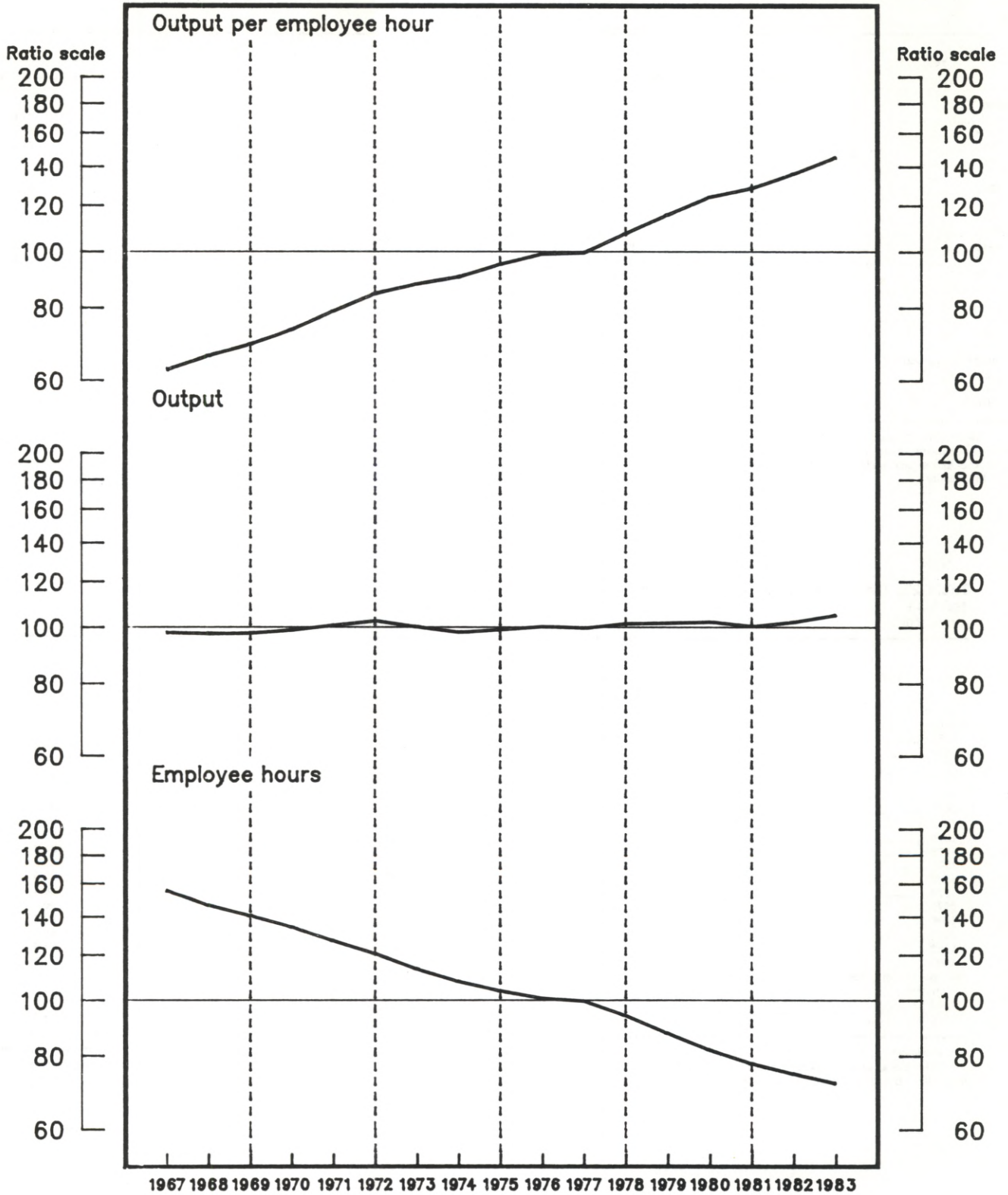
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1967 .....	64.3	81.2	80.3	83.6	78.9	77.4	82.7
1968 .....	65.0	82.4	84.2	77.6	82.4	82.1	83.2
1969 .....	61.8	83.7	84.8	80.8	83.1	82.3	85.3
1970 .....	63.5	87.2	88.2	84.6	86.9	86.4	88.0
1971 .....	71.8	91.1	91.8	89.3	91.4	91.6	91.1
1972 .....	77.5	96.6	97.1	95.2	95.7	95.9	95.3
1973 .....	66.7	96.5	95.7	98.7	96.3	95.5	98.4
1974 .....	75.9	98.9	97.1	103.8	97.7	95.7	103.1
1975 .....	72.8	97.3	94.6	104.6	96.0	92.9	104.2
1976 .....	82.4	97.9	96.3	102.3	96.0	93.7	102.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	94.1	100.5	101.3	98.4	101.3	102.4	98.4
1979 .....	94.4	99.8	101.1	96.3	99.4	100.6	96.3
1980 .....	101.0	99.2	99.9	97.4	100.1	101.2	97.4
1981 .....	95.0	100.7	102.8	95.3	101.3	103.5	95.3
1982 .....	91.1	101.4	102.8	97.4	102.3	104.1	97.4
1983 <sup>1</sup> .....	93.0	103.4	105.6	97.4	103.1	105.3	97.4
Average annual percent change:							
1967-83 .....	3.2	1.4	1.5	1.2	1.5	1.7	1.0
1978-83 .....	-6	.6	.8	-.1	.5	.8	-.1

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the U.S. Department of Agriculture.

Chart 13. Fluid milk (SIC 2026): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 24. Fluid milk (SIC 2026): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-83**  
(1977 = 100)

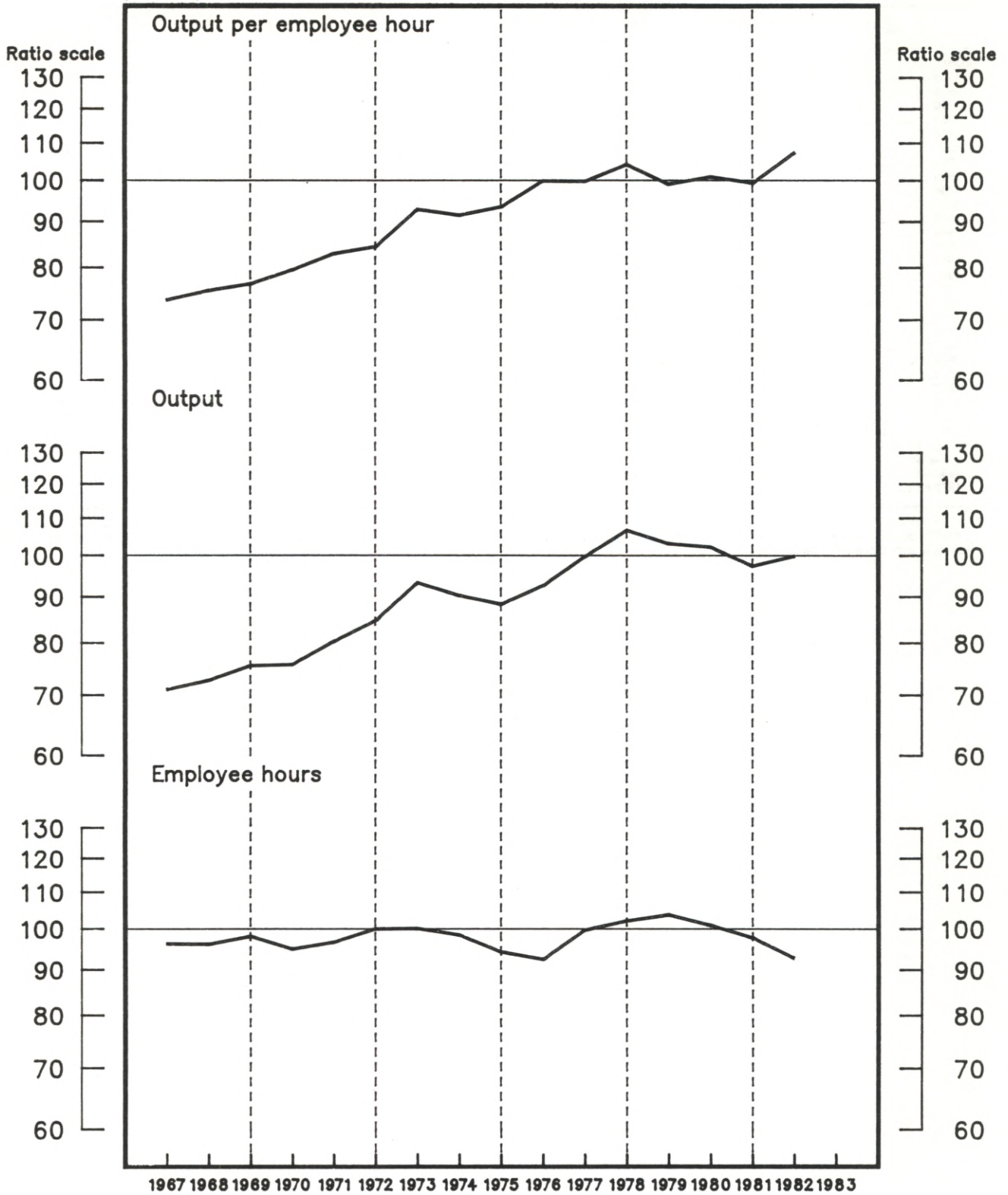
Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958 .....	48.5	48.4	89.8	185.0	185.6
1959 .....	49.8	49.7	92.0	184.9	185.0
1960 .....	50.9	50.8	93.3	183.2	183.8
1961 .....	51.9	51.8	93.7	180.7	180.8
1962 .....	54.2	53.8	95.3	175.8	177.3
1963 .....	57.4	56.8	98.6	171.8	173.7
1964 .....	58.6	57.9	100.0	170.7	172.6
1965 .....	59.3	58.7	99.8	168.2	170.0
1966 .....	61.0	60.3	98.5	161.5	163.4
1967 .....	62.9	62.2	98.1	156.0	157.7
1968 .....	66.5	64.4	97.7	147.0	151.7
1969 .....	69.6	67.3	98.0	140.9	145.6
1970 .....	73.7	71.3	99.2	134.6	139.1
1971 .....	79.4	77.3	101.1	127.3	130.8
1972 .....	85.1	83.7	102.9	120.9	122.9
1973 .....	88.4	87.2	100.4	113.6	115.1
1974 .....	90.9	89.7	98.3	108.1	109.6
1975 .....	95.5	94.3	99.4	104.1	105.4
1976 .....	99.5	98.1	100.6	101.1	102.5
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	108.0	106.6	101.8	94.3	95.5
1979 .....	116.3	114.2	102.1	87.8	89.4
1980 .....	124.8	123.0	102.5	82.1	83.3
1981 .....	129.3	126.5	100.7	77.9	79.6
1982 .....	137.0	134.0	102.5	74.8	76.5
1983 <sup>1</sup> .....	146.2	143.4	105.4	72.1	73.5
Average annual percent change:					
1958-83 .....	4.6	4.5	.4	-4.0	-3.9
1978-83 .....	6.0	5.9	.5	-5.2	-5.1

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Economic Research Service, U.S. Department of Agriculture; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 14. Preserved fruits and vegetables (SIC 203): Output per hour and related data, 1967-82  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 25. Preserved fruits and vegetables (SIC 203): Indexes of output per employee hour and output per employee, 1954-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	53.0	51.1	66.6	53.5	51.3	69.0
1955	54.2	52.4	67.2	53.4	51.3	69.3
1956	58.5	56.6	71.1	58.6	56.5	73.5
1957	55.2	56.3	49.5	55.8	56.8	51.1
1958	54.7	53.7	60.4	55.3	54.2	62.2
1959	54.8	53.6	62.2	56.3	55.1	64.0
1960	58.6	57.3	68.4	60.8	59.4	69.7
1961	60.3	58.8	71.8	61.6	60.1	72.1
1962	63.2	61.5	75.6	65.4	63.8	75.5
1963	65.8	64.5	75.3	66.0	64.6	75.1
1964	67.9	66.7	75.8	68.8	67.8	75.9
1965	70.3	69.0	79.0	71.5	70.4	78.8
1966	70.0	68.7	79.0	70.9	69.7	78.6
1967	73.8	71.6	89.6	75.5	73.6	89.1
1968	75.6	73.4	91.0	75.1	73.4	86.3
1969	76.9	74.9	91.2	77.1	75.5	87.6
1970	79.7	78.6	87.3	79.6	78.7	85.0
1971	83.1	82.3	88.2	83.9	83.2	87.3
1972	84.6	83.8	89.9	85.4	84.6	90.4
1973	93.1	93.0	93.7	93.8	93.6	94.8
1974	91.7	90.4	99.9	92.6	91.2	101.2
1975	93.7	92.5	101.4	93.7	92.3	102.4
1976	100.1	99.4	105.2	98.4	97.2	106.4
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.4	103.9	107.3	103.7	103.0	107.5
1979	99.3	99.6	97.9	99.4	99.6	98.4
1980	101.2	102.4	95.1	102.7	104.2	95.8
1981	99.6	100.2	95.9	100.7	101.6	96.3
1982 <sup>2</sup>	107.6	109.9	96.5	106.8	108.9	96.9
Average annual percent change:						
1947-82	2.8	2.9	2.0	2.8	3.0	1.9
1978-82	.6	1.2	-2.3	.7	1.3	-2.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the National Canners Association; U.S. Department of Agriculture; the Bureau of Labor Statistics; the Bureau of Competitive Assessment and Business Policy; the National Oceanic and Atmospheric Administration; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 26. Preserved fruits and vegetables (SIC 203): Indexes of output, employee hours, and employees, 1954-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	42.5	80.2	83.2	63.8	79.5	82.8	61.6
1955	44.4	81.9	84.8	66.1	83.1	86.5	64.1
1956	49.7	85.0	87.8	69.9	84.8	87.9	67.6
1957	47.5	86.1	84.3	95.9	85.2	83.6	93.0
1958	46.9	85.8	87.3	77.7	84.8	86.5	75.4
1959	47.8	87.3	89.1	76.9	84.9	86.7	74.7
1960	52.7	89.9	92.0	77.0	86.7	88.7	75.6
1961	54.0	89.5	91.9	75.2	87.6	89.8	74.9
1962	56.4	89.2	91.7	74.6	86.2	88.4	74.7
1963	58.6	89.0	90.9	77.8	88.8	90.7	78.0
1964	61.4	90.4	92.0	81.0	89.2	90.6	80.9
1965	65.1	92.6	94.3	82.4	91.0	92.5	82.6
1966	66.6	95.2	97.0	84.3	94.0	95.6	84.7
1967	71.2	96.5	99.5	79.5	94.3	96.8	79.9
1968	72.9	96.4	99.3	80.1	97.1	99.3	84.5
1969	75.7	98.4	101.1	83.0	98.2	100.3	86.4
1970	75.9	95.2	96.6	86.9	95.4	96.4	89.3
1971	80.5	96.9	97.8	91.3	95.9	96.7	92.2
1972	84.9	100.3	101.3	94.4	99.4	100.4	93.9
1973	93.5	100.4	100.5	99.8	99.7	99.9	98.6
1974	90.5	98.7	100.1	90.6	97.7	99.2	89.4
1975	88.5	94.5	95.7	87.3	94.5	95.9	86.4
1976	92.8	92.7	93.4	88.2	94.3	95.5	87.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.9	102.4	102.9	99.6	103.1	103.8	99.4
1979	103.3	104.0	103.7	105.5	103.9	103.7	105.0
1980	102.4	101.2	100.0	107.7	99.7	98.3	106.9
1981	97.6	98.0	97.4	101.8	96.9	96.1	101.4
1982 <sup>1</sup>	100.1	93.0	91.1	103.7	93.7	91.9	103.3
Average annual percent change:							
1947-82	3.6	.7	.6	1.5	.7	.5	1.6
1978-82	-1.9	-2.5	-3.0	.5	-2.6	-3.1	.4

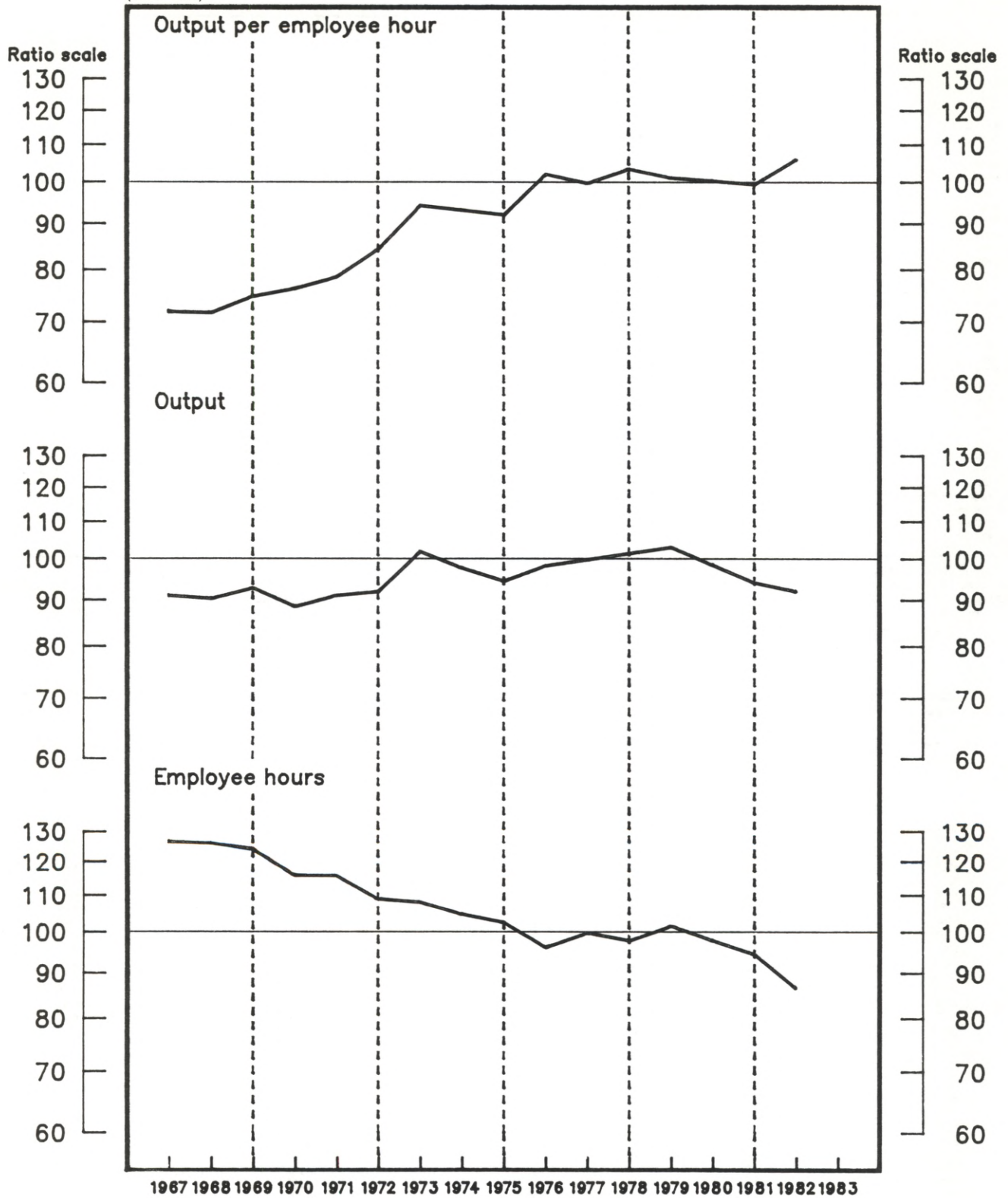
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the National Canners Association; U.S.

Department of Agriculture; the Bureau of Labor Statistics; the Bureau of Competitive Assessment and Business Policy; the National Oceanic and Atmospheric Administration; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 15. Canned fruits and vegetables (SIC 2033): Output per hour and related data, 1967-82  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 27. Canned fruits and vegetables (SIC 2033): Indexes of output per employee hour and output per employee, 1958-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	53.6	53.4	54.9	54.3	54.1	56.6
1959 .....	52.7	51.8	60.1	54.4	53.6	61.8
1960 .....	57.7	56.5	68.2	60.4	59.3	69.5
1961 .....	57.9	56.5	70.0	59.4	58.2	70.4
1962 .....	59.8	58.2	74.2	62.9	61.7	74.2
1963 .....	66.4	65.9	70.3	66.2	65.8	70.2
1964 .....	68.0	68.0	67.9	68.7	68.9	68.1
1965 .....	68.6	68.6	67.7	69.4	69.7	67.6
1966 .....	70.0	70.0	69.4	71.1	71.4	69.0
1967 .....	72.0	70.8	81.9	75.2	74.5	81.4
1968 .....	71.8	70.4	83.0	71.9	71.1	78.7
1969 .....	74.9	73.4	87.3	75.7	74.7	83.8
1970 .....	76.4	75.9	80.0	76.1	75.9	77.8
1971 .....	78.7	78.3	81.5	80.0	79.9	80.8
1972 .....	84.5	84.7	83.3	84.8	85.1	83.8
1973 .....	94.4	94.2	95.2	95.2	95.2	96.4
1974 .....	93.3	91.1	113.7	94.7	92.4	115.2
1975 .....	92.2	90.4	107.7	93.6	91.8	108.9
1976 .....	102.3	101.2	109.4	99.0	97.5	110.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.7	103.4	106.2	101.5	100.9	105.8
1979 .....	101.4	102.5	93.6	103.4	105.0	93.8
1980 .....	100.6	103.1	85.4	102.1	104.8	85.7
1981 .....	99.7	100.4	94.3	99.6	100.4	94.3
1982 <sup>2</sup> .....	106.3	108.5	93.2	106.8	109.0	93.1
Average annual percent change:						
1958-82 .....	3.1	3.2	2.3	2.9	3.0	2.2
1978-82 .....	.3	.8	-2.5	.6	1.1	-2.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 28. Canned fruits and vegetables (SIC 2033): Indexes of output, employee hours, and employees, 1958-82**  
(1977 = 100)

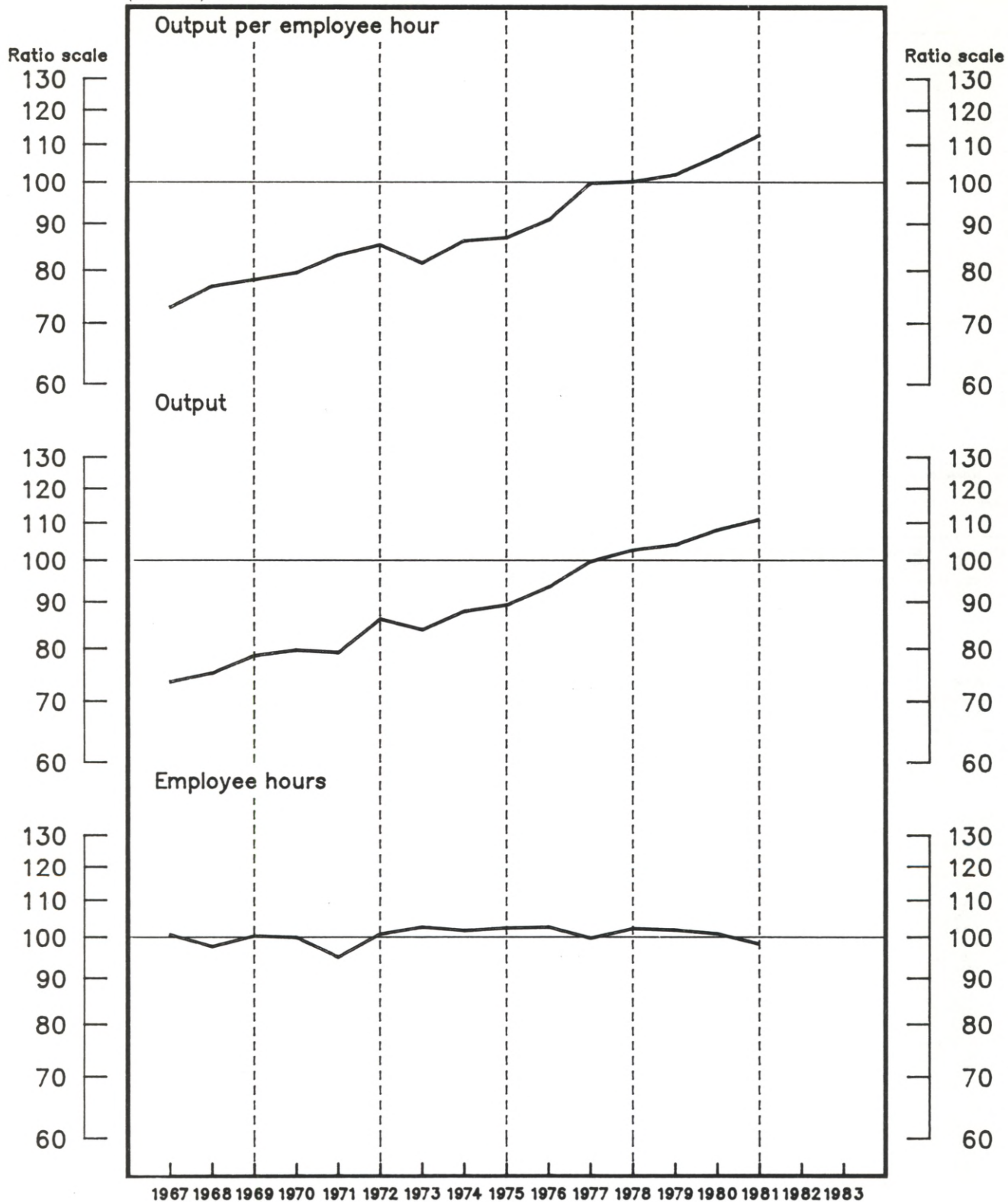
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	71.3	133.1	133.6	129.8	131.3	131.9	126.0
1959 .....	70.5	133.7	136.0	117.4	129.6	131.6	114.0
1960 .....	75.8	131.3	134.1	111.1	125.6	127.8	109.0
1961 .....	76.7	132.4	135.7	109.6	129.1	131.7	109.0
1962 .....	79.3	132.7	136.2	106.9	126.1	128.6	106.9
1963 .....	82.1	123.6	124.6	116.8	124.0	124.8	117.0
1964 .....	85.1	125.1	125.1	125.4	123.9	123.6	125.0
1965 .....	84.5	123.2	123.1	124.8	121.8	121.3	125.0
1966 .....	86.9	124.2	124.1	125.3	122.3	121.7	126.0
1967 .....	91.2	126.7	128.9	111.4	121.2	122.4	112.0
1968 .....	90.5	126.1	128.5	109.1	125.9	127.3	115.0
1969 .....	93.0	124.2	126.7	106.5	122.9	124.5	111.0
1970 .....	88.7	116.1	116.8	110.9	116.6	116.9	114.0
1971 .....	91.3	116.0	116.6	112.0	114.1	114.2	113.0
1972 .....	92.2	109.1	108.9	110.7	108.7	108.4	110.0
1973 .....	102.1	108.2	108.4	107.2	107.3	107.3	105.9
1974 .....	97.9	104.9	107.5	86.1	103.4	105.9	85.0
1975 .....	94.7	102.7	104.8	87.9	101.2	103.2	87.0
1976 .....	98.5	96.3	97.3	90.0	99.5	101.0	89.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.6	98.0	98.3	95.7	100.1	100.7	96.0
1979 .....	103.2	101.8	100.7	110.2	99.8	98.3	110.0
1980 .....	98.6	98.0	95.6	115.5	96.6	94.1	115.0
1981 .....	94.3	94.6	93.9	100.0	94.7	93.9	100.0
1982 <sup>1</sup> .....	92.2	86.7	85.0	98.9	86.3	84.6	99.0
Average annual percent change:							
1958-82 .....	1.3	-1.7	-1.8	-9	-1.6	-1.6	-9
1978-82 .....	-2.8	-3.1	-3.5	-3	-3.4	-3.9	-3

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 16. Grain mill products (SIC 204): Output per hour and related data, 1967-81  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 29. Grain mill products (SIC 204): Indexes of output per employee hour and output per employee, 1963-81**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	61.0	60.8	61.5	63.0	63.8	61.3
1964 .....	64.3	64.3	64.2	66.7	67.6	64.4
1965 .....	66.0	66.0	65.8	68.4	69.7	65.7
1966 .....	68.8	69.2	67.7	71.0	72.6	67.4
1967 .....	73.0	72.8	73.6	74.4	75.0	73.3
1968 .....	77.0	75.9	80.0	77.4	78.1	75.9
1969 .....	78.3	77.6	80.4	79.3	80.2	77.2
1970 .....	79.7	78.9	81.9	79.8	79.9	79.7
1971 .....	83.3	82.5	85.4	83.1	82.5	84.6
1972 .....	85.5	84.5	87.8	87.6	87.4	88.3
1973 .....	81.7	80.0	86.3	86.1	85.6	87.2
1974 .....	86.4	86.0	87.2	87.3	86.9	88.4
1975 .....	87.1	86.2	89.5	88.6	87.9	90.3
1976 .....	91.1	91.1	91.1	92.4	92.6	92.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.4	101.0	98.8	100.1	100.6	98.8
1979 .....	102.2	101.5	104.3	103.1	102.4	104.6
1980 .....	107.1	107.2	106.9	107.3	107.2	107.7
1981 .....	112.9	113.2	112.1	114.9	115.8	112.6
Average annual percent change:						
1963-81 .....	3.1	3.2	3.1	3.0	2.9	3.2
1978-81 .....	4.1	4.0	4.1	4.6	4.8	4.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census; Agricultural Marketing Service, U.S. Department of Agriculture; the Rice Millers' Association; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 30. Grain mill products (SIC 204): Indexes of output, employee hours, and employees, 1963-81**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	63.1	103.4	103.8	102.6	100.2	98.9	103.0
1964 .....	65.2	101.4	101.4	101.5	97.8	96.5	101.2
1965 .....	65.5	99.2	99.2	99.6	95.7	94.0	99.7
1966 .....	68.2	99.1	98.6	100.7	96.0	93.9	101.2
1967 .....	73.7	100.9	101.2	100.2	99.0	98.3	100.6
1968 .....	75.4	97.9	99.3	94.3	97.4	96.6	99.4
1969 .....	78.8	100.6	101.6	98.0	99.4	98.3	102.1
1970 .....	79.9	100.2	101.3	97.5	100.1	100.0	100.3
1971 .....	79.4	95.3	96.2	93.0	95.5	96.3	93.8
1972 .....	86.4	101.1	102.2	98.4	98.6	98.8	97.9
1973 .....	84.1	102.9	105.1	97.5	97.7	98.3	96.5
1974 .....	88.1	102.0	102.5	101.0	100.9	101.4	99.7
1975 .....	89.5	102.7	103.8	100.0	101.0	101.8	99.1
1976 .....	93.7	102.9	102.9	102.9	101.4	101.2	101.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.9	102.5	101.9	104.1	102.8	102.3	104.2
1979 .....	104.3	102.1	102.8	100.0	101.2	101.9	99.7
1980 .....	108.3	101.1	101.0	101.3	100.9	101.0	100.6
1981 .....	111.2	98.5	98.2	99.2	96.8	96.0	98.8
Average annual percent change:							
1963-81 .....	3.2	( <sup>1</sup> )	( <sup>1</sup> )	.1	.2	.3	( <sup>1</sup> )
1978-81 .....	2.7	-1.3	-1.3	-1.3	-1.8	-2.0	-1.5

<sup>1</sup> Less than .05 percent.

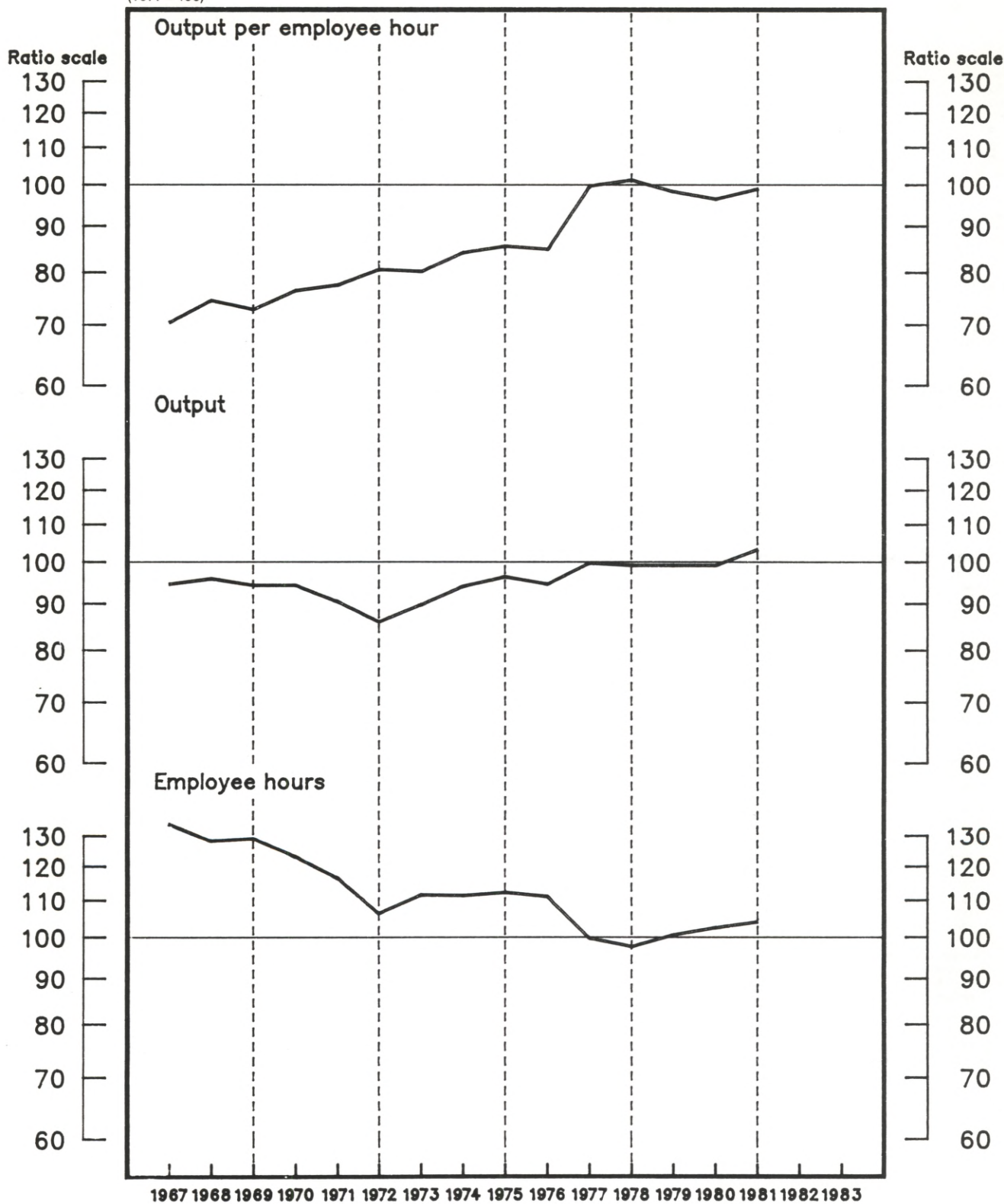
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census; Agricultural

Marketing Service, U.S. Department of Agriculture; the Rice Millers' Association; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 17. Flour and other grain mill products (SIC 2041): Output per hour and related data, 1967-81

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 31. Flour and other grain mill products (SIC 2041): Indexes of output per employee hour and output per employee, 1954-81 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	40.2	39.5	42.5	41.5	40.6	44.0
1955	41.9	41.5	43.2	42.8	42.3	44.4
1956	44.0	43.6	45.7	44.9	44.1	47.2
1957	47.8	47.4	49.3	48.6	48.0	50.8
1958	48.7	49.2	47.7	48.7	48.6	49.2
1959	47.0	46.8	47.9	48.4	48.1	49.4
1960	49.4	49.5	49.5	51.6	52.1	50.4
1961	51.4	50.7	54.3	53.7	53.4	54.5
1962	52.9	51.5	58.0	55.7	54.9	57.9
1963	59.4	57.9	65.2	63.0	62.2	65.1
1964	62.6	61.4	66.8	65.7	65.2	66.9
1965	64.5	63.7	67.4	66.5	66.3	67.2
1966	68.4	67.2	73.2	70.7	70.1	72.6
1967	70.6	70.2	71.9	72.1	72.4	71.5
1968	74.7	73.0	80.7	75.7	75.4	76.5
1969	73.0	71.8	77.0	73.7	73.7	73.8
1970	76.6	76.0	78.8	77.6	78.0	76.6
1971	77.7	76.3	82.1	78.6	77.7	81.2
1972	80.8	78.9	87.7	83.5	81.9	88.2
1973	80.4	78.0	88.9	82.6	80.1	90.0
1974	84.4	82.6	90.9	84.5	82.1	92.1
1975	85.8	85.8	85.8	85.2	84.7	86.5
1976	85.1	86.7	80.7	84.5	85.7	81.5
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	101.5	100.2	106.0	102.7	101.2	106.9
1979	98.5	97.1	103.3	101.3	100.3	104.3
1980	96.7	95.5	100.7	100.0	99.4	101.7
1981	99.2	97.5	104.9	102.2	100.8	105.9
Average annual percent change:						
1947-81	3.7	3.8	3.3	3.6	3.7	3.2
1978-81	-9	-1.0	-6	-3	-2	-5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

NOTE: Because of periodic revisions in source data, the measures in this table may

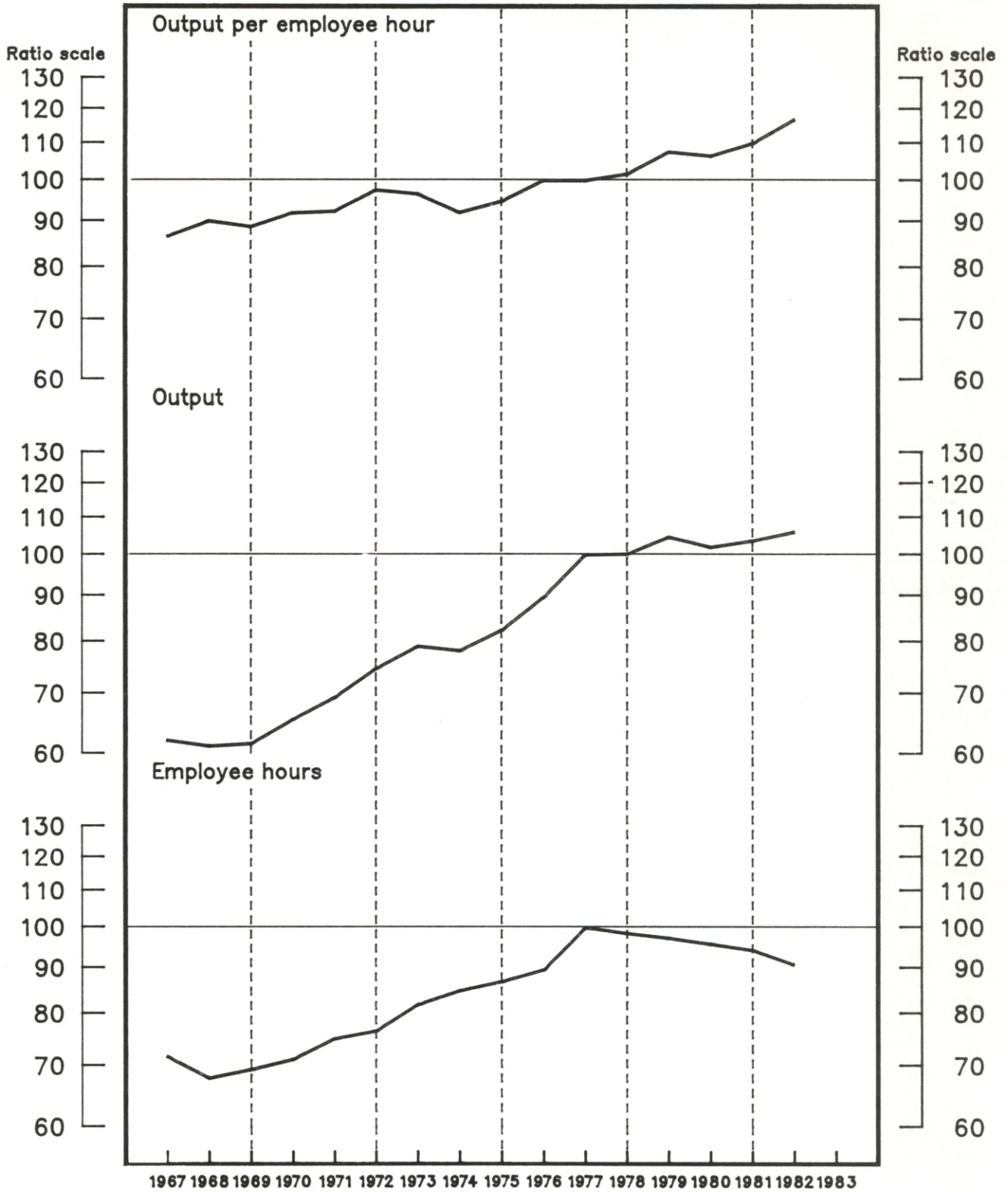
**Table 32. Flour and other grain mill products (SIC 2041): Indexes of output, employee hours, and employees, 1954-81 (1977=100)**

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	77.0	191.5	194.7	181.2	185.7	189.5	174.9
1955	79.1	188.9	190.6	183.1	184.8	187.2	178.0
1956	80.5	182.8	184.6	176.2	179.4	182.7	170.6
1957	84.5	176.8	178.1	171.5	173.7	176.2	166.4
1958	88.1	180.8	179.2	184.6	180.8	181.4	179.2
1959	88.5	188.1	189.1	184.6	182.7	184.0	179.3
1960	90.1	182.4	182.2	182.2	174.5	172.8	178.8
1961	91.4	177.7	180.4	168.4	170.3	171.2	167.6
1962	91.7	173.3	177.9	158.1	164.7	167.0	158.5
1963	90.4	152.1	156.1	138.6	143.6	145.3	138.9
1964	92.1	147.1	149.9	137.9	140.2	141.2	137.7
1965	88.5	137.3	139.0	131.4	133.0	133.4	131.7
1966	91.0	133.0	135.5	124.4	128.8	129.8	125.3
1967	94.8	134.2	135.0	131.8	131.4	130.9	132.6
1968	96.1	128.7	131.7	119.1	126.9	127.4	125.6
1969	94.5	129.5	131.7	122.8	128.3	128.3	128.0
1970	94.5	123.4	124.4	119.9	121.8	121.2	123.3
1971	90.7	116.8	118.8	110.5	115.4	116.8	111.7
1972	86.2	106.7	109.3	98.3	103.2	105.2	97.7
1973	90.0	111.9	115.4	101.2	108.9	112.3	100.0
1974	94.3	111.7	114.2	103.7	111.6	114.9	102.4
1975	96.6	112.6	112.6	112.6	113.4	114.1	111.7
1976	94.8	111.4	109.3	117.5	112.2	110.6	116.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	99.4	97.9	99.2	93.8	96.8	98.2	93.0
1979	99.4	100.9	102.4	96.2	98.1	99.1	95.3
1980	99.4	102.8	104.1	98.7	99.4	100.0	97.7
1981	103.5	104.3	106.1	98.7	101.3	102.7	97.7
Average annual percent change:							
1947-81	.6	-2.9	-3.0	-2.6	-2.8	-3.0	-2.5
1978-81	1.2	2.1	2.2	1.8	1.5	1.4	1.7

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 18. Cereal breakfast foods (SIC 2043): Output per hour and related data, 1967-82  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 33. Cereal breakfast foods (SIC 2043): Indexes of output per employee hour and output per employee, 1963-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	79.3	81.3	68.9	76.4	77.9	69.1
1964 .....	81.0	82.3	73.9	78.9	79.7	75.8
1965 .....	83.0	84.4	75.2	80.0	80.9	75.4
1966 .....	84.1	85.4	76.9	82.5	83.5	77.1
1967 .....	86.6	88.6	76.5	83.5	84.8	76.9
1968 .....	90.1	92.3	79.4	88.1	90.8	75.7
1969 .....	88.8	91.0	77.9	87.7	90.3	76.2
1970 .....	92.0	93.8	82.8	89.5	91.4	81.1
1971 .....	92.4	94.5	81.1	90.8	92.8	81.8
1972 .....	97.6	99.6	87.5	95.0	96.4	88.2
1973 .....	96.6	96.9	95.0	99.0	99.2	97.9
1974 .....	92.1	93.1	87.3	92.3	93.0	88.5
1975 .....	94.8	95.3	92.0	97.3	98.0	93.2
1976 .....	100.0	100.9	95.6	97.9	98.0	97.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.7	101.9	100.2	99.0	98.8	100.2
1979 .....	107.6	105.4	122.6	105.3	102.4	123.8
1980 .....	106.5	104.5	119.4	105.2	102.7	120.6
1981 .....	110.0	108.2	121.4	109.0	106.8	122.6
1982 <sup>2</sup> .....	116.9	120.8	98.0	112.3	115.3	98.5
Average annual percent change:						
1963-82 .....	1.8	1.6	2.7	1.9	1.7	2.8
1978-82 .....	3.1	3.7	-5	2.9	3.6	-4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 34. Cereal breakfast foods (SIC 2043): Indexes of output, employee hours, and employees, 1963-82**  
(1977=100)

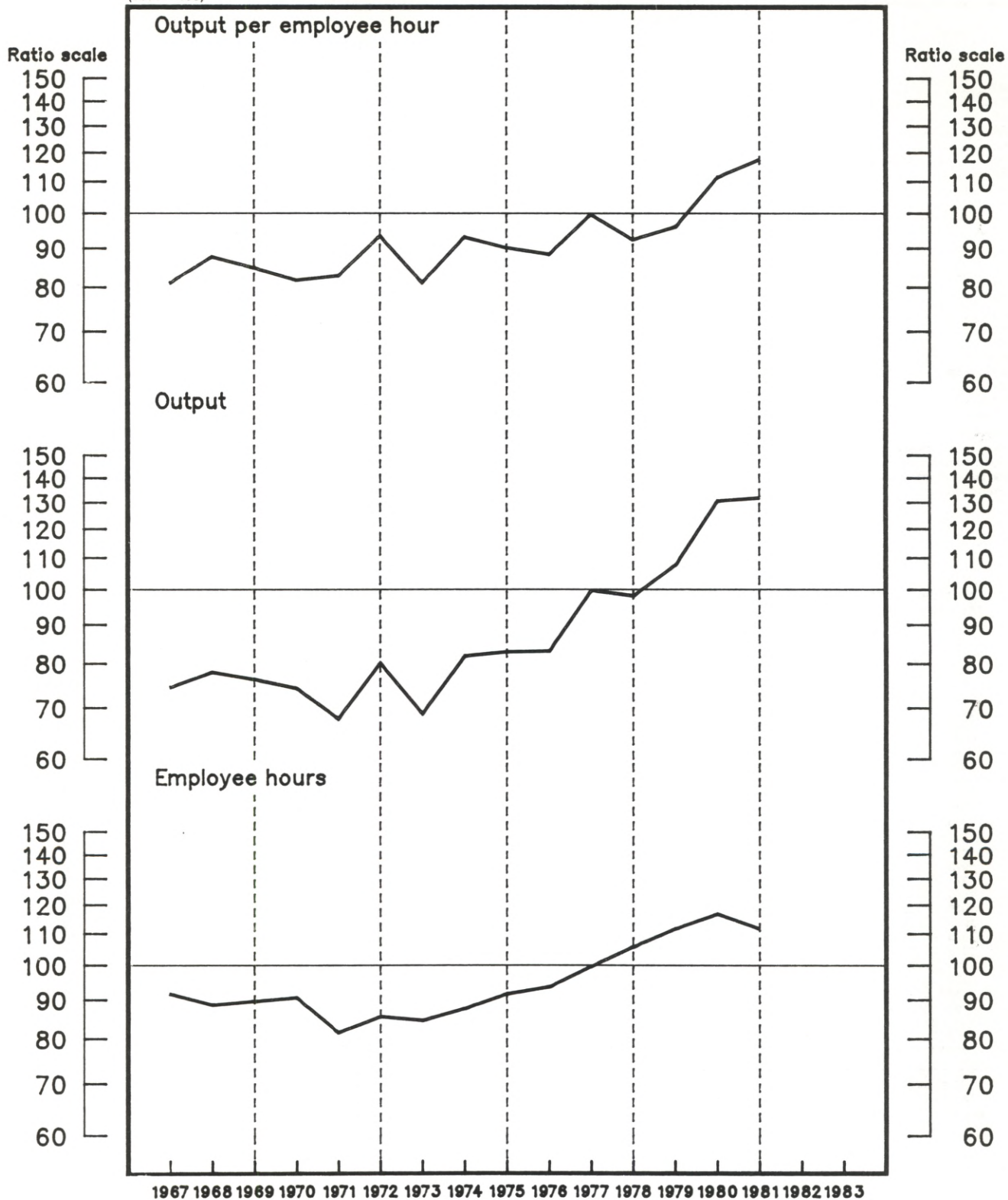
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	53.1	67.0	65.3	77.1	69.5	68.2	76.9
1964 .....	55.4	68.4	67.3	75.0	70.2	69.5	73.1
1965 .....	58.0	69.9	68.7	77.1	72.5	71.7	76.9
1966 .....	59.3	70.5	69.4	77.1	71.9	71.0	76.9
1967 .....	62.1	71.7	70.1	81.2	74.4	73.2	80.8
1968 .....	61.2	67.9	66.3	77.1	69.5	67.4	80.8
1969 .....	61.6	69.4	67.7	79.1	70.2	68.2	80.8
1970 .....	65.5	71.2	69.8	79.1	73.2	71.7	80.8
1971 .....	69.3	75.0	73.3	85.4	76.3	74.7	84.7
1972 .....	74.7	76.5	75.0	85.4	78.6	77.5	84.7
1973 .....	79.1	81.9	81.6	83.3	79.9	79.7	80.8
1974 .....	78.2	84.9	84.0	89.6	84.7	84.1	88.4
1975 .....	82.4	86.9	86.5	89.6	84.7	84.1	88.4
1976 .....	89.6	89.6	88.8	93.7	91.5	91.4	92.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.2	98.5	98.3	100.0	101.2	101.4	100.0
1979 .....	104.7	97.3	99.3	85.4	99.4	102.2	84.6
1980 .....	102.0	95.8	97.6	85.4	97.0	99.3	84.6
1981 .....	103.7	94.3	95.8	85.4	95.1	97.1	84.6
1982 <sup>1</sup> .....	106.1	90.8	87.8	108.3	94.5	92.0	107.7
Average annual percent change:							
1963-82 .....	4.1	2.3	2.5	1.4	2.2	2.4	1.3
1978-82 .....	1.1	-1.9	-2.6	1.6	-1.8	-2.4	1.5

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 19. Rice milling (SIC 2044): Output per hour and related data, 1967-81  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 35. Rice milling (SIC 2044): Indexes of output per employee hour and output per employee, 1963-81**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	61.2	66.2	43.1	64.2	71.9	41.8
1964 .....	69.9	74.7	51.2	74.2	81.1	51.9
1965 .....	73.4	78.1	55.0	79.7	87.1	55.8
1966 .....	79.1	85.6	55.5	84.4	93.7	56.2
1967 .....	81.3	87.2	59.0	85.4	93.4	59.8
1968 .....	88.0	93.9	65.2	89.4	97.7	62.6
1969 .....	85.1	90.5	63.7	87.4	95.6	61.2
1970 .....	82.0	92.1	50.7	85.1	99.3	49.7
1971 .....	83.1	90.7	56.7	85.9	97.1	54.4
1972 .....	93.8	102.4	63.5	96.6	107.3	64.4
1973 .....	81.5	89.3	54.5	85.0	95.3	55.3
1974 .....	93.4	98.6	72.4	89.5	93.8	73.0
1975 .....	90.4	94.3	73.3	90.6	95.0	73.9
1976 .....	88.7	92.0	73.5	85.1	87.7	74.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	92.7	102.1	61.5	92.7	103.6	60.6
1979 .....	96.3	106.7	62.3	94.2	105.4	61.7
1980 .....	111.8	122.3	75.6	112.3	124.8	74.9
1981 .....	117.9	120.7	104.3	124.5	129.0	105.8
Average annual percent change:						
1963-81 .....	2.5	2.4	3.0	2.1	1.8	3.0
1978-81 .....	9.1	6.6	19.5	11.2	8.6	20.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census; Agricultural Marketing Service, U.S. Department of Agriculture; the Rice Millers' Association; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 36. Rice milling (SIC 2044): Indexes of output, employee hours, and employees, 1963-81**  
(1977=100)

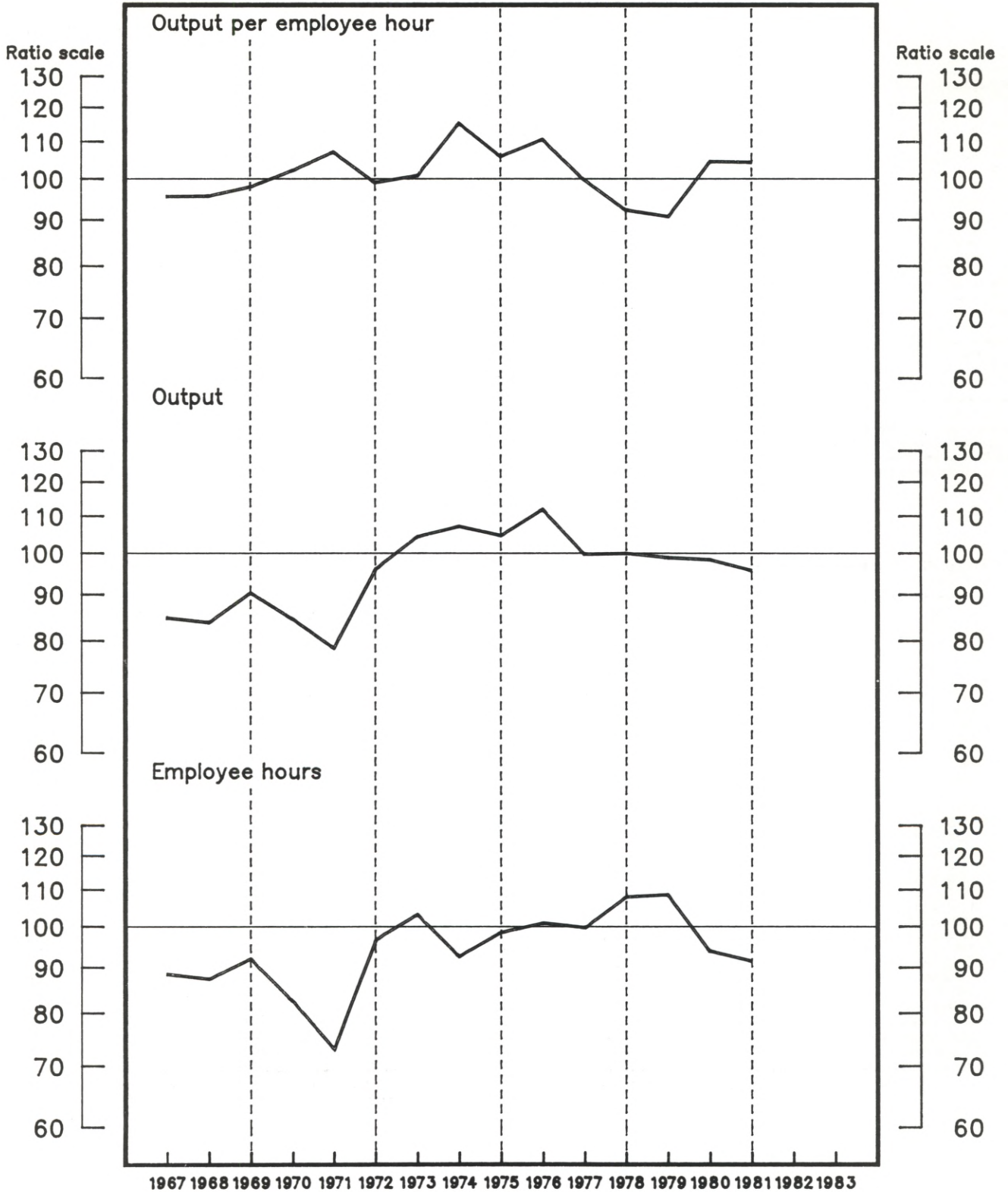
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	57.5	93.9	86.9	133.5	89.6	80.0	137.5
1964 .....	64.9	92.9	86.9	126.7	87.5	80.0	125.0
1965 .....	69.7	94.9	89.3	126.7	87.5	80.0	125.0
1966 .....	70.3	88.9	82.1	126.7	83.3	75.0	125.0
1967 .....	74.7	91.9	85.7	126.7	87.5	80.0	125.0
1968 .....	78.2	88.9	83.3	120.0	87.5	80.0	125.0
1969 .....	76.5	89.9	84.5	120.0	87.5	80.0	125.0
1970 .....	74.5	90.9	80.9	146.8	87.5	75.0	150.0
1971 .....	68.0	81.8	75.0	120.0	79.2	70.0	125.0
1972 .....	80.5	85.8	78.6	126.7	83.3	75.0	125.0
1973 .....	69.1	84.8	77.4	126.7	81.3	72.5	125.0
1974 .....	82.1	87.9	83.3	113.4	91.7	87.5	112.5
1975 .....	83.1	91.9	88.1	113.4	91.7	87.5	112.5
1976 .....	83.3	93.9	90.5	113.4	97.9	95.0	112.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.4	106.1	96.4	160.0	106.2	95.0	162.5
1979 .....	108.0	112.1	101.2	173.3	114.6	102.5	175.0
1980 .....	131.0	117.2	107.1	173.3	116.7	105.0	175.0
1981 .....	132.2	112.1	109.5	126.7	106.2	102.5	125.0
Average annual percent change:							
1963-81 .....	3.6	1.1	1.2	.6	1.5	1.8	.6
1978-81 .....	11.4	2.1	4.5	-6.8	.2	2.6	-7.6

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census; Agricultural

Marketing Service, U.S. Department of Agriculture; the Rice Millers' Association; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 20. Blended and prepared flour (SIC 2045): Output per hour and related data, 1967-81  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 37. Blended and prepared flour (SIC 2045): Indexes of output per employee hour and output per employee, 1963-81**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	78.0	76.1	82.8	78.5	76.6	83.3
1964 .....	85.5	90.8	74.3	85.6	91.6	74.6
1965 .....	87.5	87.4	87.9	87.6	87.1	88.8
1966 .....	90.0	89.9	90.4	88.8	87.8	91.3
1967 .....	95.8	91.0	110.2	95.2	89.7	110.5
1968 .....	95.9	89.9	115.2	95.3	90.2	109.2
1969 .....	98.2	92.9	114.4	98.8	93.9	112.1
1970 .....	102.4	98.7	113.1	98.9	94.6	110.3
1971 .....	107.4	101.4	126.1	105.1	97.3	128.1
1972 .....	99.3	94.8	112.8	102.4	98.1	113.8
1973 .....	101.1	93.7	125.6	108.5	101.2	129.5
1974 .....	115.6	109.3	135.6	115.6	107.4	139.7
1975 .....	106.2	100.8	122.8	107.5	101.5	124.0
1976 .....	110.9	111.3	109.9	115.0	116.3	112.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	92.5	91.2	96.2	93.6	92.3	96.5
1979 .....	91.0	87.5	101.2	96.8	94.2	103.0
1980 .....	104.8	101.1	115.5	102.3	97.0	116.5
1981 .....	104.6	101.8	112.3	106.0	103.0	113.4
Average annual percent change:						
1963-81 .....	1.0	.9	1.3	1.2	1.1	1.4
1978-81 .....	5.2	4.9	6.1	4.4	3.6	6.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

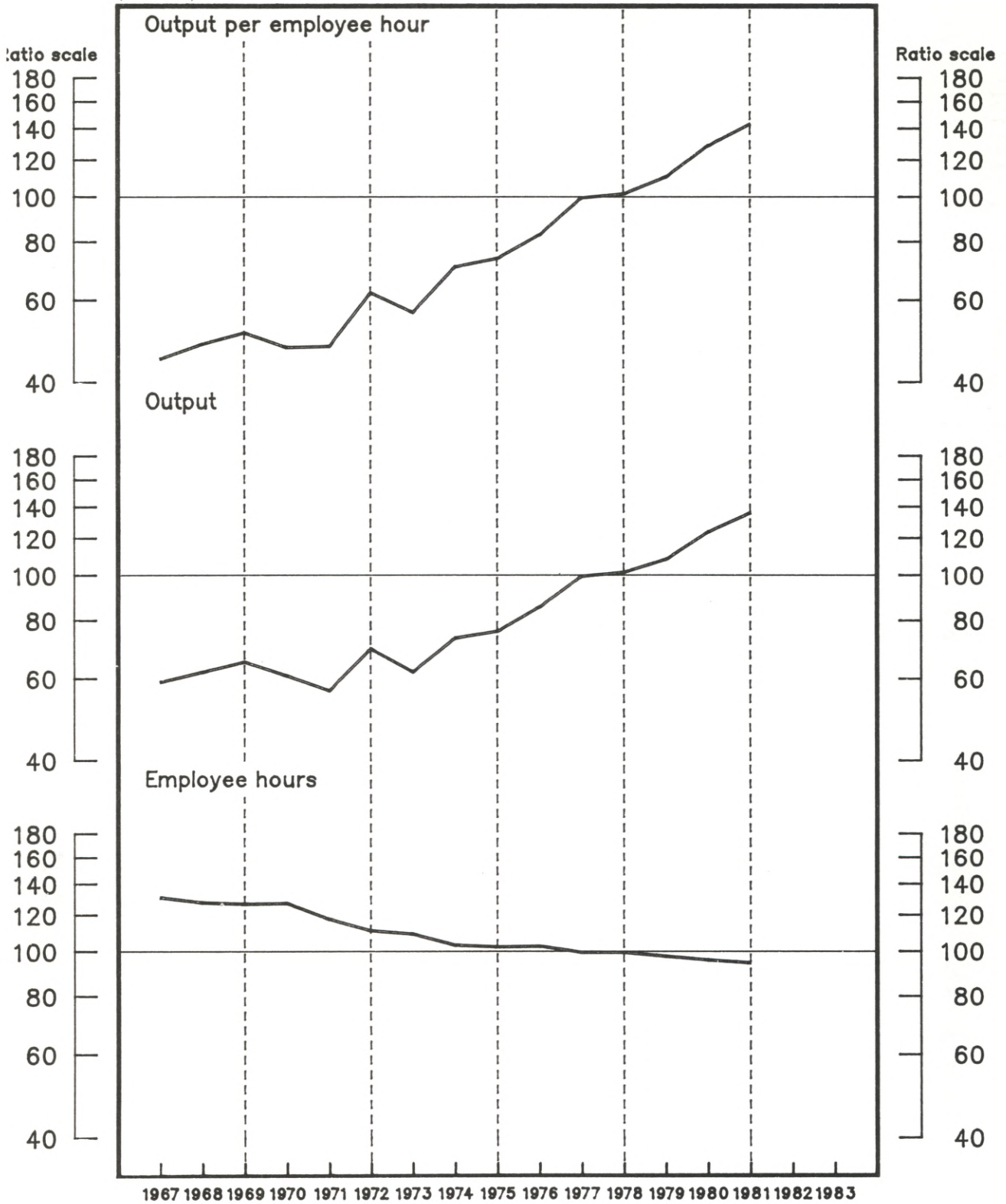
**Table 38. Blended and prepared flour (SIC 2045): Indexes of output, employee hours, and employees, 1963-81**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	67.3	86.3	88.4	81.3	85.7	87.9	80.8
1964 .....	77.4	90.5	85.2	104.2	90.4	84.5	103.8
1965 .....	75.1	85.8	85.9	85.4	85.7	86.2	84.6
1966 .....	77.2	85.8	85.9	85.4	86.9	87.9	84.6
1967 .....	85.0	88.7	93.4	77.1	89.3	94.8	76.9
1968 .....	84.0	87.6	93.4	72.9	88.1	93.1	76.9
1969 .....	90.6	92.3	97.5	79.2	91.7	96.5	80.8
1970 .....	84.8	82.8	85.9	75.0	85.7	89.6	76.9
1971 .....	78.8	73.4	77.7	62.5	75.0	81.0	61.5
1972 .....	96.3	97.0	101.6	85.4	94.0	98.2	84.6
1973 .....	104.6	103.5	111.6	83.3	96.4	103.4	80.8
1974 .....	107.4	92.9	98.3	79.2	92.9	100.0	76.9
1975 .....	104.9	98.8	104.1	85.4	97.6	103.4	84.6
1976 .....	112.2	101.2	100.8	102.1	97.6	96.5	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.2	108.3	109.9	104.2	107.1	108.6	103.8
1979 .....	99.1	108.9	113.2	97.9	102.4	105.2	96.2
1980 .....	98.6	94.1	97.5	85.4	96.4	101.7	84.6
1981 .....	95.9	91.7	94.2	85.4	90.5	93.1	84.6
Average annual percent change:							
1963-81 .....	2.1	1.0	1.2	.8	.9	1.0	.6
1978-81 .....	-1.4	-6.2	-5.9	-7.1	-5.5	-4.8	-7.2

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 21. Wet corn milling (SIC 2046): Output per hour and related data, 1967-81  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 39. Wet corn milling (SIC 2046): Indexes of output per employee hour and output per employee, 1963-81**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
<b>Index:</b>						
1963 .....	39.2	37.2	45.6	41.0	39.5	45.2
1964 .....	41.9	40.2	47.2	44.0	42.8	47.5
1965 .....	41.5	40.2	45.2	44.2	43.9	45.0
1966 .....	42.2	41.6	43.7	43.7	43.9	43.2
1967 .....	45.1	45.8	43.0	45.8	47.2	42.8
1968 .....	48.6	48.4	48.8	48.1	49.1	46.0
1969 .....	51.4	51.1	52.1	52.9	54.4	49.5
1970 .....	47.8	48.3	46.7	49.4	51.3	45.2
1971 .....	48.1	49.6	44.6	47.7	49.3	44.1
1972 .....	62.6	64.2	58.8	63.0	64.9	58.6
1973 .....	56.9	57.6	54.8	58.1	59.3	55.3
1974 .....	71.1	72.8	66.8	72.4	74.7	67.2
1975 .....	74.1	72.4	78.9	76.2	75.2	78.7
1976 .....	83.2	81.8	87.5	85.1	83.8	88.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.0	100.7	105.6	100.2	98.3	105.4
1979 .....	110.8	114.5	101.7	109.7	113.0	102.1
1980 .....	129.2	131.1	124.4	126.7	127.7	124.4
1981 .....	143.8	144.8	141.3	143.1	143.8	141.0
<b>Average annual percent change:</b>						
1963-81 .....	7.5	7.7	6.8	7.1	7.2	7.0
1978-81 .....	12.6	13.0	11.4	12.9	13.5	11.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

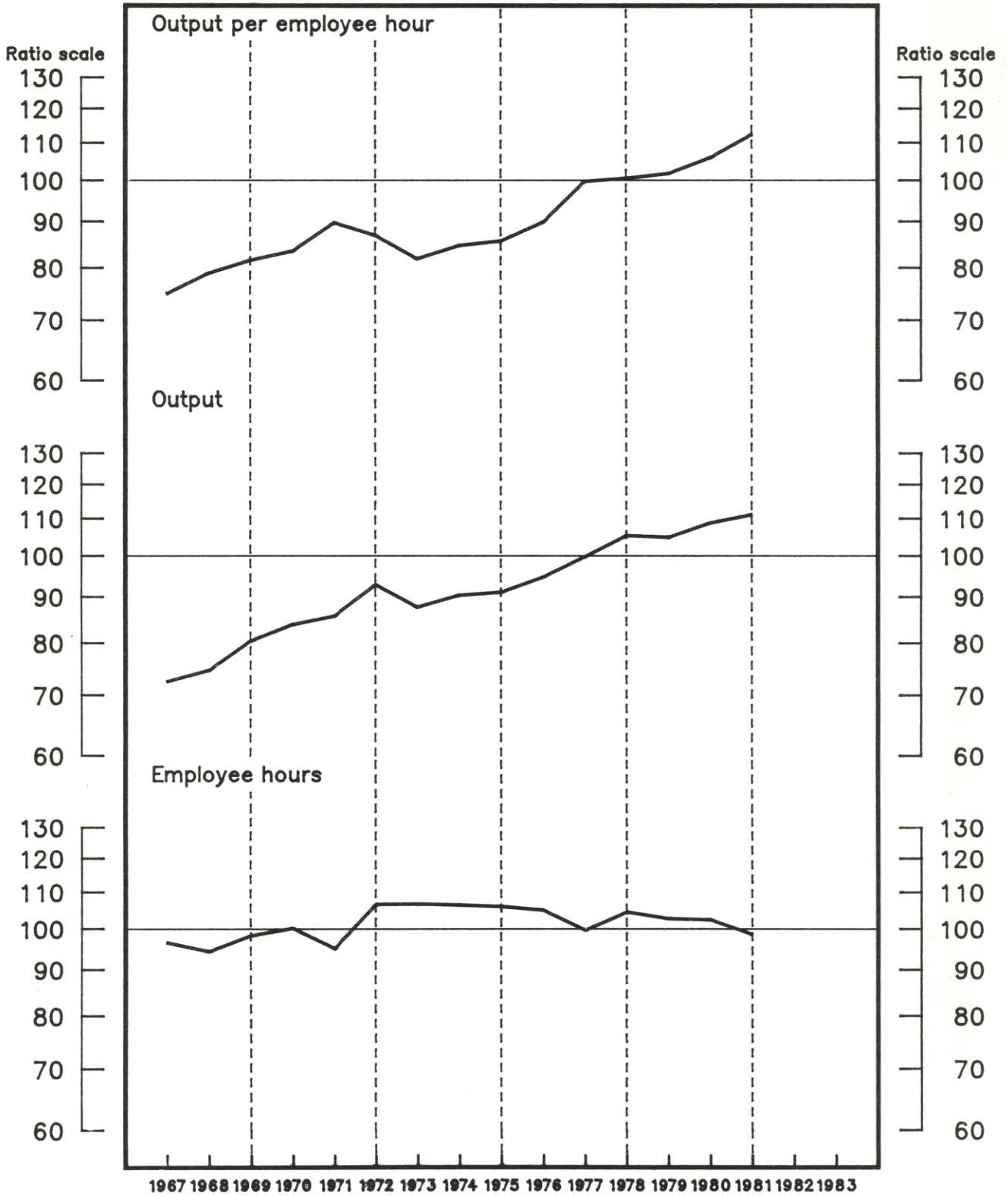
**Table 40. Wet corn milling (SIC 2046): Indexes of output, employee hours, and employees, 1963-81**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
<b>Index:</b>							
1963 .....	49.6	126.4	133.2	108.7	121.1	125.6	109.7
1964 .....	50.5	120.4	125.5	106.9	114.7	118.0	106.4
1965 .....	52.3	126.1	130.0	115.6	118.4	119.2	116.1
1966 .....	55.7	132.1	133.8	127.6	127.6	126.9	129.0
1967 .....	59.3	131.6	129.4	137.9	129.4	125.6	138.7
1968 .....	62.3	128.3	128.7	127.6	129.4	126.9	135.5
1969 .....	65.5	127.4	128.1	125.8	123.8	120.5	132.2
1970 .....	61.2	127.9	126.8	131.0	123.8	119.2	135.5
1971 .....	56.9	118.2	114.7	127.6	119.3	115.3	129.0
1972 .....	69.9	111.6	108.9	118.9	111.0	107.7	119.3
1973 .....	62.4	109.7	108.3	113.8	107.4	105.2	112.9
1974 .....	73.7	103.7	101.3	110.3	101.8	98.7	109.7
1975 .....	76.2	102.8	105.2	96.6	100.0	101.3	96.8
1976 .....	85.9	103.2	105.0	98.2	100.9	102.5	96.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.0	100.0	101.3	96.6	101.8	103.8	96.8
1979 .....	108.7	98.1	94.9	106.9	99.1	96.2	106.5
1980 .....	124.4	96.3	94.9	100.0	98.2	97.4	100.0
1981 .....	136.5	94.9	94.3	96.6	95.4	94.9	96.8
<b>Average annual percent change:</b>							
1963-81 .....	5.4	-1.9	-2.2	-1.3	-1.6	-1.7	-1.5
1978-81 .....	10.6	-1.7	-2.1	-7	-2.0	-2.5	-6

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 22. Prepared feeds for animals and fowls (SIC 2047, 2048): Output per hour and related data, 1967-81  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 41. Prepared feeds for animals and fowls (SIC 2047, 2048): Indexes of output per employee hour and output per employee, 1963-81**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	61.3	61.1	61.7	63.4	64.4	61.5
1964 .....	64.1	63.5	65.3	66.9	67.8	65.4
1965 .....	66.2	66.2	66.2	69.4	71.4	66.2
1966 .....	69.5	69.7	68.8	72.7	75.2	68.4
1967 .....	75.1	73.3	78.9	77.5	76.9	78.5
1968 .....	79.1	76.3	85.2	80.1	79.6	80.8
1969 .....	81.8	79.4	87.1	82.8	82.3	83.5
1970 .....	83.7	79.9	92.4	83.7	80.6	89.9
1971 .....	90.0	86.7	97.8	89.9	86.4	97.0
1972 .....	87.1	83.5	95.3	90.7	88.1	96.0
1973 .....	82.1	78.6	90.5	88.3	86.5	91.6
1974 .....	84.9	83.3	88.2	86.8	85.5	89.3
1975 .....	85.9	83.7	90.6	88.0	86.4	91.3
1976 .....	90.1	88.3	93.9	92.9	92.0	94.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.8	101.7	98.8	101.1	102.5	98.8
1979 .....	102.0	100.8	104.8	103.1	102.0	105.1
1980 .....	106.2	106.8	105.2	106.6	107.1	105.9
1981 .....	112.6	115.1	108.3	115.2	119.3	108.7
Average annual percent change:						
1963-81 .....	3.0	3.1	2.8	2.8	2.8	2.9
1978-81 .....	3.8	4.4	2.8	4.3	5.2	3.0

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

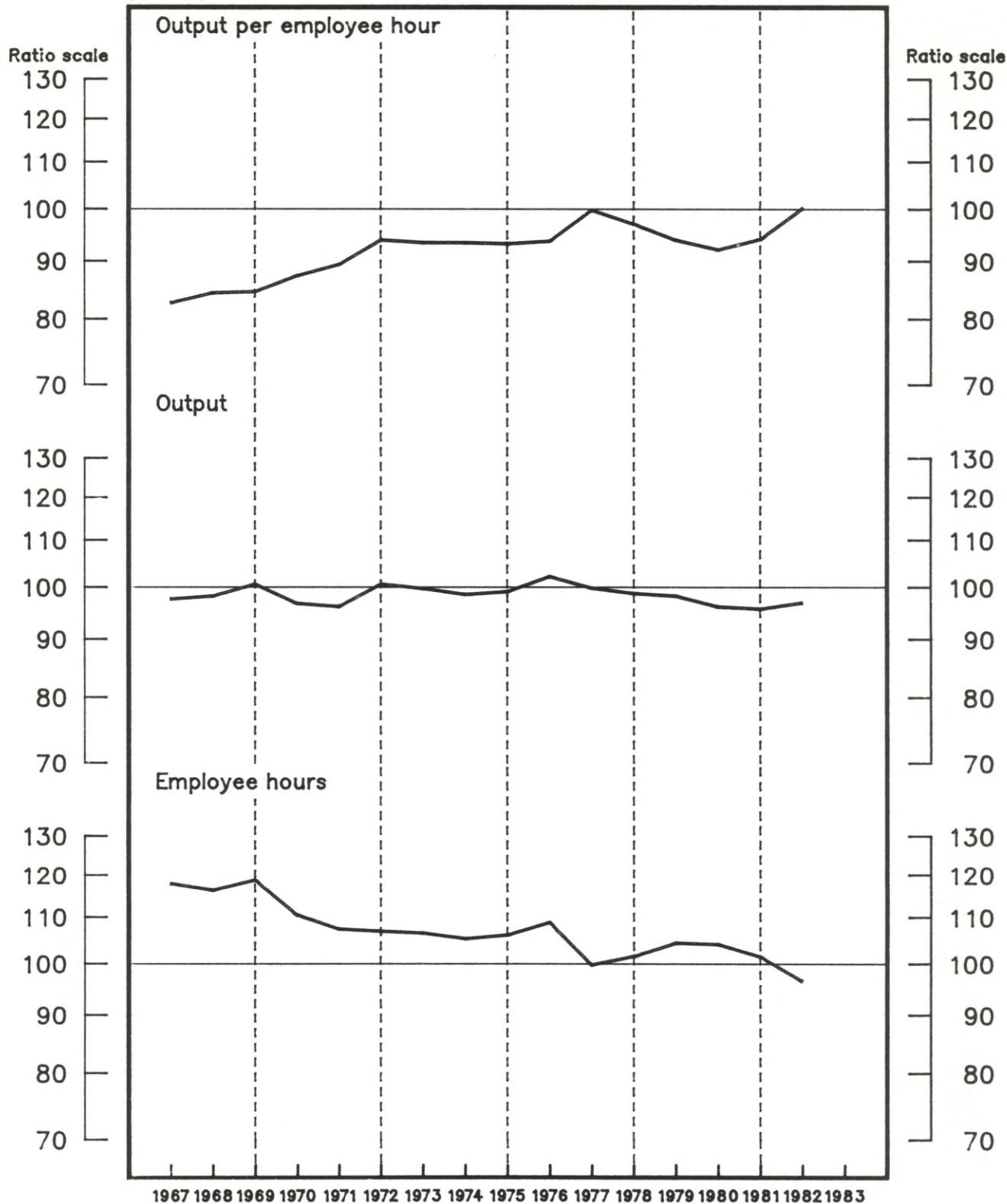
**Table 42. Prepared feeds for animals and fowls (SIC 2047, 2048): Indexes of output, employee hours, and employees, 1963-81**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	60.9	99.3	99.7	98.7	96.1	94.5	99.1
1964 .....	62.2	97.0	97.9	95.3	93.0	91.8	95.1
1965 .....	62.6	94.5	94.6	94.5	90.2	87.7	94.5
1966 .....	65.7	94.6	94.2	95.5	90.4	87.4	96.0
1967 .....	72.7	96.8	99.2	92.1	93.8	94.5	92.6
1968 .....	74.8	94.6	98.0	87.8	93.4	94.0	92.6
1969 .....	80.7	98.6	101.7	92.6	97.5	98.1	96.6
1970 .....	84.1	100.5	105.3	91.0	100.5	104.3	93.6
1971 .....	85.9	95.4	99.1	87.8	95.6	99.4	88.6
1972 .....	93.1	106.9	111.5	97.7	102.6	105.7	97.0
1973 .....	87.9	107.0	111.8	97.1	99.6	101.6	96.0
1974 .....	90.6	106.7	108.7	102.7	104.4	106.0	101.5
1975 .....	91.3	106.3	109.1	100.8	103.7	105.7	100.0
1976 .....	94.9	105.3	107.5	101.1	102.1	103.2	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.6	104.8	103.8	106.9	104.4	103.0	106.9
1979 .....	105.1	103.0	104.3	100.3	101.9	103.0	100.0
1980 .....	109.1	102.7	102.2	103.7	102.3	101.9	103.0
1981 .....	111.4	98.9	96.8	102.9	96.7	93.4	102.5
Average annual percent change:							
1963-81 .....	3.5	.5	.4	.7	.6	.7	.5
1978-81 .....	2.0	-1.8	-2.3	-8	-2.2	-3.0	-1.0

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 23. Bakery products (SIC 205): Output per hour and related data, 1967-82  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 43. Bakery products (SIC 205): Indexes of output per employee hour and output per employee, 1954-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	58.4	55.2	63.6	59.1	56.9	62.5
1955 .....	58.9	56.1	63.9	59.6	57.8	62.4
1956 .....	60.0	57.7	63.9	60.2	58.6	62.7
1957 .....	61.9	61.1	63.3	61.9	61.6	62.0
1958 .....	64.0	62.4	66.8	64.8	64.4	65.4
1959 .....	64.0	62.8	66.1	64.7	64.7	64.6
1960 .....	64.3	63.0	66.5	65.5	66.2	64.3
1961 .....	65.4	64.0	67.8	66.2	67.2	64.6
1962 .....	67.2	66.4	68.6	67.9	70.0	65.0
1963 .....	72.3	70.6	75.3	72.6	73.4	71.3
1964 .....	74.6	72.5	78.2	76.5	77.8	74.4
1965 .....	77.5	75.1	81.3	77.5	77.6	76.9
1966 .....	78.4	75.5	83.0	78.8	79.1	78.4
1967 .....	82.8	79.0	89.6	82.2	80.6	84.4
1968 .....	84.5	79.9	92.7	84.8	82.6	87.7
1969 .....	84.7	80.5	92.2	84.5	81.8	88.5
1970 .....	87.5	83.0	95.6	87.7	84.3	92.8
1971 .....	89.5	86.8	94.0	90.2	88.2	93.1
1972 .....	94.1	91.6	98.4	95.4	92.9	98.9
1973 .....	93.6	90.9	98.2	95.1	92.2	99.4
1974 .....	93.6	94.4	92.3	93.0	92.8	93.5
1975 .....	93.4	94.5	92.0	93.1	93.2	92.8
1976 .....	93.9	93.7	94.2	94.0	93.1	95.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	97.2	98.6	95.2	96.9	98.0	95.2
1979 .....	94.1	93.4	94.9	94.3	93.7	95.3
1980 .....	92.3	90.7	94.9	93.0	91.3	95.6
1981 .....	94.3	92.7	96.9	95.5	94.5	97.2
1982 <sup>2</sup> .....	100.4	104.2	95.1	99.9	103.4	95.1
Average annual percent change:						
1947-82 .....	2.1	2.4	1.5	2.0	2.2	1.6
1978-82 .....	.7	1.0	.2	.7	1.2	.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 44. Bakery products (SIC 205): Indexes of output, employee hours, and employees, 1954-82**  
(1977=100)

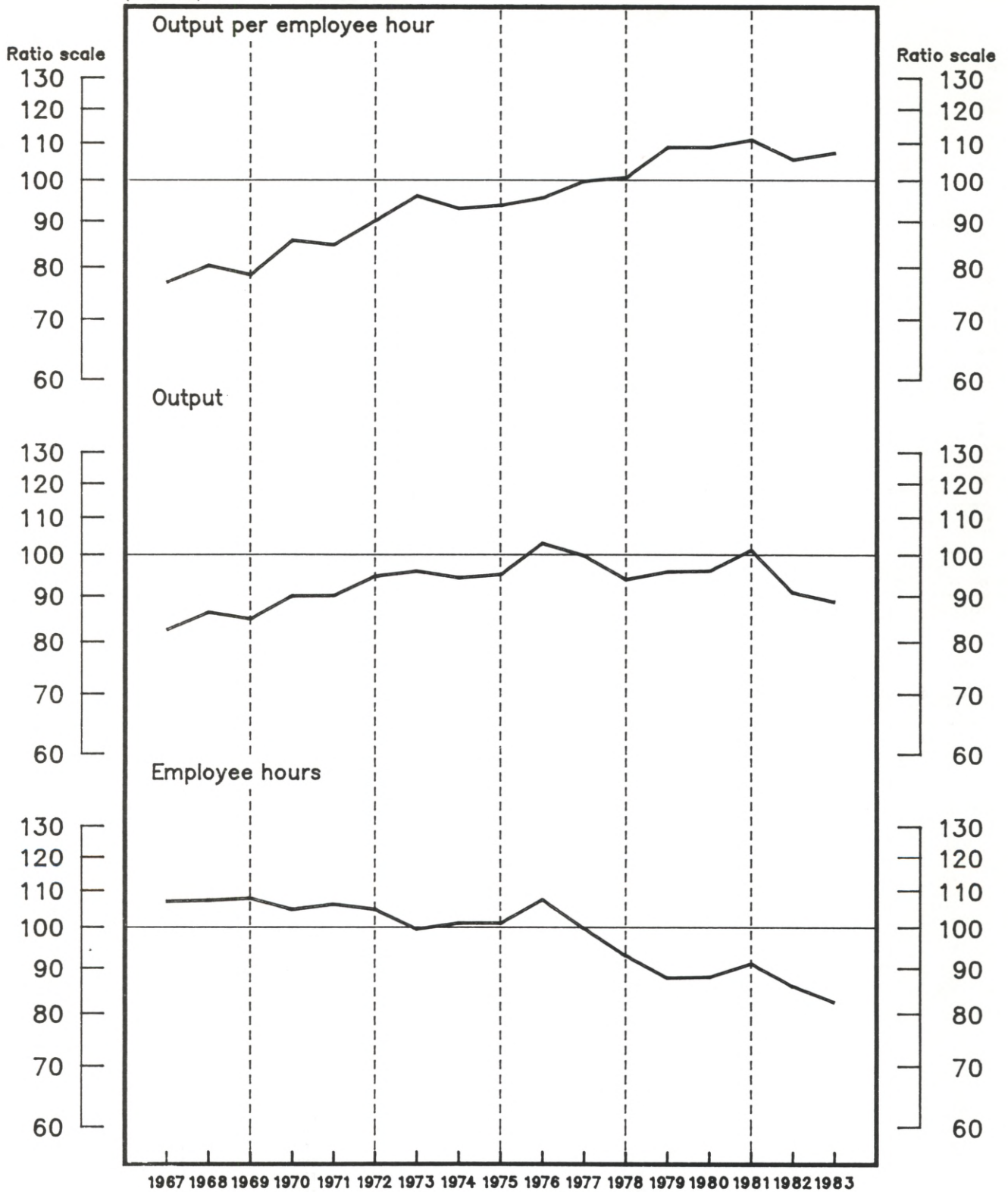
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	77.9	133.5	141.0	122.4	131.8	136.9	124.6
1955 .....	79.7	135.3	142.1	124.8	133.7	138.0	127.8
1956 .....	82.8	137.9	143.4	129.6	137.5	141.3	132.1
1957 .....	85.0	137.4	139.2	134.3	137.4	137.9	137.2
1958 .....	88.3	137.9	141.5	132.2	136.2	137.1	135.1
1959 .....	88.9	139.0	141.6	134.4	137.3	137.3	137.7
1960 .....	89.7	139.4	142.3	134.8	136.9	135.4	139.4
1961 .....	89.0	136.0	139.0	131.2	134.4	132.4	137.7
1962 .....	90.8	135.2	136.8	132.3	133.7	129.7	139.6
1963 .....	91.6	126.7	129.8	121.7	126.2	124.8	128.4
1964 .....	95.2	127.6	131.3	121.7	124.5	122.3	128.0
1965 .....	96.9	125.1	129.0	119.2	125.1	124.8	126.0
1966 .....	97.5	124.4	129.1	117.4	123.7	123.3	124.3
1967 .....	97.8	118.1	123.8	109.2	119.0	121.4	115.9
1968 .....	98.4	116.5	123.1	106.2	116.1	119.1	112.2
1969 .....	100.8	119.0	125.2	109.3	119.3	123.2	113.9
1970 .....	96.9	110.7	116.7	101.4	110.5	114.9	104.4
1971 .....	96.3	107.6	110.9	102.4	106.8	109.2	103.4
1972 .....	100.8	107.1	110.0	102.4	105.7	108.5	101.9
1973 .....	99.9	106.7	109.9	101.7	105.1	108.4	100.5
1974 .....	98.7	105.5	104.6	106.9	106.1	106.4	105.6
1975 .....	99.3	106.3	105.1	107.9	106.7	106.6	107.0
1976 .....	102.4	109.1	109.3	108.7	108.9	110.0	107.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.9	101.8	100.3	103.9	102.1	100.9	103.9
1979 .....	98.4	104.6	105.3	103.7	104.3	105.0	103.3
1980 .....	96.3	104.3	106.2	101.5	103.5	105.5	100.7
1981 .....	95.9	101.7	103.5	99.0	100.4	101.5	98.7
1982 <sup>1</sup> .....	97.1	96.7	93.2	102.1	97.2	93.9	102.1
Average annual percent change:							
1947-82 .....	.9	-1.2	-1.5	-.6	-1.1	-1.3	-.7
1978-82 .....	-.6	-1.3	-1.6	-.8	-1.4	-1.8	-.8

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 24. Sugar (SIC 2061, 2062, 2063): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 45. Sugar (SIC 2061, 2062, 2063): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	46.5	43.8	59.9	45.7	43.2	57.8
1955	48.4	45.4	63.6	47.4	44.6	60.9
1956	51.0	47.6	69.3	51.7	48.6	66.7
1957	50.3	46.7	69.6	50.4	47.2	66.9
1958	51.8	48.9	65.4	52.9	50.7	62.8
1959	54.6	51.3	71.2	54.6	51.6	68.2
1960	57.5	54.0	74.9	58.1	55.3	71.0
1961	61.4	57.8	79.3	61.6	58.8	74.3
1962	67.5	63.1	90.3	67.7	64.2	84.0
1963	68.0	63.9	88.4	68.0	64.8	82.1
1964	71.5	67.2	92.5	71.9	68.7	86.3
1965	74.4	69.5	99.9	72.4	68.0	92.9
1966	77.1	73.0	95.6	74.5	72.2	88.5
1967	77.1	72.7	98.8	75.7	72.2	91.4
1968	80.5	75.2	106.9	79.4	75.2	99.0
1969	78.6	73.9	102.7	76.0	72.2	93.9
1970	85.9	80.1	116.1	83.0	78.4	105.0
1971	84.9	79.7	110.7	86.5	82.4	105.1
1972	90.4	86.5	109.5	90.9	87.0	108.6
1973	96.3	93.8	107.0	98.8	96.1	110.3
1974	93.2	89.2	112.8	98.2	94.1	117.2
1975	94.0	93.8	94.4	91.8	90.7	96.8
1976	95.8	95.2	98.5	97.3	96.6	100.0
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	101.0	101.4	99.3	98.4	98.3	98.8
1979	109.1	109.2	108.1	107.6	107.5	108.2
1980	109.1	108.5	111.6	107.0	105.7	112.5
1981	111.2	110.1	116.5	109.3	107.5	116.5
1982	105.7	105.9	104.5	103.2	102.8	104.5
1983 <sup>2</sup>	107.6	107.5	108.5	106.1	105.6	108.0
Average annual percent change:						
1947-83	3.4	3.7	2.1	3.4	3.7	2.2
1978-83	.7	.6	1.1	.8	.7	1.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service and Statistical Reporting Service, U.S. Department of Agriculture; and the Bureau of the Census.

Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 46. Sugar (SIC 2061, 2062, 2063): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	56.2	120.8	128.3	93.8	122.9	130.0	97.2
1955	56.0	115.6	123.3	88.1	118.2	125.5	91.9
1956	58.7	115.1	123.4	84.7	113.5	120.7	88.0
1957	58.1	115.5	124.4	83.5	115.2	123.1	86.9
1958	61.5	118.7	125.7	94.1	116.3	121.4	98.0
1959	64.6	118.3	126.0	90.7	118.4	125.2	94.7
1960	66.4	115.4	122.9	88.7	114.2	120.0	93.5
1961	70.2	114.3	121.4	88.5	113.9	119.4	94.5
1962	73.4	108.7	116.3	81.3	108.4	114.4	87.4
1963	77.0	113.2	120.5	87.1	113.3	118.9	93.8
1964	83.1	116.2	123.7	89.8	115.6	120.9	96.3
1965	80.6	108.3	116.0	80.7	111.4	118.5	86.8
1966	81.2	105.3	111.2	84.9	109.0	112.5	91.8
1967	82.7	107.2	113.8	83.7	109.3	114.6	90.5
1968	86.5	107.5	115.0	80.9	109.0	115.1	87.4
1969	85.0	108.1	115.0	82.8	111.8	117.8	90.5
1970	90.2	105.0	112.6	77.7	108.7	115.1	85.9
1971	90.3	106.4	113.3	81.6	104.4	109.6	85.9
1972	94.9	105.0	109.7	86.7	104.4	109.1	87.4
1973	96.1	99.8	102.4	89.8	97.3	100.0	87.1
1974	94.5	101.4	106.0	83.8	96.2	100.4	80.6
1975	95.3	101.4	101.6	100.9	103.8	105.1	98.4
1976	103.2	107.7	108.4	104.8	106.1	106.8	103.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	94.1	93.2	92.8	94.8	95.6	95.7	95.2
1979	96.0	88.0	87.9	88.8	89.2	89.3	88.7
1980	96.2	88.2	88.7	86.2	89.9	91.0	85.5
1981	101.5	91.3	92.2	87.1	92.9	94.4	87.1
1982	91.0	86.1	85.9	87.1	88.2	88.5	87.1
1983 <sup>1</sup>	88.9	82.6	82.7	81.9	83.8	84.2	82.3
Average annual percent change:							
1947-83	2.2	-1.2	-1.5	.1	-1.2	-1.4	( <sup>2</sup> )
1978-83	-1.1	-1.8	-1.7	-2.2	-1.9	-1.8	-2.2

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

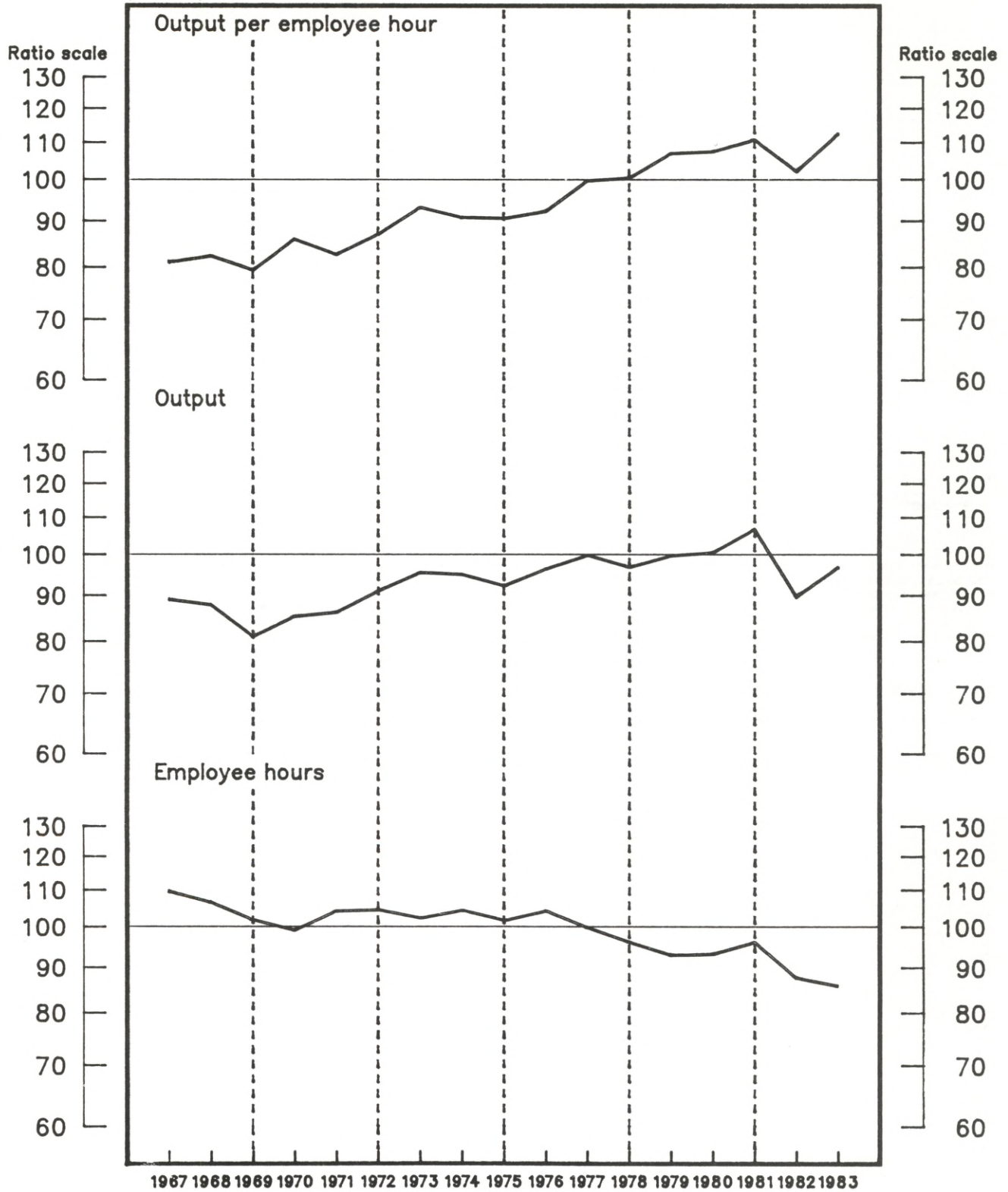
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service and Statistical Reporting Service, U.S. Department of Agriculture; and the Bureau of the Census.

Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 25. Raw and refined cane sugar (SIC 2061, 2062): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 47. Raw and refined cane sugar (SIC 2061, 2062): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	51.9	48.6	64.7	51.9	49.7	59.5
1959 .....	55.5	51.5	72.3	54.5	51.2	66.5
1960 .....	57.2	53.2	73.1	56.6	53.8	66.5
1961 .....	64.3	60.2	81.2	64.1	61.5	72.9
1962 .....	71.1	65.9	91.9	71.3	68.1	82.0
1963 .....	69.8	65.4	86.7	70.4	68.2	77.2
1964 .....	69.6	65.8	83.6	69.9	68.2	74.8
1965 .....	76.9	71.7	97.7	76.3	73.0	87.0
1966 .....	81.2	75.9	102.0	80.9	78.0	90.5
1967 .....	81.2	77.1	96.5	83.2	80.2	93.1
1968 .....	82.5	77.9	99.5	84.7	81.3	96.1
1969 .....	79.6	77.3	86.9	79.0	77.6	82.9
1970 .....	86.1	83.4	94.6	86.5	85.5	89.2
1971 .....	82.8	80.1	91.0	86.4	85.0	90.2
1972 .....	87.2	86.1	90.1	91.8	91.3	93.3
1973 .....	93.4	90.9	101.4	98.0	95.7	104.5
1974 .....	91.0	90.4	92.7	96.3	96.6	95.2
1975 .....	90.8	91.6	88.9	91.5	91.8	90.5
1976 .....	92.5	92.4	93.2	95.5	95.1	96.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.7	100.4	101.6	100.8	100.7	101.4
1979 .....	107.3	104.6	117.3	108.2	105.4	117.4
1980 .....	107.8	104.2	121.3	109.7	106.2	121.3
1981 .....	111.1	106.7	128.9	113.2	108.6	128.9
1982 .....	102.5	100.8	108.4	103.7	102.2	108.4
1983 <sup>2</sup> .....	112.8	109.9	123.7	117.7	115.9	123.3
Average annual percent change:						
1958-83 .....	2.7	3.0	1.8	2.9	3.0	2.4
1978-83 .....	1.3	1.0	2.3	2.0	1.8	2.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service and Statistical Reporting Service, U.S. Department of Agriculture; and the Bureau of the Census.

Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 48. Raw and refined cane sugar (SIC 2061, 2062): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	64.6	124.5	132.9	99.9	124.5	130.1	108.6
1959 .....	69.0	124.3	134.1	95.4	126.7	134.8	103.7
1960 .....	68.9	120.5	129.5	94.3	121.7	128.0	103.6
1961 .....	74.9	116.4	124.5	92.2	116.8	121.8	102.8
1962 .....	77.6	109.1	117.8	84.4	108.9	113.9	94.6
1963 .....	80.5	115.4	123.1	92.9	114.4	118.0	104.3
1964 .....	79.4	114.1	120.7	95.0	113.6	116.4	106.1
1965 .....	81.0	105.3	113.0	82.9	106.1	110.9	93.1
1966 .....	84.9	104.6	111.9	83.2	104.9	108.9	93.8
1967 .....	89.2	109.8	115.7	92.4	107.2	111.2	95.8
1968 .....	88.0	106.7	113.0	88.4	103.9	108.2	91.6
1969 .....	81.2	102.0	105.0	93.4	102.8	104.6	97.9
1970 .....	85.5	99.3	102.5	90.4	98.9	100.0	95.8
1971 .....	86.4	104.4	107.8	94.9	100.0	101.6	95.8
1972 .....	91.3	104.7	106.0	101.3	99.5	100.0	97.9
1973 .....	95.7	102.5	105.3	94.4	97.7	100.0	91.6
1974 .....	95.2	104.6	105.3	102.7	98.9	98.6	100.0
1975 .....	92.5	101.9	101.0	104.1	101.1	100.8	102.2
1976 .....	96.6	104.4	104.6	103.7	101.1	101.6	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	97.0	96.3	96.6	95.5	96.2	96.3	95.7
1979 .....	99.9	93.1	95.5	85.2	92.3	94.8	85.1
1980 .....	100.7	93.4	96.6	83.0	91.8	94.8	83.0
1981 .....	107.0	96.3	100.3	83.0	94.5	98.5	83.0
1982 .....	90.0	87.8	89.3	83.0	86.8	88.1	83.0
1983 <sup>1</sup> .....	97.0	86.0	88.3	78.4	82.4	83.7	78.7
Average annual percent change:							
1958-83 .....	1.6	-1.2	-1.4	-2	-1.3	-1.4	-8
1978-83 .....	-7	-2.0	-1.7	-3.0	-2.6	-2.5	-3.0

<sup>1</sup> Preliminary.

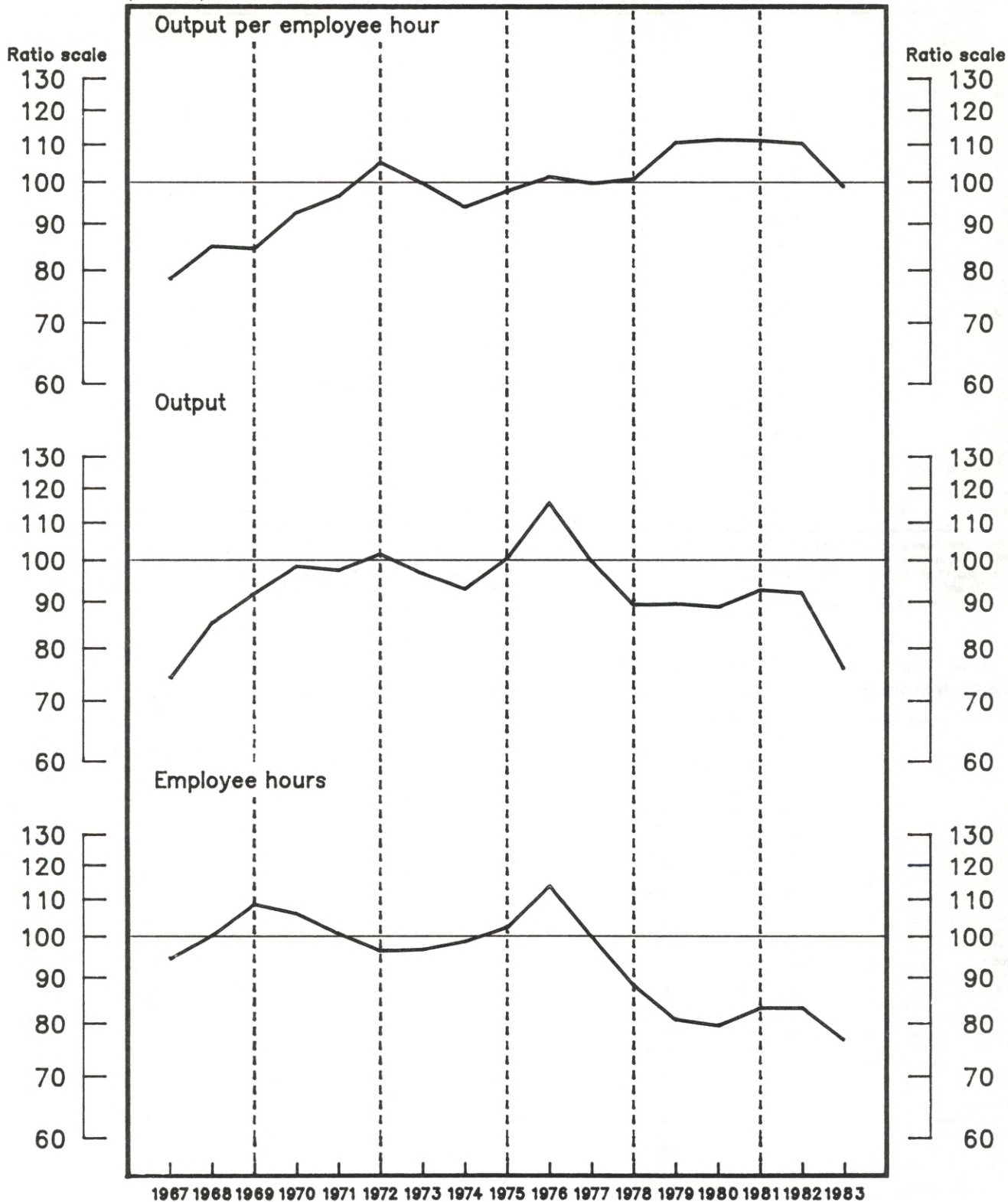
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service and Statistical

Reporting Service, U.S. Department of Agriculture; and the Bureau of the Census.

Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 26. Beet sugar (SIC 2063): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 49. Beet sugar (SIC 2063): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	60.8	59.1	73.7	64.2	63.7	67.8
1959 .....	62.1	60.7	74.3	63.9	63.3	68.3
1960 .....	68.7	66.6	87.0	71.7	70.8	79.1
1961 .....	65.9	64.1	80.8	66.1	65.3	72.5
1962 .....	72.2	69.9	92.1	71.4	70.0	81.9
1963 .....	76.0	73.1	102.2	74.1	72.0	91.0
1964 .....	86.6	83.3	117.2	87.0	84.8	104.8
1965 .....	82.1	79.6	105.1	76.5	74.5	93.6
1966 .....	82.0	81.7	83.0	74.8	74.9	73.6
1967 .....	78.4	77.9	82.4	73.5	72.7	79.4
1968 .....	85.2	83.9	94.9	81.3	79.8	91.5
1969 .....	84.7	81.7	111.4	80.8	77.9	106.2
1970 .....	92.9	89.8	120.7	87.2	84.2	113.8
1971 .....	96.8	93.0	134.4	97.7	93.9	133.1
1972 .....	105.5	102.3	134.1	100.9	96.9	138.7
1973 .....	100.0	96.9	128.0	99.5	95.9	132.0
1974 .....	94.2	91.9	113.5	90.8	87.8	116.5
1975 .....	98.1	97.0	105.9	92.6	90.6	107.8
1976 .....	101.7	100.8	107.1	101.8	100.7	108.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.2	101.9	96.3	94.5	94.3	95.9
1979 .....	110.9	115.7	83.8	105.4	109.7	84.1
1980 .....	111.7	114.2	95.8	102.5	103.6	95.4
1981 .....	111.4	114.4	92.9	102.8	104.5	92.9
1982 .....	110.6	113.5	( <sup>2</sup> )	102.0	103.7	( <sup>2</sup> )
1983 <sup>3</sup> .....	99.0	100.5	( <sup>2</sup> )	89.3	89.6	( <sup>2</sup> )
Average annual percent change:						
1958-83 .....	2.3	2.5	( <sup>2</sup> )	1.9	2.0	( <sup>2</sup> )
1978-83 .....	-3	-4	( <sup>2</sup> )	-1.1	-1.2	( <sup>2</sup> )

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Data not available.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service, U.S.

Department of Agriculture; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 50. Beet sugar (SIC 2063): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	58.2	95.8	98.4	79.0	90.6	91.3	85.9
1959 .....	59.1	95.1	97.4	79.5	92.5	93.4	86.5
1960 .....	64.5	93.9	96.8	74.1	89.9	91.1	81.5
1961 .....	64.2	97.4	100.2	79.5	97.1	98.3	88.6
1962 .....	68.5	94.9	98.0	74.4	96.0	97.9	83.6
1963 .....	73.4	96.6	100.4	71.8	99.1	101.9	80.7
1964 .....	92.1	106.4	110.6	78.6	105.9	108.6	87.9
1965 .....	82.5	100.5	103.7	78.5	107.9	110.8	88.1
1966 .....	77.4	94.4	94.7	93.3	103.5	103.3	105.2
1967 .....	74.2	94.6	95.3	90.1	100.9	102.0	93.4
1968 .....	85.5	100.4	101.9	90.1	105.2	107.1	93.4
1969 .....	92.1	108.8	112.7	82.7	114.0	118.2	86.7
1970 .....	98.7	106.2	109.9	81.8	113.2	117.2	86.7
1971 .....	97.7	100.9	105.1	72.7	100.0	104.1	73.4
1972 .....	101.8	96.5	99.5	75.9	100.9	105.1	73.4
1973 .....	96.9	96.9	100.0	75.7	97.4	101.0	73.4
1974 .....	93.2	98.9	101.4	82.1	102.6	106.1	80.0
1975 .....	100.7	102.6	103.8	95.1	108.8	111.1	93.4
1976 .....	116.0	114.1	115.1	108.3	114.0	115.2	106.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	89.5	88.4	87.8	92.9	94.7	94.9	93.3
1979 .....	89.7	80.9	77.5	107.1	85.1	81.8	106.7
1980 .....	89.0	79.7	77.9	92.9	86.8	85.9	93.3
1981 .....	92.9	83.4	81.2	100.0	90.4	88.9	100.0
1982 .....	92.2	83.4	81.2	( <sup>1</sup> )	90.4	88.9	( <sup>1</sup> )
1983 <sup>2</sup> .....	76.0	76.8	( <sup>1</sup> )	85.7	85.1	( <sup>1</sup> )	86.7
Average annual percent change:							
1958-83 .....	1.7	-6	-8	( <sup>1</sup> )	-2	-4	( <sup>1</sup> )
1978-83 .....	-2.0	-1.6	-1.6	( <sup>1</sup> )	-9	-8	( <sup>1</sup> )

<sup>1</sup> Data not available.

<sup>2</sup> Preliminary.

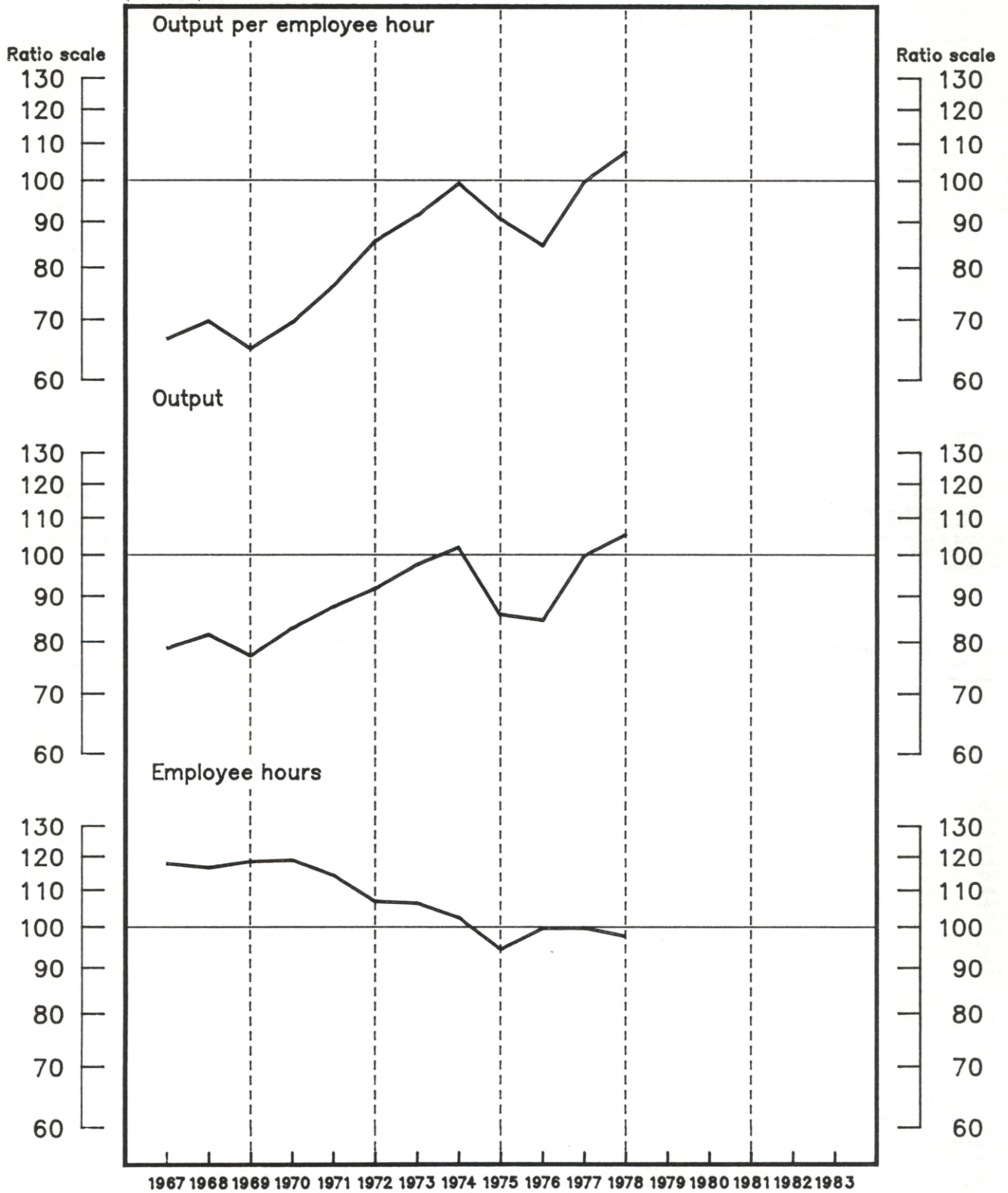
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Agricultural Marketing Service, U.S.

Department of Agriculture; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 27. Candy and other confectionery products (SIC 2065): Output per hour and related data, 1967-78

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 51. Candy and other confectionery products (SIC 2065): Indexes of output per employee hour and output per employee, 1954-78 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	41.3	40.5	44.8	42.7	41.9	46.8
1955 .....	42.6	42.9	41.2	43.8	44.1	42.9
1956 .....	43.0	44.0	39.0	44.7	45.8	40.7
1957 .....	46.8	47.8	42.9	48.1	48.9	44.7
1958 .....	48.9	48.6	49.7	49.9	49.6	51.8
1959 .....	50.0	50.0	49.8	52.2	52.2	51.8
1960 .....	52.3	52.4	51.6	54.5	54.8	53.1
1961 .....	52.2	52.0	53.0	54.4	54.6	53.8
1962 .....	53.2	53.1	53.8	55.5	55.9	54.2
1963 .....	58.8	57.3	66.0	60.0	58.7	66.4
1964 .....	59.9	58.3	67.6	60.9	59.4	68.4
1965 .....	62.4	60.3	73.9	63.8	61.7	74.4
1966 .....	64.9	62.9	75.1	65.4	63.5	75.3
1967 .....	66.8	64.3	80.3	67.4	64.9	80.4
1968 .....	69.9	67.5	82.4	70.4	68.8	78.2
1969 .....	65.2	63.2	75.1	66.2	64.9	72.1
1970 .....	69.7	68.7	73.9	70.1	69.7	72.0
1971 .....	76.6	76.5	76.7	79.5	80.5	76.1
1972 .....	85.9	85.5	87.5	87.9	87.9	88.0
1973 .....	91.7	95.4	78.2	93.4	97.6	79.1
1974 .....	99.5	102.1	89.4	97.3	99.0	90.7
1975 .....	90.8	94.6	77.3	87.0	89.4	78.3
1976 .....	84.9	86.7	77.5	83.3	84.6	78.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.9	105.7	118.4	108.8	106.8	118.7
Average annual percent change:						
1947-78 .....	3.7	3.8	3.4	3.5	3.6	3.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Competitive Assessment and Business Policy, the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 52. Candy and other confectionery products (SIC 2065): Indexes of output, employee hours, and employees, 1954-78 (1977=100)**

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	49.5	119.8	122.1	110.5	115.9	118.2	105.8
1955 .....	51.8	121.6	120.7	125.6	118.3	117.5	120.7
1956 .....	53.5	124.3	121.5	137.2	119.6	116.9	131.4
1957 .....	55.8	119.2	116.8	130.1	116.0	114.0	124.8
1958 .....	57.3	117.2	117.8	115.2	114.8	115.6	110.7
1959 .....	58.2	116.3	116.3	116.8	111.6	111.4	112.3
1960 .....	60.6	115.8	115.6	117.5	111.2	110.6	114.1
1961 .....	61.4	117.6	118.0	115.9	112.9	112.5	114.2
1962 .....	62.9	118.2	118.5	116.9	113.3	112.6	116.0
1963 .....	65.9	112.0	115.0	99.8	109.8	112.2	99.2
1964 .....	68.9	115.0	118.2	101.9	113.1	115.9	100.8
1965 .....	71.8	115.0	119.1	97.1	112.5	116.3	96.5
1966 .....	75.2	115.8	119.5	100.1	114.9	118.5	99.9
1967 .....	78.9	118.1	122.7	98.3	117.1	121.5	98.1
1968 .....	81.7	116.9	121.0	99.2	116.0	118.7	104.5
1969 .....	77.4	118.8	122.5	103.0	117.0	119.2	107.3
1970 .....	83.1	119.2	120.9	112.4	118.5	119.2	115.4
1971 .....	87.8	114.6	114.7	114.5	110.4	109.1	115.4
1972 .....	92.0	107.1	107.6	105.2	104.7	104.7	104.5
1973 .....	97.8	106.6	102.5	125.0	104.7	100.2	123.6
1974 .....	102.2	102.7	100.1	114.3	105.0	103.2	112.7
1975 .....	86.0	94.7	90.9	111.2	98.8	96.2	109.9
1976 .....	84.8	99.9	97.8	109.4	101.8	100.2	108.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.6	97.9	99.9	89.2	97.1	98.9	89.0
Average annual percent change:							
1947-78 .....	2.7	-1.0	-1.0	-7	-7	-8	-4

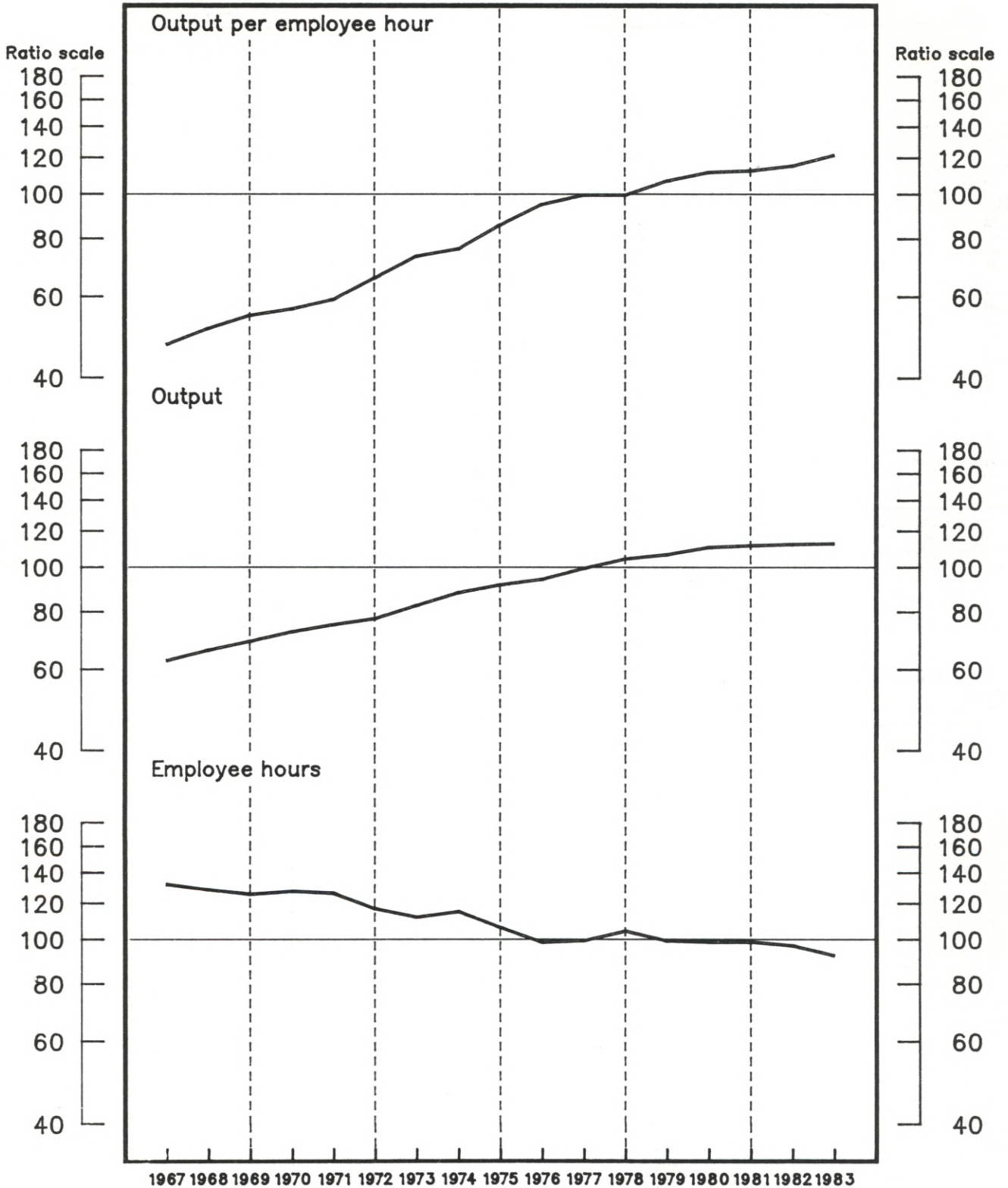
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Competitive Assessment and

Business Policy, the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 28. Malt beverages (SIC 2082): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 53. Malt beverages (SIC 2082): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	23.5	25.3	19.7	23.7	25.4	20.4
1955	24.4	26.1	21.0	24.5	26.0	21.6
1956	24.9	26.8	21.1	25.1	26.7	21.8
1957	25.7	27.8	21.4	25.6	27.4	22.1
1958	28.4	30.5	24.1	28.0	29.6	24.8
1959	29.7	31.5	25.8	29.4	30.7	26.6
1960	30.9	32.6	27.4	30.2	31.3	27.9
1961	32.5	34.2	28.6	31.6	33.0	28.7
1962	34.1	35.7	30.5	33.5	34.9	30.5
1963	37.4	39.1	33.8	36.8	38.1	33.7
1964	40.2	42.1	35.9	39.4	41.1	36.0
1965	42.3	44.5	37.3	41.7	43.9	37.2
1966	44.5	47.1	38.7	44.0	46.8	38.5
1967	47.4	50.2	41.7	46.5	49.0	41.4
1968	51.4	53.1	47.5	49.7	52.1	45.1
1969	54.9	57.2	49.9	53.3	56.0	47.9
1970	56.7	59.9	50.0	55.9	59.6	48.6
1971	59.4	64.4	49.6	58.2	63.1	49.1
1972	66.1	71.0	56.3	66.4	71.5	56.6
1973	73.7	75.6	69.1	74.3	76.4	69.9
1974	76.4	77.9	72.7	77.6	79.6	73.6
1975	86.1	88.0	82.2	86.0	87.3	83.0
1976	95.5	97.5	90.8	97.5	100.1	91.7
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.0	99.8	100.3	101.3	101.6	100.2
1979	107.4	106.7	109.5	107.4	106.6	109.7
1980	112.1	112.1	112.1	113.2	113.4	113.0
1981	113.0	116.0	106.0	113.0	115.9	106.5
1982	115.8	119.7	106.7	115.2	119.0	107.1
1983 <sup>2</sup>	122.1	130.7	104.6	119.9	127.7	104.4
Average annual percent change:						
1947-83	5.8	5.7	6.0	5.7	5.6	5.9
1978-83	3.6	5.1	.2	3.0	4.4	.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S. Department of the Treasury, and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 54. Malt beverages (SIC 2082): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	44.0	187.6	173.7	223.1	185.4	173.0	215.7
1955	45.0	184.3	172.7	214.5	183.3	173.0	208.2
1956	45.4	182.5	169.6	215.6	181.0	169.8	208.7
1957	45.2	176.2	162.7	211.0	176.4	165.0	204.4
1958	45.7	181.1	150.0	189.6	163.0	154.4	184.0
1959	47.4	159.5	150.4	183.4	161.2	154.2	178.0
1960	48.0	155.1	147.2	175.4	158.7	153.3	172.0
1961	49.0	151.0	143.2	171.5	154.9	148.6	170.5
1962	50.2	147.1	140.6	164.5	150.0	144.0	164.6
1963	52.3	139.7	133.9	154.7	142.3	137.3	155.0
1964	55.5	138.2	131.9	154.7	140.7	135.2	154.3
1965	57.3	135.6	128.8	153.8	137.4	130.5	154.1
1966	60.5	136.1	128.4	156.2	137.5	129.4	157.1
1967	63.0	132.8	125.6	151.1	135.5	128.5	152.0
1968	66.4	129.2	125.1	139.7	133.5	127.5	147.3
1969	69.4	126.4	121.4	139.1	130.2	124.0	145.0
1970	72.8	128.3	121.5	145.5	130.2	122.1	149.7
1971	75.4	127.0	117.1	152.1	129.5	119.5	153.5
1972	77.7	117.5	109.4	138.1	117.1	108.6	137.2
1973	83.0	112.6	109.8	120.1	111.7	108.6	118.7
1974	88.5	115.8	113.6	121.8	114.0	111.2	120.2
1975	92.0	106.8	104.6	111.9	107.0	105.4	110.9
1976	94.6	99.1	97.0	104.2	97.0	94.5	103.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.9	104.9	105.1	104.6	103.6	103.2	104.7
1979	107.2	99.8	100.5	97.9	99.8	100.6	97.7
1980	111.2	99.2	99.2	99.2	98.2	98.1	98.4
1981	112.2	99.3	96.7	105.8	99.3	96.8	105.4
1982	112.9	97.5	94.3	105.8	98.0	94.9	105.4
1983 <sup>1</sup>	113.3	92.8	86.7	108.3	94.5	88.7	108.5
Average annual percent change:							
1947-83	3.3	-2.3	-2.2	-2.5	-2.2	-2.1	-2.4
1978-83	1.6	-1.9	-3.3	1.4	-1.4	-2.7	1.4

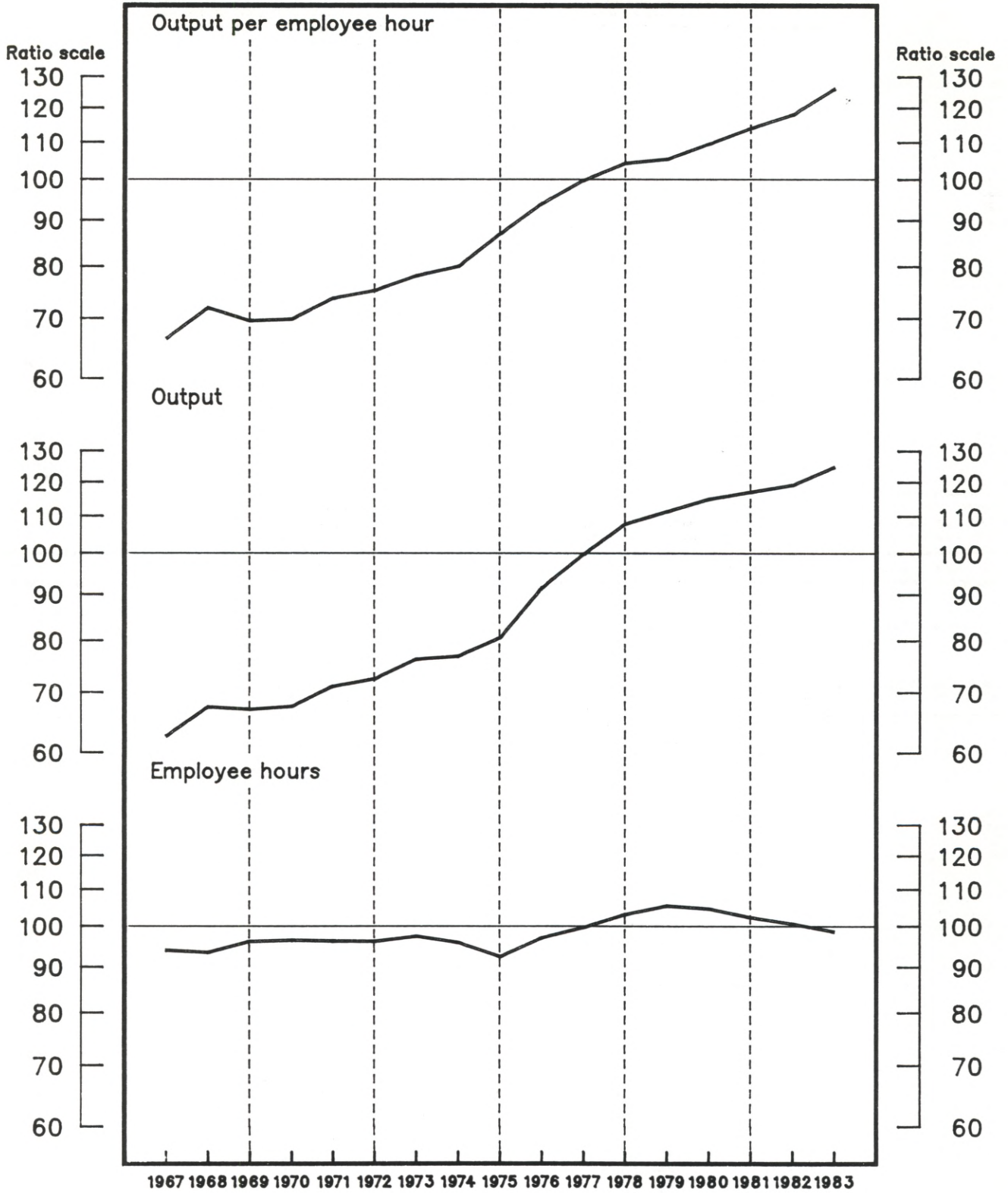
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S. Department of the Treasury; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 29. Bottled and canned soft drinks (SIC 2086): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 55. Bottled and canned soft drinks (SIC 2086): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	57.7	50.4	62.9	57.5	52.7	60.6
1959 .....	60.4	53.1	65.5	60.9	57.2	63.1
1960 .....	58.4	51.7	63.0	58.2	55.1	60.1
1961 .....	60.7	54.2	65.2	59.8	57.0	61.5
1962 .....	65.1	58.5	69.6	63.4	61.1	64.8
1963 .....	67.1	59.2	72.6	65.9	63.2	67.5
1964 .....	67.3	60.1	72.2	65.8	63.7	67.1
1965 .....	67.8	60.9	72.5	66.3	64.5	67.4
1966 .....	68.2	59.4	74.5	66.9	63.1	69.3
1967 .....	66.6	58.5	72.2	64.8	61.1	67.1
1968 .....	72.1	64.3	77.5	69.6	65.6	72.1
1969 .....	69.7	64.0	73.5	67.7	64.6	69.5
1970 .....	70.0	65.5	72.9	68.6	66.2	70.0
1971 .....	73.9	69.7	76.4	73.2	70.6	74.8
1972 .....	75.4	72.9	76.9	75.7	73.7	76.8
1973 .....	78.3	76.7	79.3	78.7	77.1	79.6
1974 .....	80.2	78.5	81.2	80.3	77.9	81.8
1975 .....	87.2	86.1	87.7	87.1	85.2	88.1
1976 .....	94.2	93.5	94.6	94.3	93.5	94.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.5	105.3	104.1	105.0	106.3	104.1
1979 .....	105.6	109.1	103.6	105.9	110.2	103.6
1980 .....	109.8	116.4	106.4	110.5	118.4	106.4
1981 .....	114.3	125.1	109.0	114.7	126.0	109.0
1982 .....	118.3	131.5	112.0	118.5	131.8	112.0
1983 <sup>2</sup> .....	126.4	141.9	119.0	126.5	142.2	119.0
Average annual percent change:						
1958-83 .....	3.1	4.1	2.5	3.2	3.8	2.8
1978-83 .....	3.9	6.3	2.7	3.8	6.0	2.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Sales Survey and Statistical Profile of the Soft Drink Industry, National Soft Drink Association; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 56. Bottled and canned soft drinks (SIC 2086): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	43.0	74.5	85.3	68.4	74.8	81.6	71.0
1959 .....	46.6	77.1	87.8	71.1	76.5	81.4	73.8
1960 .....	46.0	78.8	89.0	73.0	79.1	83.5	76.6
1961 .....	47.5	78.2	87.7	72.8	79.4	83.3	77.2
1962 .....	51.3	78.8	87.7	73.7	80.9	83.9	79.2
1963 .....	54.6	81.4	92.3	75.2	82.9	86.4	80.9
1964 .....	57.0	84.7	94.8	79.0	86.6	89.5	84.9
1965 .....	59.2	87.3	97.2	81.7	89.3	91.8	87.8
1966 .....	63.1	92.5	106.3	84.7	94.3	100.0	91.0
1967 .....	62.7	94.2	107.2	86.9	96.8	102.7	93.4
1968 .....	67.6	93.7	105.2	87.2	97.1	103.1	93.7
1969 .....	67.2	96.4	105.0	91.4	99.3	104.0	96.7
1970 .....	67.7	96.7	103.3	92.9	98.7	102.3	96.7
1971 .....	71.3	96.5	102.3	93.3	97.4	101.0	95.3
1972 .....	72.7	96.4	99.7	94.5	96.1	98.7	94.6
1973 .....	76.5	97.7	99.7	96.5	97.2	99.2	96.1
1974 .....	77.1	96.1	98.2	94.9	96.0	99.0	94.3
1975 .....	80.8	92.7	93.8	92.1	92.8	94.8	91.7
1976 .....	91.7	97.3	98.1	96.9	97.2	98.1	96.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.1	103.4	102.7	103.8	103.0	101.7	103.8
1979 .....	111.6	105.7	102.3	107.7	105.4	101.3	107.7
1980 .....	115.2	104.9	99.0	108.3	104.3	97.3	108.3
1981 .....	117.3	102.6	93.8	107.6	102.3	93.1	107.6
1982 .....	119.4	100.9	90.8	106.6	100.8	90.6	106.6
1983 <sup>1</sup> .....	125.0	98.9	88.1	105.0	98.8	87.9	105.0
Average annual percent change:							
1958-83 .....	4.4	1.3	.3	1.9	1.2	.6	1.5
1978-83 .....	2.7	-1.1	-3.3	.1	-1.0	-3.1	.1

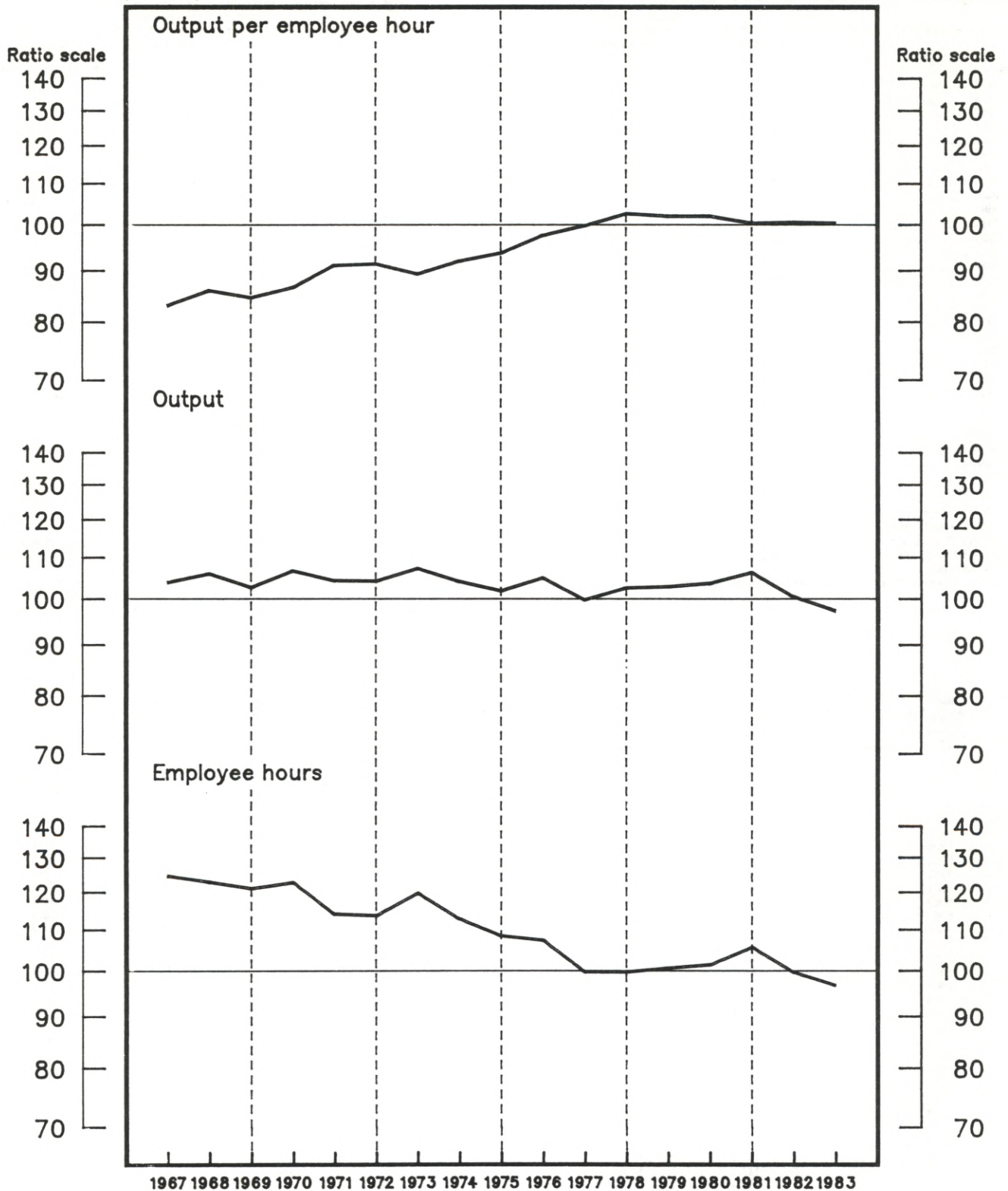
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Sales Survey and Statistical Profile of the Soft Drink Industry, National Soft Drink Association; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 30. All tobacco products (SIC 2111, 2121, 2131): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 57. All tobacco products (SIC 2111, 2121, 2131): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	52.1	48.0	100.1	54.4	49.6	112.8
1955 .....	52.0	47.9	100.2	54.6	49.8	112.5
1956 .....	55.2	51.0	105.6	57.8	52.8	118.7
1957 .....	57.8	53.4	108.4	60.6	55.5	121.7
1958 .....	62.1	57.9	105.5	65.9	60.9	118.4
1959 .....	65.3	61.3	102.3	69.5	64.8	114.6
1960 .....	69.7	65.6	108.0	73.9	69.0	121.4
1961 .....	72.1	68.4	104.4	77.1	72.5	117.4
1962 .....	74.3	70.9	101.7	79.6	75.3	115.2
1963 .....	78.4	74.4	112.3	84.0	78.9	126.8
1964 .....	80.2	75.5	125.1	87.5	81.6	142.0
1965 .....	83.4	79.2	119.5	87.2	81.9	135.1
1966 .....	83.2	79.0	119.0	88.0	82.6	134.1
1967 .....	83.3	79.6	112.3	87.8	82.9	126.5
1968 .....	86.2	82.3	116.8	88.3	83.4	129.0
1969 .....	84.8	81.6	108.8	87.6	83.5	119.5
1970 .....	86.8	83.1	116.4	91.8	87.2	128.0
1971 .....	91.3	88.0	117.3	95.5	91.0	128.9
1972 .....	91.6	88.9	110.7	94.9	91.1	121.3
1973 .....	89.5	87.2	104.4	93.4	90.3	114.7
1974 .....	92.2	90.4	103.7	93.6	90.9	111.3
1975 .....	93.9	93.2	97.2	95.8	94.6	102.1
1976 .....	97.8	96.7	103.3	100.5	99.3	106.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.8	102.5	104.4	105.8	106.1	104.2
1979 .....	102.2	103.6	94.5	105.2	107.4	94.7
1980 .....	102.2	105.2	87.9	105.8	109.9	88.3
1981 .....	100.6	103.9	84.7	103.0	107.3	85.0
1982 .....	100.8	107.0	75.5	101.1	107.9	75.8
1983 <sup>2</sup> .....	100.6	108.7	70.7	99.9	108.3	70.7
Average annual percent change:						
1947-83 .....	2.6	2.9	-2	2.5	2.9	-6
1978-83 .....	-5	1.1	-7.3	-1.2	.3	-7.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S. Department of the Treasury; the Bureau of the Census; and Agricultural Marketing Service, U.S. Department of Agriculture. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

**Table 58. All tobacco products (SIC 2111, 2121, 2131): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	82.9	159.1	172.7	82.8	152.4	167.1	73.5
1955 .....	83.7	161.1	174.8	83.5	153.3	168.0	74.4
1956 .....	84.3	152.6	165.2	79.8	145.8	159.8	71.0
1957 .....	86.9	150.4	162.7	80.2	143.4	156.7	71.4
1958 .....	91.9	147.9	158.6	87.1	139.4	150.9	77.6
1959 .....	97.3	149.1	158.7	95.1	139.9	150.2	84.9
1960 .....	99.7	143.0	152.0	92.3	134.9	144.5	82.1
1961 .....	99.2	137.5	145.0	95.0	128.6	136.9	84.5
1962 .....	99.4	133.7	140.1	97.7	124.8	132.0	86.3
1963 .....	101.6	129.6	136.5	90.5	121.0	128.7	80.1
1964 .....	110.3	137.5	146.1	88.2	126.1	135.1	77.7
1965 .....	107.4	128.7	135.6	89.9	123.1	131.2	79.5
1966 .....	104.6	125.7	132.4	87.9	118.9	126.6	78.0
1967 .....	104.1	125.0	130.7	92.7	118.6	125.5	82.3
1968 .....	106.2	123.2	129.0	90.9	120.3	127.4	82.3
1969 .....	102.9	121.4	126.1	94.6	117.4	123.3	86.1
1970 .....	106.9	123.1	128.6	91.8	116.4	122.6	83.5
1971 .....	104.5	114.4	118.8	89.1	109.4	114.8	81.1
1972 .....	104.4	114.0	117.5	94.3	110.0	114.6	86.1
1973 .....	107.5	120.1	123.3	103.0	115.1	119.1	93.7
1974 .....	104.3	113.1	115.4	100.6	111.4	114.8	93.7
1975 .....	102.1	108.7	109.5	105.0	106.6	107.9	100.0
1976 .....	105.2	107.6	108.8	101.8	104.7	105.9	98.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.8	100.0	100.3	98.5	97.2	96.9	98.7
1979 .....	103.1	100.9	99.5	109.1	98.0	96.0	108.9
1980 .....	103.9	101.7	98.8	118.2	98.2	94.5	117.7
1981 .....	106.5	105.9	102.5	125.8	103.4	99.3	125.3
1982 .....	100.7	99.9	94.1	133.3	99.6	93.3	132.9
1983 <sup>1</sup> .....	97.5	96.9	89.7	137.9	97.6	90.0	138.0
Average annual percent change:							
1947-83 .....	.8	-1.7	-2.0	1.0	-1.6	-2.0	1.4
1978-83 .....	-9	-4	-1.9	6.9	.3	-1.2	6.9

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

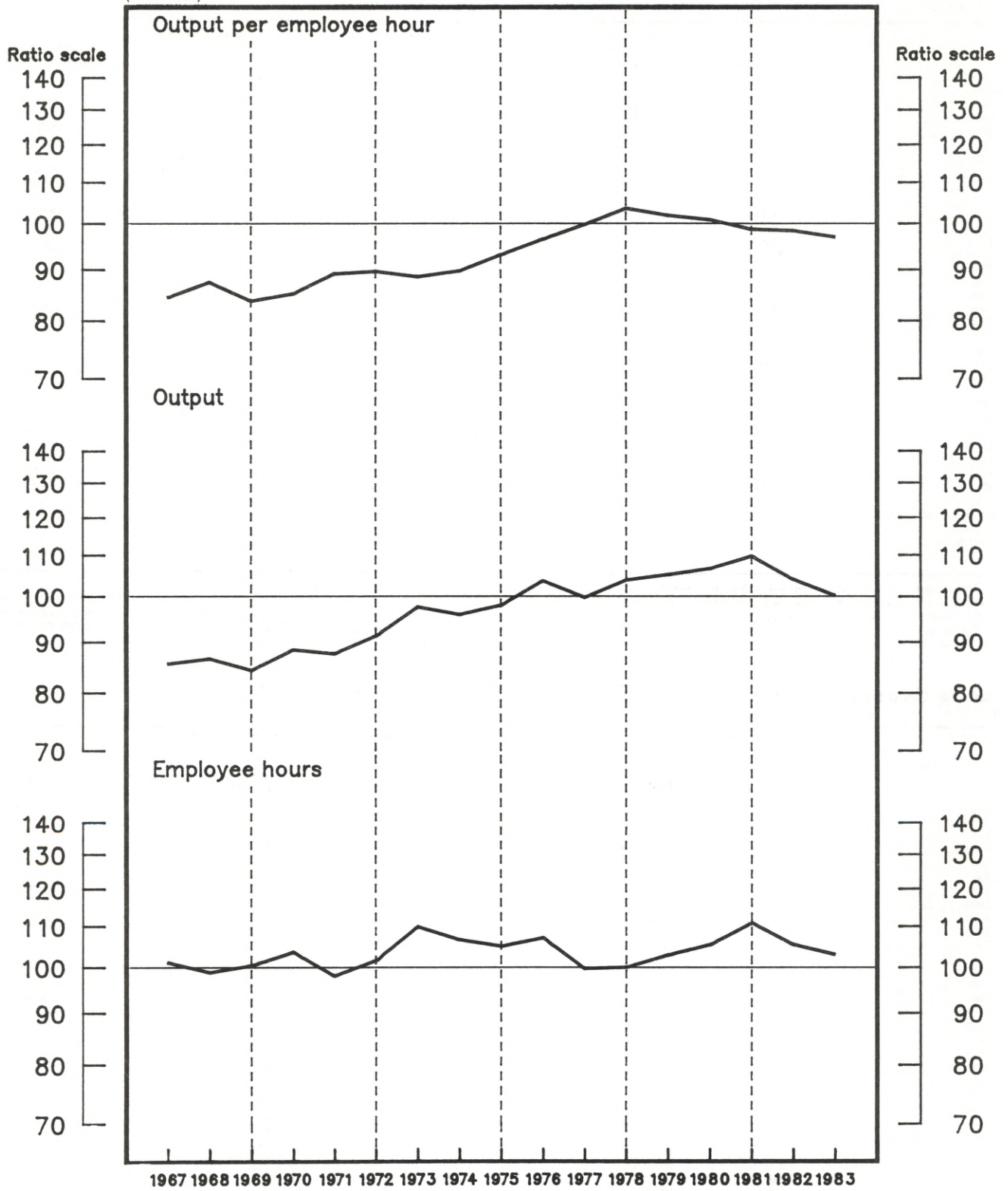
SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms,

U.S. Department of the Treasury; the Bureau of the Census; and Agricultural Marketing Service, U.S. Department of Agriculture. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 31. Cigarettes, chewing and smoking tobacco (SIC 2111, 2131): Output per hour and related data, 1967-83

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 59. Cigarettes, chewing and smoking tobacco (SIC 2111, 2131): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	66.6	61.3	119.2	71.3	65.0	134.9
1955 .....	65.9	60.6	122.4	71.9	65.4	137.6
1956 .....	67.8	62.2	128.0	73.7	66.9	144.9
1957 .....	69.7	64.0	129.1	75.6	68.7	145.8
1958 .....	70.7	65.4	121.7	76.7	70.2	137.3
1959 .....	72.3	67.7	112.9	78.6	72.8	127.5
1960 .....	75.5	70.8	115.5	81.4	75.6	130.1
1961 .....	77.1	72.6	113.5	83.5	78.1	127.5
1962 .....	77.4	73.5	106.3	84.6	79.8	120.0
1963 .....	80.9	76.3	116.1	88.3	82.6	130.8
1964 .....	79.7	75.1	115.0	86.9	81.3	129.9
1965 .....	83.3	78.8	117.1	87.3	81.6	131.9
1966 .....	83.3	79.2	114.3	89.3	84.0	128.2
1967 .....	84.6	80.3	117.2	90.1	84.6	131.4
1968 .....	87.6	83.2	120.4	89.4	83.6	132.9
1969 .....	83.9	80.4	108.6	86.6	82.0	119.4
1970 .....	85.3	81.1	116.1	90.8	85.7	127.5
1971 .....	89.3	85.9	112.9	93.6	89.0	124.0
1972 .....	89.8	86.5	111.4	93.3	89.0	122.0
1973 .....	88.7	86.2	103.4	93.1	89.6	113.6
1974 .....	89.9	88.2	99.3	92.4	89.9	106.4
1975 .....	93.3	92.5	97.6	95.4	94.2	102.5
1976 .....	96.7	95.4	103.8	99.9	98.6	106.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.8	103.8	104.1	107.4	108.1	104.1
1979 .....	102.1	103.7	94.4	105.6	108.2	94.9
1980 .....	101.1	104.1	87.8	105.1	109.4	88.5
1981 .....	98.9	102.2	84.6	101.1	105.2	85.1
1982 .....	98.6	104.7	75.3	98.6	105.1	75.8
1983 <sup>2</sup> .....	97.2	105.4	68.9	95.9	104.3	68.9
Average annual percent change:						
1947-83 .....	1.4	1.8	-9	1.2	1.6	-1.3
1978-83 .....	-1.3	.2	-7.6	-2.3	-9	-7.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S. Department of the Treasury; the Bureau of the Census; and Agricultural Marketing Service, U.S. Department of Agriculture. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 60. Cigarettes, chewing and smoking tobacco (SIC 2111, 2131): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	63.4	95.2	103.4	53.2	88.9	97.5	47.0
1955 .....	65.1	98.8	107.5	53.2	90.6	99.6	47.3
1956 .....	66.2	97.7	106.5	51.7	89.8	99.0	45.7
1957 .....	68.8	98.7	107.5	53.3	91.0	100.2	47.2
1958 .....	72.9	103.1	111.5	59.9	95.1	103.9	53.1
1959 .....	77.0	106.5	113.8	68.2	98.0	105.8	60.4
1960 .....	79.0	104.6	111.6	68.4	97.0	104.5	60.7
1961 .....	80.7	104.7	111.1	71.1	96.6	103.3	63.3
1962 .....	80.4	103.9	109.4	75.6	95.0	100.7	67.0
1963 .....	82.8	102.4	108.5	71.3	93.8	100.2	63.3
1964 .....	82.1	103.0	109.3	71.4	94.5	101.0	63.2
1965 .....	83.5	100.3	106.0	71.3	95.6	102.3	63.3
1966 .....	84.5	101.4	106.7	73.9	94.6	100.6	65.9
1967 .....	85.8	101.4	106.8	73.2	95.2	101.4	65.3
1968 .....	86.8	99.1	104.3	72.1	97.1	103.8	65.3
1969 .....	84.5	100.7	105.1	77.8	97.6	103.1	70.8
1970 .....	88.6	103.9	109.2	76.3	97.6	103.4	69.5
1971 .....	87.8	98.3	102.2	77.8	93.8	98.6	70.8
1972 .....	91.5	101.9	105.8	82.1	98.1	102.8	75.0
1973 .....	97.8	110.2	113.4	94.6	105.1	109.1	86.1
1974 .....	96.1	106.9	108.9	96.8	104.0	106.9	90.3
1975 .....	98.2	105.3	106.2	100.6	102.9	104.3	95.8
1976 .....	103.9	107.4	108.9	100.1	104.0	105.4	97.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.1	100.3	100.3	100.0	96.9	96.3	100.0
1979 .....	105.4	103.2	101.6	111.7	99.8	97.4	111.1
1980 .....	106.9	105.7	102.7	121.7	101.7	97.7	120.8
1981 .....	110.0	111.2	107.6	130.0	108.8	104.6	129.2
1982 .....	104.2	105.7	99.5	138.3	105.7	99.1	137.5
1983 <sup>1</sup> .....	100.4	103.3	95.3	145.8	104.7	96.3	145.8
Average annual percent change:							
1947-83 .....	1.7	.3	-1	2.6	.5	.1	3.0
1978-83 .....	-5	.8	-8	7.7	1.8	.3	7.7

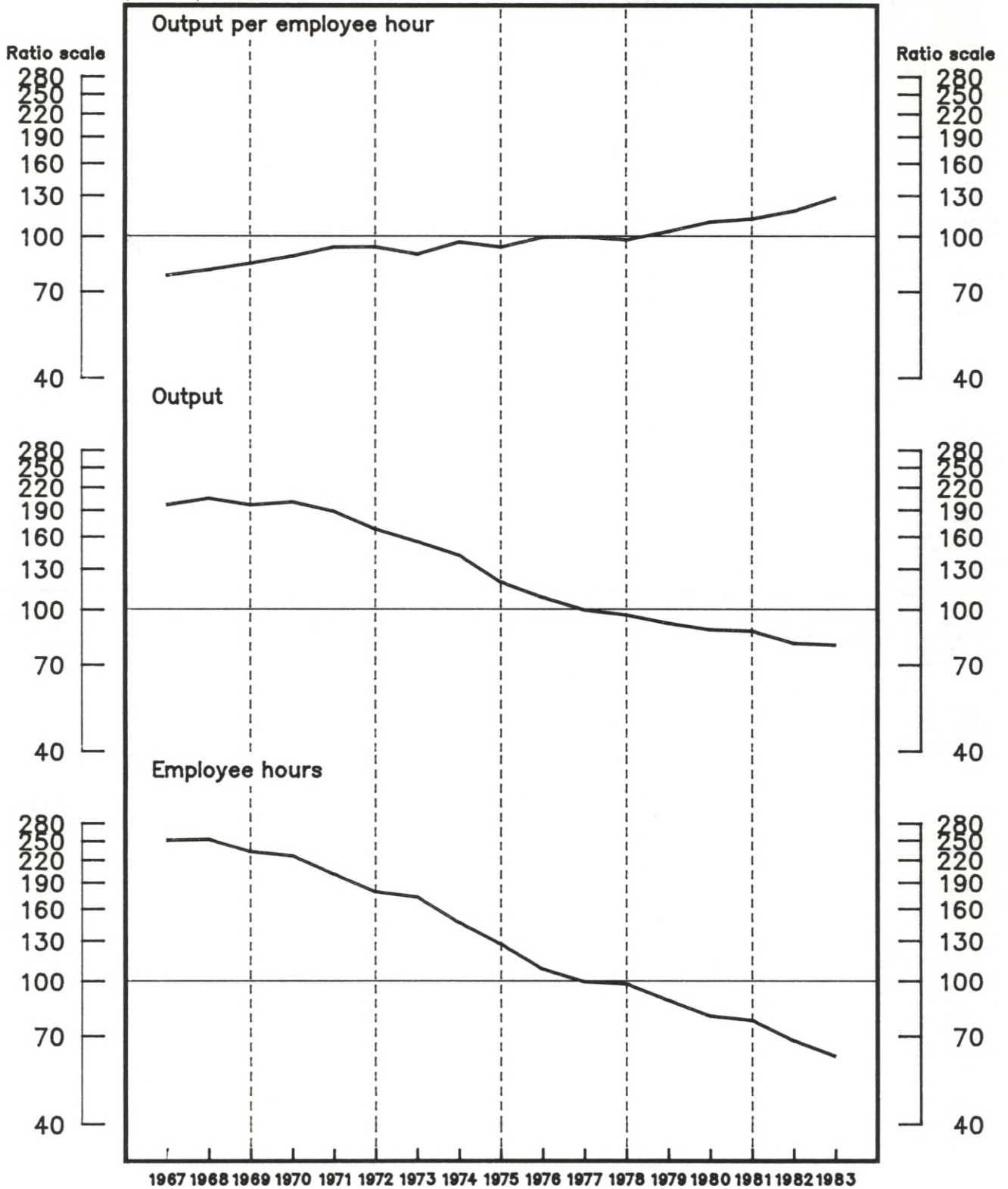
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms,

U.S. Department of the Treasury; the Bureau of the Census; and Agricultural Marketing Service, U.S. Department of Agriculture. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 32. Cigars (SIC 2121): Output per hour and related data, 1967-83  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 61. Cigars (SIC 2121): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	35.5	34.7	46.8	35.9	34.8	52.0
1955	35.8	35.0	45.7	35.9	34.9	50.4
1956	39.4	38.7	48.4	39.3	38.3	53.7
1957	42.1	41.4	51.3	42.2	41.2	56.9
1958	48.8	48.5	52.3	49.9	49.3	57.9
1959	53.0	52.9	54.6	54.8	54.3	60.4
1960	58.6	58.4	61.0	60.3	59.6	68.2
1961	62.1	62.6	57.5	64.3	64.3	64.8
1962	66.5	67.1	60.5	68.4	68.3	69.4
1963	71.6	71.7	68.8	73.5	73.1	78.8
1964	79.1	77.6	98.3	85.6	83.7	113.1
1965	81.5	81.5	81.6	84.2	83.3	93.5
1966	80.6	79.8	89.9	82.5	80.9	102.6
1967	78.0	79.2	67.4	80.0	80.4	76.9
1968	80.9	81.8	72.5	83.3	83.7	80.0
1969	84.4	85.6	74.0	87.2	87.9	81.3
1970	88.4	89.4	80.2	91.6	91.9	88.0
1971	93.7	93.8	92.8	97.1	96.6	101.9
1972	93.8	95.6	77.1	96.0	97.6	84.3
1973	89.5	90.2	82.7	92.1	92.2	90.7
1974	96.9	96.3	103.4	93.7	92.4	110.9
1975	93.7	95.2	79.9	94.0	95.2	83.8
1976	99.9	100.7	92.3	99.5	99.9	95.1
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	98.2	96.8	116.2	98.1	96.8	113.0
1979	103.7	103.1	110.2	104.0	103.6	107.1
1980	110.3	110.8	105.8	111.2	112.1	102.8
1981	112.5	113.2	104.9	118.1	119.9	102.0
1982	118.3	120.8	97.0	122.1	125.7	94.3
1983 <sup>2</sup>	129.1	128.5	137.0	136.8	136.3	139.9
Average annual percent change:						
1947-83	4.5	4.6	3.2	4.5	4.6	2.8
1978-83	5.2	5.6	1.2	6.5	7.0	2.0

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S. Department of the Treasury; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 62. Cigars (SIC 2121): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

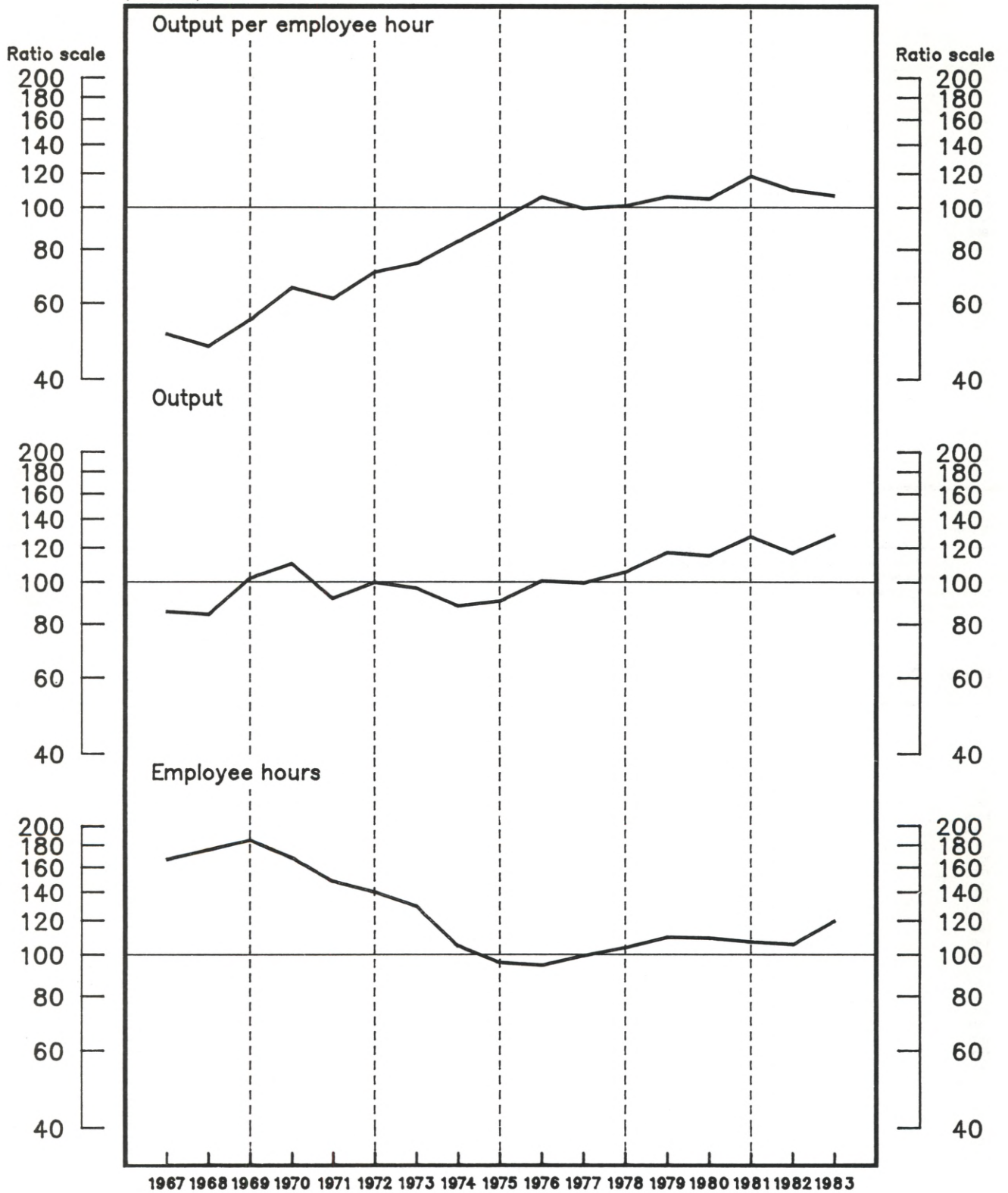
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	179.4	505.8	517.5	383.6	500.0	515.5	345.2
1955	178.3	498.7	509.0	390.3	497.0	511.1	353.5
1956	177.5	450.1	458.4	366.9	452.1	463.9	330.8
1957	181.4	430.6	437.7	353.4	429.4	440.3	319.0
1958	190.5	390.1	392.8	363.9	381.5	386.2	328.8
1959	202.0	381.0	382.0	370.1	368.9	372.0	334.7
1960	206.1	351.6	352.9	337.8	342.0	345.9	302.1
1961	195.7	315.2	312.7	340.5	304.2	304.4	302.1
1962	196.8	295.9	293.5	325.2	287.9	288.0	283.5
1963	198.0	276.7	276.1	287.7	269.4	270.8	251.4
1964	255.9	323.5	329.9	260.4	298.8	305.7	226.2
1965	230.2	282.5	282.5	282.1	273.3	276.2	246.3
1966	207.5	257.5	259.9	230.8	251.6	256.5	202.3
1967	197.6	253.2	249.4	293.3	246.9	245.7	257.1
1968	205.7	254.4	251.6	283.6	246.9	245.7	257.1
1969	197.2	233.7	230.4	266.6	226.2	224.3	242.7
1970	201.0	227.3	224.9	250.7	219.5	218.7	228.5
1971	189.1	201.8	201.5	203.8	194.8	195.8	185.6
1972	168.6	179.7	176.3	218.8	175.6	172.7	200.0
1973	155.5	173.7	172.3	188.0	168.9	168.6	171.5
1974	142.5	147.1	147.9	137.8	152.1	154.3	128.5
1975	119.8	127.8	125.9	149.9	127.4	125.8	142.9
1976	108.5	108.6	107.7	117.6	109.1	108.6	114.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	96.8	98.6	100.0	83.3	98.7	100.0	85.7
1979	91.8	88.5	89.0	83.3	88.3	88.6	85.7
1980	88.1	79.9	79.5	83.3	79.2	78.6	85.7
1981	87.4	77.7	77.2	83.3	74.0	72.9	85.7
1982	80.8	68.3	66.9	83.3	66.2	64.3	85.7
1983 <sup>1</sup>	79.9	61.9	62.2	58.3	58.4	58.6	57.1
Average annual percent change:							
1947-83	-2.0	-6.1	-6.2	-5.0	-6.2	-6.3	-4.6
1978-83	-3.8	-8.6	-8.9	-5.0	-9.7	-10.1	-5.6

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Alcohol, Tobacco, and Firearms, U.S. Department of the Treasury; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 33. Hosiery (SIC 2251, 2252): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 63. Hosiery (SIC 2251, 2252): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	23.9	23.3	32.0	23.8	23.0	34.0
1955 .....	23.5	23.0	30.3	23.6	22.9	32.1
1956 .....	24.0	23.5	30.4	24.0	23.3	32.2
1957 .....	25.2	24.7	30.3	25.1	24.4	32.2
1958 .....	29.7	29.3	33.7	29.2	28.7	35.7
1959 .....	29.5	29.0	35.6	29.9	29.3	37.7
1960 .....	30.3	29.7	37.0	30.6	29.8	39.3
1961 .....	33.1	32.7	37.8	33.6	33.0	39.9
1962 .....	34.3	33.9	38.8	34.8	34.2	41.1
1963 .....	38.8	38.1	46.3	38.9	38.0	49.1
1964 .....	41.4	40.6	50.4	42.6	41.6	53.6
1965 .....	41.4	40.6	50.4	42.3	41.3	53.3
1966 .....	45.5	44.8	53.2	47.0	46.1	56.0
1967 .....	51.1	50.7	56.0	52.1	51.4	59.2
1968 .....	47.9	47.7	49.9	49.0	48.5	54.6
1969 .....	55.2	55.0	57.1	56.5	56.0	61.0
1970 .....	65.5	65.8	63.6	63.5	63.2	66.6
1971 .....	61.8	63.2	52.6	60.3	60.9	55.4
1972 .....	71.2	72.6	61.5	71.9	72.8	64.8
1973 .....	74.6	76.4	63.1	72.1	73.0	64.9
1974 .....	84.0	85.9	71.0	80.5	81.7	70.9
1975 .....	94.3	96.4	79.8	89.2	90.3	80.1
1976 .....	106.4	107.9	96.7	105.1	106.1	97.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.4	101.9	97.9	102.3	102.9	97.9
1979 .....	106.5	108.4	92.2	110.6	113.1	92.8
1980 .....	105.3	108.1	85.8	109.0	112.3	86.8
1981 .....	118.9	122.5	94.3	124.5	129.1	94.9
1982 .....	110.3	112.1	96.1	109.5	111.2	96.4
1983 <sup>2</sup> .....	107.1	107.5	103.5	113.7	115.0	103.4
Average annual percent change:						
1947-83 .....	5.9	6.1	4.5	5.9	6.1	4.2
1978-83 .....	1.4	1.4	1.4	1.8	1.9	1.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

differ from those previously published.

SOURCE: Output based on data from the National Association of Hosiery Manufacturers, Inc., and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

**Table 64. Hosiery (SIC 2251, 2252): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	50.0	209.2	214.9	156.2	209.9	217.2	147.0
1955 .....	50.7	215.3	220.5	167.5	215.2	221.7	158.1
1956 .....	49.5	206.0	210.8	162.9	206.4	212.7	153.5
1957 .....	49.5	196.8	200.5	163.2	197.5	202.7	153.9
1958 .....	51.3	172.8	174.8	152.2	175.5	179.0	143.5
1959 .....	54.0	182.9	186.3	151.8	180.4	184.6	143.2
1960 .....	53.9	177.7	181.2	145.8	176.1	180.8	137.1
1961 .....	59.0	178.0	180.4	156.0	175.6	179.0	147.7
1962 .....	60.5	176.5	178.5	155.9	174.0	177.1	147.2
1963 .....	62.7	161.7	164.5	135.4	161.3	165.1	127.8
1964 .....	66.6	160.7	164.0	132.2	156.5	160.1	124.2
1965 .....	70.2	169.6	172.8	139.4	165.9	169.8	131.7
1966 .....	77.4	170.1	172.8	145.6	164.6	167.8	138.1
1967 .....	85.8	167.8	169.2	153.1	164.7	166.9	144.9
1968 .....	84.6	176.8	177.3	169.7	172.8	174.6	154.9
1969 .....	102.7	186.1	186.6	179.8	181.7	183.3	168.3
1970 .....	110.9	169.3	168.5	174.3	174.6	175.5	166.5
1971 .....	92.2	149.2	146.0	175.2	152.9	151.3	166.5
1972 .....	100.3	140.9	138.2	163.2	139.5	137.7	154.9
1973 .....	97.3	130.4	127.4	154.1	134.9	133.2	149.9
1974 .....	88.5	105.4	103.0	124.7	110.0	108.3	124.9
1975 .....	90.8	96.3	94.2	113.8	101.8	100.5	113.3
1976 .....	101.1	95.0	93.7	104.6	96.2	95.3	103.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.0	104.5	104.0	108.3	103.6	103.0	108.3
1979 .....	117.6	110.4	108.5	127.5	106.3	104.0	126.7
1980 .....	115.7	109.9	107.0	134.9	106.1	103.0	133.3
1981 .....	128.1	107.7	104.6	135.8	102.9	99.2	135.0
1982 .....	117.3	106.3	104.6	122.0	107.1	105.5	121.7
1983 <sup>1</sup> .....	129.2	120.6	120.2	124.8	113.6	112.3	125.0
Average annual percent change:							
1947-83 .....	3.2	-2.5	-2.7	-1.2	-2.5	-2.7	-1.0
1978-83 .....	3.1	1.7	1.7	1.7	1.3	1.3	1.8

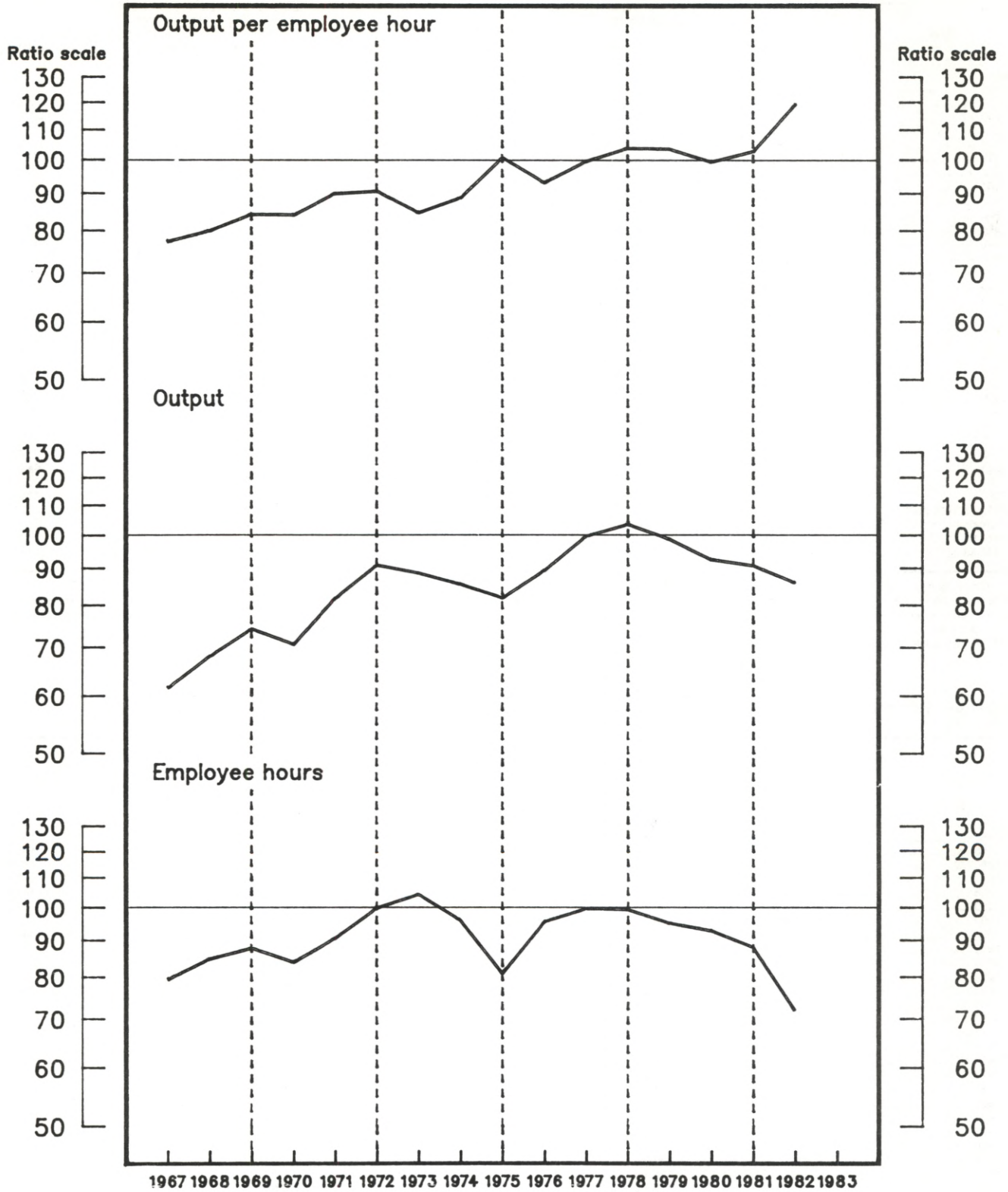
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the National Association of Hosiery Manufacturers, Inc., and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 34. Yarn mills, except wool (SIC 2281): Output per hour and related data, 1967-82  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 65. Yarn mills, except wool (SIC 2281): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	59.5	58.7	71.9	54.0	52.7	74.8
1959 .....	62.3	61.3	79.6	61.5	60.1	83.0
1960 .....	65.3	64.2	82.0	62.0	60.5	85.0
1961 .....	71.4	70.4	87.1	68.8	67.4	90.2
1962 .....	74.7	73.6	94.0	73.5	71.9	97.4
1963 .....	76.3	74.7	106.1	75.9	74.0	109.3
1964 .....	80.6	79.9	91.3	83.1	82.4	94.4
1965 .....	84.6	83.2	108.1	90.1	88.5	112.0
1966 .....	81.8	79.9	120.2	85.5	83.3	123.5
1967 .....	77.5	76.1	102.8	77.0	75.2	106.2
1968 .....	80.2	78.9	102.4	81.9	80.0	112.2
1969 .....	84.5	83.3	105.7	83.3	81.4	112.4
1970 .....	84.3	83.6	96.7	82.2	80.9	101.0
1971 .....	90.3	89.5	101.6	91.9	90.9	106.5
1972 .....	91.0	90.2	105.3	94.6	93.5	110.5
1973 .....	85.0	84.1	99.2	86.6	85.5	101.1
1974 .....	89.1	89.4	87.1	84.8	84.6	86.9
1975 .....	101.2	102.0	92.6	93.7	93.9	92.2
1976 .....	93.5	93.1	100.1	91.8	91.2	100.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.2	104.1	105.4	103.5	103.3	105.3
1979 .....	103.9	103.8	106.1	103.3	103.1	106.2
1980 .....	99.8	100.5	91.4	97.0	97.5	91.5
1981 .....	103.2	104.1	92.4	98.9	99.5	92.3
1982 <sup>2</sup> .....	119.6	121.1	103.0	110.2	110.9	102.9
Average annual percent change:						
1958-82 .....	2.2	2.4	.6	2.2	2.3	.4
1978-82 .....	2.7	3.1	-1.8	.8	1.1	-1.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.  
<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.  
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

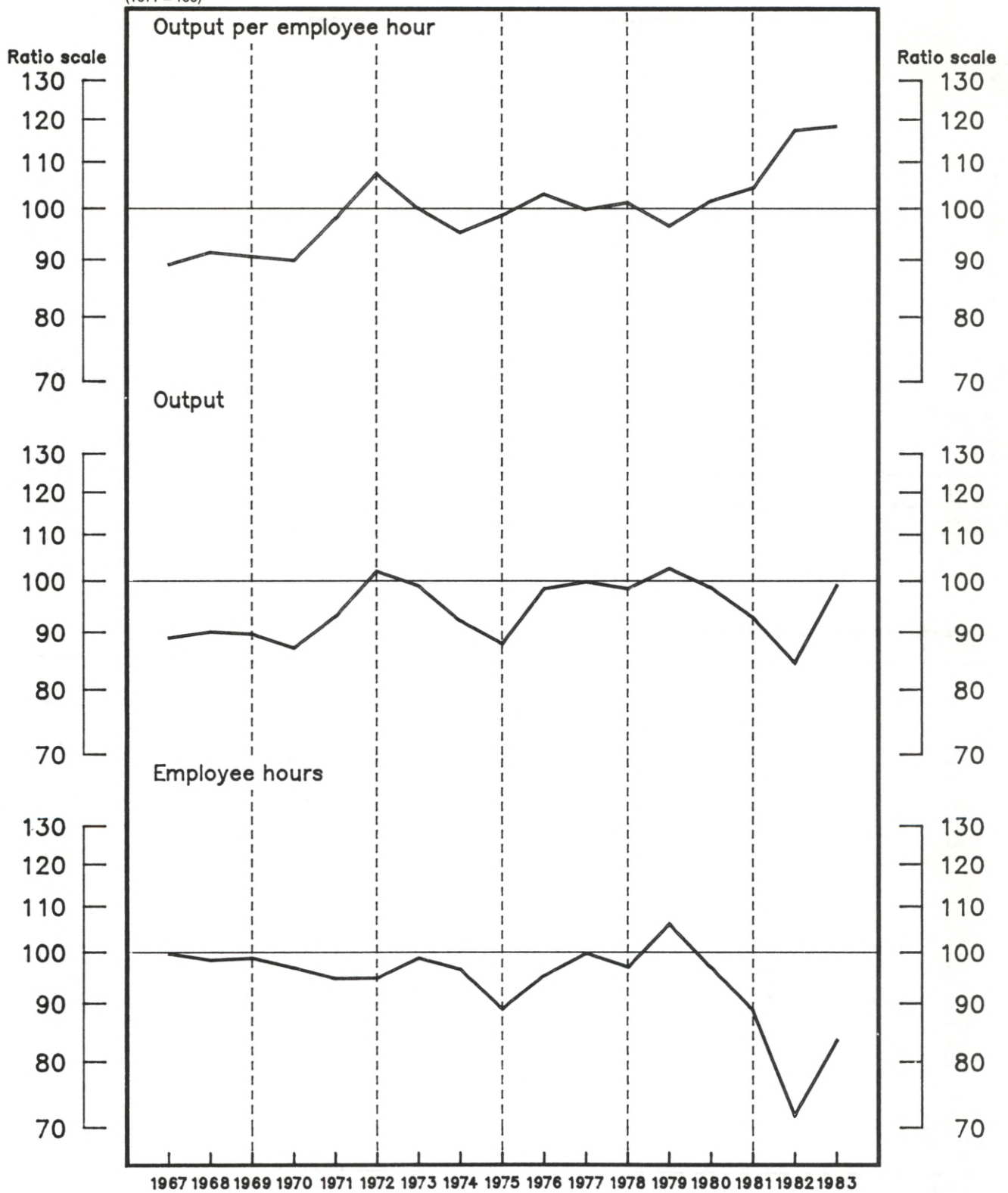
**Table 66. Yarn mills, except wool (SIC 2281): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	39.4	66.2	67.1	54.8	72.9	74.7	52.7
1959 .....	44.8	71.9	73.1	56.3	72.9	74.6	54.0
1960 .....	42.5	65.1	66.2	51.8	68.6	70.2	50.0
1961 .....	45.1	63.2	64.1	51.8	65.6	66.9	50.0
1962 .....	48.7	65.2	66.2	51.8	66.3	67.7	50.0
1963 .....	50.3	65.9	67.3	47.4	66.3	68.0	46.0
1964 .....	57.4	71.2	71.8	62.9	69.1	69.7	60.8
1965 .....	66.5	78.6	79.9	61.5	73.8	75.1	59.4
1966 .....	66.7	81.5	83.5	55.5	78.0	80.1	54.0
1967 .....	61.7	79.6	81.1	60.0	80.1	82.0	58.1
1968 .....	68.2	85.0	86.4	66.6	83.3	85.2	60.8
1969 .....	74.4	88.0	89.3	70.4	89.3	91.4	66.2
1970 .....	70.9	84.1	84.8	73.3	86.3	87.6	70.2
1971 .....	82.0	90.8	91.6	80.7	89.2	90.2	77.0
1972 .....	91.2	100.2	101.1	86.6	96.4	97.5	82.5
1973 .....	88.9	104.6	105.7	89.6	102.7	104.0	87.9
1974 .....	85.8	96.3	96.0	98.5	101.2	101.4	98.7
1975 .....	82.2	81.2	80.6	88.8	87.7	87.5	89.2
1976 .....	89.7	95.9	96.3	89.6	97.7	98.4	89.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.8	99.6	99.7	98.5	100.3	100.5	98.6
1979 .....	99.0	95.3	95.4	93.3	95.8	96.0	93.2
1980 .....	92.8	93.0	92.3	101.5	95.7	95.2	101.4
1981 .....	91.0	88.2	87.4	98.5	92.0	91.5	98.6
1982 <sup>1</sup> .....	86.2	72.1	71.2	83.7	78.2	77.7	83.8
Average annual percent change:							
1958-82 .....	3.9	1.6	1.5	3.3	1.7	1.5	3.5
1978-82 .....	-4.5	-7.0	-7.3	-2.7	-5.2	-5.5	-2.7

<sup>1</sup> Preliminary.  
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 35. Sawmills and planing mills, general (SIC 2421): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 67. Sawmills and planing mills, general (SIC 2421): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	65.2	66.7	55.3	61.3	62.0	55.6
1959 .....	67.5	65.7	87.6	64.0	61.9	88.0
1960 .....	67.1	65.4	86.1	65.3	63.4	86.1
1961 .....	73.1	71.1	94.9	70.2	68.0	94.1
1962 .....	76.4	74.0	104.4	74.1	71.6	103.0
1963 .....	79.7	79.0	86.1	77.1	76.1	85.1
1964 .....	84.7	84.3	87.4	83.4	82.9	86.6
1965 .....	81.8	80.9	89.8	80.0	79.0	88.8
1966 .....	82.7	81.6	93.0	80.6	79.3	91.4
1967 .....	89.2	87.2	111.1	86.5	84.3	109.5
1968 .....	91.5	90.0	106.1	89.9	88.2	106.7
1969 .....	90.7	89.5	101.8	88.6	87.0	102.5
1970 .....	90.0	90.1	89.2	88.0	87.7	90.6
1971 .....	98.1	97.3	105.2	96.2	94.9	106.9
1972 .....	107.6	106.8	114.1	107.5	106.5	116.0
1973 .....	100.2	99.6	106.0	100.1	99.3	106.9
1974 .....	95.4	95.9	91.5	93.2	93.5	91.3
1975 .....	98.8	98.9	98.1	96.7	96.5	98.2
1976 .....	103.2	103.1	103.2	102.2	102.0	103.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.4	102.1	96.0	99.7	100.2	96.1
1979 .....	96.7	97.7	89.0	96.9	98.0	89.5
1980 .....	101.8	105.1	80.5	98.7	101.4	81.3
1981 .....	104.5	107.6	83.6	101.1	103.8	83.9
1982 .....	117.6	121.8	90.9	112.6	116.0	91.4
1983 <sup>2</sup> .....	118.6	120.5	104.6	120.5	122.7	104.7
Average annual percent change:						
1958-83 .....	2.0	2.2	.5	2.2	2.3	.6
1978-83 .....	4.1	4.4	1.5	4.1	4.5	1.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 68. Sawmills and planing mills, general (SIC 2421): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	86.0	131.9	129.0	155.6	140.3	138.6	154.6
1959 .....	92.1	136.4	140.1	105.1	143.9	148.8	104.6
1960 .....	89.6	133.6	137.0	104.1	137.3	141.4	104.1
1961 .....	85.8	117.4	120.7	90.4	122.2	126.2	91.2
1962 .....	88.7	116.1	119.8	85.0	119.7	123.9	86.1
1963 .....	91.2	114.4	115.4	105.9	118.3	119.8	107.2
1964 .....	94.7	111.8	112.3	108.3	113.5	114.2	109.3
1965 .....	92.0	112.5	113.7	102.5	115.0	116.5	103.6
1966 .....	89.6	108.4	109.8	96.3	111.2	113.0	98.0
1967 .....	89.1	99.9	102.2	80.2	103.0	105.7	81.4
1968 .....	90.2	98.6	100.2	85.0	100.3	102.3	84.5
1969 .....	89.8	99.0	100.3	88.2	101.3	103.2	87.6
1970 .....	87.3	97.0	96.9	97.9	99.2	99.6	96.4
1971 .....	93.1	94.9	95.7	88.5	96.8	98.1	87.1
1972 .....	102.2	95.0	95.7	89.6	95.1	96.0	88.1
1973 .....	99.2	99.0	99.6	93.6	99.1	99.9	92.8
1974 .....	92.3	96.7	96.2	100.9	99.0	98.7	101.1
1975 .....	88.1	89.2	89.1	89.8	91.1	91.3	89.7
1976 .....	98.6	95.5	95.6	95.5	96.5	96.7	94.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.6	97.2	96.6	102.7	98.9	98.4	102.6
1979 .....	102.8	106.3	105.2	115.5	106.1	104.9	114.9
1980 .....	98.8	97.1	94.0	122.8	100.1	97.4	121.6
1981 .....	93.0	89.0	86.4	111.3	92.0	89.6	110.8
1982 .....	84.8	72.1	69.6	93.3	75.3	73.1	92.8
1983 <sup>1</sup> .....	99.3	83.7	82.4	94.9	82.4	80.9	94.8
Average annual percent change:							
1958-83 .....	.4	-1.6	-1.8	-.1	-1.7	-1.9	-.2
1978-83 .....	-1.7	-5.6	-5.9	-3.2	-5.6	-5.9	-3.2

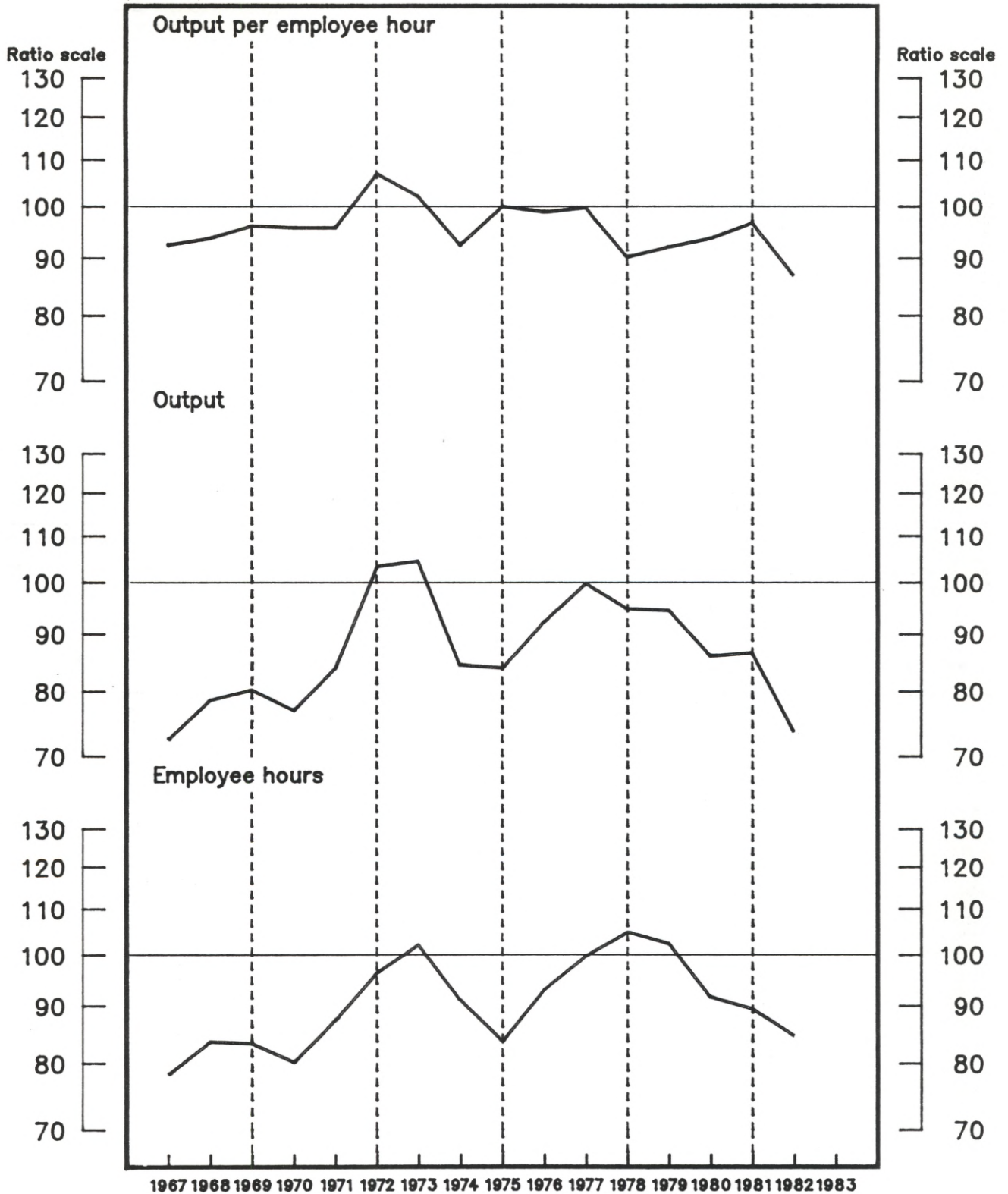
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 36. Millwork (SIC 2431): Output per and related data, 1967-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 69. Millwork (SIC 2431): Indexes of output per employee hour and output per employee, 1958-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	75.6	77.0	70.7	77.2	78.3	72.8
1959 .....	71.7	72.4	69.7	74.2	74.8	71.8
1960 .....	73.2	74.8	67.7	73.8	75.0	69.3
1961 .....	76.9	78.1	72.6	78.3	79.4	73.7
1962 .....	78.1	78.8	76.3	79.8	80.6	77.1
1963 .....	86.0	86.0	86.5	88.6	88.9	87.3
1964 .....	86.0	85.9	87.2	88.3	88.3	88.0
1965 .....	85.8	86.1	85.2	88.2	88.7	86.0
1966 .....	82.7	84.0	78.4	84.4	85.7	79.3
1967 .....	92.6	93.3	90.1	94.9	96.0	91.0
1968 .....	93.9	93.7	96.0	95.5	95.9	94.4
1969 .....	96.3	96.6	95.7	96.2	96.6	94.9
1970 .....	95.9	97.6	89.7	95.7	97.2	89.8
1971 .....	95.9	95.3	99.3	96.3	96.8	95.1
1972 .....	107.2	104.5	121.6	107.0	106.1	111.3
1973 .....	102.3	101.6	106.7	101.6	101.6	101.7
1974 .....	92.7	94.4	85.5	91.3	92.8	84.6
1975 .....	100.2	102.6	90.9	100.4	102.8	90.3
1976 .....	99.1	99.6	97.3	98.8	99.2	97.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	90.4	90.3	90.7	90.0	89.8	90.7
1979 .....	92.3	93.6	86.6	91.0	91.9	86.6
1980 .....	93.9	97.5	80.1	92.3	95.4	80.1
1981 .....	96.9	100.2	83.6	95.0	97.7	83.6
1982 <sup>2</sup> .....	87.0	92.2	69.0	85.9	90.6	69.0
Average annual percent change:						
1958-82 .....	1.1	1.2	.8	.9	.9	.6
1978-82 .....	-3	1.1	-5.7	-5	.8	-5.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 70. Millwork (SIC 2431): Indexes of output, employee hours, and employees, 1958-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	58.5	77.4	76.0	82.8	75.8	74.7	80.4
1959 .....	61.2	85.3	84.5	87.8	82.5	81.8	85.2
1960 .....	55.7	76.1	74.5	82.3	75.5	74.3	80.4
1961 .....	56.6	73.6	72.5	78.0	72.3	71.3	76.8
1962 .....	59.7	76.4	75.8	78.2	74.8	74.1	77.4
1963 .....	68.1	79.2	79.2	78.7	76.9	76.6	78.0
1964 .....	69.2	80.5	80.6	79.4	78.4	78.4	78.6
1965 .....	70.2	81.8	81.5	82.4	79.6	79.1	81.6
1966 .....	66.6	80.5	79.3	84.9	78.9	77.7	84.0
1967 .....	72.6	78.4	77.8	80.6	76.5	75.6	79.8
1968 .....	78.7	83.8	84.0	82.0	82.4	82.1	83.4
1969 .....	80.4	83.5	83.2	84.0	83.6	83.2	84.7
1970 .....	77.1	80.4	79.0	86.0	80.6	79.3	85.9
1971 .....	84.0	87.6	88.1	84.6	87.2	86.8	88.3
1972 .....	103.6	96.6	99.1	85.2	96.8	97.6	93.1
1973 .....	104.7	102.3	103.1	98.1	103.1	103.1	103.0
1974 .....	84.6	91.3	89.6	99.0	92.7	91.2	100.0
1975 .....	84.1	83.9	82.0	92.5	83.8	81.8	93.1
1976 .....	92.5	93.3	92.9	95.1	93.6	93.2	95.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	94.9	105.0	105.1	104.6	105.5	105.7	104.6
1979 .....	94.6	102.5	101.1	109.2	104.0	102.9	109.2
1980 .....	86.2	91.8	88.4	107.6	93.4	90.4	107.6
1981 .....	86.8	89.6	86.6	103.8	91.4	88.8	103.8
1982 <sup>1</sup> .....	73.8	84.8	80.0	106.9	85.9	81.5	106.9
Average annual percent change:							
1958-82 .....	2.1	1.0	1.0	1.4	1.2	1.2	1.5
1978-82 .....	-5.7	-5.5	-6.8	-1	-5.3	-6.5	-1

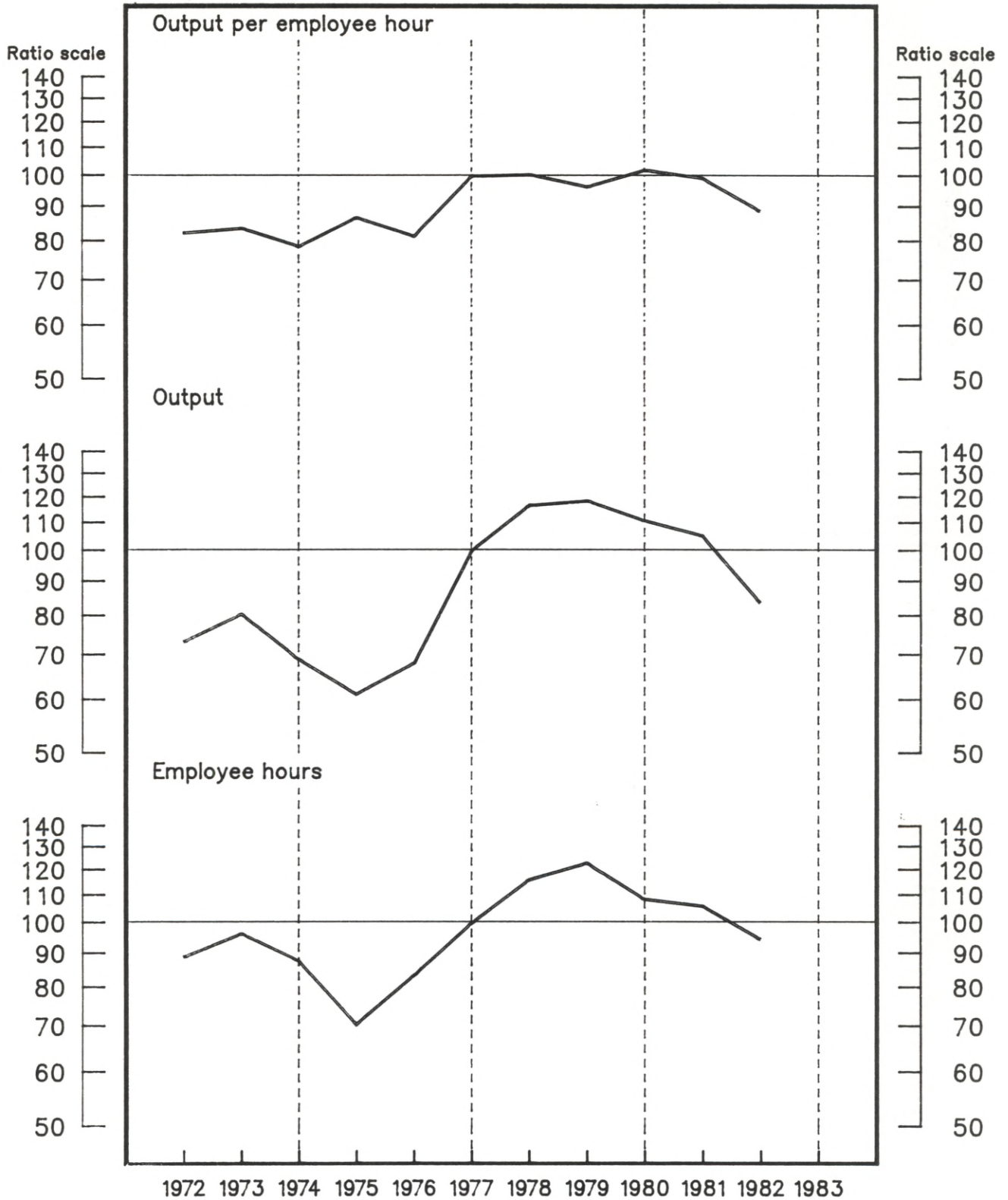
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.



Chart 37. Wood kitchen cabinets (SIC 2434): Output per hour and related data, 1972-82  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 71. Wood kitchen cabinets (SIC 2434): Indexes of output per employee hour and output per employee, 1972-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	82.3	80.9	90.1	84.9	85.4	82.5
1973 .....	83.6	83.6	83.3	84.9	86.1	79.4
1974 .....	78.6	81.3	67.6	79.1	81.9	67.0
1975 .....	86.7	90.9	70.5	85.8	89.7	70.1
1976 .....	81.4	81.9	79.3	81.4	81.9	79.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.5	100.2	102.3	103.2	103.4	102.3
1979 .....	96.4	95.7	100.2	96.8	96.2	100.2
1980 .....	102.1	104.5	91.4	101.1	103.2	91.4
1981 .....	99.3	104.4	80.3	99.0	103.5	80.3
1982 <sup>2</sup> .....	88.7	96.2	63.9	88.1	95.0	63.9
Average annual percent change:						
1972-82 .....	2.1	2.6	( <sup>3</sup> )	1.8	2.1	.6
1978-82 .....	-2.2	.1	-11.0	-2.9	-1.0	-11.0

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 72. Wood kitchen cabinets (SIC 2434): Indexes of output, employee hours, and employees, 1972-82**  
(1977=100)

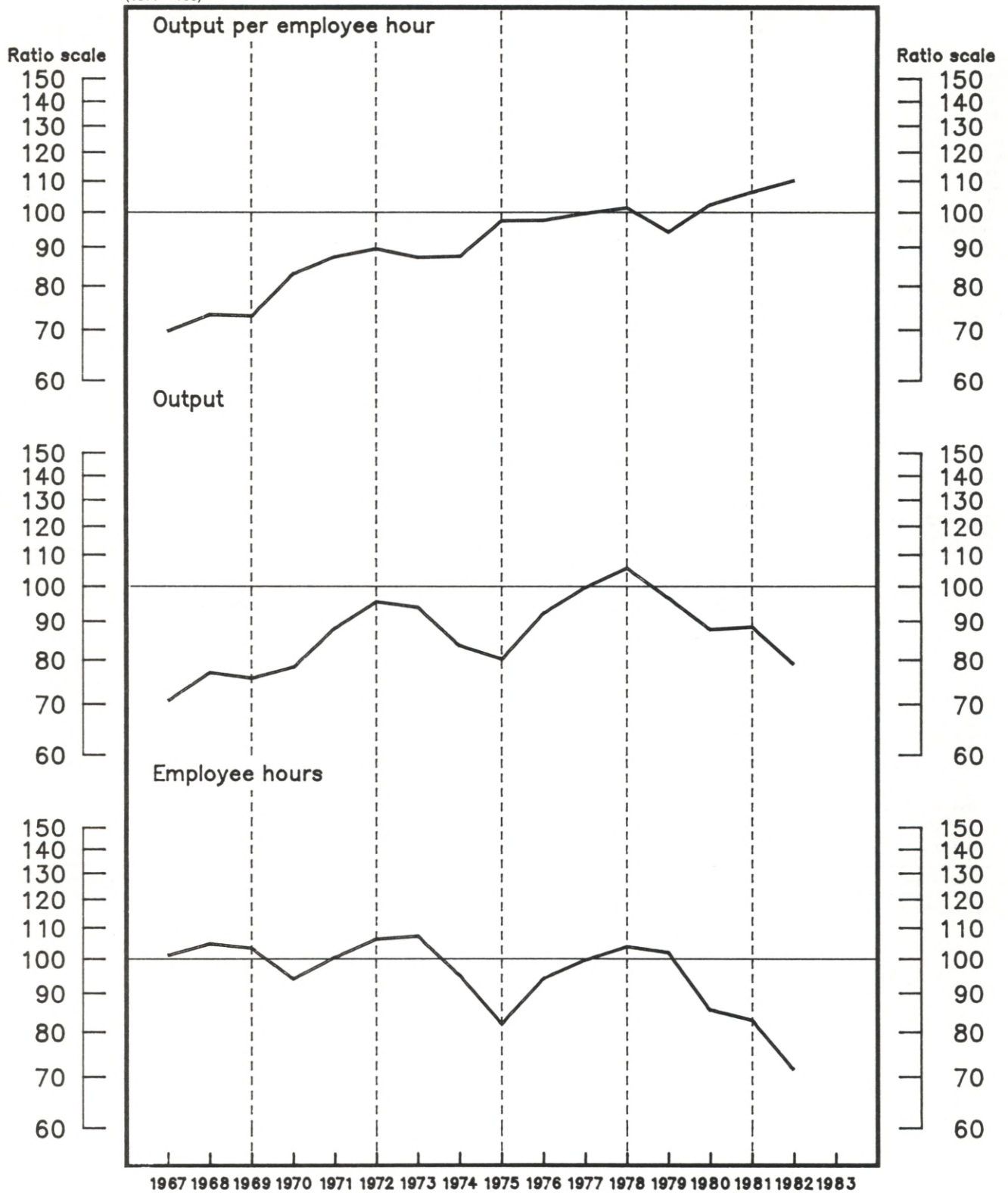
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	73.2	88.9	90.5	81.2	86.2	85.7	88.7
1973 .....	80.5	96.3	96.3	96.6	94.8	93.5	101.4
1974 .....	68.9	87.7	84.8	101.9	87.1	84.1	102.8
1975 .....	61.2	70.6	67.3	86.8	71.3	68.2	87.3
1976 .....	68.0	83.5	83.0	85.7	83.5	83.0	85.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	116.7	116.1	116.5	114.1	113.1	112.9	114.1
1979 .....	118.5	122.9	123.8	118.3	122.4	123.2	118.3
1980 .....	110.7	108.4	105.9	121.1	109.5	107.3	121.1
1981 .....	105.2	105.9	100.8	131.0	106.3	101.6	131.0
1982 <sup>1</sup> .....	83.7	94.4	87.0	131.0	95.0	88.1	131.0
Average annual percent change:							
1972-82 .....	4.7	2.5	2.0	4.7	2.8	2.5	4.0
1978-82 .....	-7.5	-5.5	-7.6	3.9	-4.8	-6.7	3.9

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 38. Veneer and plywood (SIC 2435, 2436): Output per hour and related data, 1967-82  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 73. Veneer and plywood (SIC 2435, 2436): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	41.7	40.4	55.2	41.4	40.0	56.7
1959 .....	46.9	45.2	69.1	48.0	46.1	70.9
1960 .....	49.3	47.7	67.7	48.3	46.6	69.1
1961 .....	53.9	52.2	74.2	53.7	51.8	75.2
1962 .....	58.3	56.1	86.1	59.0	56.7	86.8
1963 .....	60.7	58.3	90.5	61.7	59.2	91.1
1964 .....	62.6	60.4	89.1	64.1	61.9	89.6
1965 .....	64.0	62.1	85.6	66.1	64.3	86.3
1966 .....	64.3	62.5	83.3	65.8	64.0	83.9
1967 .....	69.9	68.5	82.6	70.3	68.9	83.2
1968 .....	73.5	71.7	91.1	75.2	73.7	89.4
1969 .....	73.2	71.9	86.2	73.8	72.5	85.5
1970 .....	83.2	83.0	83.7	82.2	82.0	83.7
1971 .....	87.6	87.3	90.8	88.2	87.9	90.6
1972 .....	89.8	88.8	98.7	93.0	92.5	98.2
1973 .....	87.5	87.5	86.3	88.2	88.5	85.6
1974 .....	87.8	88.8	80.7	85.9	86.7	79.9
1975 .....	97.8	99.9	83.2	94.5	96.2	82.6
1976 .....	97.9	98.1	96.3	97.6	97.8	96.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.7	102.2	97.5	101.3	101.8	97.6
1979 .....	94.6	96.4	81.7	92.5	94.1	81.7
1980 .....	102.7	105.8	82.9	98.3	100.7	82.9
1981 .....	106.7	108.0	97.2	101.7	102.4	97.0
1982 <sup>2</sup> .....	110.5	113.1	91.7	103.4	105.0	91.7
Average annual percent change:						
1958-82 .....	3.8	4.1	1.2	3.6	3.9	1.1
1978-82 .....	2.9	3.2	.5	1.4	1.5	.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 74. Veneer and plywood (SIC 2435, 2436): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	34.3	82.2	84.8	62.1	82.8	85.7	60.5
1959 .....	43.8	93.3	97.0	63.4	91.3	95.1	61.8
1960 .....	42.7	86.6	89.5	63.1	88.4	91.7	61.8
1961 .....	46.5	86.2	89.1	62.7	86.6	89.7	61.8
1962 .....	54.6	93.6	97.3	63.4	92.5	96.3	62.9
1963 .....	56.3	92.8	96.6	62.2	91.3	95.1	61.8
1964 .....	62.0	99.0	102.7	69.6	96.7	100.1	69.2
1965 .....	68.2	106.5	109.8	79.7	103.1	106.1	79.0
1966 .....	72.5	112.8	116.0	87.0	110.2	113.2	86.4
1967 .....	70.9	101.5	103.5	85.8	100.9	102.9	85.2
1968 .....	77.2	105.1	107.7	84.7	102.7	104.7	86.4
1969 .....	75.9	103.7	105.6	88.0	102.9	104.7	88.8
1970 .....	78.5	94.4	94.6	93.8	95.5	95.7	93.8
1971 .....	88.3	100.8	101.2	97.3	100.1	100.4	97.5
1972 .....	95.7	106.6	107.8	97.0	102.9	103.5	97.5
1973 .....	94.1	107.6	107.5	109.1	106.7	106.3	109.9
1974 .....	83.8	95.4	94.4	103.9	97.5	96.6	104.9
1975 .....	80.5	82.3	80.6	96.8	85.2	83.7	97.5
1976 .....	92.5	94.5	94.3	96.1	94.8	94.6	96.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.0	104.2	103.7	108.7	104.6	104.1	108.6
1979 .....	96.8	102.3	100.4	118.5	104.6	102.9	118.5
1980 .....	88.0	85.7	83.2	106.2	89.5	87.4	106.2
1981 .....	88.7	83.1	82.1	91.3	87.2	86.6	91.4
1982 <sup>1</sup> .....	79.2	71.7	70.0	86.4	76.6	75.4	86.4
Average annual percent change:							
1958-82 .....	3.6	-2	-4	2.4	( <sup>2</sup> )	-2	2.5
1978-82 .....	-6.5	-9.1	-9.4	-6.9	-7.7	-7.9	-6.9

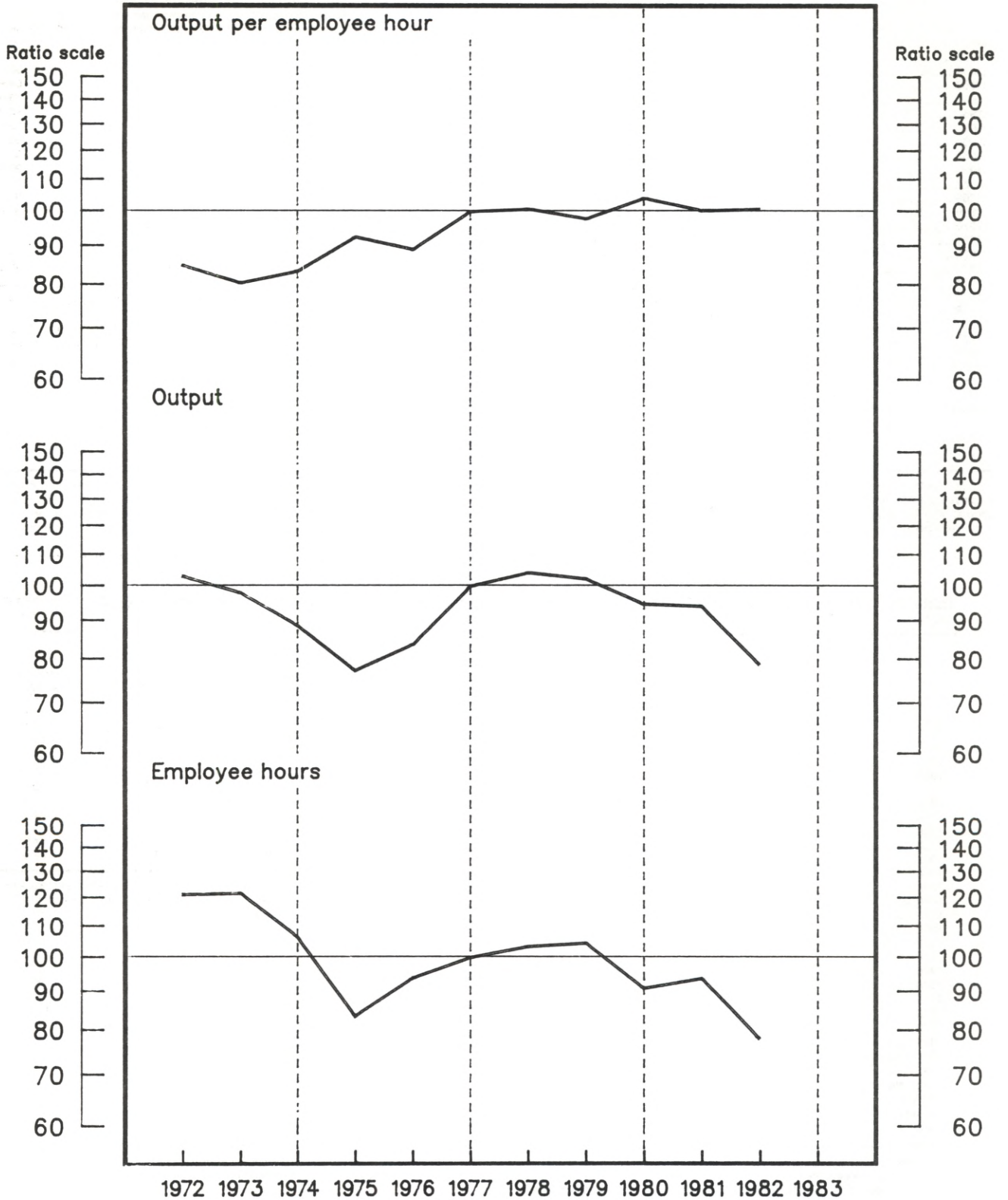
<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 39. Hardwood veneer and plywood (SIC 2435): Output per hour and related data, 1972-82  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 75. Hardwood veneer and plywood (SIC 2435): Indexes of output per employee hour and output per employee, 1972-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	84.9	83.5	97.0	87.7	86.6	96.5
1973 .....	80.5	78.8	95.5	81.8	80.4	94.9
1974 .....	83.4	81.7	99.6	82.7	81.1	98.6
1975 .....	92.5	92.4	93.5	89.6	89.2	92.8
1976 .....	89.1	88.7	93.2	89.1	88.7	93.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.7	99.8	107.7	99.5	98.6	107.7
1979 .....	97.8	97.7	98.9	96.3	96.1	98.9
1980 .....	104.1	104.9	97.9	100.4	100.7	97.9
1981 .....	100.3	101.6	91.1	99.4	100.5	91.1
1982 <sup>2</sup> .....	100.8	104.0	81.4	94.5	96.6	81.4
Average annual percent change:						
1972-82 .....	2.4	2.9	-8	1.8	2.2	-7
1978-82 .....	.3	1.2	-6.2	-7	( <sup>3</sup> )	-6.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 76. Hardwood veneer and plywood (SIC 2435): Indexes of output, employee hours, and employees, 1972-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	103.0	121.3	123.3	106.2	117.5	118.9	106.7
1973 .....	98.0	121.8	124.3	102.6	119.8	121.9	103.3
1974 .....	88.7	106.4	108.6	89.1	107.2	109.4	90.0
1975 .....	77.3	83.6	83.7	82.7	86.3	86.7	83.3
1976 .....	83.7	93.9	94.4	89.8	93.9	94.4	90.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.1	103.4	104.3	96.7	104.6	105.6	96.7
1979 .....	102.2	104.5	104.6	103.3	106.1	106.4	103.3
1980 .....	94.7	91.0	90.3	96.7	94.3	94.0	96.7
1981 .....	94.1	93.8	92.6	103.3	94.7	93.6	103.3
1982 <sup>1</sup> .....	78.7	78.1	75.7	96.7	83.3	81.5	96.7
Average annual percent change:							
1972-82 .....	-5	-2.8	-3.2	.3	-2.3	-2.6	.2
1978-82 .....	-6.2	-6.5	-7.3	( <sup>2</sup> )	-5.5	-6.3	( <sup>2</sup> )

<sup>1</sup> Preliminary.

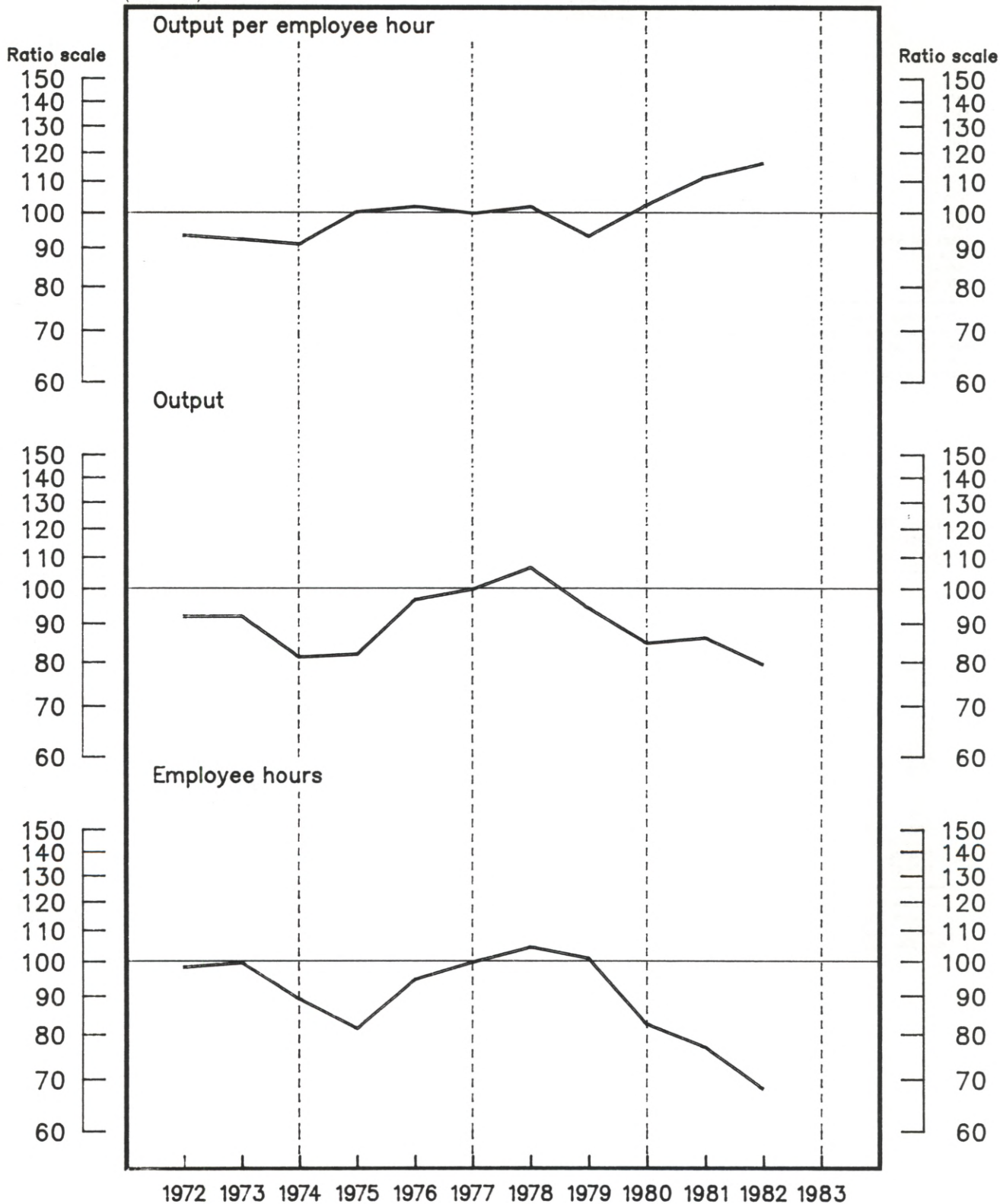
<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.



Chart 40. Softwood veneer and plywood (SIC 2436): Output per hour and related data, 1972-82  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 77. Softwood veneer and plywood (SIC 2436): Indexes of output per employee hour and output per employee, 1972-82 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	93.5	92.7	100.4	97.3	96.9	99.9
1973 .....	92.4	93.8	81.7	92.8	94.5	81.1
1974 .....	91.1	93.9	72.3	88.4	90.9	71.6
1975 .....	100.5	104.1	78.1	97.0	100.0	77.5
1976 .....	102.1	102.8	97.1	101.7	102.3	96.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.1	103.4	92.3	102.0	103.4	92.3
1979 .....	93.4	96.3	74.1	90.9	93.5	74.0
1980 .....	102.7	107.1	75.9	97.8	101.4	75.9
1981 .....	111.8	113.0	102.4	104.1	104.2	102.4
1982 <sup>2</sup> .....	116.6	119.0	98.9	109.1	110.4	98.9
Average annual percent change:						
1972-82 .....	1.9	2.1	.7	1.1	1.1	.8
1978-82 .....	4.6	4.5	4.7	2.7	2.4	4.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 78. Softwood veneer and plywood (SIC 2436): Indexes of output, employee hours, and employees, 1972-82 (1977=100)**

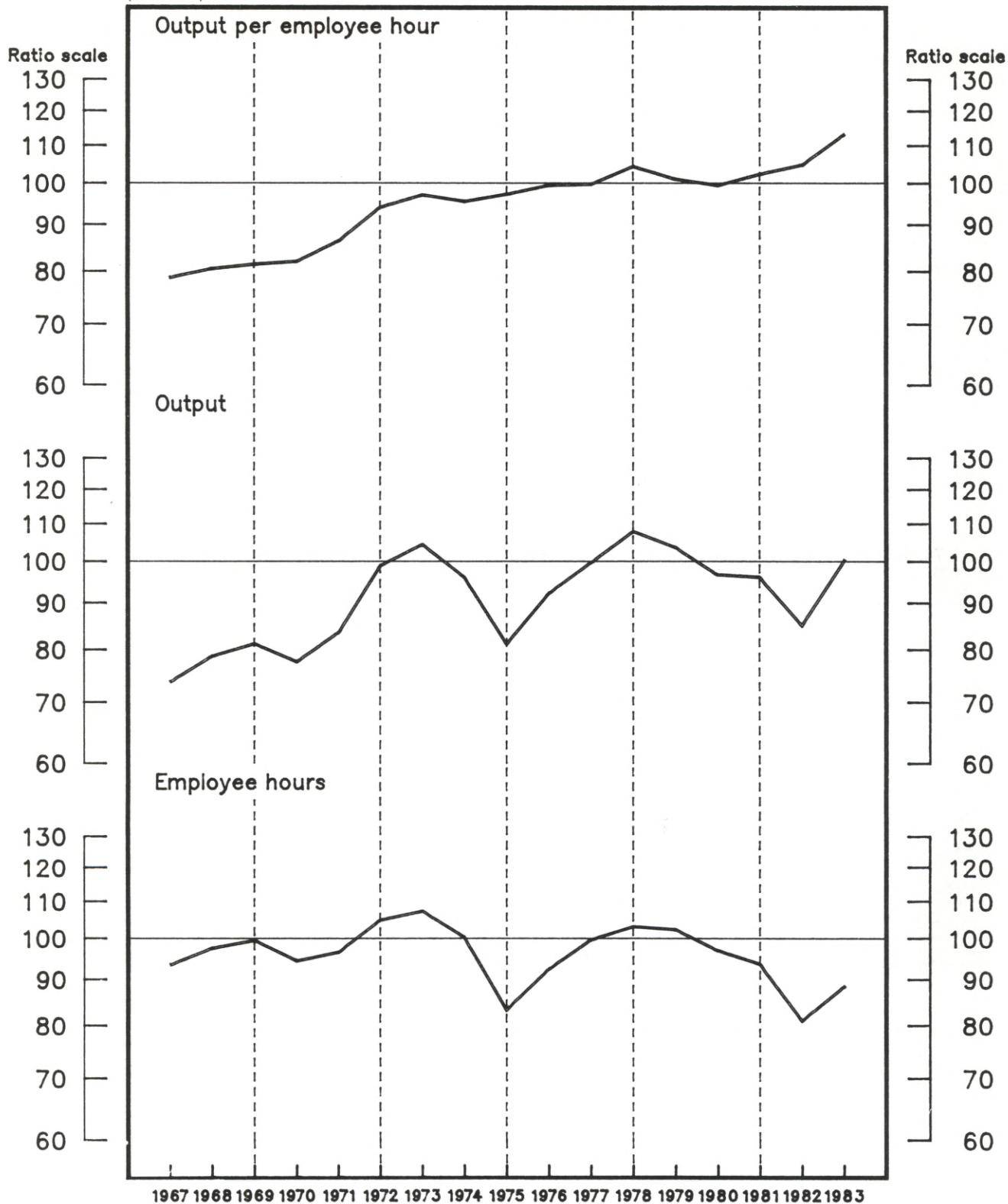
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	92.1	98.5	99.3	91.7	94.7	95.0	92.2
1973 .....	92.2	99.8	98.3	112.9	99.4	97.6	113.7
1974 .....	81.4	89.4	86.7	112.6	92.1	89.5	113.7
1975 .....	82.1	81.7	78.9	105.1	84.6	82.1	105.9
1976 .....	96.9	94.9	94.3	99.8	95.3	94.7	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.8	104.6	103.3	115.7	104.7	103.3	115.7
1979 .....	94.4	101.1	98.0	127.4	103.8	101.0	127.5
1980 .....	84.9	82.7	79.3	111.8	86.8	83.7	111.8
1981 .....	86.3	77.2	76.4	84.3	82.9	82.8	84.3
1982 <sup>1</sup> .....	79.5	68.2	66.8	80.4	72.9	72.0	80.4
Average annual percent change:							
1972-82 .....	-5	-2.3	-2.5	-1.2	-1.5	-1.6	-1.3
1978-82 .....	-6.6	-10.6	-10.6	-10.8	-9.1	-8.8	-10.8

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 41. Household furniture (SIC 251): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 79. Household furniture (SIC 251): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	65.8	66.2	64.6	67.9	68.3	65.3
1959 .....	67.8	66.8	75.3	72.1	71.4	76.0
1960 .....	67.1	66.4	72.0	70.6	70.2	72.6
1961 .....	67.7	66.9	72.8	70.8	70.4	73.1
1962 .....	69.8	68.6	77.7	74.3	73.7	78.1
1963 .....	73.1	72.0	80.5	77.3	76.8	80.7
1964 .....	74.6	73.6	81.1	79.5	79.0	81.9
1965 .....	77.2	75.6	88.3	82.0	80.8	88.8
1966 .....	78.7	77.0	90.4	83.5	82.4	90.4
1967 .....	78.9	77.2	90.3	82.3	80.9	90.3
1968 .....	80.7	79.8	87.3	85.4	84.0	93.9
1969 .....	81.6	80.6	87.8	85.8	84.5	93.3
1970 .....	82.2	82.2	82.9	85.5	85.1	87.2
1971 .....	86.5	86.3	88.3	89.9	89.8	90.8
1972 .....	94.3	93.7	98.1	96.9	96.6	97.8
1973 .....	97.3	94.7	117.8	99.2	96.8	116.5
1974 .....	95.7	95.9	95.2	95.6	96.0	93.0
1975 .....	97.5	98.4	92.6	94.9	95.5	91.1
1976 .....	99.7	100.2	97.3	99.0	99.2	96.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.6	104.7	104.2	105.9	106.2	104.2
1979 .....	101.3	102.1	96.6	102.0	102.9	96.9
1980 .....	99.7	101.6	89.9	99.0	100.6	90.6
1981 .....	102.6	104.3	93.0	102.1	103.7	93.3
1982 .....	105.0	107.8	91.0	101.1	102.9	91.3
1983 <sup>2</sup> .....	113.4	114.4	107.5	115.6	117.1	107.4
Average annual percent change:						
1958-83 .....	2.2	2.3	1.4	1.9	1.9	1.3
1978-83 .....	1.6	1.8	( <sup>3</sup> )	1.3	1.5	( <sup>3</sup> )

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 80. Household furniture (SIC 251): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	51.4	78.1	77.7	79.6	75.7	75.3	78.7
1959 .....	58.8	86.7	88.0	78.1	81.5	82.3	77.4
1960 .....	56.0	83.5	84.4	77.8	79.3	79.8	77.1
1961 .....	54.0	79.8	80.7	74.2	76.3	76.7	73.9
1962 .....	59.3	85.0	86.5	76.3	79.8	80.5	75.9
1963 .....	63.1	86.3	87.6	78.4	81.6	82.2	78.2
1964 .....	67.4	90.3	91.6	83.1	84.8	85.3	82.3
1965 .....	72.7	94.2	96.2	82.3	88.7	90.0	81.9
1966 .....	77.2	98.1	100.2	85.4	92.5	93.7	85.4
1967 .....	73.9	93.7	95.7	81.8	89.8	91.3	81.8
1968 .....	78.9	97.8	98.9	90.4	92.4	93.9	84.0
1969 .....	81.4	99.8	101.0	92.7	94.9	96.3	87.2
1970 .....	77.8	94.7	94.6	93.9	91.0	91.4	89.2
1971 .....	83.7	96.8	97.0	94.8	93.1	93.2	92.2
1972 .....	99.2	105.2	105.9	101.1	102.4	102.7	101.4
1973 .....	104.7	107.6	110.6	88.9	105.5	108.2	89.9
1974 .....	96.3	100.6	100.4	101.2	100.7	100.3	103.6
1975 .....	81.5	83.6	82.8	88.0	85.9	85.3	89.5
1976 .....	92.5	92.8	92.3	95.1	93.4	93.2	95.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.2	103.4	103.3	103.8	102.2	101.9	103.8
1979 .....	103.9	102.6	101.8	107.6	101.9	101.0	107.2
1980 .....	96.9	97.2	95.4	107.8	97.9	96.3	107.0
1981 .....	96.3	93.9	92.3	103.5	94.3	92.9	103.2
1982 .....	85.4	81.3	79.2	93.8	84.5	83.0	93.5
1983 <sup>1</sup> .....	100.6	88.7	87.9	93.6	87.0	85.9	93.7
Average annual percent change:							
1958-83 .....	2.7	.5	.4	1.3	.8	.7	1.3
1978-83 .....	-2.7	-4.2	-4.5	-2.7	-3.9	-4.1	-2.7

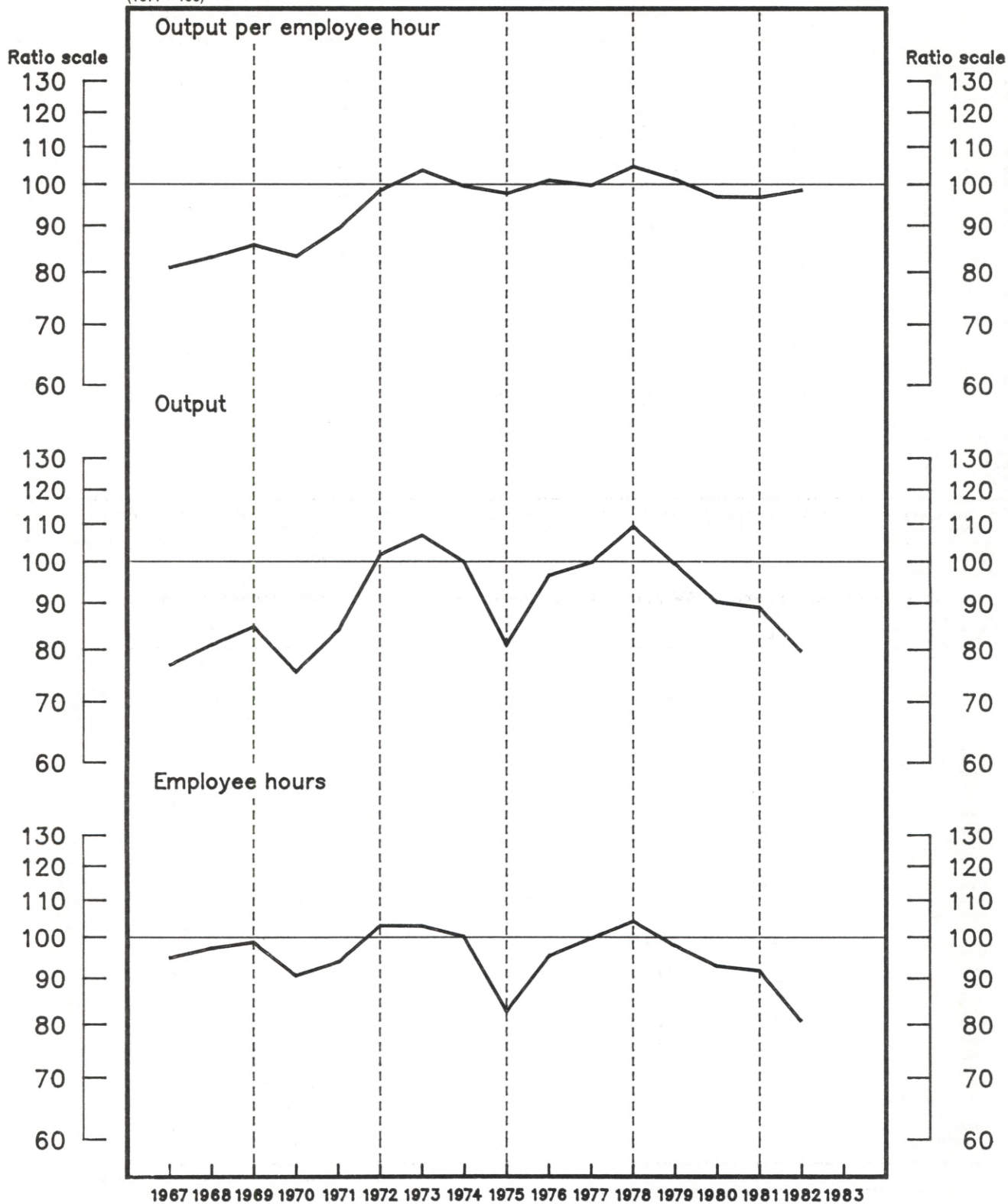
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 42. Wood household furniture (SIC 2511, 2517): Output per hour and related data, 1967-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 81. Wood household furniture (SIC 2511, 2517): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	66.4	65.9	69.2	68.1	67.9	70.1
1959 .....	68.4	66.8	82.3	72.5	71.1	83.3
1960 .....	67.9	66.4	80.5	71.3	70.0	81.2
1961 .....	68.3	66.9	78.9	70.9	69.9	79.0
1962 .....	70.5	68.7	86.0	75.5	74.2	86.2
1963 .....	74.8	73.0	91.7	79.7	78.2	92.2
1964 .....	76.4	74.7	90.8	82.7	81.7	91.7
1965 .....	78.9	76.5	101.2	84.7	82.7	101.8
1966 .....	81.0	78.6	102.4	86.9	84.9	102.4
1967 .....	81.1	78.8	100.5	84.5	82.6	100.5
1968 .....	83.3	81.6	96.8	88.6	86.7	104.1
1969 .....	85.9	84.5	97.4	90.5	89.0	103.3
1970 .....	83.5	83.0	86.6	86.6	86.1	91.2
1971 .....	89.5	89.0	92.7	92.2	91.8	95.2
1972 .....	98.8	98.1	104.5	101.5	101.2	104.3
1973 .....	103.9	98.4	179.9	105.8	100.6	178.1
1974 .....	99.8	100.3	95.6	99.2	100.0	93.3
1975 .....	98.0	99.5	87.2	93.1	94.2	85.8
1976 .....	101.3	102.1	94.4	99.1	99.8	94.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.9	105.8	98.0	105.8	106.9	97.9
1979 .....	101.5	103.1	90.5	101.7	103.4	90.8
1980 .....	97.1	99.7	80.6	94.2	96.2	81.1
1981 .....	97.0	99.0	83.4	95.5	97.4	83.5
1982 <sup>2</sup> .....	98.8	101.8	79.6	92.0	94.0	79.8
Average annual percent change:						
1958-82 .....	2.0	2.2	.4	1.6	1.7	.4
1978-82 .....	-1.6	-1.2	-4.9	-3.4	-3.1	-4.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 82. Wood household furniture (SIC 2511, 2517): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	49.5	74.6	75.1	71.5	72.7	72.9	70.6
1959 .....	57.7	84.3	86.4	70.1	79.6	81.1	69.3
1960 .....	54.9	80.9	82.7	68.2	77.0	78.4	67.6
1961 .....	52.7	77.2	78.8	66.8	74.3	75.4	66.7
1962 .....	59.4	84.2	86.4	69.1	78.7	80.0	68.9
1963 .....	65.1	87.0	89.2	71.0	81.7	83.3	70.6
1964 .....	69.5	91.0	93.1	76.5	84.0	85.1	75.8
1965 .....	74.9	94.9	97.9	74.0	88.4	90.6	73.6
1966 .....	80.7	99.6	102.7	78.8	92.9	95.0	78.8
1967 .....	77.1	95.1	97.8	76.7	91.2	93.3	76.7
1968 .....	81.2	97.5	99.5	83.9	91.6	93.7	78.0
1969 .....	85.0	99.0	100.6	87.3	93.9	95.5	82.3
1970 .....	75.9	90.9	91.4	87.6	87.6	88.2	83.2
1971 .....	84.2	94.1	94.6	90.8	91.3	91.7	88.4
1972 .....	102.1	103.3	104.1	97.7	100.6	100.9	97.9
1973 .....	107.2	103.2	108.9	59.6	101.3	106.6	60.2
1974 .....	100.2	100.4	99.9	104.8	101.0	100.2	107.4
1975 .....	81.4	83.1	81.8	93.4	87.4	86.4	94.9
1976 .....	96.8	95.6	94.8	102.5	97.7	97.0	102.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	109.6	104.5	103.6	111.8	103.6	102.5	111.9
1979 .....	99.6	98.1	96.6	110.0	97.9	96.3	109.7
1980 .....	90.4	93.1	90.7	112.1	96.0	94.0	111.4
1981 .....	89.2	92.0	90.1	106.9	93.4	91.6	106.8
1982 <sup>1</sup> .....	79.8	80.8	78.4	100.3	86.7	84.9	100.0
Average annual percent change:							
1958-82 .....	2.6	.6	.4	2.2	1.1	.9	2.2
1978-82 .....	-7.2	-5.6	-6.1	-2.4	-4.0	-4.2	-2.5

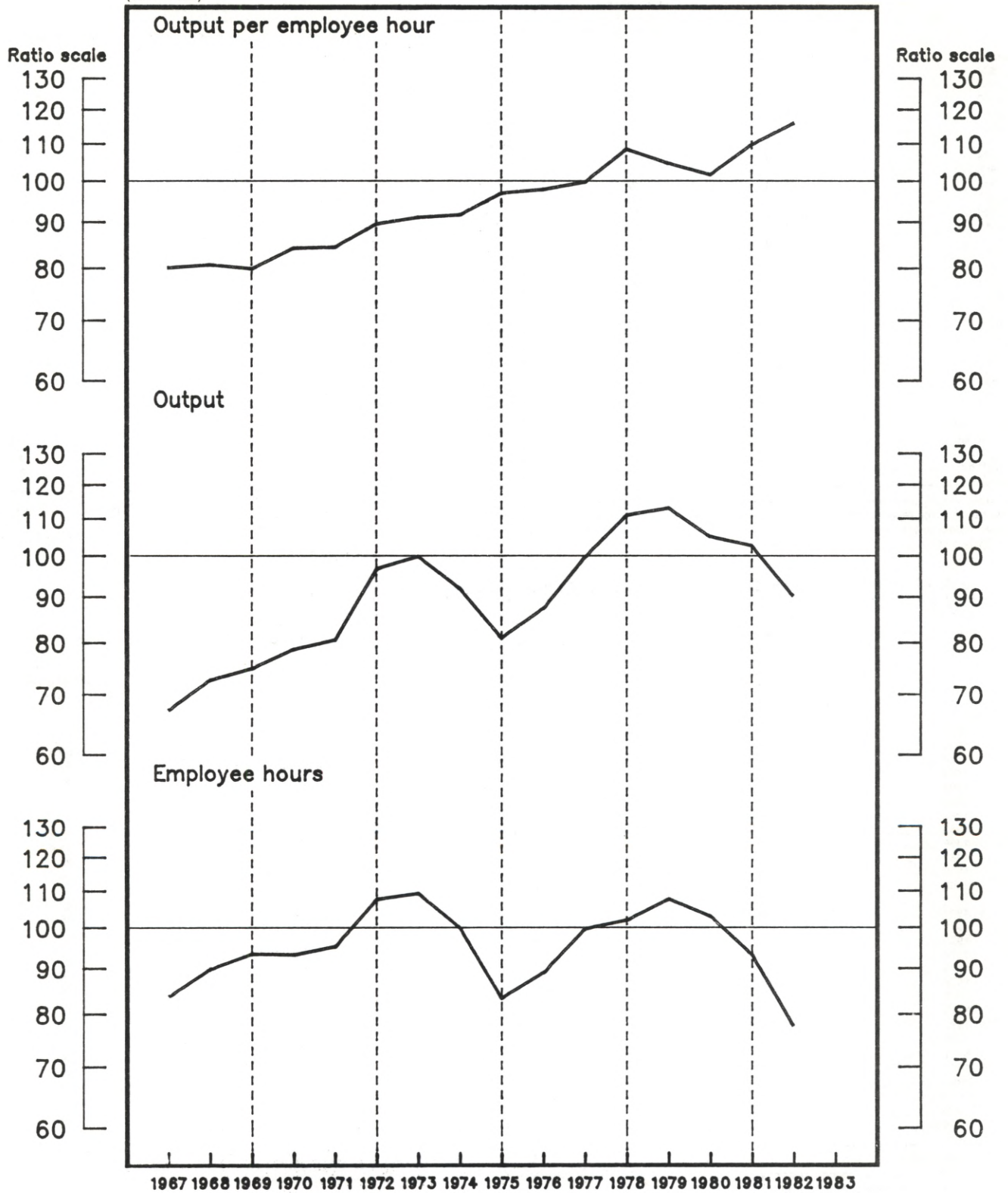
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 43. Upholstered household furniture (SIC 2512): Output per hour and related data, 1967-82  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 83. Upholstered household furniture (SIC 2512): Indexes of output per employee hour and output per employee, 1958-82 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	71.7	72.2	69.7	75.4	76.4	70.4
1959 .....	73.9	72.9	80.2	80.5	80.5	81.0
1960 .....	72.6	72.3	74.6	78.0	78.6	75.2
1961 .....	74.1	72.5	84.1	79.2	78.3	84.5
1962 .....	74.9	73.2	85.3	81.6	80.9	86.2
1963 .....	76.3	75.6	81.1	81.3	81.3	81.8
1964 .....	78.2	77.3	83.2	82.1	81.9	84.0
1965 .....	80.2	78.8	88.9	85.2	84.7	89.3
1966 .....	81.9	80.5	91.1	86.2	85.6	91.4
1967 .....	80.3	78.8	90.3	85.1	84.4	90.3
1968 .....	80.9	79.4	90.7	86.2	84.5	97.7
1969 .....	80.1	79.1	86.8	85.3	84.4	92.6
1970 .....	84.4	83.5	90.1	89.5	88.7	94.8
1971 .....	84.6	83.4	92.7	91.0	90.4	95.4
1972 .....	89.8	88.8	95.3	94.0	93.8	95.2
1973 .....	91.3	90.8	94.1	94.0	94.1	93.1
1974 .....	91.9	91.1	96.0	92.8	92.7	93.6
1975 .....	97.2	96.6	100.9	97.4	97.0	99.0
1976 .....	98.1	97.6	101.7	98.5	98.1	101.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.8	108.0	113.1	111.0	110.5	113.0
1979 .....	104.9	103.8	111.5	106.3	105.4	111.6
1980 .....	101.9	102.3	100.1	105.4	106.3	100.8
1981 .....	110.1	110.6	106.7	110.2	110.8	106.9
1982 <sup>2</sup> .....	116.2	117.1	111.2	113.3	113.7	111.2
Average annual percent change:						
1958-82 .....	1.9	2.0	1.6	1.6	1.6	1.5
1978-82 .....	1.8	2.3	-8	.8	1.1	-7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 84. Upholstered household furniture (SIC 2512): Indexes of output, employee hours, and employees, 1958-82 (1977=100)**

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	48.5	67.6	67.2	69.6	64.3	63.5	68.9
1959 .....	55.8	75.5	76.5	69.6	69.3	69.3	68.9
1960 .....	54.5	75.1	75.4	73.1	69.9	69.3	72.5
1961 .....	52.8	71.3	72.8	62.8	66.7	67.4	62.5
1962 .....	57.5	76.8	78.5	67.4	70.5	71.1	66.7
1963 .....	58.1	76.1	76.9	71.6	71.5	71.5	71.0
1964 .....	62.7	80.2	81.1	75.4	76.4	76.6	74.6
1965 .....	67.3	83.9	85.4	75.7	79.0	79.5	75.4
1966 .....	70.8	86.4	87.9	77.7	82.1	82.7	77.5
1967 .....	67.4	83.9	85.5	74.6	79.2	79.9	74.6
1968 .....	72.9	90.1	91.8	80.4	84.6	86.3	74.6
1969 .....	75.1	93.7	95.0	86.5	88.0	89.0	81.1
1970 .....	78.9	93.5	94.5	87.6	88.2	89.0	83.2
1971 .....	80.8	95.5	96.9	87.2	88.8	89.4	84.7
1972 .....	97.0	108.0	109.2	101.8	103.2	103.4	101.9
1973 .....	100.1	109.6	110.2	106.4	106.5	106.4	107.5
1974 .....	92.2	100.3	101.2	96.0	99.4	99.5	98.5
1975 .....	81.3	83.6	84.2	80.6	83.5	83.8	82.1
1976 .....	87.6	89.3	89.8	86.1	88.9	89.3	86.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	111.3	102.3	103.1	98.4	100.3	100.7	98.5
1979 .....	113.3	108.0	109.2	101.6	106.6	107.5	101.5
1980 .....	105.3	103.3	102.9	105.2	99.9	99.1	104.5
1981 .....	102.9	93.5	93.0	96.4	93.4	92.9	96.3
1982 <sup>1</sup> .....	90.4	77.8	77.2	81.3	79.8	79.5	81.3
Average annual percent change:							
1958-82 .....	3.3	1.4	1.3	1.7	1.7	1.7	1.8
1978-82 .....	-5.0	-6.7	-7.1	-4.3	-5.7	-6.0	-4.3

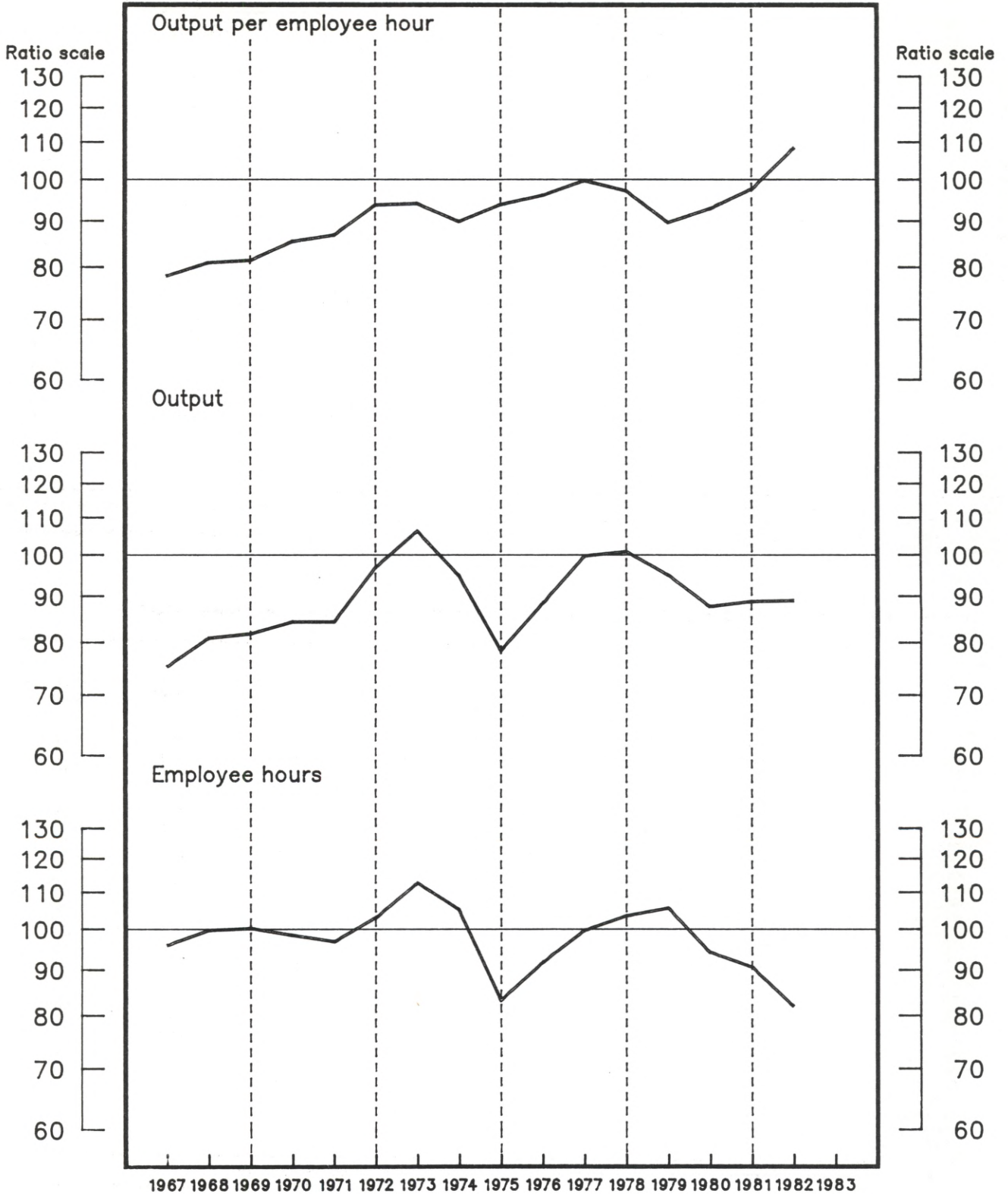
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 44. Metal household furniture (SIC 2514): Output per hour and related data, 1967-82

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 85. Metal household furniture (SIC 2514): Indexes of output per employee hour and output per employee, 1958-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	66.7	67.5	63.6	69.1	70.2	64.1
1959 .....	67.0	65.1	77.4	70.4	68.9	78.3
1960 .....	64.6	63.4	71.3	67.7	66.9	72.1
1961 .....	65.6	64.4	72.3	68.2	67.4	72.2
1962 .....	68.9	67.2	78.1	71.7	70.3	78.6
1963 .....	73.8	72.8	78.4	76.6	76.2	78.3
1964 .....	74.2	73.1	80.2	77.7	77.0	81.2
1965 .....	77.5	76.5	82.4	80.5	80.0	82.7
1966 .....	75.8	75.3	78.2	79.9	80.3	78.0
1967 .....	78.4	77.3	83.9	80.7	80.0	84.1
1968 .....	81.1	81.8	78.2	84.0	83.9	84.0
1969 .....	81.6	80.7	86.0	83.0	81.3	91.4
1970 .....	85.6	86.5	81.5	86.6	86.7	86.0
1971 .....	87.0	87.7	83.7	89.0	89.7	86.0
1972 .....	94.0	93.4	97.2	93.8	93.1	97.2
1973 .....	94.3	93.4	99.3	95.9	95.4	98.1
1974 .....	90.1	91.2	85.6	89.2	90.5	83.6
1975 .....	94.1	96.9	83.3	92.4	94.9	81.5
1976 .....	96.3	97.7	90.3	96.5	98.0	90.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	97.4	96.6	101.1	98.4	97.9	101.1
1979 .....	89.9	90.8	85.8	91.9	93.2	86.3
1980 .....	93.1	92.9	93.9	92.3	91.9	94.4
1981 .....	97.9	98.6	95.1	99.1	99.9	95.6
1982 <sup>2</sup> .....	108.6	111.5	97.3	112.2	115.8	97.6
Average annual percent change:						
1958-82 .....	2.0	2.1	1.4	1.8	1.9	1.3
1978-82 .....	3.1	3.8	.3	3.4	4.1	.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 86. Metal household furniture (SIC 2514): Indexes of output, employee hours, and employees, 1958-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	63.0	94.4	93.4	99.1	91.2	89.7	98.3
1959 .....	68.9	102.9	105.8	89.0	97.9	100.0	88.0
1960 .....	64.7	100.2	102.1	90.8	95.5	96.7	89.7
1961 .....	61.0	93.0	94.7	84.4	89.4	90.5	84.5
1962 .....	62.4	90.6	92.8	79.9	87.0	88.7	79.4
1963 .....	67.6	91.6	92.8	86.2	88.2	88.7	86.3
1964 .....	72.8	98.1	99.6	90.8	93.7	94.5	89.7
1965 .....	75.6	97.6	98.8	91.7	93.9	94.5	91.4
1966 .....	75.3	99.3	100.0	96.3	94.3	93.8	96.6
1967 .....	75.4	96.2	97.5	89.9	93.4	94.2	89.7
1968 .....	81.1	100.0	99.2	103.7	96.6	96.7	96.6
1969 .....	82.0	100.5	101.6	95.4	98.8	100.8	89.7
1970 .....	84.5	98.7	97.7	103.7	97.6	97.5	98.3
1971 .....	84.5	97.1	96.3	100.9	94.9	94.2	98.3
1972 .....	97.2	103.4	104.1	100.0	103.6	104.4	100.0
1973 .....	106.6	113.0	114.1	107.4	111.1	111.7	108.7
1974 .....	95.1	105.5	104.3	111.1	106.6	105.1	113.8
1975 .....	78.7	83.6	81.2	94.5	85.2	82.9	96.6
1976 .....	88.7	92.1	90.8	98.2	91.9	90.5	98.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.1	103.8	104.7	100.0	102.7	103.3	100.0
1979 .....	95.2	105.9	104.8	111.0	103.6	102.2	110.3
1980 .....	87.9	94.4	94.6	93.6	95.2	95.6	93.1
1981 .....	89.0	90.9	90.3	93.6	89.8	89.1	93.1
1982 <sup>1</sup> .....	89.2	82.1	80.0	91.7	79.5	77.0	91.4
Average annual percent change:							
1958-82 .....	1.9	-.1	-.2	.5	.1	( <sup>2</sup> )	.6
1978-82 .....	-3.1	-6.0	-6.6	-3.4	-6.3	-7.0	-3.4

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

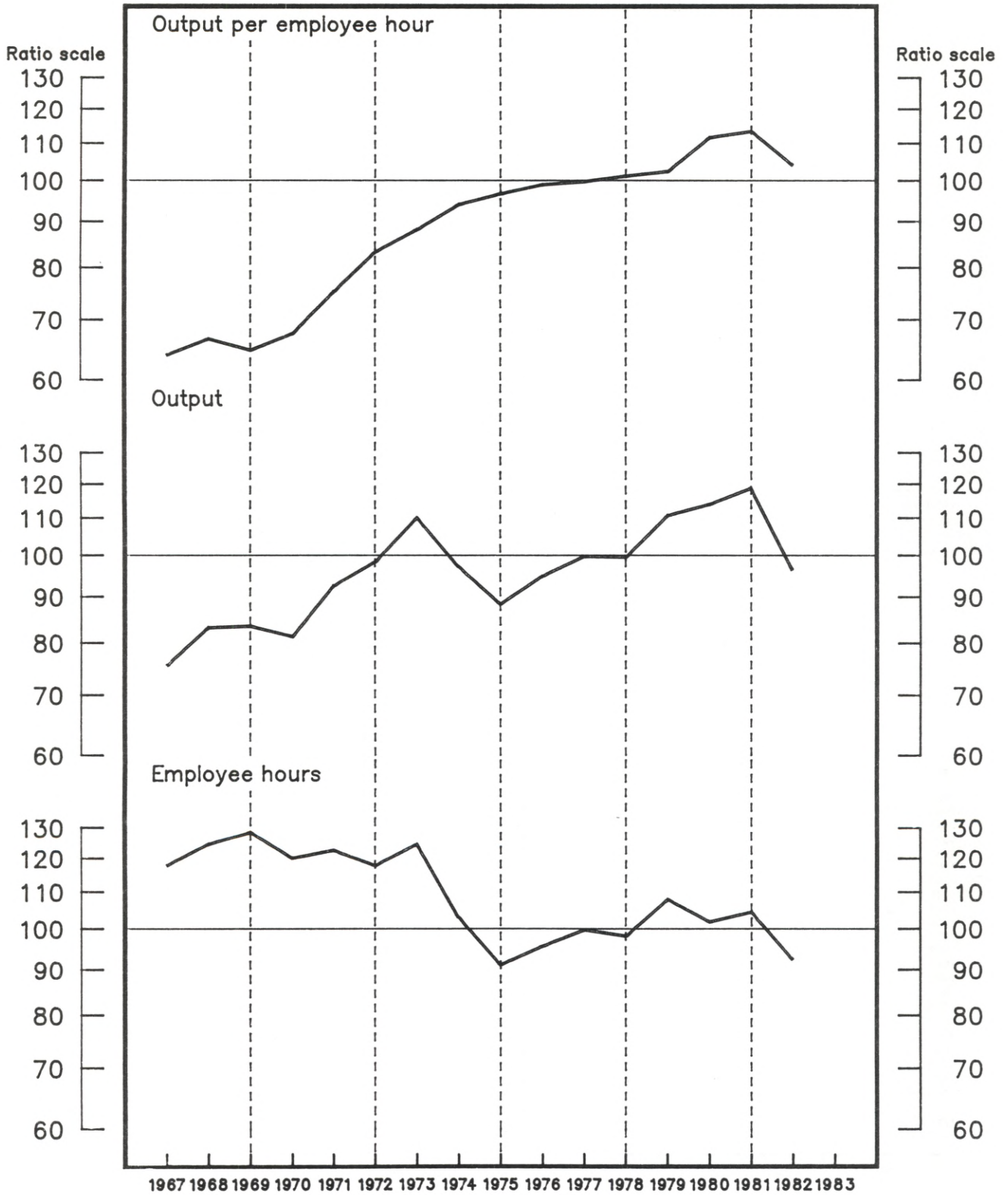
NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 45. Mattresses and bedsprings (SIC 2515): Output per hour and related data, 1967-82

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 87. Mattresses and bedsprings (SIC 2515): Indexes of output per employee hour and output per employee, 1958-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	51.2	50.0	55.1	51.9	50.9	55.8
1959 .....	51.9	50.5	56.7	53.9	53.0	57.1
1960 .....	53.2	52.7	54.8	54.6	54.3	55.6
1961 .....	53.1	53.2	52.3	55.0	55.8	52.5
1962 .....	55.5	55.4	55.6	57.1	57.5	56.1
1963 .....	57.5	56.9	59.4	59.4	59.4	59.8
1964 .....	59.1	58.8	59.8	61.0	61.2	60.2
1965 .....	61.3	60.2	65.2	63.4	62.7	65.6
1966 .....	62.4	60.6	69.1	64.2	62.8	69.1
1967 .....	64.1	62.2	71.0	65.5	63.9	71.2
1968 .....	66.8	65.9	69.6	70.1	68.7	75.2
1969 .....	64.9	63.7	68.8	68.2	66.9	73.4
1970 .....	67.7	67.2	69.0	70.5	69.9	72.4
1971 .....	75.4	74.3	78.9	77.2	76.0	81.2
1972 .....	83.5	82.3	87.6	84.8	83.9	87.6
1973 .....	88.4	86.1	96.8	88.7	86.7	95.5
1974 .....	94.3	92.4	100.8	93.2	91.5	99.0
1975 .....	96.9	94.9	104.2	95.7	93.6	103.0
1976 .....	99.2	98.3	101.9	99.5	99.0	101.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.4	100.1	105.9	100.9	99.3	106.5
1979 .....	102.6	103.6	99.4	104.0	105.4	100.1
1980 .....	111.9	114.5	103.8	110.9	113.1	104.4
1981 .....	113.7	116.7	105.0	113.5	116.2	105.8
1982 <sup>2</sup> .....	104.2	107.1	95.7	103.0	105.2	96.5
Average annual percent change:						
1958-82 .....	3.7	3.9	3.4	3.5	3.6	3.3
1978-82 .....	1.6	2.6	-1.5	1.3	2.2	-1.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 88. Mattresses and bedsprings (SIC 2515): Indexes of output, employee hours, and employees, 1958-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	61.0	119.2	121.9	110.8	117.5	119.9	109.4
1959 .....	65.1	125.5	128.8	114.9	120.8	122.9	114.1
1960 .....	61.7	115.9	117.0	112.5	113.1	113.6	110.9
1961 .....	61.5	115.9	115.6	117.5	111.9	110.2	117.2
1962 .....	66.7	120.2	120.4	119.9	116.8	116.1	118.8
1963 .....	66.3	115.3	116.5	111.6	111.6	111.7	110.9
1964 .....	68.7	116.3	116.8	114.9	112.6	112.2	114.1
1965 .....	74.9	122.2	124.5	114.9	118.2	119.4	114.1
1966 .....	76.6	122.8	126.5	110.8	119.3	121.9	110.9
1967 .....	75.7	118.1	121.7	106.6	115.6	118.5	106.3
1968 .....	83.4	124.9	126.5	119.9	119.0	121.4	110.9
1969 .....	83.7	128.9	131.5	121.6	122.7	125.2	114.1
1970 .....	81.5	120.4	121.2	118.2	115.6	116.6	112.5
1971 .....	92.7	122.9	124.7	117.5	120.0	121.9	114.1
1972 .....	98.6	118.1	119.8	112.5	116.3	117.5	112.5
1973 .....	110.4	124.9	128.2	114.1	124.5	127.3	115.6
1974 .....	97.4	103.3	105.4	96.6	104.5	106.4	98.4
1975 .....	88.6	91.4	93.4	85.0	92.6	94.7	86.0
1976 .....	95.1	95.9	96.7	93.3	95.6	96.1	93.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.8	98.4	99.7	94.2	98.9	100.5	93.7
1979 .....	111.0	108.2	107.1	111.7	106.7	105.3	110.9
1980 .....	114.2	102.1	99.7	110.0	103.0	101.0	109.4
1981 .....	119.0	104.7	102.0	113.3	104.8	102.4	112.5
1982 <sup>1</sup> .....	96.5	92.6	90.1	100.8	93.7	91.7	100.0
Average annual percent change:							
1958-82 .....	2.7	-1.0	-1.1	-6	-8	-9	-6
1978-82 .....	( <sup>2</sup> )	-1.5	-2.5	1.5	-1.3	-2.1	1.5

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

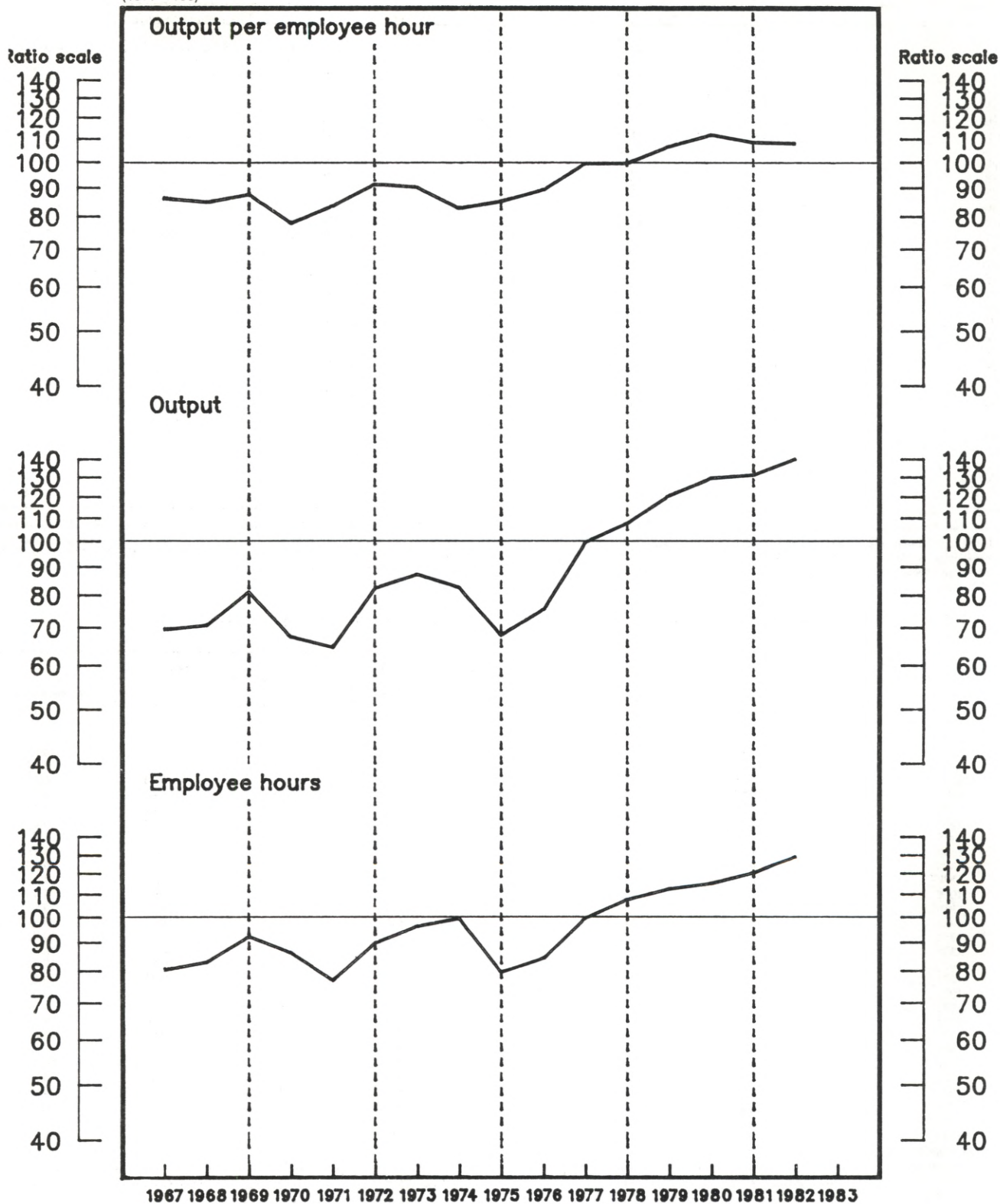
NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 46. Office furniture (SIC 252): Output per hour and related data, 1967-82  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 89. Office furniture (SIC 252): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	64.0	62.0	73.2	63.9	61.5	74.5
1959 .....	69.8	66.6	85.0	70.9	67.4	86.4
1960 .....	70.4	67.0	86.2	72.0	68.8	86.6
1961 .....	72.5	69.8	84.0	74.1	71.6	84.4
1962 .....	74.4	71.5	88.1	75.4	72.5	88.6
1963 .....	75.9	72.7	90.3	77.7	74.8	90.3
1964 .....	82.1	80.0	90.9	84.7	82.9	91.4
1965 .....	84.2	81.1	98.1	88.6	86.2	98.1
1966 .....	86.7	83.0	103.5	90.9	88.0	103.3
1967 .....	86.5	84.2	96.0	89.1	87.3	95.9
1968 .....	85.2	84.8	86.8	90.1	89.2	93.5
1969 .....	88.0	89.2	84.1	91.6	92.2	89.5
1970 .....	78.2	79.4	74.0	81.7	82.9	77.8
1971 .....	83.9	86.6	75.3	86.5	89.5	77.3
1972 .....	91.8	91.7	92.1	94.7	95.5	92.0
1973 .....	90.6	89.9	93.0	92.7	92.8	92.2
1974 .....	83.1	80.7	93.5	83.8	82.0	91.2
1975 .....	85.5	87.4	78.8	83.4	85.1	77.6
1976 .....	89.7	91.2	84.4	88.6	89.9	84.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.1	99.6	102.1	100.3	99.8	101.9
1979 .....	107.3	106.6	109.9	109.2	109.0	110.0
1980 .....	112.5	118.3	95.2	109.9	114.4	96.1
1981 .....	109.1	112.7	97.7	109.8	113.6	98.1
1982 <sup>2</sup> .....	108.6	113.9	92.5	107.6	112.5	92.9
Average annual percent change:						
1958-82 .....	1.9	2.2	.6	1.8	2.1	.5
1978-82 .....	1.8	3.3	-3.1	1.5	2.8	-2.9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 90. Office furniture (SIC 252): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

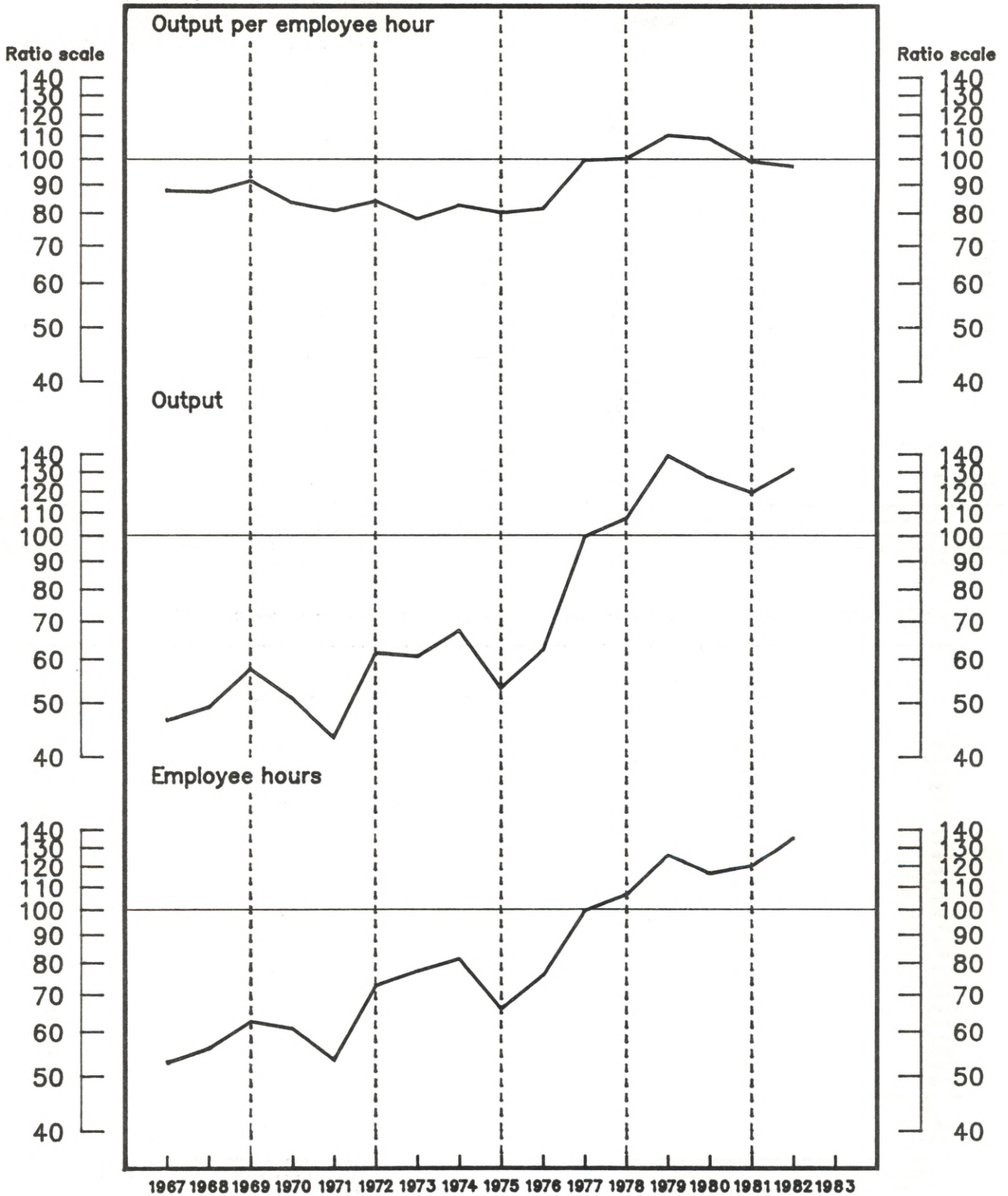
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	33.1	51.7	53.4	45.2	51.8	53.8	44.4
1959 .....	37.5	53.7	56.3	44.1	52.9	55.6	43.4
1960 .....	39.4	56.0	58.8	45.7	54.7	57.3	45.5
1961 .....	38.4	53.0	55.0	45.7	51.8	53.6	45.5
1962 .....	42.1	56.6	58.9	47.8	55.8	58.1	47.5
1963 .....	45.6	60.1	62.7	50.5	58.7	61.0	50.5
1964 .....	50.8	61.9	63.5	55.9	60.0	61.3	55.6
1965 .....	57.5	68.3	70.9	58.6	64.9	66.7	58.6
1966 .....	67.9	78.3	81.8	65.6	74.7	77.2	65.7
1967 .....	69.7	80.6	82.8	72.6	78.2	79.8	72.7
1968 .....	70.9	83.2	83.6	81.7	78.7	79.5	75.8
1969 .....	81.4	92.5	91.3	96.8	88.9	88.3	90.9
1970 .....	67.6	86.4	85.1	91.4	82.7	81.5	86.9
1971 .....	64.8	77.2	74.8	86.0	74.9	72.4	83.8
1972 .....	82.7	90.1	90.2	89.8	87.3	86.6	89.9
1973 .....	87.5	96.6	97.3	94.1	94.4	94.3	94.9
1974 .....	82.9	99.8	102.7	88.7	98.9	101.1	90.9
1975 .....	68.2	79.8	78.0	86.6	81.8	80.1	87.9
1976 .....	75.8	84.5	83.1	89.8	85.6	84.3	89.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.1	108.0	108.5	105.9	107.8	108.3	106.1
1979 .....	121.1	112.9	113.6	110.2	110.9	111.1	110.1
1980 .....	130.1	115.6	110.0	136.6	118.4	113.7	135.4
1981 .....	131.8	120.8	116.9	134.9	120.0	116.0	134.3
1982 <sup>1</sup> .....	140.8	129.6	123.6	152.2	130.9	125.1	151.5
Average annual percent change:							
1958-82 .....	5.6	3.7	3.3	5.0	3.8	3.5	5.1
1978-82 .....	6.3	4.4	2.9	9.7	4.8	3.4	9.5

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 47. Wood office furniture (SIC 2521): Output per hour and related data, 1967-82  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 91. Wood office furniture (SIC 2521): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	67.1	62.5	98.0	67.7	62.7	98.0
1959 .....	69.5	64.2	109.6	71.9	66.2	109.6
1960 .....	68.0	63.7	96.1	71.4	67.0	96.8
1961 .....	70.5	66.1	97.2	74.5	70.3	97.9
1962 .....	69.9	64.8	104.2	74.9	69.9	105.0
1963 .....	80.4	74.5	121.9	85.0	78.8	122.8
1964 .....	84.5	79.2	116.7	88.3	83.1	118.6
1965 .....	82.8	78.8	105.7	86.4	82.3	108.0
1966 .....	85.9	81.5	112.5	88.3	83.5	114.9
1967 .....	88.1	83.2	116.8	91.2	86.6	115.0
1968 .....	87.7	83.3	113.9	95.0	90.1	121.4
1969 .....	91.9	88.8	108.4	97.3	93.7	115.6
1970 .....	83.9	79.6	109.6	85.3	79.9	116.9
1971 .....	81.2	78.3	96.9	80.1	76.5	99.5
1972 .....	84.5	81.1	102.8	85.8	82.3	103.9
1973 .....	78.5	74.9	98.5	78.5	74.9	97.3
1974 .....	83.0	78.4	109.7	80.8	76.0	108.3
1975 .....	80.5	78.3	91.6	73.7	70.4	89.9
1976 .....	81.9	79.2	96.0	78.0	74.6	95.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.7	103.3	91.0	98.4	100.7	90.7
1979 .....	110.7	113.9	98.7	111.3	114.7	99.4
1980 .....	109.2	117.4	84.0	100.5	105.3	85.0
1981 .....	99.4	102.9	86.7	99.4	103.0	87.2
1982 <sup>2</sup> .....	97.4	101.8	82.6	95.2	98.9	82.9
Average annual percent change:						
1958-82 .....	1.6	2.1	-9	1.2	1.6	-9
1978-82 .....	-1.7	-1.3	-3.2	-1.8	-1.4	-3.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 92. Wood office furniture (SIC 2521): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

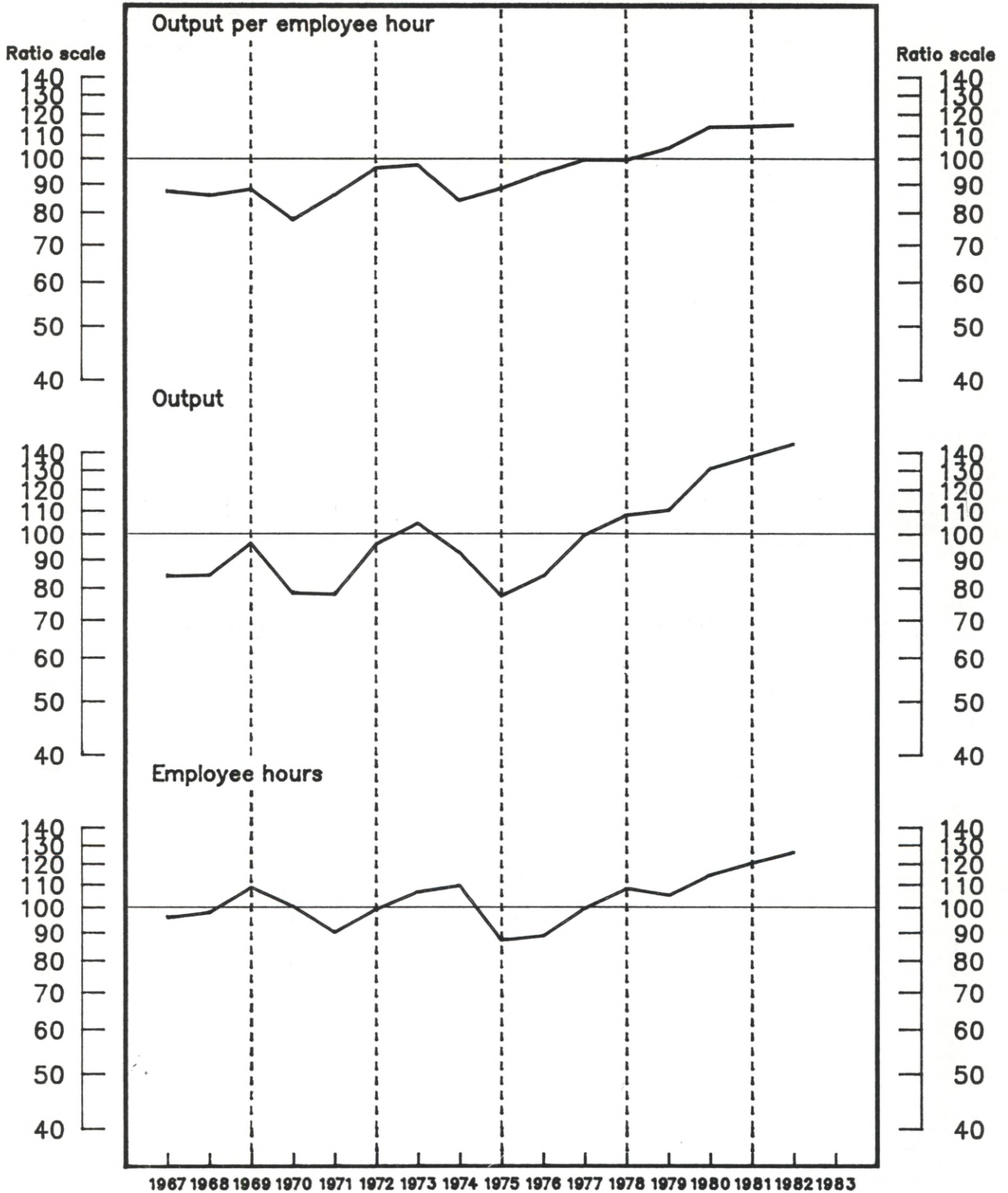
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	24.5	36.5	39.2	25.0	36.2	39.1	25.0
1959 .....	27.4	39.4	42.7	25.0	38.1	41.4	25.0
1960 .....	27.2	40.0	42.7	28.3	38.1	40.6	28.1
1961 .....	27.5	39.0	41.6	28.3	36.9	39.1	28.1
1962 .....	29.5	42.2	45.5	28.3	39.4	42.2	28.1
1963 .....	34.5	42.9	46.3	28.3	40.6	43.8	28.1
1964 .....	37.0	43.8	46.7	31.7	41.9	44.5	31.2
1965 .....	40.5	48.9	51.4	38.3	46.9	49.2	37.5
1966 .....	43.1	50.2	52.9	38.3	48.8	51.6	37.5
1967 .....	46.7	53.0	56.1	40.0	51.2	53.9	40.6
1968 .....	49.3	56.2	59.2	43.3	51.9	54.7	40.6
1969 .....	57.8	62.9	65.1	53.3	59.4	61.7	50.0
1970 .....	51.2	61.0	64.3	46.7	60.0	64.1	43.8
1971 .....	43.6	53.7	55.7	45.0	54.4	57.0	43.8
1972 .....	61.7	73.0	76.1	60.0	71.9	75.0	59.4
1973 .....	60.8	77.5	81.2	61.7	77.5	81.2	62.5
1974 .....	67.7	81.6	86.3	61.7	83.8	89.1	62.5
1975 .....	53.4	66.3	68.2	58.3	72.5	75.8	59.4
1976 .....	62.4	76.2	78.8	65.0	80.0	83.6	65.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.7	107.0	104.3	118.3	109.4	107.0	118.7
1979 .....	139.8	126.3	122.7	141.7	125.6	121.9	140.6
1980 .....	127.5	116.8	108.6	151.7	126.9	121.1	150.0
1981 .....	119.9	120.6	116.5	138.3	120.6	116.4	137.5
1982 <sup>1</sup> .....	132.1	135.6	129.8	160.0	138.7	133.6	159.4
Average annual percent change:							
1958-82 .....	7.3	5.6	5.1	8.2	6.0	5.6	8.3
1978-82 .....	2.6	4.4	3.9	6.0	4.4	4.1	5.8

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 48. Metal office furniture (SIC 2522): Output per hour and related data, 1967-82  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 93. Metal office furniture (SIC 2522): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	64.5	62.7	71.7	64.2	62.1	72.1
1959 .....	71.6	68.7	84.2	72.3	69.2	79.9
1960 .....	72.7	69.3	87.4	74.0	70.7	87.9
1961 .....	74.7	72.5	84.3	75.8	73.5	84.7
1962 .....	77.9	75.4	88.1	77.6	74.7	88.7
1963 .....	75.9	73.4	86.7	77.3	74.8	86.6
1964 .....	82.9	81.5	88.6	85.4	84.3	89.0
1965 .....	86.3	83.2	99.3	91.6	89.3	99.7
1966 .....	88.3	84.5	104.9	93.6	90.6	105.3
1967 .....	87.6	85.6	95.6	90.4	89.0	95.6
1968 .....	86.2	86.4	85.3	90.6	90.3	91.5
1969 .....	88.5	90.5	82.2	91.8	93.2	87.5
1970 .....	78.0	80.8	69.7	82.5	85.8	73.0
1971 .....	86.4	90.8	74.0	90.6	96.2	75.8
1972 .....	96.7	97.9	92.6	100.4	103.2	92.2
1973 .....	97.9	98.2	96.4	101.0	102.9	94.9
1974 .....	84.5	82.7	91.4	86.7	85.9	88.9
1975 .....	88.9	92.8	77.7	89.4	94.2	76.6
1976 .....	94.8	98.6	83.7	95.3	99.5	83.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.9	97.7	108.4	101.4	99.4	108.4
1979 .....	104.8	102.1	115.2	107.6	105.4	115.8
1980 .....	114.4	118.6	101.5	115.5	120.1	102.3
1981 .....	114.7	118.2	103.9	115.7	119.7	104.3
1982 <sup>2</sup> .....	115.4	121.4	98.2	115.1	121.2	98.6
Average annual percent change:						
1958-82 .....	1.9	2.2	.9	1.9	2.2	.9
1978-82 .....	3.9	6.0	-3.0	3.3	5.4	-2.9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 94. Metal office furniture (SIC 2522): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	38.7	60.0	61.7	54.0	60.3	62.3	53.7
1959 .....	44.1	61.6	64.2	52.4	61.0	63.7	55.2
1960 .....	47.2	64.9	68.1	54.0	63.8	66.8	53.7
1961 .....	45.5	60.9	62.8	54.0	60.0	61.9	53.7
1962 .....	50.3	64.6	66.7	57.1	64.8	67.3	56.7
1963 .....	53.0	69.8	72.2	61.1	68.6	70.9	61.2
1964 .....	59.8	72.1	73.4	67.5	70.0	70.9	67.2
1965 .....	68.5	79.4	82.3	69.0	74.8	76.7	68.7
1966 .....	83.3	94.3	98.6	79.4	89.0	91.9	79.1
1967 .....	84.2	96.1	98.4	88.1	93.1	94.6	88.1
1968 .....	84.6	98.2	97.9	99.2	93.4	93.7	92.5
1969 .....	96.6	109.1	106.7	117.5	105.2	103.6	110.4
1970 .....	78.5	100.7	97.2	112.7	95.2	91.5	107.5
1971 .....	78.1	90.4	86.0	105.6	86.2	81.2	103.0
1972 .....	96.3	99.6	98.4	104.0	95.9	93.3	104.5
1973 .....	104.8	107.1	106.7	108.7	103.8	101.8	110.4
1974 .....	92.9	110.0	112.4	101.6	107.2	108.1	104.5
1975 .....	77.7	87.4	83.7	100.0	86.9	82.5	101.5
1976 .....	84.4	89.0	85.6	100.8	88.6	84.8	101.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.4	108.5	111.0	100.0	106.9	109.0	100.0
1979 .....	110.6	105.5	108.3	96.0	102.8	104.9	95.5
1980 .....	131.4	114.9	110.8	129.4	113.8	109.4	128.4
1981 .....	138.5	120.8	117.2	133.3	119.7	115.7	132.8
1982 <sup>1</sup> .....	145.7	126.3	120.0	148.4	126.6	120.2	147.8
Average annual percent change:							
1958-82 .....	4.8	2.8	2.5	3.9	2.9	2.5	3.9
1978-82 .....	8.5	4.5	2.4	11.8	5.0	3.0	11.8

<sup>1</sup> Preliminary.

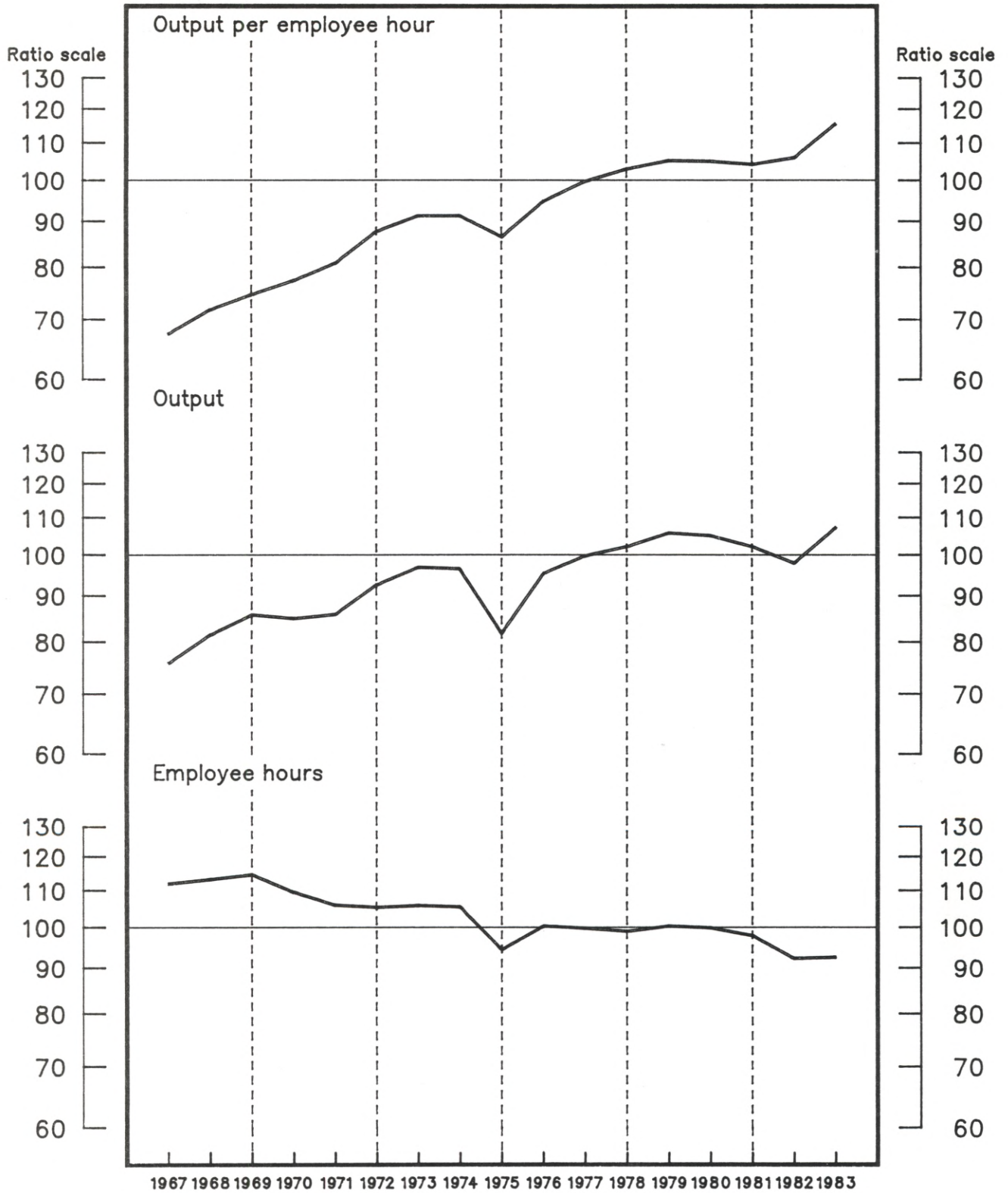
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 49. Paper, paperboard, and pulp mills (SIC 2611, 2621, 2631, 2661): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 95. Paper, paperboard, and pulp mills (SIC 2611, 2621, 2631, 2661): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	40.4	37.9	56.3	42.5	39.6	58.3
1955 .....	43.2	40.4	62.4	46.4	43.2	64.2
1956 .....	45.1	42.5	61.2	48.2	45.2	63.2
1957 .....	45.1	42.9	57.8	47.0	44.4	59.6
1958 .....	46.2	44.1	58.2	47.9	45.2	60.0
1959 .....	49.0	46.9	60.8	51.8	49.5	62.6
1960 .....	50.6	48.8	59.8	52.9	50.9	61.6
1961 .....	53.9	52.2	62.3	56.2	54.3	63.9
1962 .....	56.0	54.2	65.4	58.5	56.5	67.3
1963 .....	59.3	57.4	68.7	62.0	60.0	70.6
1964 .....	62.3	60.3	73.1	65.8	63.6	75.5
1965 .....	65.4	63.7	74.6	68.8	66.9	76.7
1966 .....	68.7	66.9	78.1	72.8	70.9	79.9
1967 .....	67.6	66.1	75.0	70.7	69.3	76.7
1968 .....	71.9	69.9	82.3	75.8	73.7	84.0
1969 .....	74.8	72.5	86.0	78.7	76.6	86.5
1970 .....	77.5	75.8	85.7	79.5	78.0	85.1
1971 .....	81.0	80.1	85.1	83.6	82.8	86.3
1972 .....	87.9	86.7	93.1	91.6	90.5	96.0
1973 .....	91.5	90.2	98.3	94.9	93.2	101.6
1974 .....	91.5	90.5	95.2	93.6	92.4	98.2
1975 .....	86.7	87.7	82.3	85.9	86.1	84.3
1976 .....	95.0	95.0	95.1	95.9	95.6	96.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.2	103.7	101.1	103.5	104.3	101.1
1979 .....	105.4	106.2	102.0	105.6	106.5	102.4
1980 .....	105.2	106.4	100.5	105.7	106.9	101.3
1981 .....	104.4	105.5	100.0	104.0	104.9	100.4
1982 .....	106.2	108.4	97.8	104.5	106.3	98.2
1983 <sup>2</sup> .....	115.8	118.0	107.5	114.7	116.8	107.5
Average annual percent change:						
1947-83 .....	3.7	4.0	2.1	3.5	3.8	1.9
1978-83 .....	1.7	2.0	.5	1.3	1.6	.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the American Paper Institute. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 96. Paper, paperboard, and pulp mills (SIC 2611, 2621, 2631, 2661): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	41.4	102.5	109.1	73.5	97.4	104.6	71.0
1955 .....	46.4	107.3	114.9	74.4	100.0	107.5	72.3
1956 .....	49.2	109.1	115.7	80.4	102.1	108.8	77.9
1957 .....	47.9	106.3	111.7	82.9	102.0	107.9	80.4
1958 .....	48.1	104.2	109.1	82.6	100.5	106.3	80.1
1959 .....	53.6	109.4	114.4	88.1	103.4	108.3	85.6
1960 .....	54.8	108.3	112.2	91.6	103.6	107.7	89.0
1961 .....	56.5	104.9	108.3	90.7	100.6	104.1	88.4
1962 .....	59.5	106.3	109.8	91.0	101.7	105.4	88.4
1963 .....	62.7	105.8	109.2	91.3	101.1	104.5	88.8
1964 .....	66.7	107.0	110.6	91.3	101.3	104.8	88.4
1965 .....	70.6	107.9	110.9	94.7	102.6	105.6	92.1
1966 .....	76.1	110.8	113.8	97.5	104.6	107.3	95.3
1967 .....	75.9	112.2	114.8	101.2	107.3	109.6	98.9
1968 .....	81.6	113.5	116.8	99.2	107.7	110.7	97.1
1969 .....	85.9	114.9	118.5	99.9	109.2	112.1	99.3
1970 .....	85.1	109.8	112.2	99.3	107.1	109.1	100.0
1971 .....	86.0	106.2	107.3	101.0	102.9	103.9	99.6
1972 .....	92.8	105.6	107.0	99.7	101.3	102.5	96.7
1973 .....	97.1	106.1	107.7	98.8	102.3	104.2	95.6
1974 .....	96.7	105.7	106.8	101.6	103.3	104.7	98.5
1975 .....	82.1	94.7	93.6	99.7	95.6	95.3	97.4
1976 .....	95.6	100.6	100.6	100.5	99.7	100.0	98.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.4	99.2	98.7	101.3	98.9	98.2	101.3
1979 .....	106.0	100.6	99.8	103.9	100.4	99.5	103.5
1980 .....	105.3	100.1	99.0	104.8	99.6	98.5	103.9
1981 .....	102.4	98.1	97.1	102.4	98.5	97.6	102.0
1982 .....	98.2	92.5	90.6	100.4	94.0	92.4	100.0
1983 <sup>1</sup> .....	107.5	92.8	91.1	100.0	93.7	92.0	100.0
Average annual percent change:							
1947-83 .....	3.7	-.1	-.4	1.6	.2	-.2	1.7
1978-83 .....	( <sup>2</sup> )	-1.7	-2.0	-5	-1.4	-1.6	-5

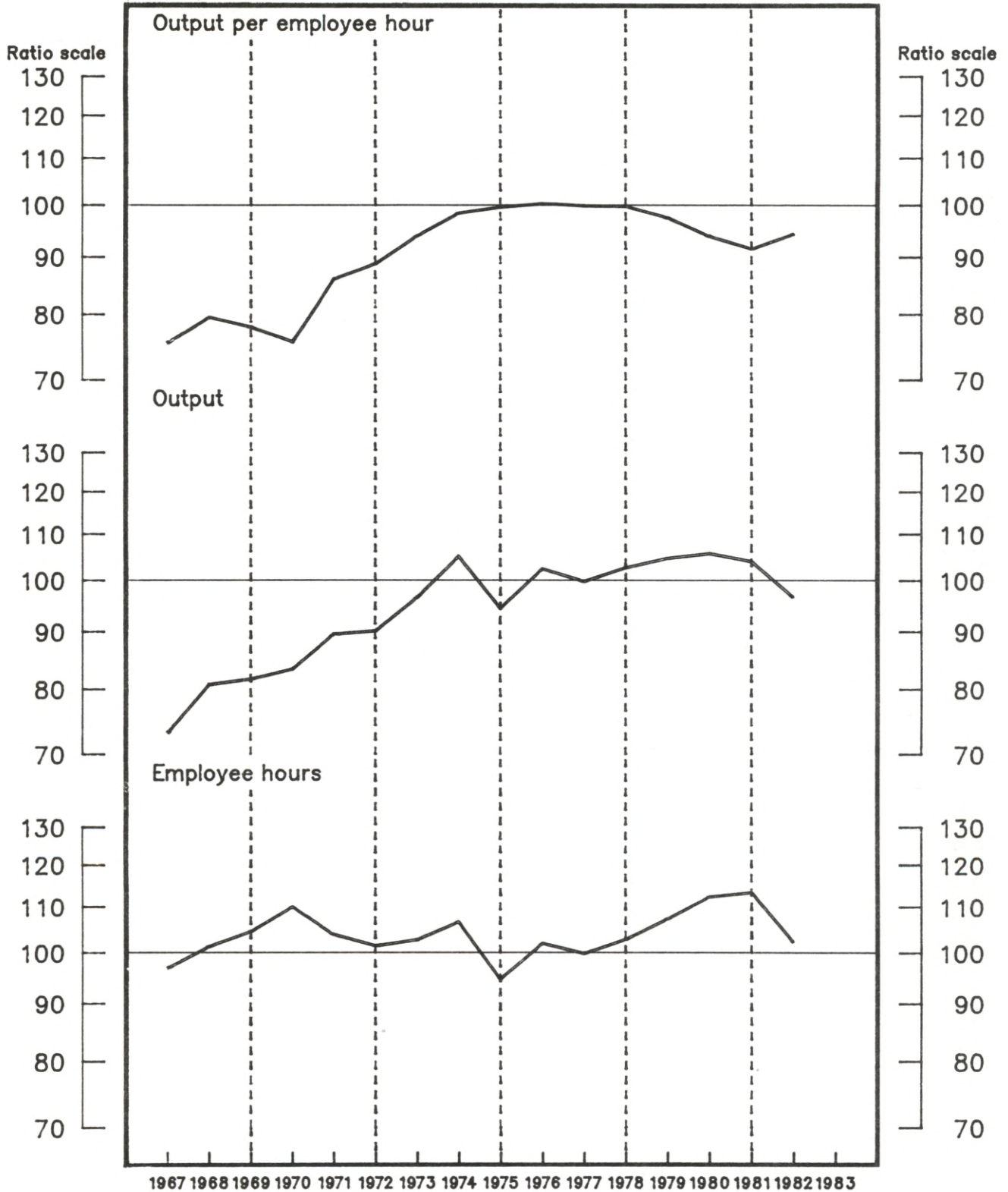
<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census, the Bureau of Labor Statistics, and the American Paper Institute. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 50. Paper and plastic bags (SIC 2643): Output per hour and related data, 1967-82  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 97. Paper and plastic bags (SIC 2643): Indexes of output per employee hour and output per employee, 1954-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	55.2	53.0	66.6	56.2	53.6	69.1
1955 .....	57.9	55.7	69.4	59.7	57.2	71.7
1956 .....	55.5	54.2	61.8	56.2	54.5	64.0
1957 .....	56.5	55.2	62.7	57.8	56.2	64.9
1958 .....	57.6	56.9	61.0	58.0	56.9	63.0
1959 .....	60.4	60.0	62.3	61.1	60.3	64.1
1960 .....	61.1	60.3	64.9	58.7	56.9	67.0
1961 .....	65.0	63.8	70.4	64.1	62.3	72.5
1962 .....	66.7	65.5	72.2	65.9	64.0	74.3
1963 .....	69.7	68.8	73.6	70.5	69.3	75.8
1964 .....	69.3	68.7	71.7	71.2	70.5	74.2
1965 .....	72.7	72.6	73.1	74.4	74.1	75.4
1966 .....	72.4	71.9	74.6	75.0	74.7	76.3
1967 .....	75.6	75.2	77.2	77.1	76.7	78.9
1968 .....	79.7	78.9	83.2	83.1	82.6	85.2
1969 .....	78.1	78.2	78.0	80.4	80.8	78.6
1970 .....	75.8	74.4	82.2	76.5	75.2	81.9
1971 .....	86.2	85.1	91.3	86.9	85.5	92.6
1972 .....	88.9	88.7	89.4	90.5	90.0	92.1
1973 .....	94.1	94.3	92.7	95.3	95.1	95.8
1974 .....	98.6	96.5	108.3	99.4	96.6	112.0
1975 .....	99.8	100.4	97.4	94.5	93.3	99.7
1976 .....	100.5	100.1	102.1	98.6	97.3	103.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.9	99.4	101.8	101.3	101.1	101.9
1979 .....	97.6	97.6	97.3	97.0	96.7	97.9
1980 .....	94.0	94.5	92.6	94.0	94.0	93.6
1981 .....	91.7	92.2	89.8	92.8	93.4	90.5
1982 <sup>2</sup> .....	94.5	95.2	91.7	93.5	93.9	92.1
Average annual percent change:						
1954-82 .....	2.4	2.5	1.9	2.3	2.5	1.8
1978-82 .....	-1.7	-1.4	-2.9	-2.0	-1.8	-2.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 98. Paper and plastic bags (SIC 2643): Indexes of output, employee hours, and employees, 1954-82**  
(1977=100)

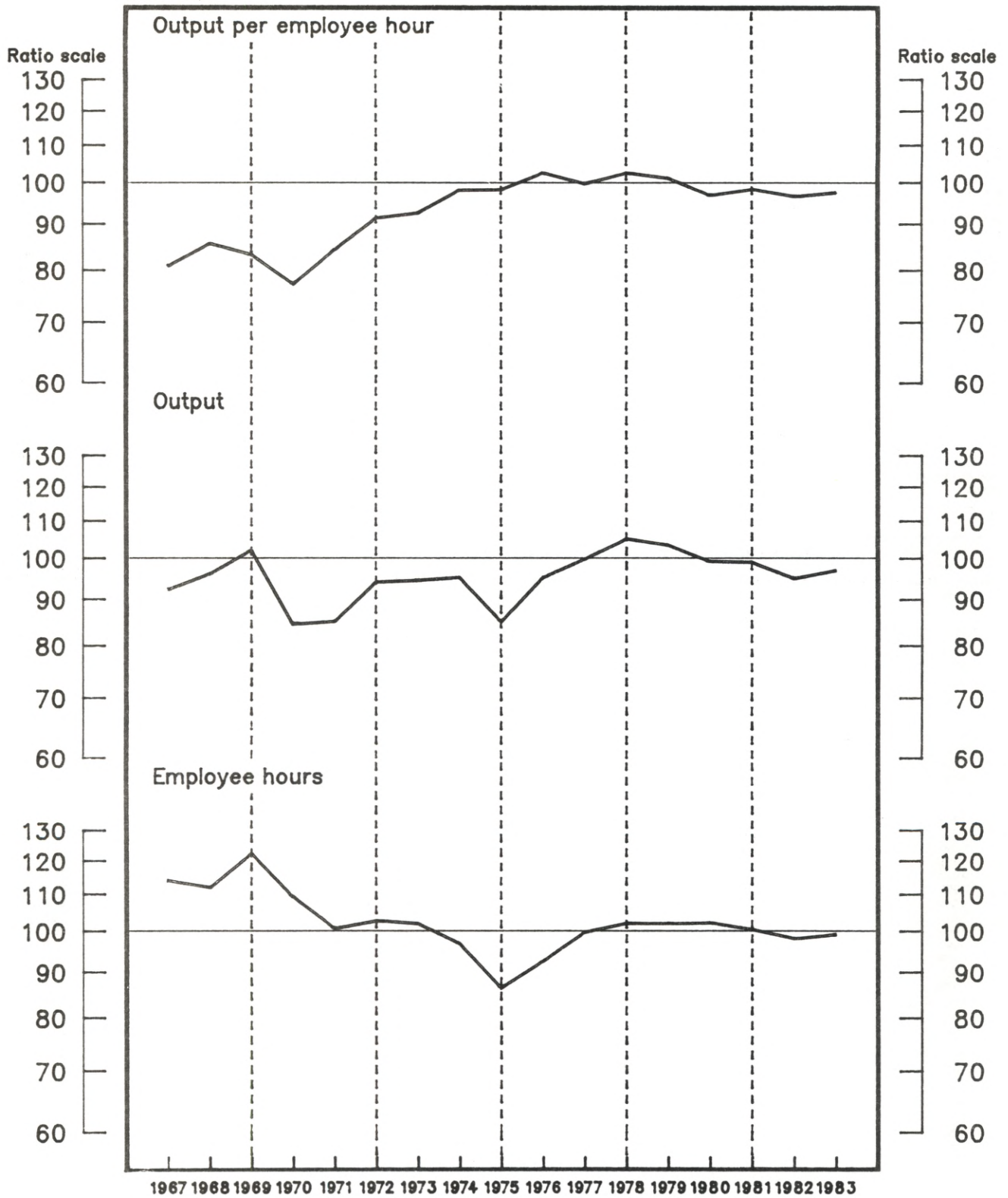
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	38.4	69.6	72.4	57.7	68.3	71.6	55.6
1955 .....	42.0	72.6	75.4	60.5	70.4	73.4	58.6
1956 .....	42.6	76.7	78.6	68.9	75.8	78.1	66.6
1957 .....	44.6	79.0	80.8	71.1	77.2	79.3	68.7
1958 .....	46.4	80.5	81.5	76.1	80.0	81.6	73.7
1959 .....	50.5	83.6	84.2	81.1	82.7	83.7	78.8
1960 .....	49.4	80.8	81.9	76.1	84.2	86.8	73.7
1961 .....	52.0	80.0	81.5	73.9	81.1	83.5	71.7
1962 .....	54.1	81.1	82.6	74.9	82.1	84.5	72.8
1963 .....	61.3	88.0	89.1	83.3	86.9	88.4	80.9
1964 .....	63.7	91.9	92.7	88.9	89.5	90.4	85.9
1965 .....	67.0	92.1	92.3	91.6	90.1	90.4	88.9
1966 .....	72.5	100.1	100.8	97.2	96.7	97.1	95.0
1967 .....	73.3	97.0	97.5	95.0	95.1	95.6	92.9
1968 .....	80.9	101.5	102.5	97.2	97.3	97.9	95.0
1969 .....	81.8	104.7	104.6	104.9	101.8	101.2	104.1
1970 .....	83.5	110.2	112.2	101.6	109.2	111.1	102.0
1971 .....	89.7	104.0	105.4	98.3	103.2	104.9	96.9
1972 .....	90.3	101.6	101.8	101.0	99.8	100.3	98.0
1973 .....	96.8	102.9	102.6	104.4	101.6	101.8	101.0
1974 .....	105.3	106.8	109.1	97.2	105.9	109.0	94.0
1975 .....	94.7	94.9	94.3	97.2	100.2	101.5	95.0
1976 .....	102.6	102.1	102.5	100.5	104.1	105.4	99.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.9	103.0	103.5	101.1	101.6	101.8	101.0
1979 .....	104.9	107.5	107.5	107.8	108.2	108.5	107.1
1980 .....	105.9	112.6	112.1	114.4	112.7	112.6	113.1
1981 .....	104.2	113.6	113.0	116.1	112.3	111.6	115.2
1982 <sup>1</sup> .....	96.8	102.4	101.7	105.6	103.5	103.1	105.1
Average annual percent change:							
1954-82 .....	3.9	1.5	1.4	2.0	1.5	1.4	2.1
1978-82 .....	-1.3	.4	.1	1.6	.7	.5	1.5

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 51. Folding paperboard boxes (SIC 2651): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 99. Folding paperboard boxes (SIC 2651): Indexes of output per employee hour and output per employee, 1963-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	75.8	75.2	79.2	78.0	77.2	81.3
1964 .....	77.5	76.8	81.3	80.6	79.8	84.2
1965 .....	73.5	72.9	76.5	76.5	76.0	78.6
1966 .....	74.0	73.4	77.1	76.9	76.2	79.1
1967 .....	81.0	80.9	81.9	83.9	83.8	84.0
1968 .....	85.8	84.8	91.3	88.6	87.5	93.1
1969 .....	83.4	82.3	89.6	85.5	84.3	90.1
1970 .....	77.4	77.1	78.8	77.8	77.5	78.5
1971 .....	84.5	84.9	83.2	85.0	85.0	84.4
1972 .....	91.6	91.6	92.5	92.5	91.6	95.3
1973 .....	92.8	92.6	94.0	93.5	92.6	96.8
1974 .....	98.4	99.4	94.7	98.8	99.0	97.5
1975 .....	98.5	100.6	90.3	99.5	101.4	92.5
1976 .....	102.8	103.7	99.7	105.1	106.0	101.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.8	103.2	101.4	103.1	103.4	101.7
1979 .....	101.4	101.1	103.0	102.9	102.8	103.6
1980 .....	97.1	97.5	95.3	97.6	98.0	96.1
1981 .....	98.6	98.4	99.8	100.1	100.0	100.3
1982 .....	96.8	98.0	91.8	97.3	98.8	92.1
1983 <sup>2</sup> .....	97.8	98.2	96.0	100.3	101.5	96.1
Average annual percent change:						
1963-83 .....	1.7	1.8	1.3	1.6	1.7	1.2
1978-83 .....	-1.1	-9	-1.6	-8	-5	-1.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Paperboard Packaging Council, the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 100. Folding paperboard boxes (SIC 2651): Indexes of output, employee hours, and employees, 1963-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	89.5	118.0	119.0	113.0	114.8	116.0	110.1
1964 .....	89.8	115.9	116.9	110.5	111.4	112.6	106.7
1965 .....	88.3	120.2	121.1	115.5	115.4	116.2	112.3
1966 .....	93.3	126.1	127.1	121.0	121.4	122.4	118.0
1967 .....	92.5	114.2	114.3	113.0	110.3	110.4	110.1
1968 .....	96.3	112.2	113.6	105.5	108.7	110.0	103.4
1969 .....	102.3	122.6	124.3	114.2	119.6	121.3	113.5
1970 .....	84.7	109.5	109.8	107.5	108.9	109.3	107.9
1971 .....	85.3	100.9	100.5	102.5	100.4	100.3	101.1
1972 .....	94.3	102.9	103.0	101.9	102.0	102.9	98.9
1973 .....	94.7	102.1	102.3	100.7	101.3	102.3	97.8
1974 .....	95.4	97.0	96.0	100.7	96.6	96.4	97.8
1975 .....	85.3	86.6	84.8	94.5	85.7	84.1	92.2
1976 .....	95.4	92.8	92.0	95.7	90.8	90.0	94.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.2	102.3	101.9	103.7	102.0	101.7	103.4
1979 .....	103.6	102.2	102.5	100.6	100.7	100.8	100.0
1980 .....	99.4	102.4	101.9	104.3	101.8	101.4	103.4
1981 .....	99.2	100.6	100.8	99.4	99.1	99.2	98.9
1982 .....	95.2	98.3	97.1	103.7	97.8	96.4	103.4
1983 <sup>1</sup> .....	97.2	99.4	99.0	101.2	96.9	95.8	101.1
Average annual percent change:							
1963-83 .....	.5	-1.1	-1.2	-7	-1.0	-1.1	-6
1978-83 .....	-1.8	-8	-9	-2	-1.1	-1.3	-2

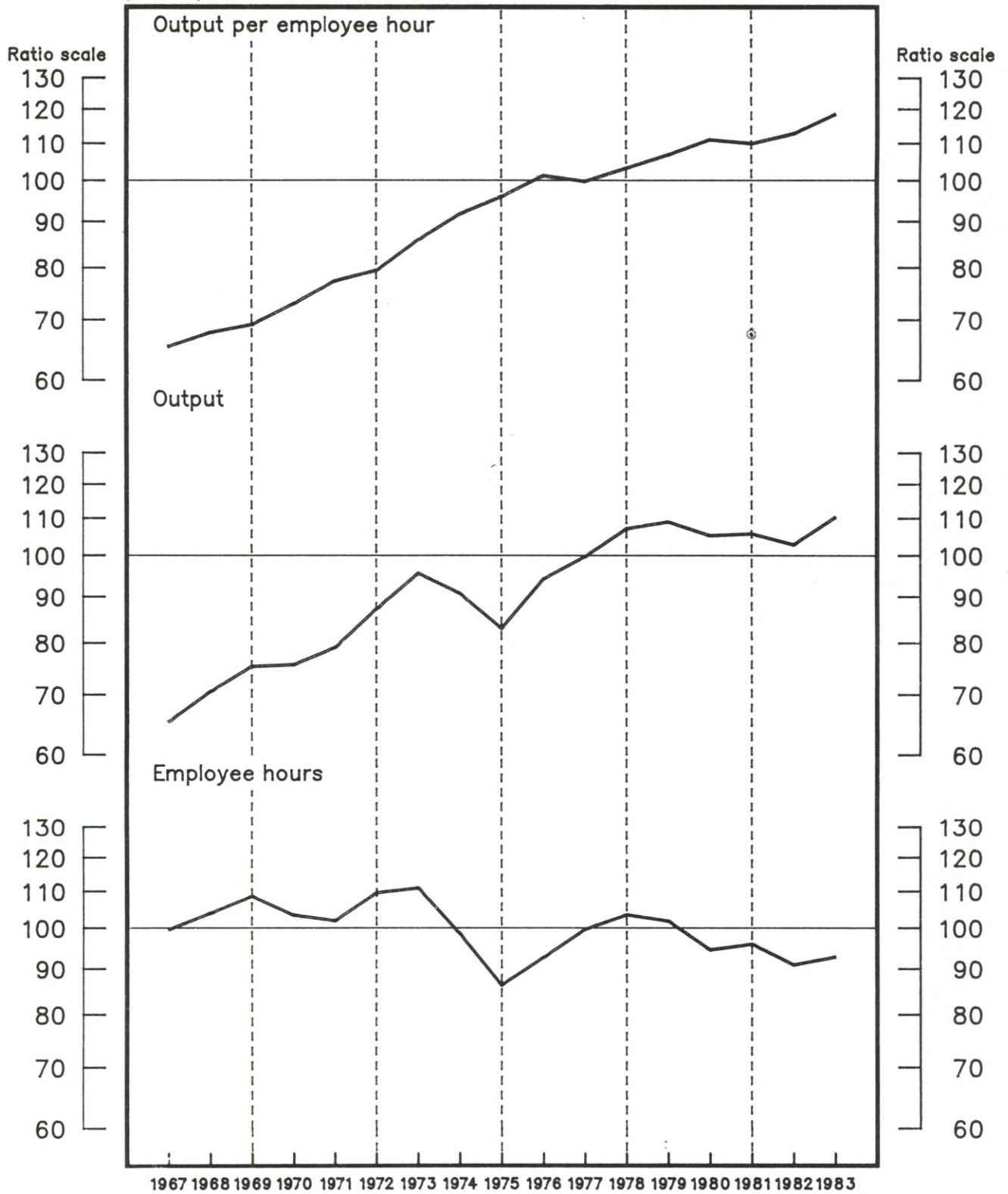
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Paperboard Packaging Council, the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 52. Corrugated and solid fiber boxes (SIC 2653): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 101. Corrugated and solid fiber boxes (SIC 2653): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	49.9	47.9	56.9	51.7	49.6	58.6
1959 .....	50.8	47.9	61.8	53.7	50.9	63.5
1960 .....	50.6	48.1	59.1	52.3	49.8	60.9
1961 .....	53.4	50.7	62.8	56.0	53.4	64.4
1962 .....	54.1	51.1	65.4	57.2	54.3	67.1
1963 .....	57.7	55.2	66.5	60.7	58.3	68.2
1964 .....	58.9	56.4	67.5	63.3	61.2	69.6
1965 .....	60.7	58.2	69.6	65.5	63.5	71.5
1966 .....	63.2	59.6	76.8	67.4	64.0	78.6
1967 .....	65.5	62.8	74.3	68.3	65.9	76.0
1968 .....	67.9	64.7	78.6	71.3	68.4	80.2
1969 .....	69.3	66.3	79.9	72.5	70.0	80.4
1970 .....	73.1	70.8	80.4	73.4	71.3	79.8
1971 .....	77.5	75.9	82.2	78.3	76.5	83.4
1972 .....	79.6	77.3	87.2	82.3	79.8	89.7
1973 .....	86.1	83.1	95.6	88.6	85.2	99.1
1974 .....	92.0	91.8	92.3	89.7	87.8	95.1
1975 .....	96.2	98.3	90.2	94.6	95.5	92.1
1976 .....	101.5	101.5	101.5	101.0	100.2	103.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.5	103.1	104.8	103.1	102.4	104.8
1979 .....	107.1	106.6	108.0	106.9	106.4	108.5
1980 .....	111.3	113.4	105.5	110.1	111.8	106.2
1981 .....	110.2	111.6	106.4	110.5	112.1	106.7
1982 .....	113.0	115.3	106.8	111.6	113.3	107.3
1983 <sup>2</sup> .....	118.8	119.2	117.8	119.4	120.1	117.8
Average annual percent change:						
1958-83 .....	3.9	4.2	2.8	3.6	3.8	2.7
1978-83 .....	2.4	2.7	1.6	2.5	2.9	1.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

differ from those previously published.

SOURCE: Output based on data from the Fiber Box Association, and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

**Table 102. Corrugated and solid fiber boxes (SIC 2653): Indexes of output, employee hours, and employment, 1958-83**  
(1977 = 100)

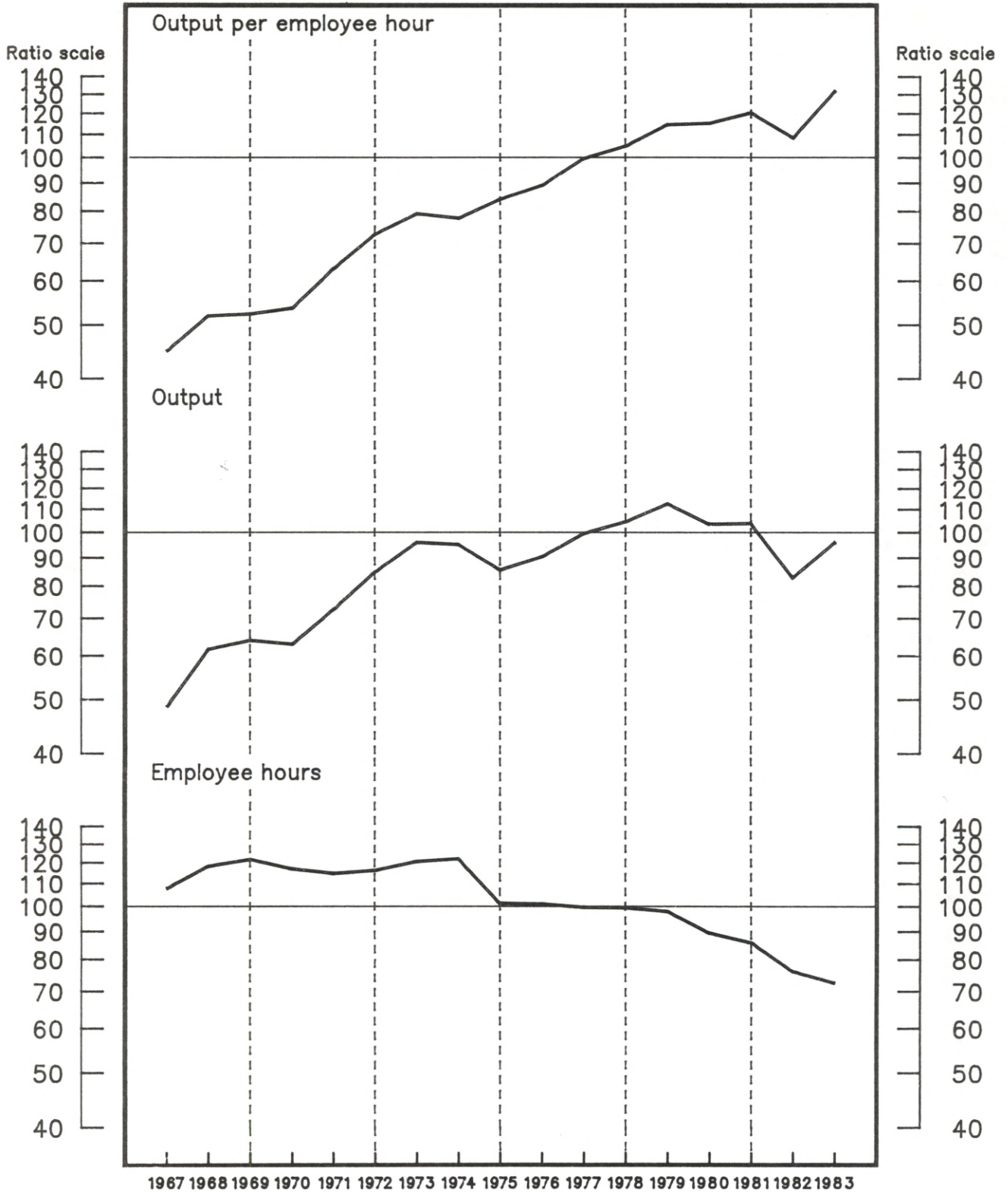
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	36.1	72.3	75.4	63.5	69.8	72.8	61.6
1959 .....	41.2	81.1	86.1	66.7	76.7	81.0	64.9
1960 .....	41.2	81.5	85.6	69.7	78.8	82.8	67.7
1961 .....	44.0	82.4	86.8	70.1	78.6	82.4	68.3
1962 .....	47.0	86.8	91.9	71.9	82.1	86.6	70.0
1963 .....	49.8	86.3	90.2	74.9	82.1	85.4	73.0
1964 .....	53.9	91.5	95.5	79.8	85.2	88.0	77.4
1965 .....	58.5	96.3	100.5	84.1	89.3	92.1	81.8
1966 .....	63.8	100.9	107.1	83.1	94.7	99.7	81.2
1967 .....	65.4	99.9	104.1	88.0	95.7	99.3	86.1
1968 .....	70.7	104.2	109.2	90.0	99.2	103.4	88.2
1969 .....	75.5	108.9	113.9	94.5	104.1	107.8	93.9
1970 .....	75.8	103.7	107.0	94.3	103.2	106.3	95.0
1971 .....	79.2	102.2	104.4	96.3	101.2	103.5	96.3
1972 .....	87.5	109.9	113.2	100.4	106.3	109.6	97.5
1973 .....	95.8	111.3	115.3	100.2	108.1	112.4	96.7
1974 .....	91.0	98.9	99.1	98.6	101.5	103.7	95.7
1975 .....	83.3	86.6	84.7	92.3	88.1	87.2	90.4
1976 .....	94.4	93.0	93.0	93.0	93.5	94.2	91.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.4	103.8	104.2	102.5	104.2	104.9	102.5
1979 .....	109.3	102.1	102.5	101.2	102.2	102.7	100.7
1980 .....	105.5	94.8	93.0	100.0	95.8	94.4	99.3
1981 .....	106.0	96.2	95.0	99.6	95.9	94.6	99.3
1982 .....	103.1	91.2	89.4	96.5	92.4	91.0	96.1
1983 <sup>1</sup> .....	110.6	93.1	92.8	93.9	92.6	92.1	93.9
Average annual percent change:							
1958-83 .....	4.6	.7	.4	1.7	1.0	.7	1.8
1978-83 .....	-.1	-2.4	-2.7	-1.7	-2.5	-2.8	-1.6

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Fiber Box Association, and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 53. Synthetic fibers (SIC 2823, 2824): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 103. Synthetic fibers (SIC 2823, 2824): Indexes of output per employee hour and output per employee, 1957-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1957 .....	30.9	30.5	32.0	31.1	30.5	32.9
1958 .....	29.6	30.4	27.5	30.2	30.9	28.2
1959 .....	33.9	33.4	35.9	34.7	34.0	36.8
1960 .....	32.4	32.5	32.2	32.5	32.4	32.8
1961 .....	34.8	35.1	34.0	35.2	35.4	34.4
1962 .....	38.3	37.8	39.9	39.0	38.5	40.5
1963 .....	37.9	38.4	36.4	38.9	39.6	37.0
1964 .....	40.4	40.6	39.7	41.9	42.4	40.5
1965 .....	41.8	41.6	42.1	42.9	42.9	42.7
1966 .....	42.0	42.8	39.7	42.8	43.8	40.1
1967 .....	45.0	45.3	44.3	45.7	46.0	44.7
1968 .....	52.1	51.1	55.4	53.7	52.9	56.3
1969 .....	52.5	51.8	55.2	53.9	53.3	55.8
1970 .....	53.8	53.9	53.7	54.3	54.4	54.0
1971 .....	63.3	62.4	66.5	63.8	62.9	66.9
1972 .....	73.0	71.1	80.2	74.7	73.0	80.3
1973 .....	79.5	77.0	88.7	81.7	79.3	89.9
1974 .....	78.0	77.3	80.1	78.7	77.6	82.0
1975 .....	84.5	86.9	77.5	83.4	85.0	78.9
1976 .....	89.5	92.1	82.5	88.2	89.8	83.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.2	104.7	106.8	105.6	105.1	106.9
1979 .....	115.0	113.9	118.2	115.8	114.8	118.8
1980 .....	115.7	117.4	111.0	114.9	116.0	111.8
1981 .....	120.9	122.7	115.5	119.9	121.3	116.0
1982 .....	109.0	114.0	95.7	105.4	109.0	96.1
1983 <sup>2</sup> .....	132.4	135.6	123.6	131.5	134.3	123.7
Average annual percent change:						
1957-83 .....	6.3	6.4	6.1	6.2	6.2	6.0
1978-83 .....	3.0	3.9	.4	2.5	3.2	.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Textile Economics Bureau, Inc. and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 104. Synthetic fibers (SIC 2823, 2824): Indexes of output, employee hours, and employees, 1957-83**  
(1977 = 100)

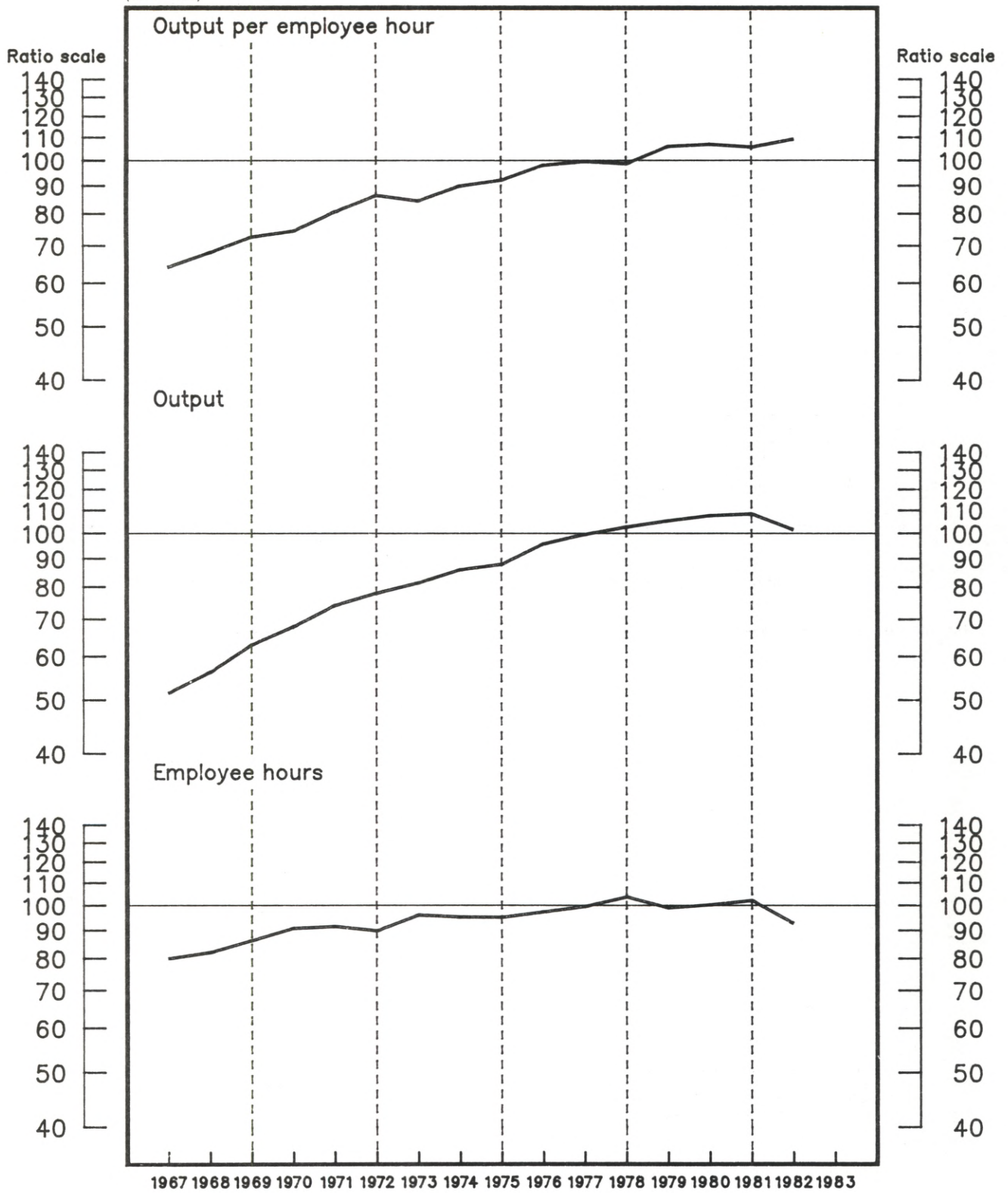
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1957 .....	24.2	78.4	79.3	75.6	77.8	79.3	73.6
1958 .....	22.1	74.6	72.8	80.3	73.3	71.6	78.4
1959 .....	26.4	77.8	79.0	73.5	76.1	77.7	71.8
1960 .....	24.8	76.5	76.3	77.0	76.2	76.6	75.5
1961 .....	26.1	74.9	74.3	76.8	74.2	73.8	75.8
1962 .....	31.2	81.5	82.5	78.2	80.1	81.1	77.1
1963 .....	33.3	87.8	86.7	91.4	85.5	84.0	90.1
1964 .....	38.2	94.5	94.0	96.2	91.2	90.2	94.3
1965 .....	43.8	104.9	105.3	104.0	102.2	102.1	102.6
1966 .....	47.8	113.9	111.6	120.4	111.7	109.2	119.3
1967 .....	48.7	108.2	107.6	109.9	106.6	105.8	108.9
1968 .....	61.9	118.8	121.1	111.8	115.2	117.0	109.9
1969 .....	64.2	122.2	124.0	116.4	119.1	120.4	115.0
1970 .....	63.2	117.4	117.2	117.7	116.3	116.1	117.0
1971 .....	72.9	115.2	116.9	109.7	114.2	115.9	108.9
1972 .....	85.2	116.7	119.9	106.3	114.1	116.7	106.1
1973 .....	96.3	121.1	125.0	108.6	117.8	121.5	107.1
1974 .....	95.5	122.5	123.5	119.2	121.3	123.0	116.4
1975 .....	85.9	101.7	98.8	110.9	103.0	101.1	108.9
1976 .....	90.8	101.4	98.6	110.1	102.9	101.1	108.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.0	99.8	100.3	98.3	99.4	99.9	98.2
1979 .....	113.0	98.3	99.2	95.6	97.6	98.4	95.1
1980 .....	103.9	89.8	88.5	93.6	90.4	89.6	92.9
1981 .....	104.2	86.2	84.9	90.2	86.9	85.9	89.8
1982 .....	83.3	76.4	73.1	87.0	79.0	76.4	86.7
1983 <sup>1</sup> .....	96.4	72.8	71.1	78.0	73.3	71.8	77.9
Average annual percent change:							
1957-83 .....	6.8	.5	.4	.7	.6	.6	.7
1978-83 .....	-3.8	-6.6	-7.4	-4.1	-6.1	-6.8	-4.1

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Textile Economics Bureau, Inc. and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 54. Pharmaceutical preparations (SIC 2834): Output per hour and related data, 1967-82  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 105. Pharmaceutical preparations (SIC 2834): Indexes of output per employee hour and output per employee, 1963-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>		Output per employee <sup>1</sup>		
	All employees	Production workers	All employees	Production workers	Nonproduction workers
Index:					
1963 .....	52.9	49.0	54.2	50.1	59.0
1964 .....	54.0	49.3	55.7	50.7	61.6
1965 .....	58.5	53.8	59.6	54.7	65.4
1966 .....	60.6	55.5	62.6	57.3	69.0
1967 .....	64.4	59.4	64.1	59.1	70.0
1968 .....	68.4	63.6	69.6	64.8	75.3
1969 .....	73.0	66.6	74.1	67.7	81.9
1970 .....	74.8	70.0	77.1	72.0	82.8
1971 .....	81.0	80.1	82.8	81.8	83.8
1972 .....	86.8	85.1	88.4	86.6	90.2
1973 .....	84.8	84.5	85.5	85.2	85.6
1974 .....	90.3	89.7	90.4	89.8	90.9
1975 .....	92.5	94.1	90.8	92.5	89.3
1976 .....	98.4	98.1	98.0	97.7	98.3
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	99.0	100.2	100.6	101.7	99.5
1979 .....	106.4	103.5	102.9	100.1	105.8
1980 .....	107.3	106.1	101.0	99.7	102.3
1981 .....	106.1	106.8	105.5	106.0	104.9
1982 <sup>2</sup> .....	109.6	111.2	108.4	110.0	106.9
Average annual percent change:					
1963-82 .....	4.1	4.7	3.8	4.4	3.1
1978-82 .....	2.0	2.4	1.8	2.2	1.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 106. Pharmaceutical preparations (SIC 2834): Indexes of output, employee hours, and employees, 1963-82**  
(1977 = 100)

Year	Output	Employee hours		Employees		
		All employees	Production workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	36.5	69.0	74.5	67.3	72.8	61.9
1964 .....	39.7	73.5	80.6	71.3	78.3	64.4
1965 .....	44.6	76.2	82.9	74.8	81.5	68.2
1966 .....	48.7	80.3	87.7	77.8	85.0	70.6
1967 .....	51.7	80.3	87.1	80.7	87.5	73.9
1968 .....	56.4	82.4	88.7	81.0	87.1	74.9
1969 .....	63.2	86.6	94.9	85.3	93.4	77.2
1970 .....	68.2	91.2	97.4	88.5	94.7	82.4
1971 .....	74.4	91.9	92.9	89.9	91.0	88.8
1972 .....	78.3	90.2	92.0	88.6	90.4	86.8
1973 .....	81.7	96.4	96.7	95.6	95.9	95.4
1974 .....	86.3	95.6	96.2	95.5	96.1	94.9
1975 .....	88.3	95.5	93.8	97.2	95.5	98.9
1976 .....	96.1	97.7	98.0	98.1	98.4	97.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.1	104.1	102.9	102.5	101.4	103.6
1979 .....	105.8	99.4	102.2	102.8	105.7	100.0
1980 .....	108.1	100.7	101.9	107.0	108.4	105.7
1981 .....	108.9	102.6	102.0	103.2	102.7	103.8
1982 <sup>1</sup> .....	102.0	93.1	91.7	94.1	92.7	95.4
Average annual percent change:						
1963-82 .....	6.0	1.8	1.2	2.1	1.5	2.8
1978-82 .....	.1	-1.9	-2.3	-1.7	-2.1	-1.3

<sup>1</sup> Preliminary.

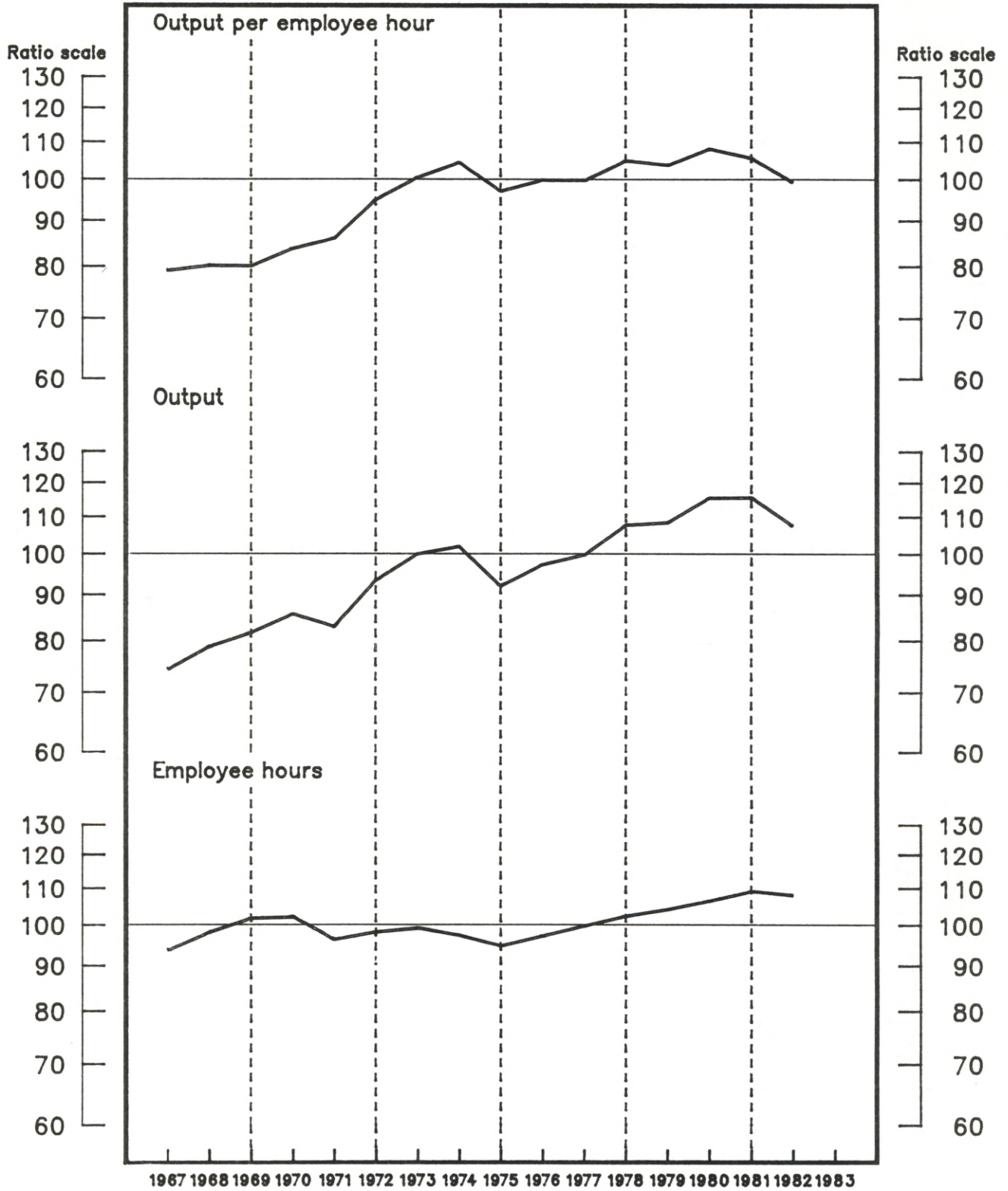
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census.

Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 55. Soaps and detergents (SIC 2841): Output per hour and related data, 1967-82  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 107. Soaps and detergents (SIC 2841): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	61.6	58.1	69.2	60.1	55.6	69.6
1959 .....	66.9	63.3	74.7	65.5	61.0	75.0
1960 .....	64.8	60.5	74.5	63.7	58.7	74.5
1961 .....	65.5	60.6	76.5	64.7	59.4	76.3
1962 .....	66.5	60.5	81.5	65.5	58.8	80.8
1963 .....	72.0	64.9	89.8	70.4	62.6	89.0
1964 .....	72.0	65.5	87.6	70.4	63.2	87.0
1965 .....	69.9	64.5	82.4	68.5	62.5	81.6
1966 .....	74.7	69.7	86.0	73.8	68.4	85.2
1967 .....	79.3	74.2	90.8	77.9	72.1	90.1
1968 .....	80.3	76.0	89.3	78.7	73.9	88.4
1969 .....	80.2	77.2	86.3	79.0	75.8	85.2
1970 .....	83.9	81.9	87.6	82.3	80.0	86.4
1971 .....	86.1	85.1	87.7	83.5	81.7	86.6
1972 .....	95.2	92.9	100.1	94.2	91.5	99.0
1973 .....	100.8	99.4	103.4	100.2	98.2	103.6
1974 .....	104.7	103.0	107.8	103.9	100.9	109.4
1975 .....	97.3	95.0	101.7	96.6	93.3	102.7
1976 .....	100.1	99.2	101.9	100.0	98.6	102.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.2	102.7	110.1	105.8	103.4	110.1
1979 .....	104.0	101.3	109.4	104.2	101.3	109.4
1980 .....	108.4	106.5	111.9	107.3	104.8	111.9
1981 .....	105.9	102.4	112.8	104.5	100.3	112.8
1982 <sup>2</sup> .....	99.5	96.2	106.3	99.3	95.6	106.3
Average annual percent change:						
1958-82 .....	2.5	2.8	1.8	2.6	3.0	1.9
1978-82 .....	-9	-1.2	-4	-1.2	-1.7	-4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 108. Soaps and detergents (SIC 2841): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

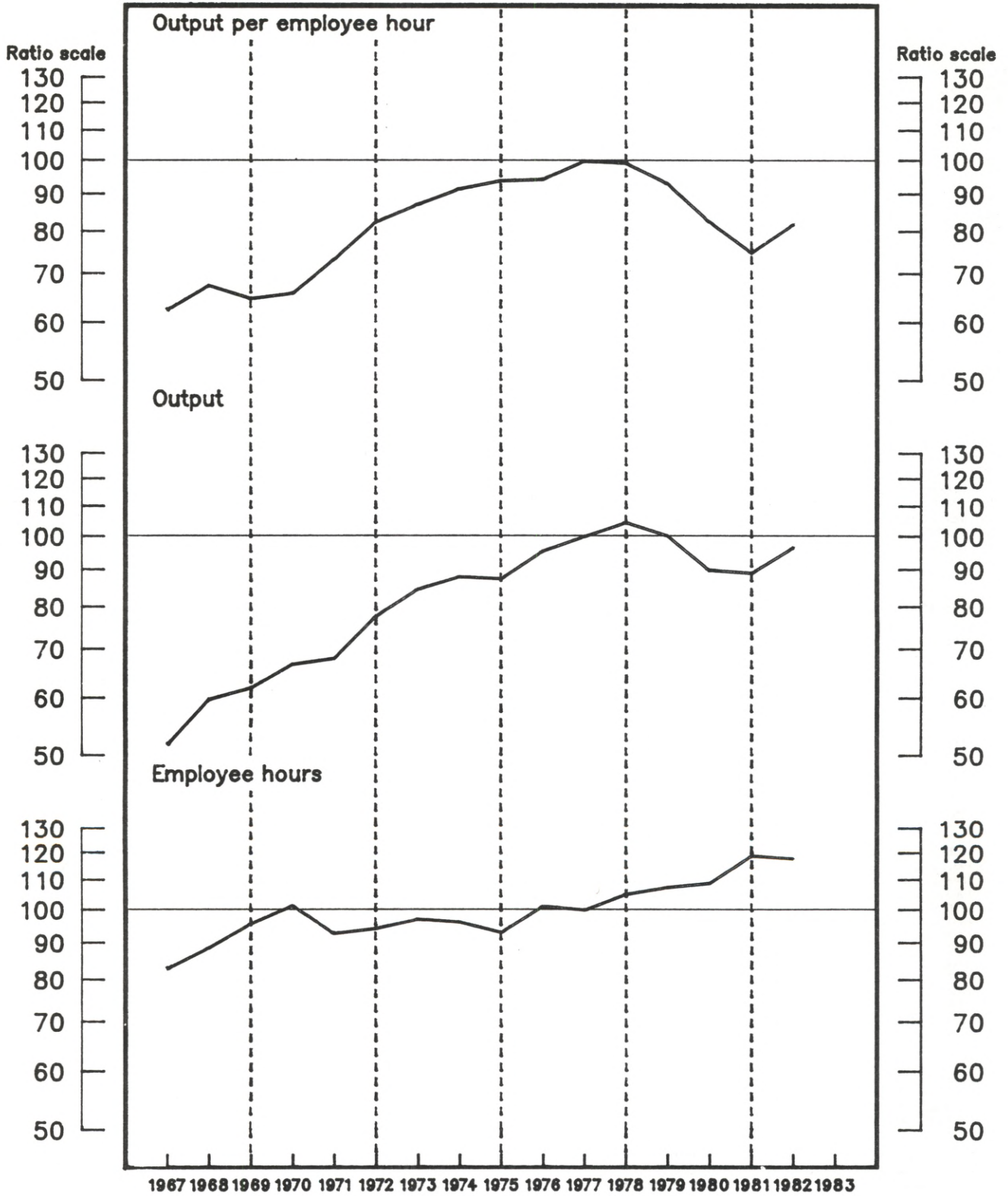
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	48.1	78.1	82.8	69.5	80.0	86.5	69.1
1959 .....	53.4	79.8	84.4	71.5	81.5	87.6	71.2
1960 .....	53.5	82.6	88.5	71.8	84.0	91.2	71.8
1961 .....	56.3	86.0	92.9	73.6	87.0	94.8	73.8
1962 .....	58.6	88.1	96.8	71.9	89.5	99.6	72.5
1963 .....	63.4	88.1	97.7	70.6	90.0	101.2	71.2
1964 .....	66.0	91.7	100.7	75.3	93.8	104.4	75.9
1965 .....	65.8	94.2	102.0	79.9	96.0	105.2	80.6
1966 .....	69.8	93.4	100.1	81.2	94.6	102.0	81.9
1967 .....	74.4	93.8	100.3	81.9	95.5	103.2	82.6
1968 .....	78.9	98.3	103.8	88.4	100.3	106.8	89.3
1969 .....	81.8	102.0	105.9	94.8	103.5	107.9	96.0
1970 .....	85.8	102.3	104.7	98.0	104.3	107.2	99.3
1971 .....	83.1	96.5	97.6	94.8	99.5	101.7	96.0
1972 .....	93.7	98.4	100.9	93.6	99.5	102.4	94.6
1973 .....	100.2	99.4	100.8	96.9	100.0	102.0	96.7
1974 .....	102.1	97.5	99.1	94.7	98.3	101.2	93.3
1975 .....	92.3	94.9	97.2	90.8	95.5	98.9	89.9
1976 .....	97.5	97.4	98.3	95.7	97.5	98.9	95.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.9	102.6	105.1	98.0	102.0	104.4	98.0
1979 .....	108.6	104.4	107.2	99.3	104.2	107.2	99.3
1980 .....	115.7	106.7	108.6	103.4	107.8	110.4	103.4
1981 .....	115.8	109.4	113.1	102.7	110.8	115.5	102.7
1982 <sup>1</sup> .....	107.7	108.2	112.0	101.3	108.5	112.7	101.3
Average annual percent change:							
1958-82 .....	3.7	1.1	.8	1.8	1.0	.7	1.8
1978-82 .....	.6	1.5	1.8	1.0	1.9	2.3	1.0

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 56. Cosmetics and other toiletries (SIC 2844): Output per hour and related data, 1967-82  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 109. Cosmetics and other toiletries (SIC 2844): Indexes of output per employee hour and output per employee, 1958-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	40.0	39.0	41.7	40.2	39.3	41.9
1959 .....	43.9	41.9	47.7	44.3	42.3	48.0
1960 .....	45.1	44.1	46.7	45.1	44.2	46.7
1961 .....	46.9	47.0	46.6	47.3	47.8	46.5
1962 .....	49.6	49.7	49.6	50.2	50.8	49.2
1963 .....	57.0	58.1	55.4	57.9	59.8	55.0
1964 .....	63.8	65.3	61.4	63.1	64.4	60.9
1965 .....	65.7	66.6	64.5	66.0	67.4	64.0
1966 .....	65.2	65.1	65.4	66.9	68.1	64.9
1967 .....	62.5	63.1	61.6	62.8	64.0	61.2
1968 .....	67.5	67.4	67.7	67.6	67.9	67.0
1969 .....	64.8	64.7	65.1	65.2	65.8	64.2
1970 .....	65.9	68.9	61.6	66.8	71.1	60.8
1971 .....	73.3	80.4	64.2	73.4	81.4	63.3
1972 .....	82.5	89.1	73.9	82.8	90.3	73.1
1973 .....	87.2	97.4	74.9	87.7	97.9	75.1
1974 .....	91.6	95.2	86.4	92.4	95.8	87.7
1975 .....	94.0	95.6	91.6	94.8	96.4	92.5
1976 .....	94.4	94.3	94.6	95.3	95.5	95.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.3	98.6	100.6	98.6	97.4	100.6
1979 .....	93.1	93.8	92.0	92.7	93.1	92.0
1980 .....	82.5	80.2	86.5	83.3	81.4	86.5
1981 .....	74.9	69.7	84.9	75.1	70.0	84.9
1982 <sup>2</sup> .....	81.9	76.2	93.0	82.3	76.8	93.0
Average annual percent change:						
1958-82 .....	3.4	3.3	3.5	3.4	3.3	3.5
1978-82 .....	-5.9	-7.8	-2.3	-5.6	-7.3	-2.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 110. Cosmetics and other toiletries (SIC 2844): Indexes of output, employee hours, and employees, 1958-82**  
(1977 = 100)

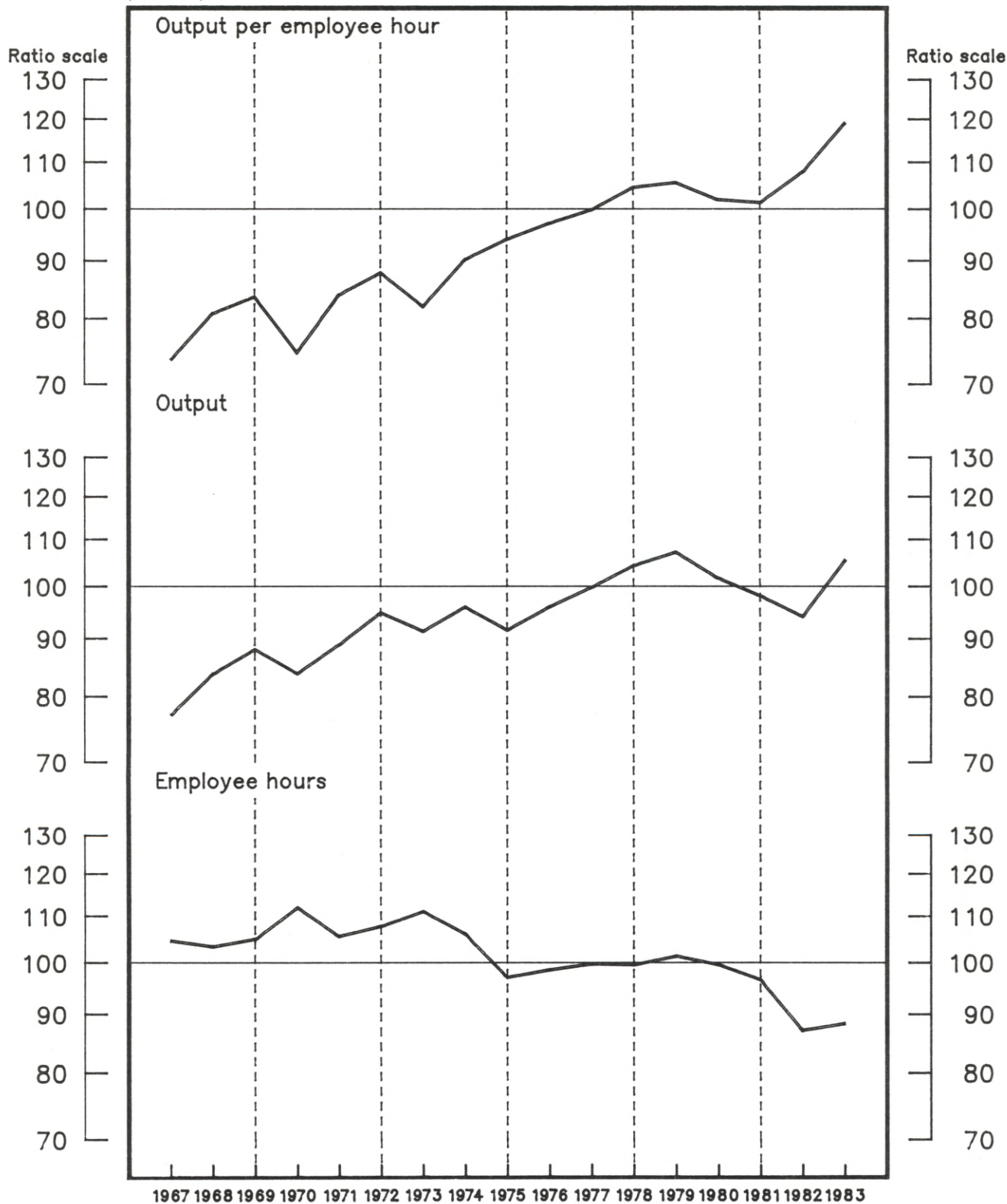
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	22.7	56.8	58.2	54.5	56.4	57.8	54.2
1959 .....	26.5	60.3	63.3	55.5	59.8	62.7	55.2
1960 .....	26.9	59.7	61.0	57.6	59.6	60.9	57.6
1961 .....	29.1	62.1	61.9	62.4	61.5	60.9	62.6
1962 .....	32.0	64.5	64.4	64.5	63.8	63.0	65.0
1963 .....	38.2	67.0	65.7	68.9	66.0	63.9	69.5
1964 .....	42.6	66.8	65.2	69.4	67.5	66.1	70.0
1965 .....	47.6	72.4	71.5	73.8	72.1	70.6	74.4
1966 .....	52.1	79.9	80.0	79.7	77.9	76.5	80.3
1967 .....	51.8	82.9	82.1	84.1	82.5	81.0	84.7
1968 .....	59.8	88.6	88.7	88.3	88.5	88.1	89.2
1969 .....	62.0	95.7	95.9	95.3	95.1	94.2	96.6
1970 .....	66.8	101.4	97.0	108.5	100.0	93.9	109.9
1971 .....	68.0	92.8	84.6	106.0	92.6	83.5	107.4
1972 .....	77.8	94.3	87.3	105.3	94.0	86.2	106.4
1973 .....	84.7	97.1	87.0	113.1	96.6	86.5	112.8
1974 .....	88.1	96.2	92.5	102.0	95.3	92.0	100.5
1975 .....	87.5	93.1	91.5	95.5	92.3	90.8	94.6
1976 .....	95.5	101.2	101.3	101.0	100.2	100.0	100.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.5	105.2	106.0	103.9	106.0	107.3	103.9
1979 .....	100.2	107.6	106.8	108.9	108.1	107.6	108.9
1980 .....	89.9	109.0	112.1	103.9	107.9	110.4	103.9
1981 .....	89.1	119.0	127.9	104.9	118.7	127.2	104.9
1982 <sup>1</sup> .....	96.6	117.9	126.7	103.9	117.4	125.7	103.9
Average annual percent change:							
1958-82 .....	6.5	3.0	3.1	3.0	3.1	3.1	2.9
1978-82 .....	-2.7	3.3	5.5	-4	3.0	5.0	-4

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 57. Paints and allied products (SIC 2851): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 111. Paints and allied products (SIC 2851): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	55.3	53.6	57.5	56.1	53.9	59.0
1959 .....	60.4	58.8	62.4	61.0	58.6	63.9
1960 .....	64.9	63.0	67.6	65.4	62.5	69.0
1961 .....	63.3	61.7	65.5	63.8	61.7	66.4
1962 .....	66.1	64.3	68.4	67.5	66.0	69.5
1963 .....	68.2	66.9	69.9	69.4	68.2	70.9
1964 .....	72.5	70.4	75.4	74.6	72.8	76.8
1965 .....	73.3	72.0	75.1	74.6	73.2	76.1
1966 .....	76.9	75.1	79.2	78.0	76.4	79.9
1967 .....	73.7	72.9	74.6	74.2	73.2	75.2
1968 .....	81.0	80.1	82.1	81.9	80.5	83.5
1969 .....	83.8	81.8	86.3	84.0	81.4	87.2
1970 .....	74.9	73.5	76.8	74.8	72.9	77.3
1971 .....	84.1	84.4	83.8	83.1	82.2	84.3
1972 .....	88.0	85.9	90.7	88.5	86.6	90.8
1973 .....	82.2	80.3	84.7	81.0	77.2	86.0
1974 .....	90.4	91.5	89.0	90.9	90.6	91.3
1975 .....	94.2	99.0	88.8	94.0	97.2	90.4
1976 .....	97.3	99.6	94.2	97.7	99.4	95.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.7	105.4	103.7	104.3	104.8	103.8
1979 .....	105.7	104.4	107.4	104.5	101.8	107.8
1980 .....	102.1	106.4	97.0	100.4	102.8	97.8
1981 .....	101.5	105.2	97.1	100.4	102.9	97.6
1982 .....	108.0	114.7	100.3	106.1	111.2	100.6
1983 <sup>2</sup> .....	119.3	122.8	115.0	119.2	123.1	114.9
Average annual percent change:						
1958-83 .....	2.6	2.9	2.3	2.5	2.8	2.2
1978-83 .....	2.1	3.0	.9	2.1	3.1	.9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 112. Paints and allied products (SIC 2851): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	51.9	93.9	96.9	90.2	92.5	96.3	88.0
1959 .....	58.3	96.5	99.2	93.4	95.6	99.5	91.3
1960 .....	60.9	93.8	96.7	90.1	93.1	97.4	88.3
1961 .....	58.6	92.6	95.0	89.4	91.9	95.0	88.2
1962 .....	61.9	93.7	96.3	90.5	91.7	93.8	89.1
1963 .....	67.0	98.2	100.1	95.8	96.5	98.2	94.5
1964 .....	71.6	98.7	101.7	94.9	96.0	98.4	93.2
1965 .....	76.5	104.3	106.3	101.9	102.6	104.5	100.5
1966 .....	82.5	107.3	109.9	104.2	105.8	108.0	103.3
1967 .....	77.2	104.8	105.9	103.5	104.1	105.4	102.6
1968 .....	83.9	103.6	104.7	102.2	102.5	104.2	100.5
1969 .....	88.2	105.2	107.8	102.2	105.0	108.3	101.2
1970 .....	84.0	112.2	114.3	109.4	112.3	115.3	108.7
1971 .....	89.0	105.8	105.5	106.2	107.1	108.3	105.6
1972 .....	95.0	108.0	110.6	104.7	107.4	109.7	104.6
1973 .....	91.5	111.3	113.9	108.0	112.9	118.5	106.4
1974 .....	96.1	106.3	105.0	108.0	105.7	106.1	105.3
1975 .....	91.7	97.3	92.6	103.3	97.6	94.3	101.4
1976 .....	96.1	98.8	96.5	102.0	98.4	96.7	100.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.5	99.8	99.1	100.8	100.2	99.7	100.7
1979 .....	107.4	101.6	102.9	100.0	102.8	105.5	99.6
1980 .....	101.9	99.8	95.8	105.1	101.5	99.1	104.2
1981 .....	98.3	96.8	93.4	101.2	97.9	95.5	100.7
1982 .....	94.3	87.3	82.2	94.0	88.9	84.8	93.7
1983 <sup>1</sup> .....	105.6	88.5	86.0	91.8	88.6	85.8	91.9
Average annual percent change:							
1958-83 .....	2.6	( <sup>2</sup> )	-.3	-.3	-.1	-.2	.4
1978-83 .....	-1.1	-3.1	-3.9	-2.0	-3.1	-4.0	-1.9

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

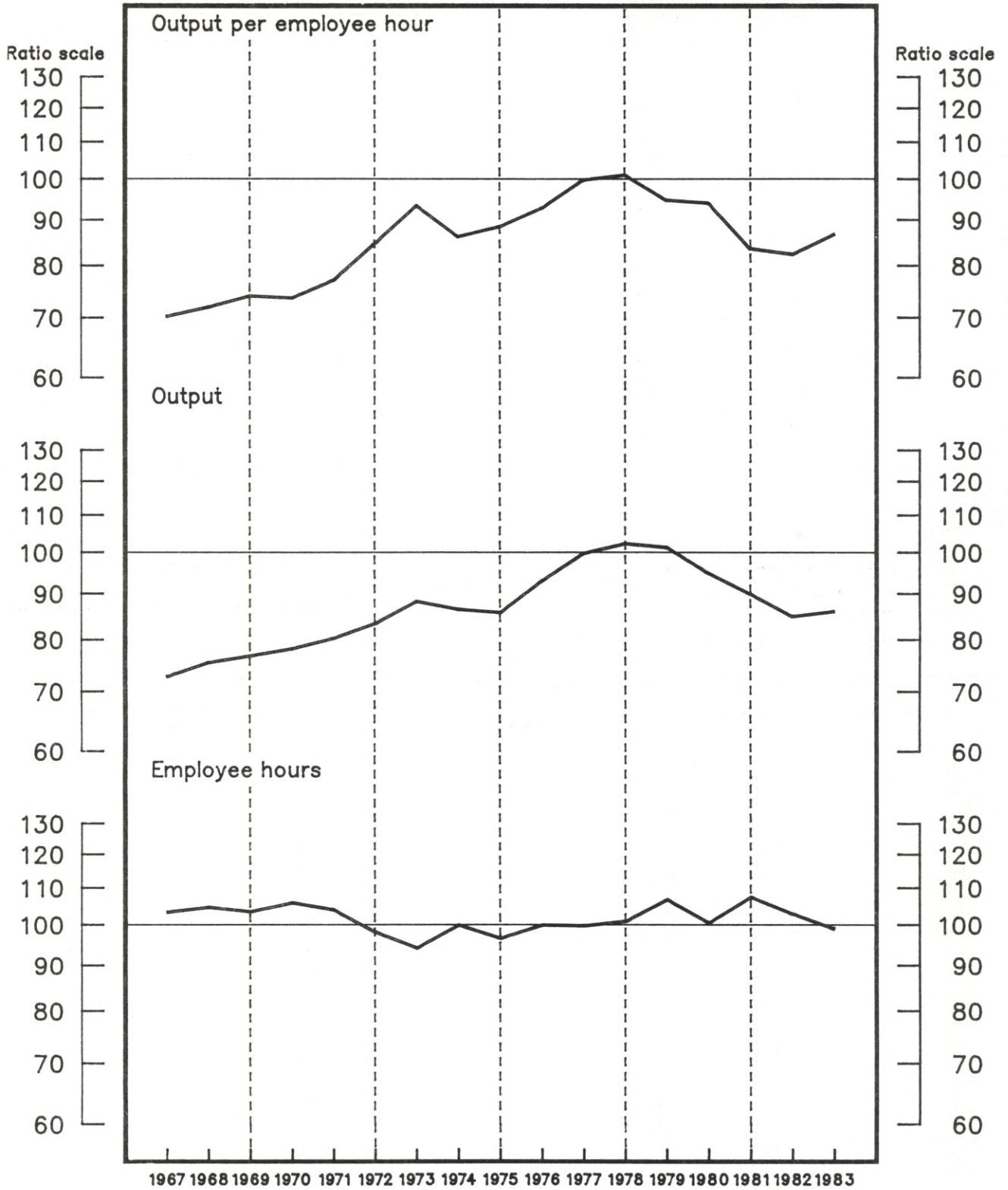
NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 58. Petroleum refining (SIC 2911): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 113. Petroleum refining (SIC 2911): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	31.4	30.0	36.2	30.9	28.7	37.3
1955 .....	34.4	32.7	39.9	34.0	31.6	40.9
1956 .....	35.8	34.1	41.5	35.4	33.0	42.7
1957 .....	35.9	34.7	39.8	35.6	33.6	40.9
1958 .....	37.7	36.5	41.4	36.8	34.7	42.5
1959 .....	42.4	41.1	46.5	41.6	39.4	47.6
1960 .....	44.1	43.1	47.2	43.6	41.8	48.4
1961 .....	47.5	46.7	50.3	46.9	45.1	51.3
1962 .....	51.8	51.1	53.9	51.1	49.5	55.3
1963 .....	55.7	54.6	58.7	54.5	52.3	60.2
1964 .....	58.7	57.7	61.9	58.3	56.2	63.7
1965 .....	63.6	62.5	67.2	62.7	60.4	68.8
1966 .....	68.7	67.4	72.5	67.9	65.6	73.8
1967 .....	70.4	69.5	72.9	70.0	68.3	74.3
1968 .....	72.1	71.7	73.4	72.3	71.1	75.6
1969 .....	74.2	75.8	70.4	76.6	76.4	77.1
1970 .....	73.8	74.1	73.4	74.6	73.6	76.8
1971 .....	77.2	78.1	75.0	77.2	76.6	78.6
1972 .....	84.9	84.8	85.3	84.9	83.1	89.4
1973 .....	93.6	94.7	91.1	92.6	91.3	95.4
1974 .....	86.4	85.6	88.8	86.3	83.8	92.4
1975 .....	88.7	89.7	86.7	87.7	86.9	89.2
1976 .....	93.0	92.6	94.2	94.0	93.1	95.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.3	100.6	103.2	103.3	103.3	103.1
1979 .....	94.9	96.8	90.4	96.0	98.7	90.6
1980 .....	94.2	100.3	81.8	94.8	96.7	90.7
1981 .....	83.7	85.7	78.7	84.9	87.9	78.9
1982 .....	82.5	88.0	71.3	84.3	91.7	71.6
1983 <sup>2</sup> .....	86.9	92.3	75.7	88.7	96.1	75.7
Average annual percent change:						
1947-83 .....	4.4	4.8	3.4	4.4	4.9	3.3
1978-83 .....	-3.7	-2.5	-6.4	-3.5	-1.9	-6.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 114. Petroleum refining (SIC 2911): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

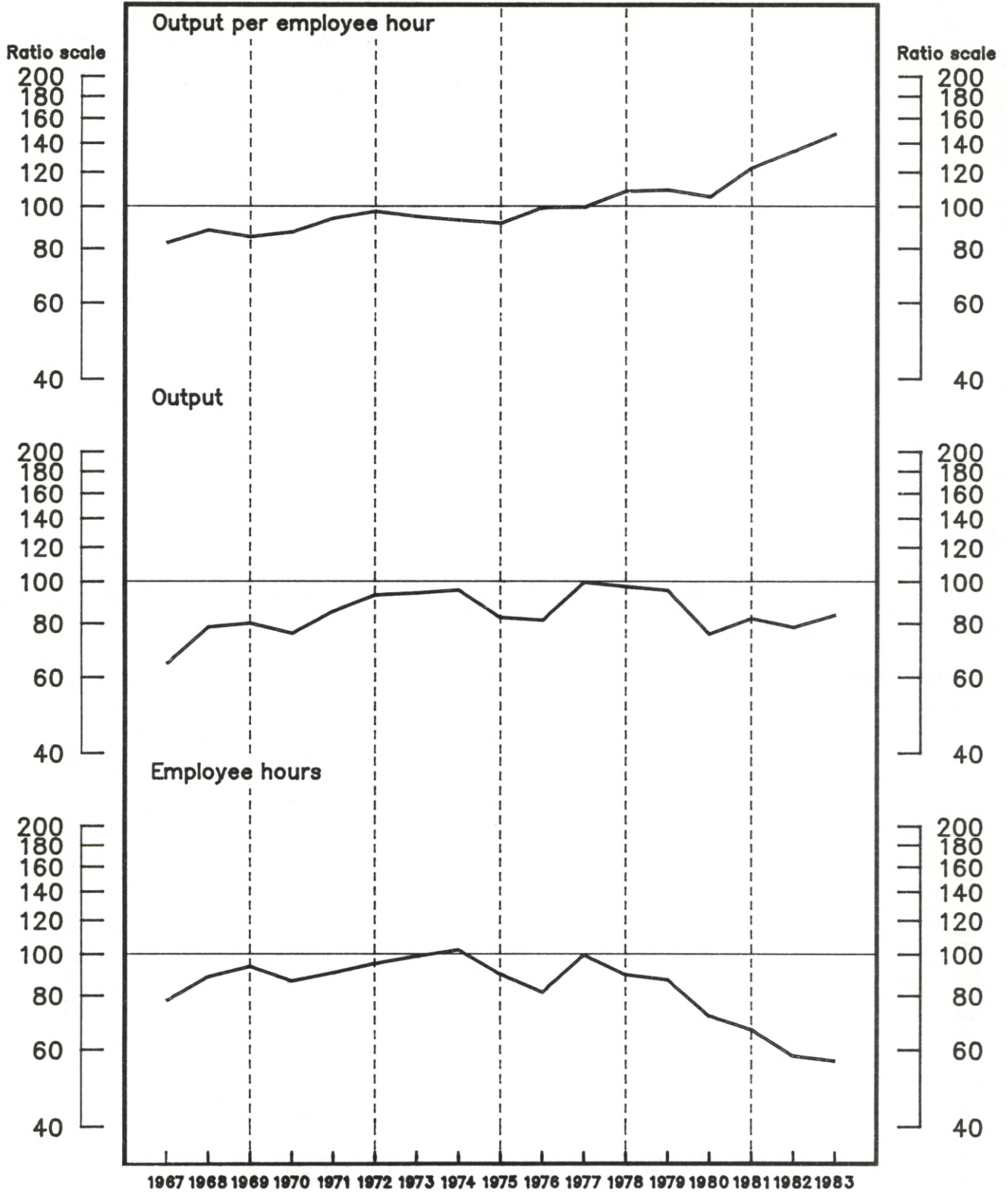
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	46.2	147.0	154.2	127.7	149.4	160.7	123.7
1955 .....	50.0	145.5	153.0	125.3	147.1	158.2	122.3
1956 .....	53.2	148.6	156.1	128.3	150.2	161.3	124.7
1957 .....	53.4	148.6	153.8	134.1	150.2	158.9	130.5
1958 .....	52.4	139.1	143.7	126.6	142.5	150.9	123.4
1959 .....	55.7	131.4	135.6	119.9	133.8	141.3	116.9
1960 .....	57.4	130.1	133.1	121.6	131.6	137.2	118.5
1961 .....	58.8	123.7	126.0	117.0	125.5	130.3	114.6
1962 .....	61.3	118.4	119.9	113.7	120.0	123.9	110.9
1963 .....	62.9	113.0	115.2	107.1	115.4	120.3	104.4
1964 .....	64.7	110.2	112.2	104.6	111.0	115.2	101.6
1965 .....	66.5	104.5	106.4	99.0	106.0	110.1	96.6
1966 .....	69.9	101.8	103.7	96.4	102.9	106.6	94.7
1967 .....	72.9	103.6	104.9	100.0	104.1	106.7	98.1
1968 .....	75.6	104.9	105.5	103.0	104.5	106.4	100.0
1969 .....	76.9	103.7	101.4	109.3	100.4	100.7	99.7
1970 .....	78.3	106.1	105.7	106.7	105.0	106.4	102.0
1971 .....	80.4	104.2	102.9	107.2	104.1	104.9	102.3
1972 .....	83.5	98.4	98.5	97.9	98.3	100.5	93.4
1973 .....	88.4	94.4	93.3	97.0	95.5	96.8	92.7
1974 .....	86.6	100.2	101.2	97.5	100.3	103.3	93.7
1975 .....	85.9	96.8	95.8	99.1	98.0	98.8	96.3
1976 .....	93.2	100.2	100.6	98.9	99.2	100.1	97.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.5	101.2	101.9	99.3	99.2	99.2	99.4
1979 .....	101.5	107.0	104.9	112.3	105.7	102.8	112.0
1980 .....	95.0	100.8	94.7	116.2	100.2	98.2	104.7
1981 .....	90.1	107.7	105.1	114.5	106.1	102.5	114.2
1982 .....	85.1	103.1	96.7	119.3	100.9	92.8	118.9
1983 <sup>1</sup> .....	86.2	99.2	93.4	113.9	97.2	89.7	113.9
Average annual percent change:							
1947-83 .....	3.0	-1.4	-1.7	-4	-1.4	-1.8	-4
1978-83 .....	-4.1	-4	-1.6	2.5	-5	-2.2	2.7

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 59. Tires and inner tubes (SIC 3011): Output per hour and related data, 1967-83  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 115. Tires and inner tubes (SIC 3011): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	45.1	44.5	47.3	42.9	41.6	47.8
1955 .....	48.0	45.8	57.9	50.2	48.3	58.1
1956 .....	47.9	47.0	51.0	46.5	45.3	51.4
1957 .....	50.5	49.8	53.1	49.5	48.5	53.5
1958 .....	52.6	52.6	52.3	50.8	50.3	52.6
1959 .....	58.3	57.0	63.0	57.3	55.8	63.3
1960 .....	59.7	59.2	61.2	58.4	57.7	61.1
1961 .....	61.6	62.1	59.8	60.3	60.7	59.0
1962 .....	67.9	66.7	72.3	68.7	67.9	71.3
1963 .....	72.9	72.4	74.3	72.3	72.1	73.3
1964 .....	79.6	78.8	81.7	81.1	81.3	80.8
1965 .....	81.3	80.8	82.6	83.5	84.1	81.4
1966 .....	83.0	82.1	85.7	85.3	85.7	84.0
1967 .....	82.7	83.6	79.7	79.6	80.1	78.0
1968 .....	88.5	88.4	88.7	91.4	91.6	90.3
1969 .....	85.4	85.1	86.6	89.0	89.2	88.6
1970 .....	87.6	90.1	79.6	86.3	87.7	81.8
1971 .....	94.3	95.7	89.2	93.0	94.0	90.6
1972 .....	97.8	97.6	98.3	99.0	99.3	98.4
1973 .....	95.1	96.3	90.7	93.9	94.4	92.3
1974 .....	93.3	95.0	87.0	93.3	94.3	89.6
1975 .....	91.8	95.5	79.9	88.8	91.4	81.5
1976 .....	99.8	105.8	82.3	89.6	91.5	83.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.8	107.1	115.2	108.3	106.5	115.2
1979 .....	109.5	109.2	110.4	105.7	104.4	110.8
1980 .....	105.6	110.0	91.8	99.2	101.3	92.4
1981 .....	123.2	122.8	123.9	118.4	116.7	124.7
1982 .....	134.8	136.9	127.8	127.2	126.6	128.6
1983 <sup>2</sup> .....	147.7	145.9	154.8	145.7	142.9	155.1
Average annual percent change:						
1947-83 .....	3.5	3.7	2.8	3.5	3.7	2.8
1978-83 .....	6.8	6.9	6.5	6.5	6.5	6.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Rubber Manufacturers Association, and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 116. Tires and inner tubes (SIC 3011): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	35.7	79.2	80.3	75.5	83.3	85.9	74.7
1955 .....	44.5	92.8	97.2	76.9	88.7	92.2	76.6
1956 .....	41.1	85.8	87.4	80.6	88.3	90.7	80.0
1957 .....	43.1	85.3	86.5	81.2	87.0	88.9	80.6
1958 .....	39.8	75.7	75.6	76.1	78.4	79.2	75.6
1959 .....	47.5	81.5	83.4	75.4	82.9	85.2	75.0
1960 .....	47.1	78.9	79.5	77.0	80.7	81.6	77.1
1961 .....	45.6	74.0	73.4	76.3	75.6	75.1	77.3
1962 .....	52.0	76.6	78.0	71.9	75.7	76.6	72.9
1963 .....	54.1	74.2	74.7	72.8	74.8	75.0	73.8
1964 .....	61.1	76.8	77.5	74.8	75.3	75.2	75.6
1965 .....	64.9	79.8	80.3	78.6	77.7	77.2	79.7
1966 .....	69.6	83.9	84.8	81.2	81.6	81.2	82.9
1967 .....	64.7	78.2	77.4	81.2	81.3	80.8	82.9
1968 .....	78.7	88.9	89.0	88.7	86.1	85.9	87.2
1969 .....	80.3	94.0	94.4	92.7	90.2	90.0	90.6
1970 .....	76.1	86.9	84.5	95.6	88.2	86.8	93.0
1971 .....	85.6	90.8	89.4	96.0	92.0	91.1	94.5
1972 .....	93.4	95.5	95.7	95.0	94.3	94.1	94.9
1973 .....	94.4	99.3	98.0	104.1	100.5	100.0	102.3
1974 .....	95.9	102.8	100.9	110.2	102.8	101.7	107.0
1975 .....	82.7	90.1	86.6	103.5	93.1	90.5	101.5
1976 .....	81.6	81.8	77.1	99.2	91.1	89.2	97.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	97.7	89.8	91.2	84.8	90.2	91.7	84.8
1979 .....	95.7	87.4	87.6	86.7	90.5	91.7	86.4
1980 .....	75.9	71.9	69.0	82.7	76.5	74.9	82.1
1981 .....	82.4	66.9	67.1	66.5	69.6	70.6	66.1
1982 .....	78.6	58.3	57.4	61.5	61.8	62.1	61.1
1983 <sup>1</sup> .....	83.9	56.8	57.5	54.2	57.6	58.7	54.1
Average annual percent change:							
1947-83 .....	3.3	-3	-4	4	-2	-4	4
1978-83 .....	-3.6	-9.7	-9.8	-9.5	-9.5	-9.4	-9.5

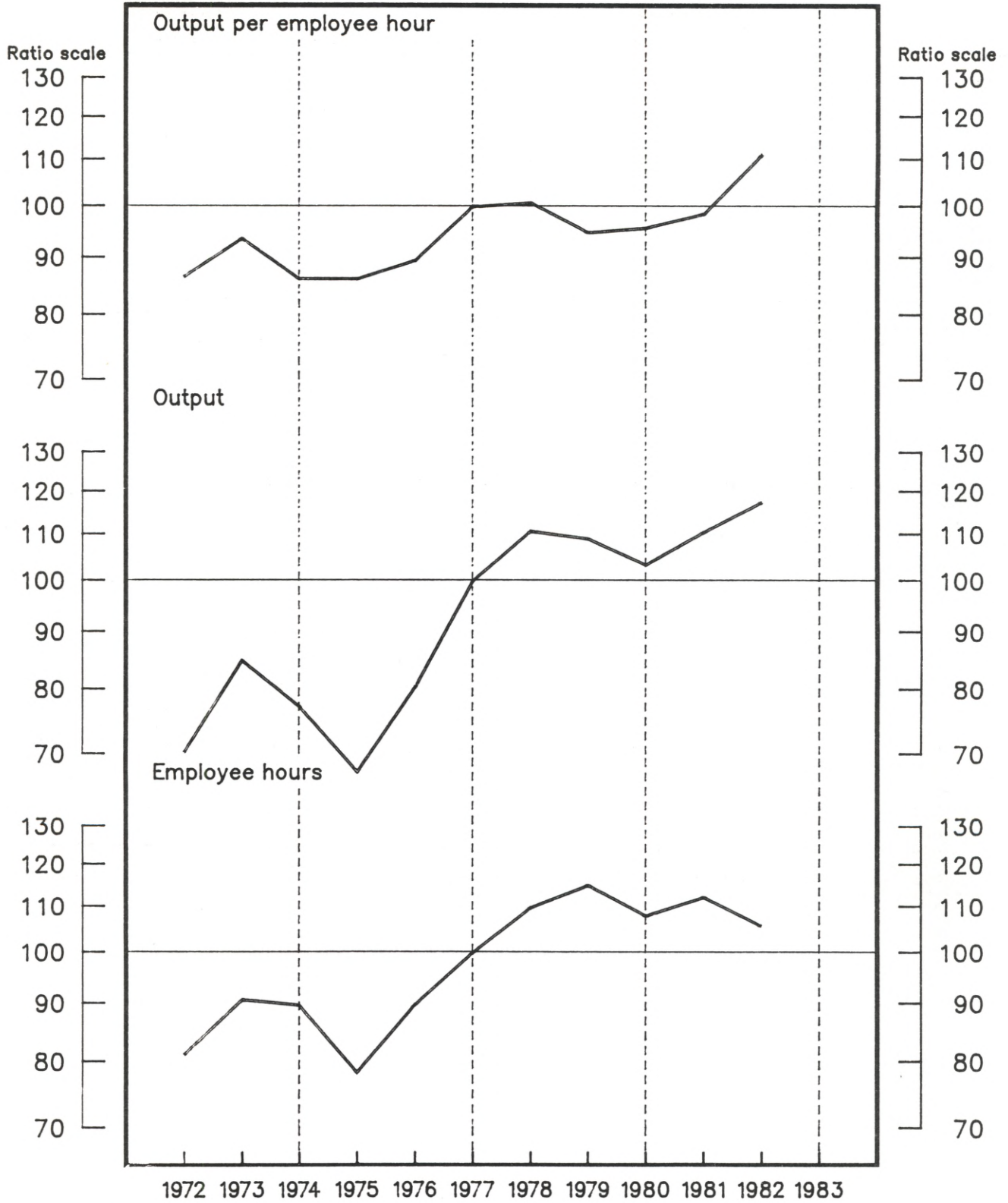
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Rubber Manufacturers Association and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 60. Miscellaneous plastics products (SIC 3079): Output per hour and related data 1972-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 117. Miscellaneous plastics products (SIC 3079): Indexes of output per employee hour and output per employee, 1972-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
<b>Index:</b>						
1972 .....	86.6	85.4	91.7	86.8	85.8	90.5
1973 .....	93.6	92.4	98.5	93.3	92.2	98.3
1974 .....	86.2	86.4	85.3	85.0	84.9	85.8
1975 .....	86.2	89.1	76.6	85.1	87.6	77.0
1976 .....	89.5	90.3	86.5	89.1	89.8	86.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.8	100.5	102.0	101.0	100.7	102.0
1979 .....	94.8	94.7	95.0	94.4	94.2	95.0
1980 .....	95.7	97.3	90.1	94.8	96.1	90.1
1981 .....	98.5	99.5	94.5	97.9	98.7	94.5
1982 <sup>2</sup> .....	111.2	114.1	101.2	109.0	111.3	101.2
<b>Average annual percent change:</b>						
1972-82 .....	1.9	2.1	1.0	1.8	2.0	1.0
1978-82 .....	2.4	3.1	-2	1.9	2.5	-2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 118. Miscellaneous plastics products (SIC 3079): Indexes of output, employee hours, and employees, 1972-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
<b>Index:</b>							
1972 .....	70.3	81.2	82.3	76.7	81.0	81.9	77.7
1973 .....	84.9	90.7	91.9	86.2	91.0	92.1	86.4
1974 .....	77.3	89.7	89.5	90.6	90.9	91.1	90.1
1975 .....	67.6	78.4	75.9	88.2	79.4	77.2	87.8
1976 .....	80.4	89.8	89.0	92.9	90.2	89.5	92.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	110.7	109.8	110.1	108.5	109.6	109.9	108.5
1979 .....	109.0	115.0	115.1	114.7	115.5	115.7	114.7
1980 .....	103.4	108.0	106.3	114.7	109.1	107.6	114.7
1981 .....	110.5	112.2	111.0	116.9	112.9	111.9	116.9
1982 <sup>1</sup> .....	117.5	105.7	103.0	116.1	107.8	105.6	116.1
<b>Average annual percent change:</b>							
1972-82 .....	5.4	3.4	3.2	4.3	3.5	3.3	4.3
1978-82 .....	1.3	-1.0	-1.7	1.6	-6	-1.1	1.6

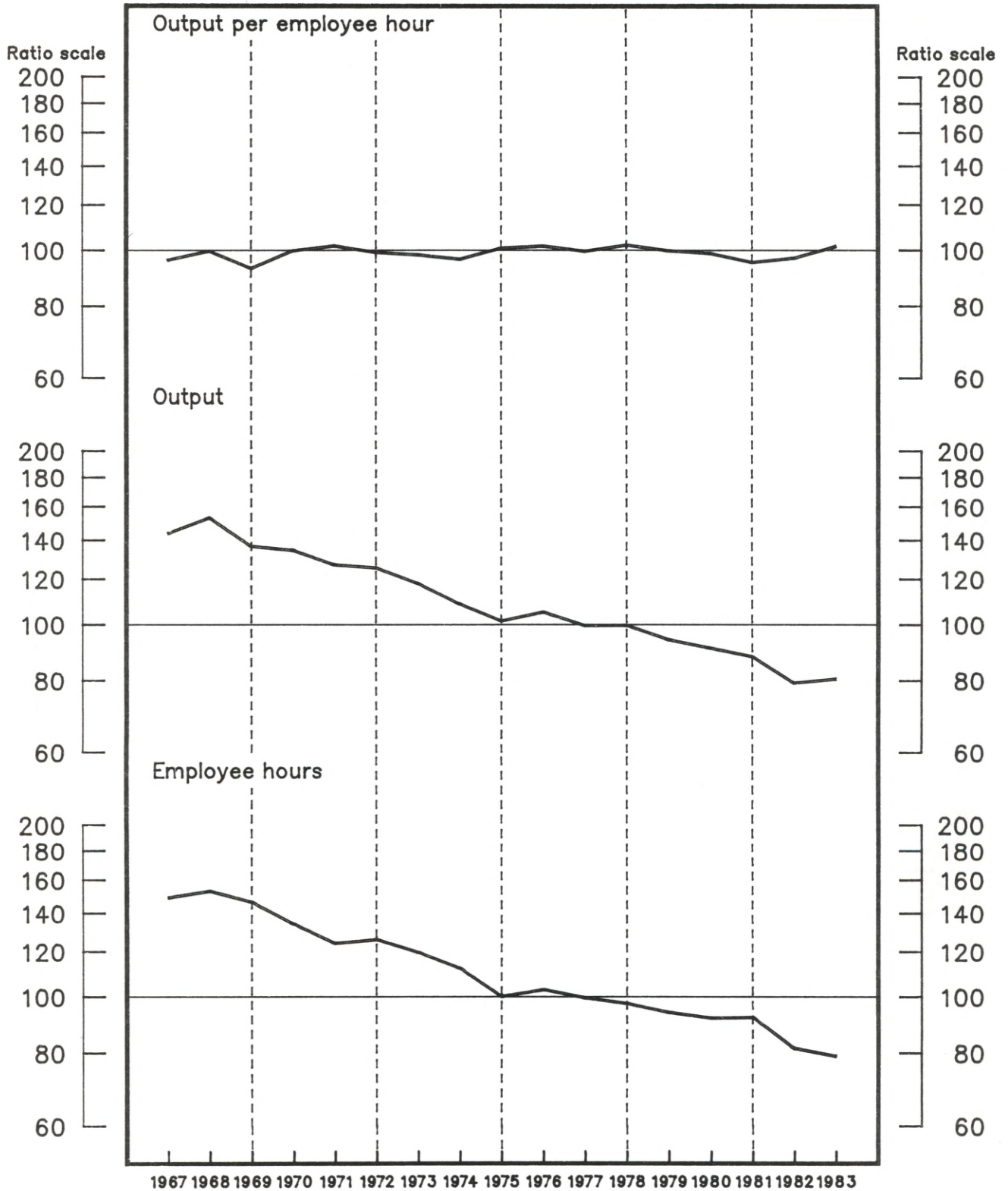
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.



Chart 61. Footwear (SIC 314): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 119. Footwear (SIC 314): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	81.3	79.5	98.0	81.2	79.2	100.5
1955 .....	85.1	83.2	103.0	88.0	86.0	105.1
1956 .....	86.7	84.9	101.9	88.3	86.6	104.3
1957 .....	88.3	86.9	99.9	89.1	87.5	102.2
1958 .....	90.3	89.1	100.0	90.6	89.3	102.3
1959 .....	94.9	93.0	110.5	97.2	95.5	113.0
1960 .....	93.8	92.5	104.2	94.6	93.3	106.0
1961 .....	94.2	92.8	105.5	94.6	93.2	106.1
1962 .....	95.3	93.3	112.1	96.8	95.0	112.7
1963 .....	98.7	96.5	118.7	100.6	98.6	119.3
1964 .....	98.4	95.9	121.3	102.2	100.1	122.3
1965 .....	97.9	95.5	119.5	101.1	99.0	120.2
1966 .....	99.0	96.8	118.9	102.8	101.1	119.0
1967 .....	96.5	94.4	116.9	99.7	97.8	117.0
1968 .....	100.1	97.8	122.0	104.1	102.2	122.2
1969 .....	93.4	92.0	105.7	95.2	93.9	106.9
1970 .....	100.3	99.3	107.9	102.6	101.5	110.6
1971 .....	102.2	101.9	105.0	104.6	104.1	108.1
1972 .....	99.5	99.0	103.7	104.1	103.6	106.9
1973 .....	98.5	98.3	99.7	101.5	101.2	103.1
1974 .....	96.8	97.6	90.8	98.0	98.5	94.1
1975 .....	101.3	101.6	98.3	101.8	101.9	100.7
1976 .....	102.1	102.0	102.4	102.7	102.5	104.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.5	101.9	106.8	101.3	100.6	106.7
1979 .....	100.2	101.0	94.8	99.4	99.9	95.1
1980 .....	99.1	100.2	92.0	98.6	99.3	92.5
1981 .....	95.6	96.1	92.1	96.4	96.9	92.4
1982 .....	97.3	98.2	91.1	95.0	95.4	91.5
1983 <sup>2</sup> .....	102.0	102.7	97.8	102.4	102.9	97.8
Average annual percent change:						
1947-83 .....	.8	.9	( <sup>3</sup> )	.8	.9	( <sup>3</sup> )
1978-83 .....	-4	-2	-1.6	-3	-1	-1.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 120. Footwear (SIC 314): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

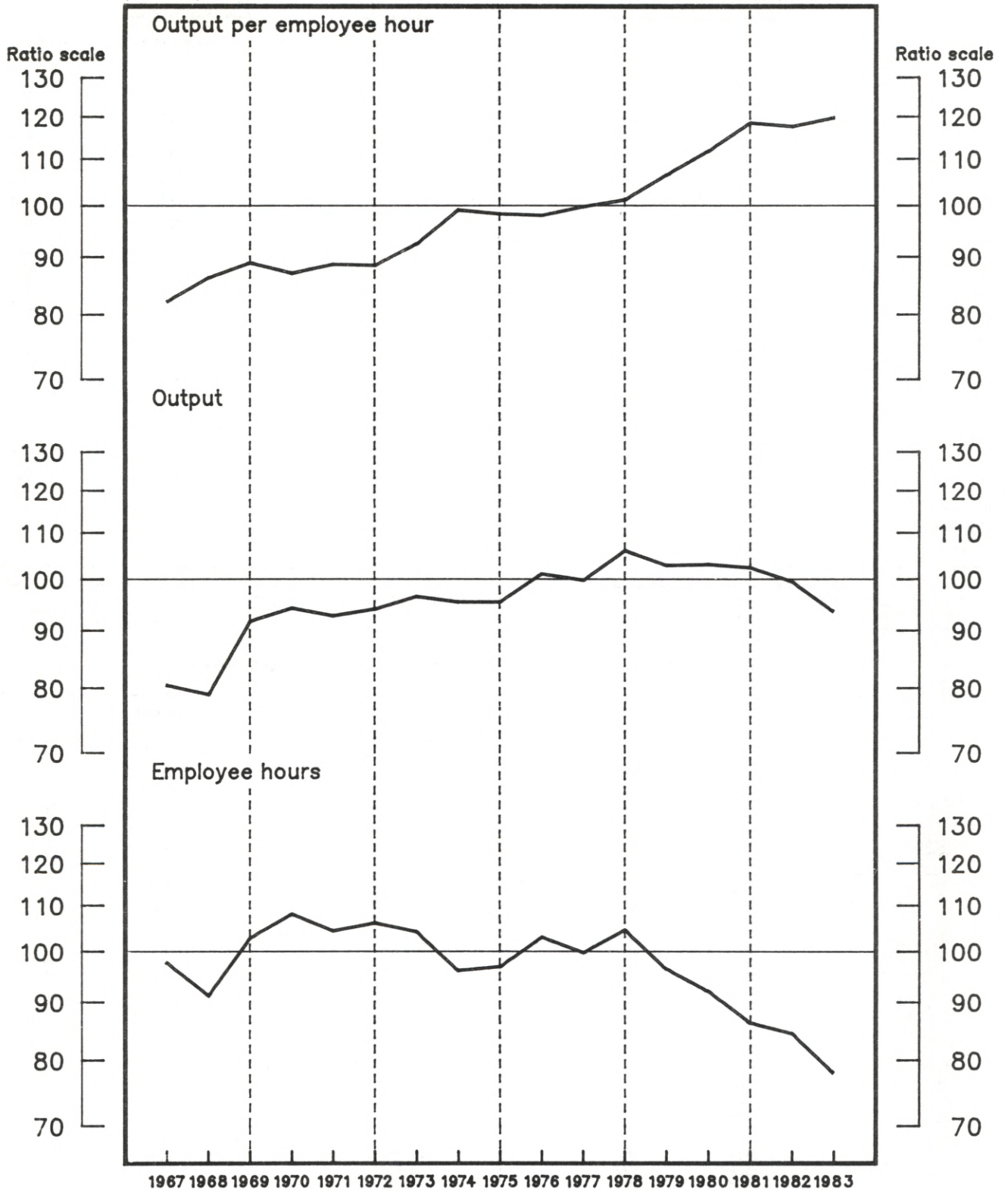
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	128.3	157.8	161.4	130.9	158.1	162.0	127.7
1955 .....	141.2	165.9	169.8	137.1	160.4	164.1	134.4
1956 .....	143.1	165.1	168.5	140.5	162.0	165.3	137.2
1957 .....	143.8	162.9	165.5	144.0	161.4	164.3	140.7
1958 .....	141.2	156.4	158.5	141.2	155.9	158.2	138.0
1959 .....	155.2	163.5	166.8	140.5	159.6	162.5	137.3
1960 .....	148.0	157.8	160.0	142.0	156.4	158.6	139.6
1961 .....	148.6	157.8	160.2	140.9	157.0	159.4	140.0
1962 .....	151.4	158.8	162.2	135.0	156.4	159.4	134.3
1963 .....	147.1	149.0	152.4	123.9	146.2	149.2	123.3
1964 .....	150.0	152.4	156.4	123.7	146.7	149.8	122.6
1965 .....	151.3	154.6	158.5	126.6	149.7	152.9	125.9
1966 .....	155.2	156.7	160.3	130.5	151.0	153.5	130.4
1967 .....	144.5	149.7	153.1	123.6	144.9	147.7	123.5
1968 .....	153.8	153.7	157.3	126.1	147.7	150.5	125.9
1969 .....	137.3	147.0	149.3	129.9	144.2	146.2	128.4
1970 .....	135.1	134.7	136.0	125.2	131.7	133.1	122.2
1971 .....	127.5	124.7	125.1	121.4	121.9	122.5	117.9
1972 .....	126.0	126.6	127.3	121.5	121.0	121.6	117.9
1973 .....	118.4	120.2	120.4	118.8	116.7	117.0	114.8
1974 .....	109.1	112.7	111.8	120.1	111.3	110.8	116.0
1975 .....	101.9	100.6	100.3	103.7	100.1	100.0	101.2
1976 .....	105.6	103.4	103.5	103.1	102.8	103.0	101.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.1	97.7	98.2	93.7	98.8	99.5	93.8
1979 .....	94.5	94.3	93.6	99.7	95.1	94.6	99.4
1980 .....	91.4	92.2	91.2	99.3	92.7	92.0	98.8
1981 .....	88.4	92.5	92.0	96.0	91.7	91.2	95.7
1982 .....	79.6	81.8	81.1	87.4	83.8	83.4	87.0
1983 <sup>1</sup> .....	80.9	79.3	78.8	82.7	79.0	78.6	82.7
Average annual percent change:							
1947-83 .....	-1.1	-2.0	-2.1	-1.2	-2.0	-2.1	-1.2
1978-83 .....	-4.5	-4.1	-4.3	-3.0	-4.2	-4.4	-3.0

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 62. Glass containers (SIC 3221): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 121. Glass containers (SIC 3221): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	64.4	63.6	71.8	66.6	65.8	72.3
1955 .....	67.2	65.8	78.1	69.9	69.0	78.2
1956 .....	67.3	66.1	77.9	70.9	70.0	78.2
1957 .....	67.0	66.0	76.3	69.8	69.0	76.5
1958 .....	64.8	64.2	68.6	67.3	67.1	68.8
1959 .....	68.8	67.9	75.6	70.3	69.8	75.7
1960 .....	67.1	66.3	73.5	69.6	69.2	73.5
1961 .....	68.4	67.3	76.7	70.4	69.7	76.4
1962 .....	70.9	70.0	77.6	73.6	73.1	77.4
1963 .....	73.5	72.3	82.5	76.2	75.4	82.2
1964 .....	75.5	74.4	84.0	78.9	78.4	84.2
1965 .....	80.3	79.2	88.8	82.7	82.1	88.5
1966 .....	80.2	79.0	90.0	83.2	82.4	89.4
1967 .....	82.3	81.1	93.0	85.6	84.8	91.6
1968 .....	86.4	86.4	87.4	87.6	87.7	87.5
1969 .....	89.1	88.7	92.5	91.0	90.5	95.3
1970 .....	87.2	86.4	92.6	90.0	89.0	97.9
1971 .....	88.8	88.7	89.0	91.1	90.9	92.9
1972 .....	88.6	88.3	90.8	91.5	91.3	93.1
1973 .....	92.6	92.5	93.2	93.7	93.7	93.3
1974 .....	99.3	98.8	102.8	100.1	100.1	100.4
1975 .....	98.5	98.5	98.1	96.7	96.7	96.8
1976 .....	98.2	97.7	102.6	100.6	100.3	102.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.4	101.0	104.9	103.4	103.2	105.0
1979 .....	106.7	106.5	107.8	107.8	107.7	108.3
1980 .....	112.0	112.8	106.7	113.4	114.3	107.2
1981 .....	118.7	119.7	111.8	119.0	120.1	112.0
1982 .....	117.8	118.4	113.3	119.4	120.3	113.3
1983 <sup>2</sup> .....	120.0	120.7	114.8	122.0	123.0	114.4
Average annual percent change:						
1947-83 .....	2.0	2.1	1.3	1.9	1.9	1.3
1978-83 .....	3.5	3.7	1.9	3.4	3.7	1.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

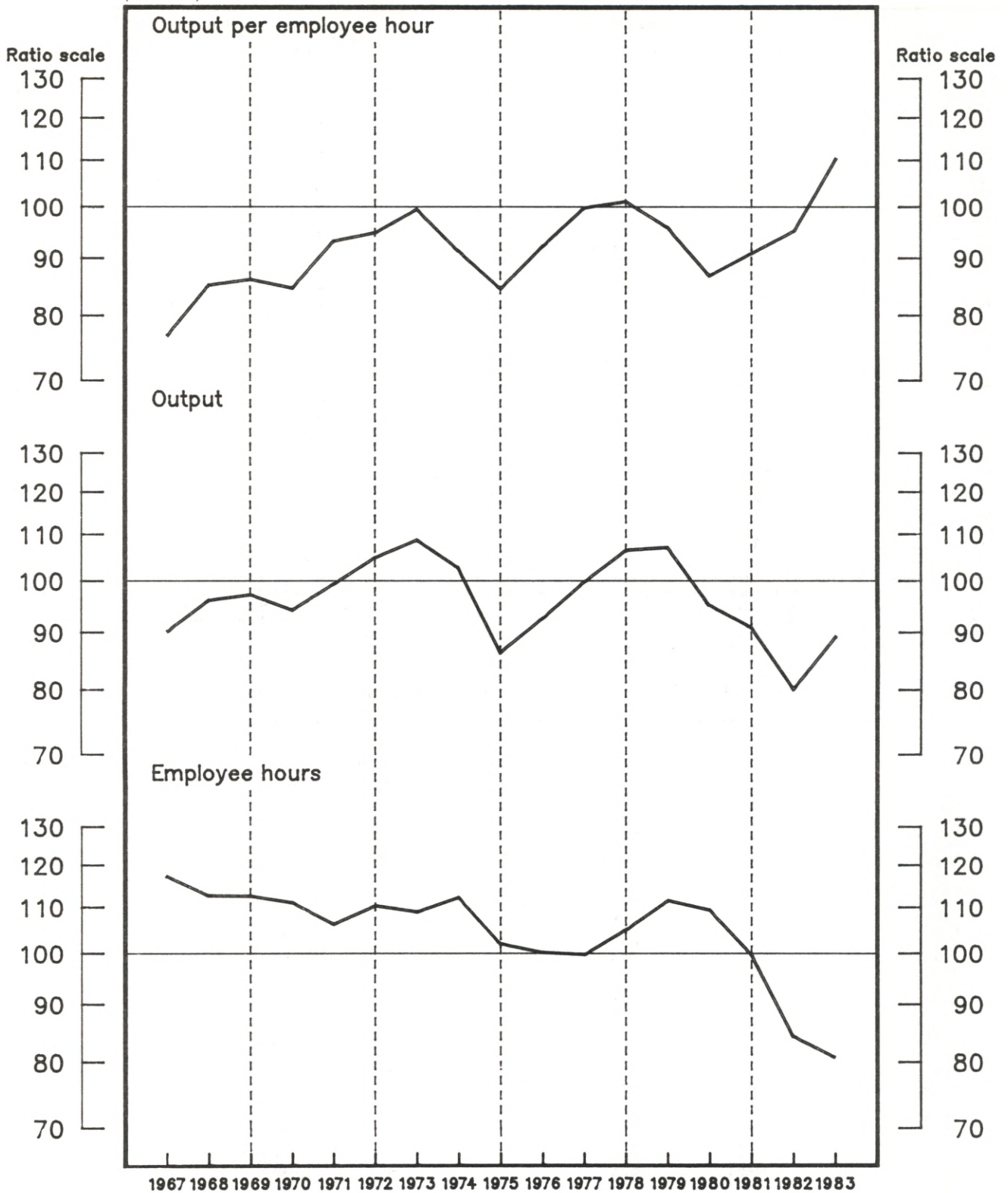
**Table 122. Glass containers (SIC 3221): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	46.4	72.0	73.0	64.6	69.7	70.5	64.2
1955 .....	50.5	75.2	76.7	64.7	72.2	73.2	64.6
1956 .....	51.8	77.0	78.4	66.5	73.1	74.0	66.2
1957 .....	53.5	79.8	81.1	70.1	76.6	77.5	69.9
1958 .....	52.2	80.6	81.3	76.1	77.6	77.8	75.9
1959 .....	55.9	81.3	82.3	73.9	79.5	80.1	73.8
1960 .....	57.6	85.8	86.9	78.4	82.7	83.2	78.4
1961 .....	59.8	87.4	88.8	78.0	85.0	85.8	78.3
1962 .....	62.4	88.0	89.1	80.4	84.8	85.4	80.6
1963 .....	64.5	87.8	89.2	78.2	84.7	85.6	78.5
1964 .....	67.4	89.3	90.6	80.2	85.4	86.0	80.0
1965 .....	71.9	89.5	90.8	81.0	86.9	87.6	81.2
1966 .....	75.7	94.4	95.8	84.1	91.0	91.9	84.7
1967 .....	80.6	97.9	99.4	86.7	94.2	95.0	88.0
1968 .....	79.1	91.5	91.6	90.5	90.3	90.2	90.4
1969 .....	91.9	103.1	103.6	99.4	101.0	101.6	96.4
1970 .....	94.4	108.3	109.2	101.9	104.9	106.1	96.4
1971 .....	92.9	104.6	104.7	104.4	102.0	102.2	100.0
1972 .....	94.2	106.3	106.7	103.8	103.0	103.2	101.2
1973 .....	96.7	104.4	104.5	103.8	103.2	103.2	103.6
1974 .....	95.6	96.3	96.8	93.0	95.5	95.5	95.2
1975 .....	95.6	97.1	97.1	97.5	98.9	98.9	98.8
1976 .....	101.3	103.2	103.7	98.7	100.7	101.0	98.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.3	104.8	105.2	101.3	103.0	103.0	101.2
1979 .....	103.1	96.6	96.8	95.6	95.6	95.7	95.2
1980 .....	103.3	92.2	91.6	96.8	91.1	90.4	96.4
1981 .....	102.6	86.4	85.7	91.8	86.2	85.4	91.6
1982 .....	99.7	84.6	84.2	88.0	83.5	82.9	88.0
1983 <sup>1</sup> .....	93.7	78.1	77.6	81.6	76.8	76.2	81.9
Average annual percent change:							
1947-83 .....	3.1	1.1	1.0	1.8	1.2	1.2	1.8
1978-83 .....	-2.1	-5.4	-5.6	-3.9	-5.3	-5.5	-3.8

<sup>1</sup> Preliminary.  
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 63. Hydraulic cement (SIC 3241): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 123. Hydraulic cement (SIC 3241): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	46.8	43.6	67.7	48.9	45.6	68.3
1955	49.4	45.8	75.2	51.8	48.0	75.3
1956	51.9	48.1	79.4	53.8	49.7	79.9
1957	50.4	47.1	73.1	50.0	46.3	73.5
1958	52.1	49.4	68.3	52.6	49.6	68.5
1959	55.9	52.5	77.6	57.2	53.6	77.8
1960	55.3	52.5	72.5	55.9	52.9	72.7
1961	61.2	58.4	76.7	61.2	58.2	76.5
1962	64.9	62.2	79.9	65.0	62.1	80.0
1963	68.7	66.7	79.3	69.3	67.2	79.3
1964	71.0	70.1	75.7	72.6	71.8	76.0
1965	73.2	72.3	77.3	73.7	72.8	77.3
1966	76.7	76.1	80.1	78.2	77.7	79.6
1967	76.9	76.4	79.1	77.0	76.5	79.0
1968	85.3	84.2	90.3	86.9	85.8	91.4
1969	86.3	85.5	90.6	89.0	87.8	94.1
1970	84.8	85.0	84.1	86.9	86.3	89.6
1971	93.4	93.3	95.0	96.1	95.2	99.5
1972	95.0	93.9	100.4	97.4	96.1	103.2
1973	99.7	98.7	104.9	102.0	101.1	105.2
1974	91.5	90.5	96.5	92.3	91.7	94.5
1975	84.7	85.3	82.7	83.9	84.3	82.2
1976	92.4	93.3	89.4	91.8	92.3	89.7
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	101.3	101.0	102.8	103.4	103.4	103.0
1979	96.0	94.9	100.7	98.1	97.2	101.8
1980	87.0	87.4	84.9	87.1	87.4	86.1
1981	91.1	92.1	87.0	90.1	90.6	87.9
1982	95.3	98.3	84.4	92.0	93.9	85.0
1983 <sup>2</sup>	110.5	114.0	97.7	108.1	110.9	98.1
Average annual percent change:						
1947-83	3.3	3.6	1.5	3.1	3.5	1.5
1978-83	1.3	2.2	-2.1	.2	.8	-2.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

**Table 124. Hydraulic cement (SIC 3241): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	69.9	149.5	160.4	103.2	143.0	153.2	102.3
1955	76.0	153.8	166.1	101.1	146.7	158.2	100.9
1956	80.1	154.2	166.7	100.9	149.0	161.3	100.3
1957	74.7	148.2	158.7	102.2	149.5	161.5	101.7
1958	77.7	149.0	157.2	113.7	147.8	156.7	113.4
1959	84.6	151.4	161.1	109.0	147.9	157.9	108.8
1960	79.2	143.2	150.9	109.2	141.6	149.8	109.0
1961	80.0	130.8	137.0	104.3	130.8	137.5	104.6
1962	83.1	128.1	133.7	104.0	127.8	133.8	103.9
1963	86.9	126.4	130.3	109.6	125.4	129.3	109.6
1964	90.5	127.4	129.1	119.5	124.6	126.0	119.1
1965	91.5	125.0	126.5	118.4	124.2	125.7	118.4
1966	94.3	122.9	123.9	117.8	120.6	121.3	118.4
1967	90.3	117.5	118.2	114.2	117.2	118.1	114.3
1968	96.3	112.9	114.4	106.6	110.8	112.2	105.4
1969	97.4	112.8	113.9	107.5	109.4	110.9	103.5
1970	94.4	111.3	111.0	112.2	108.6	109.4	105.4
1971	99.5	106.5	106.7	104.7	103.5	104.5	100.0
1972	105.1	110.6	111.9	104.7	107.9	109.4	101.8
1973	108.9	109.2	110.3	103.8	106.8	107.7	103.5
1974	102.9	112.5	113.7	106.6	111.5	112.2	108.9
1975	86.6	102.2	101.5	104.7	103.2	102.7	105.4
1976	92.8	100.4	99.5	103.8	101.1	100.5	103.5
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.7	105.3	105.6	103.8	103.2	103.2	103.6
1979	107.3	111.8	113.1	106.6	109.4	110.4	105.4
1980	95.3	109.6	109.0	112.3	109.4	109.0	110.7
1981	91.1	100.0	98.9	104.7	101.1	100.5	103.6
1982	80.4	84.4	81.8	95.3	87.4	85.6	94.6
1983 <sup>1</sup>	89.4	80.9	78.4	91.5	82.7	80.6	91.1
Average annual percent change:							
1947-83	1.6	-1.8	-2.1	( <sup>2</sup> )	-1.6	-1.9	( <sup>2</sup> )
1978-83	-5.0	-6.2	-7.0	-2.9	-5.2	-5.8	-2.9

<sup>1</sup> Preliminary.

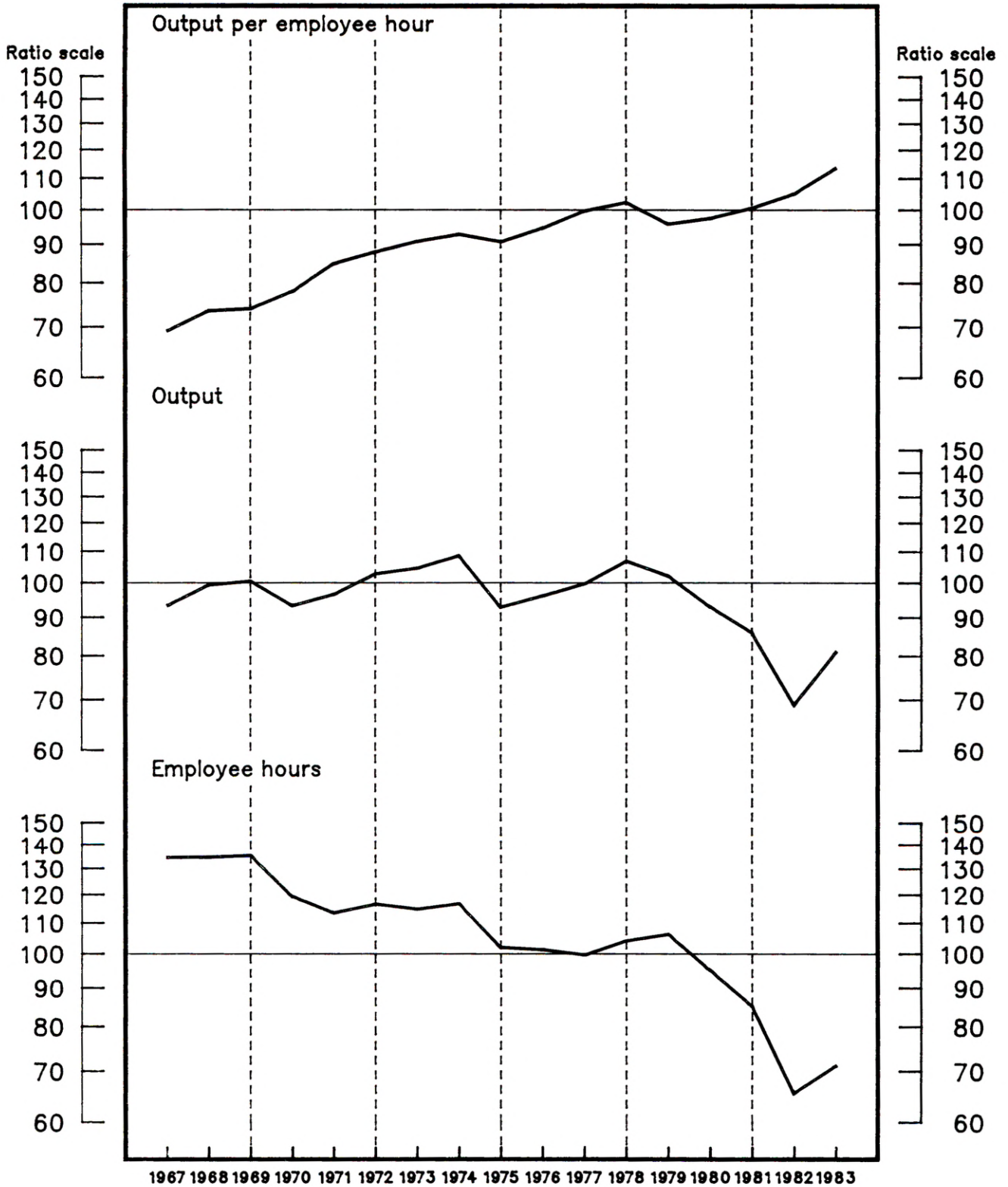
<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 64. Structural clay products (SIC 325): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 125. Structural clay products (SIC 325): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	52.4	50.2	65.1	51.8	49.4	64.8
1959 .....	56.4	53.5	73.6	56.4	53.4	73.3
1960 .....	57.9	55.2	73.9	57.0	54.2	73.5
1961 .....	59.9	57.0	77.7	59.0	55.9	76.8
1962 .....	64.6	61.3	84.3	64.3	60.9	83.6
1963 .....	62.1	59.5	76.8	62.8	60.3	76.2
1964 .....	66.3	64.2	78.0	69.0	67.1	77.6
1965 .....	67.5	64.9	82.6	68.7	66.3	81.7
1966 .....	68.8	66.1	84.1	70.3	67.8	83.1
1967 .....	69.3	67.7	77.3	69.8	68.4	76.4
1968 .....	73.7	72.4	80.3	74.9	73.7	80.6
1969 .....	74.2	73.2	79.3	75.9	74.7	81.6
1970 .....	78.2	79.7	71.8	79.9	80.9	75.6
1971 .....	85.1	87.0	77.6	87.1	86.6	80.6
1972 .....	88.2	87.3	92.4	89.7	88.8	94.2
1973 .....	91.1	88.5	104.9	91.9	89.3	104.9
1974 .....	93.1	91.2	102.1	94.0	92.8	99.6
1975 .....	91.0	92.0	86.7	90.0	91.1	85.1
1976 .....	94.9	96.1	89.3	93.0	93.9	89.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.6	100.8	111.3	104.0	102.5	111.1
1979 .....	96.1	96.5	94.3	94.5	94.4	94.6
1980 .....	97.8	101.2	84.8	96.9	100.0	85.2
1981 .....	100.9	103.1	92.5	99.7	101.4	92.8
1982 .....	105.3	109.3	90.6	103.4	106.9	90.6
1983 <sup>2</sup> .....	113.9	112.6	119.7	116.5	115.8	119.2
Average annual percent change:						
1958-83 .....	2.9	3.2	1.4	2.9	3.2	1.5
1978-83 .....	2.4	2.7	.9	2.5	2.9	.9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 126. Structural clay products (SIC 325): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	80.8	154.1	160.9	124.1	156.1	163.4	124.7
1959 .....	94.9	168.4	177.3	128.9	168.4	177.6	129.5
1960 .....	95.2	164.5	172.4	128.9	166.9	175.7	129.5
1961 .....	94.9	158.4	166.6	122.1	160.9	169.7	123.6
1962 .....	100.4	155.5	163.7	119.1	156.2	164.8	120.1
1963 .....	90.5	145.7	152.1	117.8	144.0	150.0	118.8
1964 .....	99.6	150.2	155.2	127.7	144.4	148.4	128.3
1965 .....	101.9	150.9	156.9	123.3	148.3	153.8	124.7
1966 .....	101.7	147.8	153.9	120.9	144.7	150.0	122.4
1967 .....	93.5	135.0	138.1	120.9	133.9	136.6	122.4
1968 .....	99.6	135.1	137.6	124.1	132.9	135.2	123.6
1969 .....	100.8	135.8	137.7	127.1	132.8	135.0	123.6
1970 .....	93.5	119.6	117.3	130.2	117.0	115.6	123.6
1971 .....	96.8	113.8	111.3	124.7	111.2	109.3	120.1
1972 .....	103.1	116.9	118.1	111.6	114.9	116.1	109.4
1973 .....	104.9	115.1	118.5	100.0	114.2	117.5	100.0
1974 .....	109.0	117.1	119.5	106.8	115.9	117.5	109.4
1975 .....	93.1	102.3	101.2	107.4	103.5	102.2	109.4
1976 .....	96.4	101.6	100.3	108.0	103.7	102.7	108.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.2	104.5	106.3	96.3	103.1	104.6	96.5
1979 .....	102.4	106.6	106.1	108.6	108.4	108.5	108.2
1980 .....	93.2	95.3	92.1	109.9	96.2	93.2	109.4
1981 .....	86.2	85.4	83.6	93.2	86.5	85.0	92.9
1982 .....	69.3	65.8	63.4	76.5	67.0	64.8	76.5
1983 <sup>1</sup> .....	81.3	71.4	72.2	67.9	69.8	70.2	68.2
Average annual percent change:							
1958-83 .....	-2	-3.1	-3.3	-1.6	-3.0	-3.3	-1.7
1978-83 .....	-7.2	-9.4	-9.7	-8.1	-9.5	-9.9	-8.1

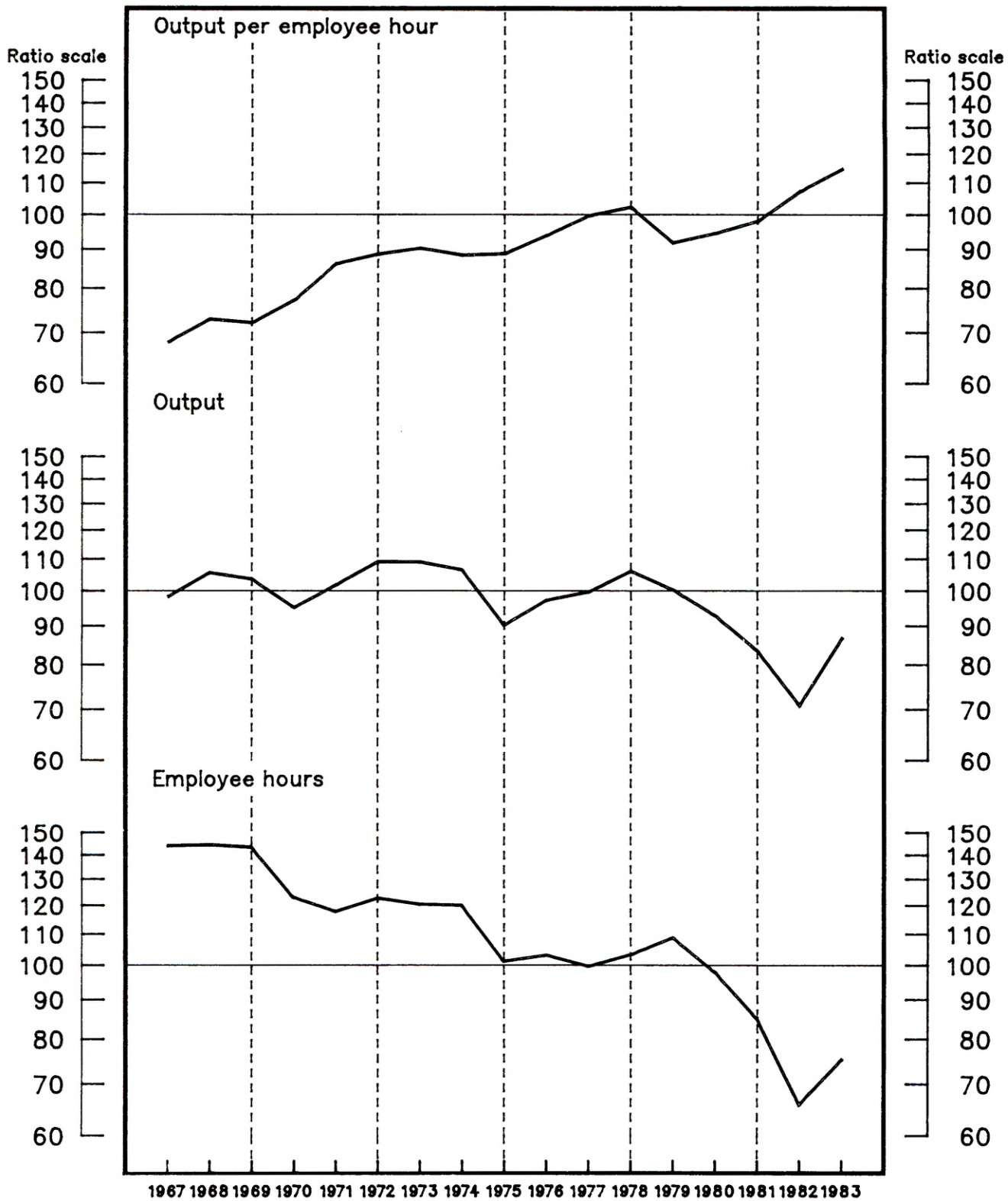
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 65. Clay construction products (SIC 3251, 3253, 3259): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 127. Clay construction products (SIC 3251, 3253, 3259): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	52.0	50.1	64.4	52.0	49.9	64.5
1959	55.5	53.5	68.1	56.6	54.7	68.1
1960	57.5	55.7	68.8	57.8	56.0	68.5
1961	59.0	56.9	72.8	59.3	57.1	72.2
1962	63.7	61.3	79.3	64.8	62.3	79.1
1963	60.9	58.8	73.5	62.2	60.3	73.0
1964	65.1	63.6	74.0	68.3	67.3	73.8
1965	66.6	64.6	78.5	68.1	66.4	78.2
1966	67.3	65.2	80.7	69.5	67.7	80.0
1967	68.2	66.9	75.4	69.7	68.6	74.7
1968	73.1	71.6	81.0	75.0	73.8	81.5
1969	72.3	71.2	78.5	74.9	73.7	80.9
1970	77.4	78.3	73.0	79.6	80.1	77.2
1971	86.4	87.2	82.5	89.3	90.2	86.2
1972	89.0	87.5	96.7	91.2	89.6	99.5
1973	90.6	88.3	104.0	91.5	89.2	104.2
1974	88.7	87.4	96.6	90.2	89.4	94.2
1975	89.1	89.9	86.0	89.5	90.5	84.8
1976	94.2	95.1	90.3	93.0	93.8	89.9
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.6	100.8	112.4	103.6	102.0	112.0
1979	92.1	92.9	88.2	92.4	93.2	88.8
1980	94.8	97.7	82.9	95.1	98.0	83.3
1981	98.4	100.8	87.7	97.3	99.5	88.2
1982	107.6	110.7	94.4	107.4	110.6	94.9
1983 <sup>2</sup>	115.1	114.6	118.0	119.0	119.2	118.7
Average annual percent change:						
1958-83	3.0	3.2	1.7	2.9	3.1	1.7
1978-83	3.1	3.5	1.4	3.4	3.8	1.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 128. Clay construction products (SIC 3251, 3253, 3259): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

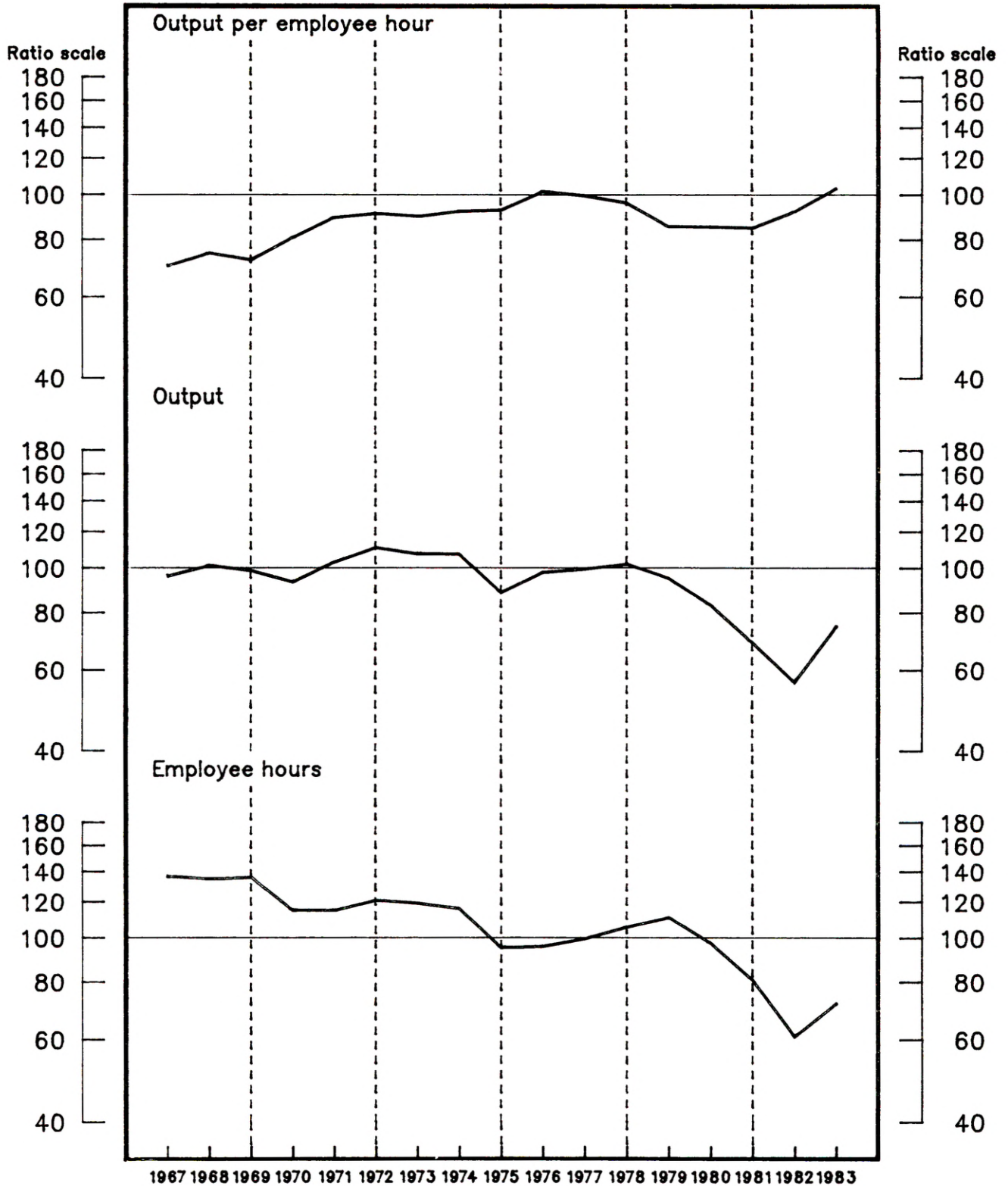
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	89.3	171.7	178.4	138.6	171.6	178.8	138.5
1959	104.5	188.2	195.3	153.5	184.6	191.2	153.5
1960	105.1	182.7	188.8	152.7	181.8	187.7	153.5
1961	104.8	177.5	184.2	143.9	176.7	183.4	145.1
1962	112.1	175.9	182.8	141.3	173.1	179.8	141.8
1963	98.6	162.0	167.6	134.2	158.6	163.6	135.0
1964	108.4	166.5	170.4	146.5	158.6	161.1	146.8
1965	109.5	164.3	169.4	139.5	160.7	165.0	140.1
1966	106.8	158.7	163.9	132.4	153.6	157.8	133.5
1967	98.5	144.5	147.3	130.7	141.4	143.5	131.8
1968	105.9	144.9	147.9	130.7	141.2	143.5	130.0
1969	103.9	143.8	145.9	132.4	138.8	140.9	128.5
1970	95.4	123.3	121.8	130.7	119.8	119.1	123.5
1971	102.1	118.2	117.1	123.7	114.3	113.2	118.4
1972	109.5	123.1	125.2	113.2	120.1	122.2	110.0
1973	109.4	120.8	123.9	105.2	119.5	122.7	105.0
1974	106.8	120.4	122.2	110.6	118.4	119.4	113.4
1975	90.5	101.6	100.7	105.2	101.1	100.0	106.7
1976	97.5	103.5	102.5	108.0	104.8	103.9	108.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.4	103.7	105.6	94.7	102.7	104.3	95.0
1979	100.6	109.2	108.3	114.0	108.9	107.9	113.3
1980	93.1	98.2	95.3	112.3	97.9	95.0	111.7
1981	83.8	85.2	83.1	95.6	86.1	84.2	95.0
1982	71.2	66.2	64.3	75.4	66.3	64.4	75.0
1983 <sup>1</sup>	87.0	75.6	75.9	73.7	73.1	73.0	73.3
Average annual percent change:							
1958-83	-7	-3.5	-3.8	-2.3	-3.5	-3.7	-2.3
1978-83	-6.0	-8.8	-9.1	-7.3	-9.0	-9.4	-7.4

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 66. Brick and structural clay tile (SIC 3251): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 129. Brick and structural clay tile (SIC 3251): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	55.4	52.9	73.8	56.6	54.1	73.3
1959 .....	59.3	56.2	82.8	60.9	57.9	82.5
1960 .....	62.9	60.5	79.1	62.9	60.6	78.3
1961 .....	64.6	61.3	88.8	64.7	61.4	87.3
1962 .....	69.2	65.8	94.2	70.5	67.3	92.7
1963 .....	63.3	60.6	82.5	65.3	62.8	81.8
1964 .....	68.7	66.2	85.9	72.0	69.9	85.6
1965 .....	70.5	67.7	89.8	72.6	70.1	88.2
1966 .....	71.4	68.3	92.8	74.4	71.7	91.0
1967 .....	70.3	68.5	81.8	71.8	70.4	80.3
1968 .....	75.0	73.1	87.3	76.5	74.8	86.7
1969 .....	72.5	71.0	80.9	75.4	74.2	82.5
1970 .....	81.1	81.1	81.5	82.4	81.7	86.3
1971 .....	89.6	90.2	87.7	92.5	93.1	90.5
1972 .....	91.5	89.5	103.4	94.5	92.6	105.0
1973 .....	90.1	88.1	103.1	91.9	90.3	101.8
1974 .....	92.5	90.6	104.6	94.2	92.9	101.7
1975 .....	93.1	93.2	93.2	93.5	94.0	91.6
1976 .....	102.2	103.6	96.8	99.6	100.8	95.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	96.5	94.9	105.6	97.2	95.6	105.5
1979 .....	85.8	88.0	76.2	85.5	87.8	76.0
1980 .....	85.6	91.2	65.2	85.0	90.6	65.1
1981 .....	85.2	89.3	69.3	83.6	87.3	69.3
1982 .....	92.5	97.6	73.2	92.4	97.6	73.7
1983 <sup>2</sup> .....	104.0	106.8	91.5	107.0	111.1	90.6
Average annual percent change:						
1958-83 .....	2.2	2.6	( <sup>3</sup> )	2.0	2.4	( <sup>3</sup> )
1978-83 .....	1.7	2.5	-2.2	2.0	3.0	-2.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.  
<sup>3</sup> Less than .05 percent.

**Table 130. Brick and structural clay tile (SIC 3251): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	85.9	155.1	162.5	116.4	151.8	158.8	117.2
1959 .....	101.4	170.9	180.3	122.4	166.4	175.2	122.9
1960 .....	105.1	167.2	173.8	132.9	167.0	173.4	134.3
1961 .....	107.3	166.1	174.9	120.9	165.9	174.7	122.9
1962 .....	113.9	164.7	173.2	120.9	161.6	169.3	122.9
1963 .....	91.2	144.0	150.6	110.5	139.6	145.2	111.5
1964 .....	102.7	149.5	155.2	119.5	142.6	147.0	120.0
1965 .....	105.9	150.2	156.5	117.9	145.9	151.1	120.0
1966 .....	106.7	149.5	156.2	115.0	143.5	148.8	117.2
1967 .....	96.4	137.2	140.8	117.9	134.2	137.0	120.0
1968 .....	101.6	135.4	139.0	116.4	132.8	135.8	117.2
1969 .....	99.0	136.6	139.4	122.4	131.3	133.4	120.0
1970 .....	93.7	115.5	115.5	115.0	113.7	114.7	108.6
1971 .....	103.4	115.4	114.6	117.9	111.8	111.1	114.3
1972 .....	111.1	121.4	124.1	107.4	117.6	120.0	105.8
1973 .....	107.7	119.5	122.3	104.5	117.2	119.3	105.8
1974 .....	107.6	116.3	118.7	102.9	114.2	115.8	105.8
1975 .....	89.0	95.6	95.5	95.5	95.2	94.7	97.2
1976 .....	98.3	96.2	94.9	101.5	98.7	97.5	102.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.4	106.1	107.9	97.0	105.4	107.1	97.1
1979 .....	95.5	111.3	108.5	125.4	111.7	108.8	125.7
1980 .....	83.7	97.8	91.8	128.4	98.5	92.4	128.6
1981 .....	69.3	81.3	77.6	100.0	82.9	79.4	100.0
1982 .....	56.8	61.4	58.2	77.6	61.5	58.2	77.1
1983 <sup>1</sup> .....	75.1	72.2	70.3	82.1	70.2	67.6	82.9
Average annual percent change:							
1958-83 .....	-1.1	-3.2	-3.6	-1.1	-3.1	-3.5	-1.2
1978-83 .....	-9.0	-10.5	-11.3	-7.0	-10.8	-11.6	-6.9

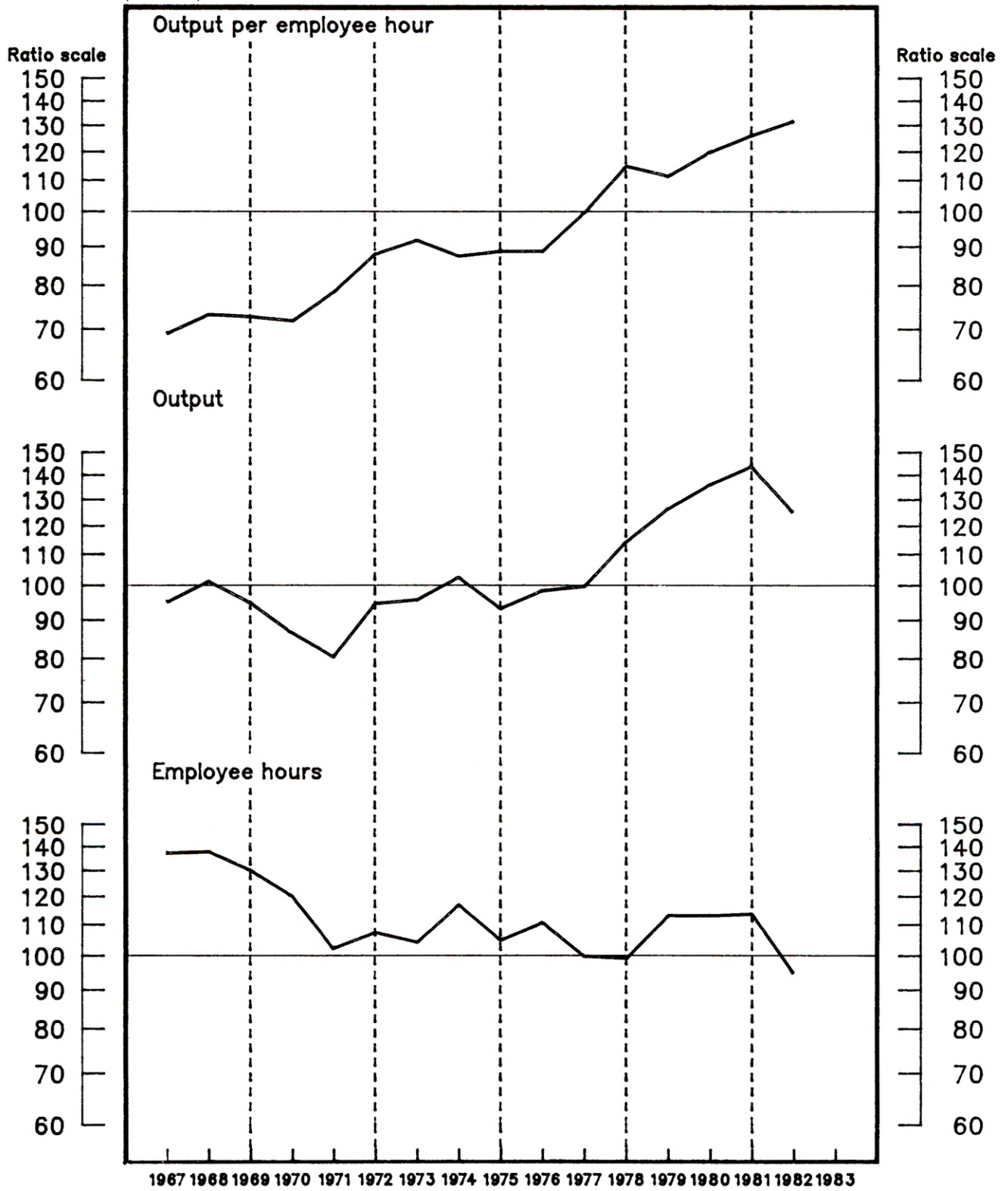
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 67. Ceramic wall and floor tile (SIC 3253): Output per hour and related data, 1967-82  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 131. Ceramic wall and floor tile (SIC 3253): Indexes of output per employee hour and output per employee, 1958-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	49.6	48.2	56.8	49.0	47.5	56.0
1959 .....	53.9	53.3	56.8	54.1	53.8	55.5
1960 .....	52.4	52.2	53.3	53.0	53.2	52.1
1961 .....	55.8	56.4	52.7	55.2	56.1	51.4
1962 .....	61.4	60.7	64.3	61.6	61.4	62.6
1963 .....	60.2	59.5	63.0	59.5	59.1	61.0
1964 .....	62.8	63.2	60.7	63.5	64.6	59.2
1965 .....	64.1	63.5	66.8	64.2	64.1	64.8
1966 .....	64.9	63.9	69.2	65.9	65.6	66.7
1967 .....	69.3	69.3	69.1	70.1	70.6	68.0
1968 .....	73.4	74.3	70.1	74.7	76.1	69.1
1969 .....	72.9	73.3	70.7	73.4	74.0	71.3
1970 .....	72.0	74.4	62.9	74.4	76.9	65.0
1971 .....	78.6	78.8	77.9	79.6	79.3	80.6
1972 .....	88.2	86.7	94.9	89.2	87.9	94.9
1973 .....	92.0	89.7	103.1	91.3	88.9	102.8
1974 .....	87.7	87.1	90.3	87.2	87.5	85.7
1975 .....	89.0	91.4	79.8	87.9	90.6	77.9
1976 .....	89.0	88.9	89.5	88.5	88.8	87.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	115.3	112.0	132.9	117.7	114.6	132.2
1979 .....	111.8	108.9	126.8	113.7	110.9	126.8
1980 .....	120.3	117.2	136.4	122.3	119.3	136.4
1981 .....	126.5	124.7	134.9	126.4	124.4	135.1
1982 <sup>2</sup> .....	132.1	129.4	145.5	130.4	127.4	144.6
Average annual percent change:						
1958-82 .....	4.0	3.9	4.2	4.0	3.9	4.3
1978-82 .....	4.0	4.3	2.5	3.2	3.3	2.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 132. Ceramic wall and floor tile (SIC 3253): Indexes of output, employee hours, and employees, 1958-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	82.2	165.6	170.4	144.8	167.9	173.0	146.8
1959 .....	99.9	185.3	187.6	175.9	184.5	185.7	180.1
1960 .....	93.8	179.0	179.8	175.9	176.9	176.2	180.1
1961 .....	89.1	159.8	157.9	169.0	161.5	158.7	173.4
1962 .....	104.3	170.0	171.9	162.1	169.2	169.9	166.7
1963 .....	97.7	162.4	164.1	155.2	164.1	165.2	160.1
1964 .....	106.7	170.0	168.8	175.9	167.9	165.2	180.1
1965 .....	103.7	161.8	163.4	155.2	161.5	161.9	160.1
1966 .....	97.9	150.9	153.2	141.4	148.6	149.3	146.8
1967 .....	95.3	137.6	137.6	137.9	135.9	135.0	140.1
1968 .....	101.5	138.2	136.7	144.8	135.9	133.3	146.8
1969 .....	95.1	130.5	129.7	134.5	129.5	128.6	133.3
1970 .....	86.7	120.4	116.5	137.9	116.6	112.7	133.3
1971 .....	80.6	102.5	102.3	103.4	101.2	101.6	100.0
1972 .....	94.9	107.6	109.4	100.0	106.4	108.0	100.0
1973 .....	96.0	104.4	107.0	93.1	105.2	108.0	93.4
1974 .....	102.8	117.2	118.0	113.8	117.9	117.5	120.0
1975 .....	93.5	105.1	102.3	117.2	106.4	103.2	120.0
1976 .....	98.7	110.9	111.0	110.3	111.5	111.2	113.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	114.6	99.4	102.3	86.2	97.4	100.0	86.7
1979 .....	126.8	113.4	116.4	100.0	111.5	114.3	100.0
1980 .....	136.4	113.4	116.4	100.0	111.5	114.3	100.0
1981 .....	144.2	114.0	115.6	106.9	114.1	115.9	106.7
1982 <sup>1</sup> .....	125.4	94.9	96.9	86.2	96.2	98.4	86.7
Average annual percent change:							
1958-82 .....	1.2	-2.6	-2.6	-2.8	-2.6	-2.6	-2.9
1978-82 .....	3.1	-9	-1.1	.7	( <sup>2</sup> )	-2	.7

<sup>1</sup> Preliminary.

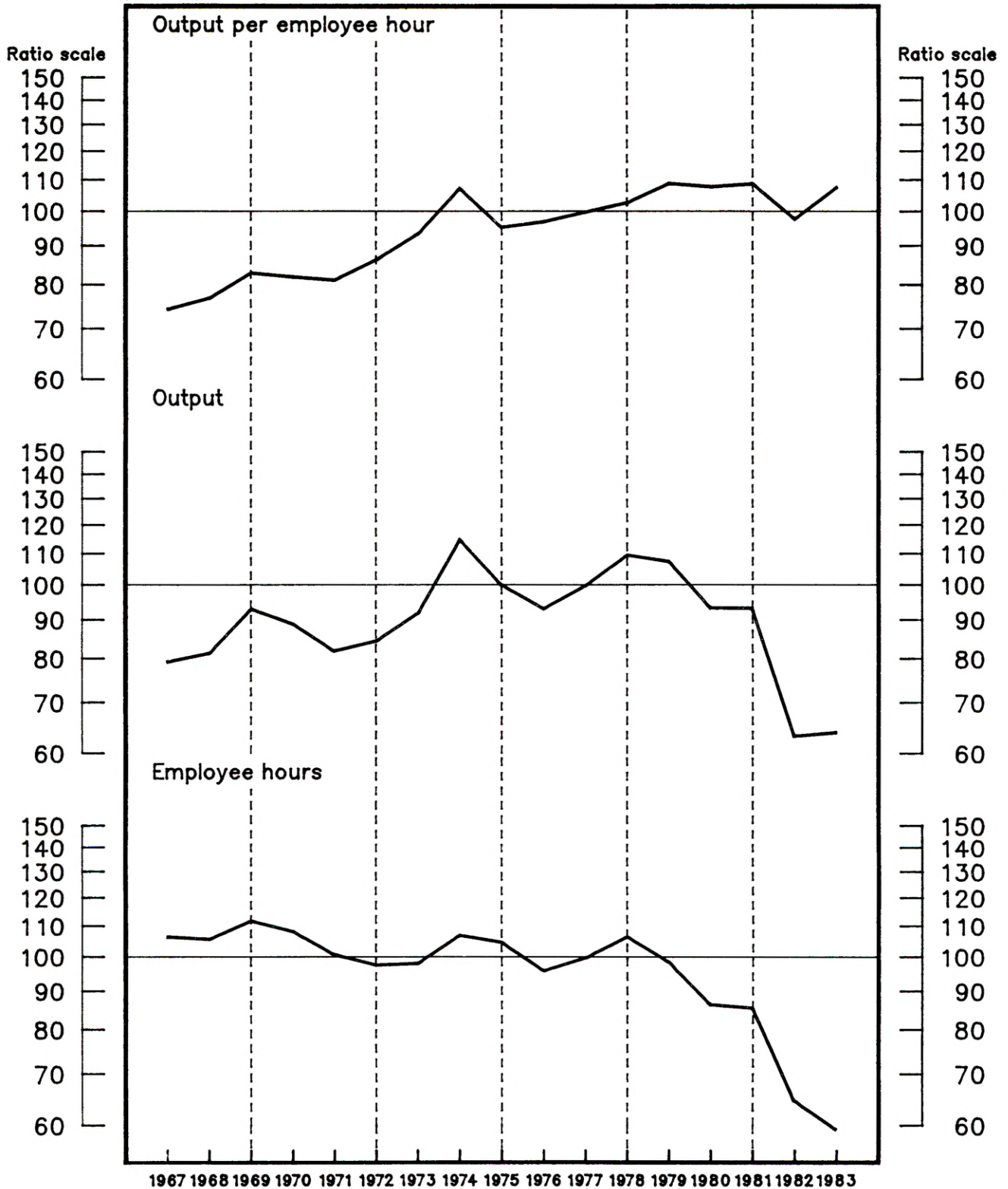
<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 68. Clay refractories (SIC 3255): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 133. Clay refractories (SIC 3255): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	53.7	52.2	60.2	50.3	48.1	60.0
1959 .....	59.6	54.3	92.4	54.4	48.8	90.8
1960 .....	59.3	54.1	91.9	52.9	47.3	90.4
1961 .....	63.6	58.8	91.4	56.7	51.3	89.9
1962 .....	67.7	62.6	96.6	60.7	55.0	94.7
1963 .....	67.2	63.9	83.0	65.1	61.5	82.1
1964 .....	72.0	68.6	88.0	71.4	67.9	87.3
1965 .....	71.6	67.7	90.9	71.4	67.3	90.5
1966 .....	75.6	72.0	93.4	73.8	70.0	91.1
1967 .....	74.4	72.8	81.1	71.2	69.2	79.4
1968 .....	77.0	77.5	75.3	74.9	74.7	75.5
1969 .....	83.1	83.7	81.3	81.0	80.3	83.2
1970 .....	82.1	86.7	69.0	81.9	85.2	71.9
1971 .....	81.3	88.2	63.5	79.9	84.9	66.2
1972 .....	86.5	89.7	76.6	85.4	87.5	78.3
1973 .....	93.6	91.0	105.0	93.7	91.0	104.5
1974 .....	107.5	104.6	120.1	105.9	103.4	115.2
1975 .....	95.5	97.5	89.1	90.6	91.8	86.4
1976 .....	97.1	100.2	87.8	92.5	94.3	86.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.9	101.2	109.8	105.2	103.9	109.8
1979 .....	109.1	108.4	112.4	100.6	97.7	112.2
1980 .....	108.0	114.3	89.7	102.5	106.9	89.9
1981 .....	109.0	109.6	106.7	106.6	106.7	106.1
1982 .....	98.0	104.3	80.1	91.9	96.2	79.2
1983 <sup>2</sup> .....	107.9	106.5	113.9	106.5	104.4	114.5
Average annual percent change:						
1958-83 .....	2.8	3.2	.9	3.0	3.4	1.0
1978-83 .....	-2	.3	-1.9	-5	-1	-1.9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 134. Clay refractories (SIC 3255): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

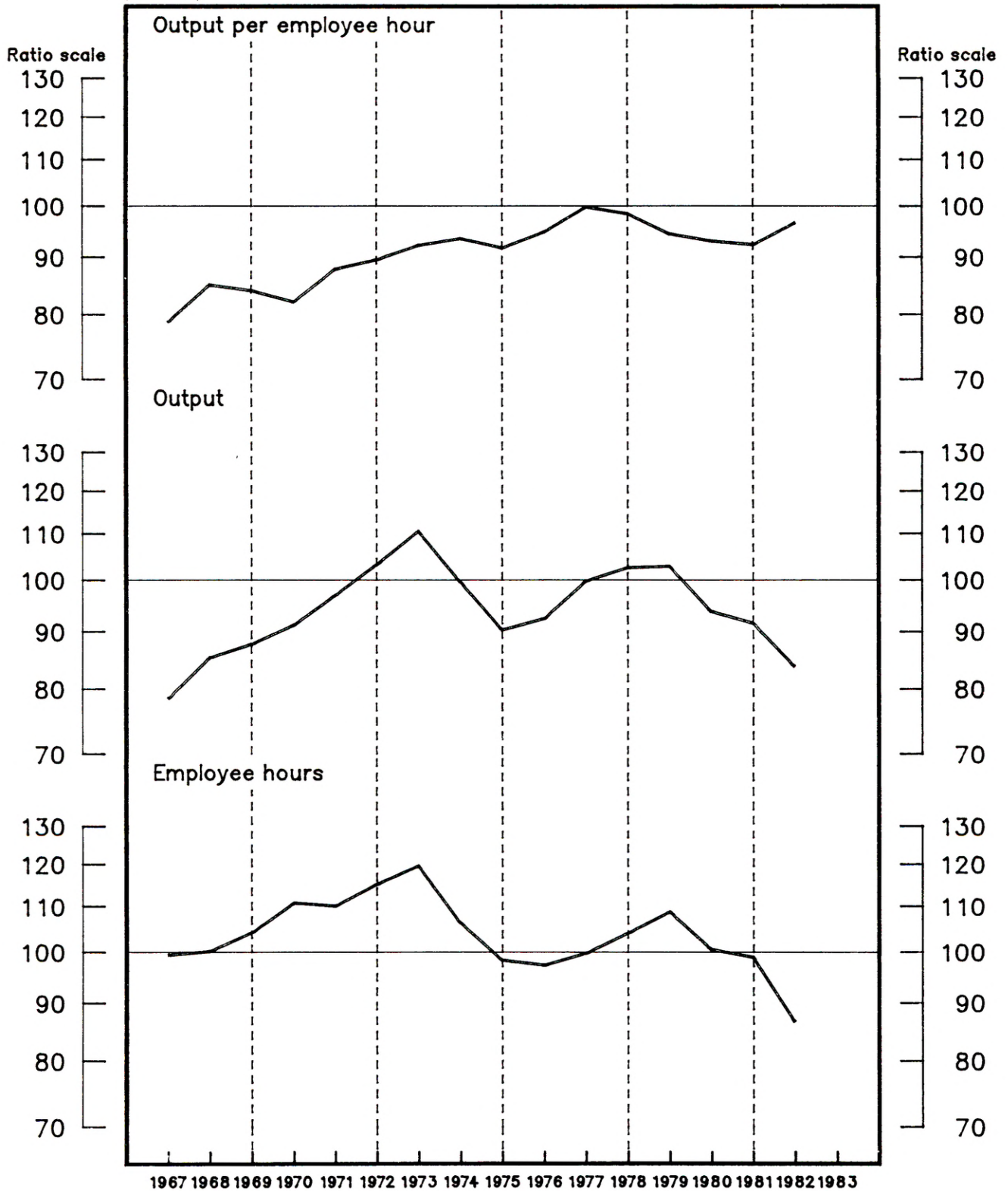
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	55.2	102.7	105.7	91.7	109.7	114.8	92.0
1959 .....	65.4	109.8	120.4	70.8	120.3	134.1	72.0
1960 .....	65.1	109.8	120.4	70.8	123.0	137.5	72.0
1961 .....	64.7	101.8	110.1	70.8	114.2	126.2	72.0
1962 .....	64.4	95.1	102.8	66.7	106.1	117.1	68.0
1963 .....	65.7	97.8	102.8	79.2	100.9	106.9	80.0
1964 .....	73.3	101.8	106.8	83.3	102.7	108.0	84.0
1965 .....	79.6	111.2	117.6	87.6	111.5	118.3	88.0
1966 .....	87.5	115.7	121.6	93.7	118.5	125.0	96.0
1967 .....	79.4	106.7	109.1	97.9	111.5	114.8	100.0
1968 .....	81.5	105.9	105.1	108.3	108.8	109.1	108.0
1969 .....	93.2	112.1	111.3	114.6	115.1	116.0	112.0
1970 .....	89.1	108.5	102.8	129.2	108.8	104.6	124.0
1971 .....	82.1	101.0	93.1	129.2	102.7	96.7	124.0
1972 .....	84.6	97.8	94.3	110.5	99.1	96.7	108.0
1973 .....	92.0	98.3	101.1	87.6	98.2	101.1	88.0
1974 .....	115.2	107.2	110.1	95.9	108.8	111.4	100.0
1975 .....	100.2	104.9	102.8	112.5	110.6	109.1	116.0
1976 .....	93.3	96.1	93.1	106.3	100.9	98.9	108.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	109.8	106.7	108.5	100.0	104.4	105.7	100.0
1979 .....	107.7	98.7	99.4	95.8	107.1	110.2	96.0
1980 .....	93.5	86.6	81.8	104.2	91.2	87.5	104.0
1981 .....	93.4	85.7	85.2	87.5	87.6	87.5	88.0
1982 .....	63.4	64.7	60.8	79.2	69.0	65.9	80.0
1983 <sup>1</sup> .....	64.1	59.4	60.2	56.3	60.2	61.4	56.0
Average annual percent change:							
1958-83 .....	1.5	-1.2	-1.6	.6	-1.4	-1.9	.5
1978-83 .....	-11.5	-11.3	-11.8	-9.8	-11.1	-11.5	-9.8

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 69. Concrete products (SIC 3271, 3272): Output per hour and related data, 1967-82  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 135. Concrete products (SIC 3271, 3272): Indexes of output per employee hour and output per employee, 1954-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	53.1	51.2	61.4	54.9	53.0	61.5
1955 .....	56.3	53.9	67.2	57.8	55.2	66.9
1956 .....	61.4	58.9	72.8	64.2	61.7	72.7
1957 .....	60.1	58.3	68.3	62.1	60.3	68.4
1958 .....	59.1	58.0	64.5	60.0	58.5	64.5
1959 .....	60.2	57.1	74.6	63.1	59.9	74.4
1960 .....	57.6	54.5	72.4	62.2	59.4	72.1
1961 .....	58.7	55.8	72.1	63.5	61.2	71.5
1962 .....	59.8	56.7	74.6	65.2	62.6	74.2
1963 .....	64.8	63.1	73.1	68.4	67.2	72.7
1964 .....	68.7	67.2	75.6	72.9	72.0	75.5
1965 .....	71.3	69.6	80.0	74.4	72.8	79.4
1966 .....	75.7	75.2	80.1	77.5	76.9	79.2
1967 .....	78.9	75.6	91.0	81.1	78.4	90.0
1968 .....	85.2	81.9	96.9	88.3	85.6	97.3
1969 .....	84.2	81.5	93.9	88.8	86.3	96.9
1970 .....	82.3	79.6	92.1	86.9	83.7	97.5
1971 .....	88.0	86.1	94.4	90.2	87.7	98.6
1972 .....	89.7	87.9	95.4	91.9	90.1	97.7
1973 .....	92.4	90.4	98.6	95.0	93.9	98.8
1974 .....	93.7	91.1	102.9	94.9	93.1	100.2
1975 .....	91.9	92.4	90.0	91.5	92.4	88.7
1976 .....	95.0	94.6	96.0	96.5	96.6	95.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.6	98.5	99.0	98.4	98.2	98.9
1979 .....	94.6	95.0	93.3	94.9	95.5	93.6
1980 .....	93.2	96.5	84.6	93.3	96.5	85.2
1981 .....	92.5	95.5	84.4	92.7	95.8	84.7
1982 <sup>2</sup> .....	96.8	99.5	89.4	96.1	98.6	89.5
Average annual percent change:						
1947-82 .....	2.7	3.1	1.3	2.5	2.9	1.3
1978-82 .....	-6	.3	-3.0	-7	.1	-3.0

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 136. Concrete products (SIC 3271, 3272): Indexes of output, employee hours, and employees, 1954-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	41.3	77.8	80.6	67.3	75.2	77.9	67.1
1955 .....	47.7	84.8	88.5	71.0	82.5	86.4	71.3
1956 .....	55.9	91.1	94.9	76.8	87.1	90.6	76.9
1957 .....	54.0	89.9	92.6	79.1	86.9	89.6	79.0
1958 .....	51.5	87.2	88.8	79.9	85.9	88.0	79.9
1959 .....	55.5	92.2	97.2	74.4	88.0	92.6	74.6
1960 .....	56.1	97.4	103.0	77.5	90.2	94.5	77.8
1961 .....	56.2	95.7	100.7	78.0	88.5	91.9	78.6
1962 .....	58.1	97.1	102.5	77.9	89.1	92.8	78.3
1963 .....	64.8	100.0	102.7	88.6	94.7	96.5	89.1
1964 .....	70.6	102.8	105.0	93.4	96.9	98.0	93.5
1965 .....	76.9	107.8	110.5	96.1	103.3	105.7	96.8
1966 .....	81.9	108.2	108.9	102.2	105.7	106.5	103.4
1967 .....	78.6	99.6	104.0	86.4	96.9	100.2	87.3
1968 .....	85.5	100.4	104.4	88.2	96.8	99.9	87.9
1969 .....	87.9	104.4	107.9	93.6	99.0	101.9	90.7
1970 .....	91.4	111.0	114.8	99.2	105.2	109.2	93.7
1971 .....	97.1	110.3	112.8	102.9	107.6	110.7	98.5
1972 .....	103.5	115.4	117.8	108.5	112.6	114.9	105.9
1973 .....	110.8	119.9	122.5	112.4	116.6	118.0	112.2
1974 .....	99.8	106.5	109.6	97.0	105.2	107.2	99.6
1975 .....	90.5	98.5	97.9	100.5	98.9	97.9	102.0
1976 .....	92.6	97.5	97.9	96.5	96.0	95.9	96.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.8	104.3	104.4	103.8	104.5	104.7	103.9
1979 .....	103.1	109.0	108.5	110.5	108.6	108.0	110.2
1980 .....	93.9	100.7	97.3	111.0	100.6	97.3	110.2
1981 .....	91.7	99.1	96.0	108.7	98.9	95.7	108.3
1982 <sup>1</sup> .....	83.9	86.7	84.3	93.8	87.3	85.1	93.7
Average annual percent change:							
1947-82 .....	3.7	1.0	.6	2.4	1.2	.8	2.4
1978-82 .....	-5.1	-4.5	-5.4	-2.2	-4.4	-5.2	-2.2

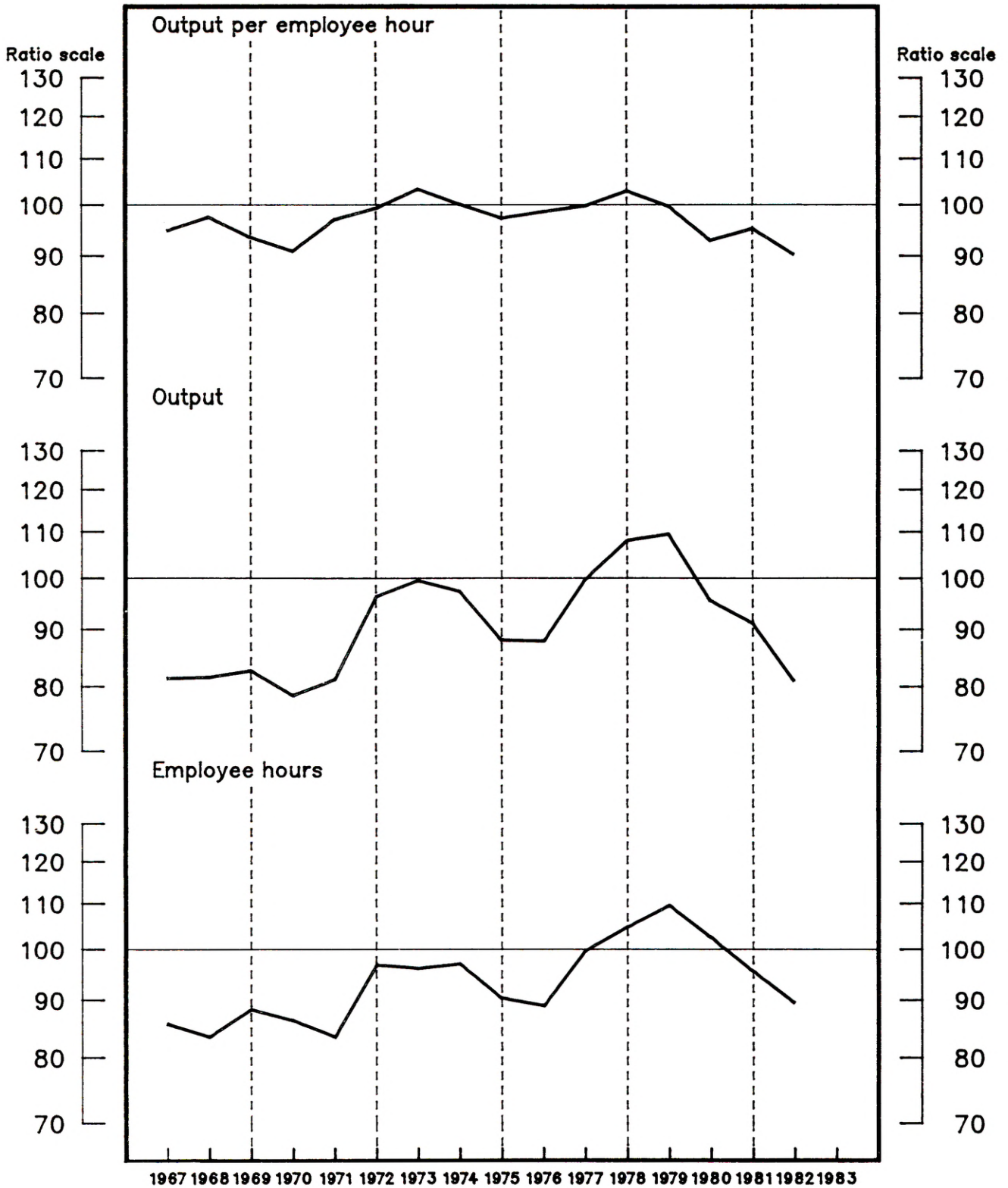
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 70. Ready-mixed concrete (SIC 3273): Output per hour and related data, 1967-82  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 137. Ready-mixed concrete (SIC 3273): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-82**  
(1977 = 100)

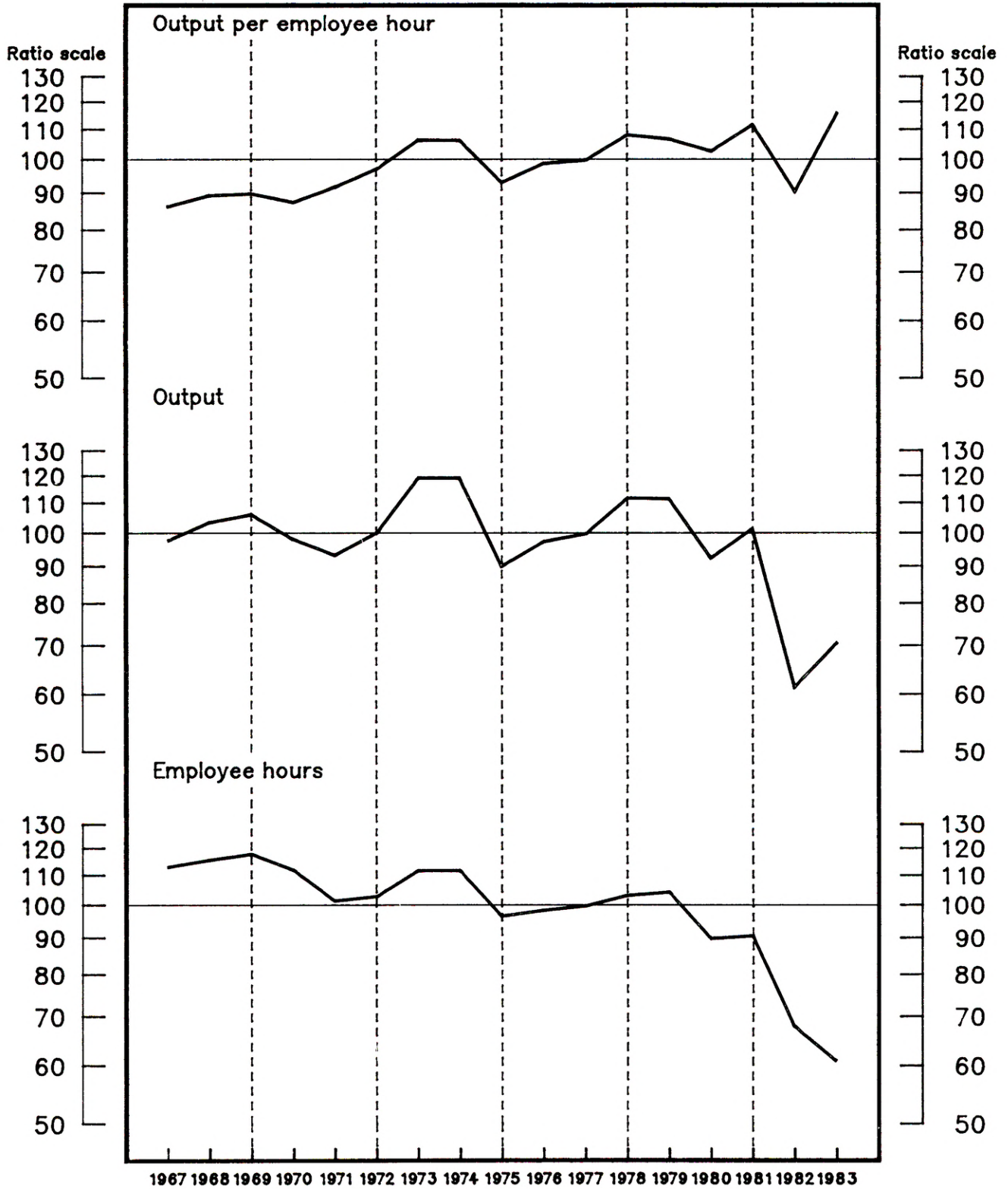
Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958 .....	77.4	76.5	54.1	69.9	70.7
1959 .....	79.2	78.5	60.4	76.3	76.9
1960 .....	77.9	79.8	58.8	75.5	73.7
1961 .....	76.7	79.8	59.3	77.3	74.3
1962 .....	78.7	80.6	61.1	77.6	75.8
1963 .....	85.8	88.5	72.0	83.9	81.4
1964 .....	86.2	88.8	73.0	84.7	82.2
1965 .....	90.3	91.1	79.0	87.5	86.7
1966 .....	90.7	91.3	78.3	86.3	85.8
1967 .....	95.0	96.2	81.5	85.8	84.7
1968 .....	97.7	98.3	81.7	83.6	83.1
1969 .....	93.7	97.2	82.8	88.4	85.2
1970 .....	91.1	90.6	78.7	86.4	86.9
1971 .....	97.2	93.1	81.3	83.6	87.3
1972 .....	99.5	99.0	96.5	97.0	97.5
1973 .....	103.5	101.4	99.7	96.3	98.3
1974 .....	100.3	98.3	97.5	97.2	99.2
1975 .....	97.5	93.1	88.2	90.5	94.7
1976 .....	98.8	94.5	88.0	89.1	93.1
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	103.1	102.9	108.3	105.0	105.2
1979 .....	99.9	98.4	109.7	109.8	111.5
1980 .....	93.1	91.3	95.6	102.7	104.7
1981 .....	95.4	93.5	91.3	95.7	97.6
1982 <sup>1</sup> .....	90.4	87.8	81.0	89.6	92.3
Average annual percent change:					
1958-82 .....	1.0	.8	2.3	1.3	1.5
1978-82 .....	-3.0	-3.6	-7.4	-4.4	-3.9

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census.

Chart 71. Steel (SIC 331): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 138. Steel (SIC 331): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	66.8	62.0	91.9	62.8	57.9	89.5
1955	75.9	69.0	117.7	75.7	69.0	114.5
1956	74.8	68.8	106.6	74.4	68.8	103.7
1957	72.9	68.2	95.4	70.5	65.9	92.9
1958	67.4	65.6	74.6	63.1	60.8	72.6
1959	75.7	73.4	85.0	74.8	72.6	82.7
1960	71.2	68.8	80.8	67.5	64.8	78.4
1961	73.4	71.4	81.4	70.7	68.6	78.8
1962	77.1	74.9	86.2	74.6	72.5	83.3
1963	80.6	77.0	96.1	79.7	76.4	93.0
1964	84.1	79.3	106.5	84.8	80.7	103.0
1965	87.5	82.6	110.7	88.3	84.0	107.1
1966	89.2	84.8	109.5	89.6	85.7	105.8
1967	86.4	83.6	98.0	85.5	83.1	94.8
1968	89.5	87.6	96.8	90.4	88.6	97.3
1969	90.0	87.7	98.9	91.5	89.6	99.3
1970	87.6	86.0	93.4	86.9	85.1	94.0
1971	91.9	91.0	95.4	90.4	89.0	95.4
1972	97.3	95.5	104.4	97.9	95.9	105.4
1973	106.6	103.3	119.9	109.5	106.6	121.2
1974	106.5	103.7	117.7	108.5	106.0	118.8
1975	93.3	93.5	92.4	91.3	91.3	91.5
1976	99.0	98.5	100.4	98.5	98.1	99.9
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	108.3	106.9	113.7	110.9	109.7	114.8
1979	106.9	105.1	113.2	108.6	107.0	114.0
1980	102.9	104.3	98.5	100.4	101.3	97.1
1981	112.0	112.9	109.0	111.5	112.5	108.3
1982	90.9	97.0	74.5	86.3	90.7	73.4
1983 <sup>2</sup>	116.1	121.6	100.0	114.4	118.6	101.3
Average annual percent change:						
1947-83	1.7	2.0	( <sup>3</sup> )	1.7	2.1	.1
1978-83	-2	1.4	-5.0	-1.2	( <sup>3</sup> )	-5.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the American Iron and Steel Institute; the Energy Information Administration, U.S. Department of Energy; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 139. Steel (SIC 331): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

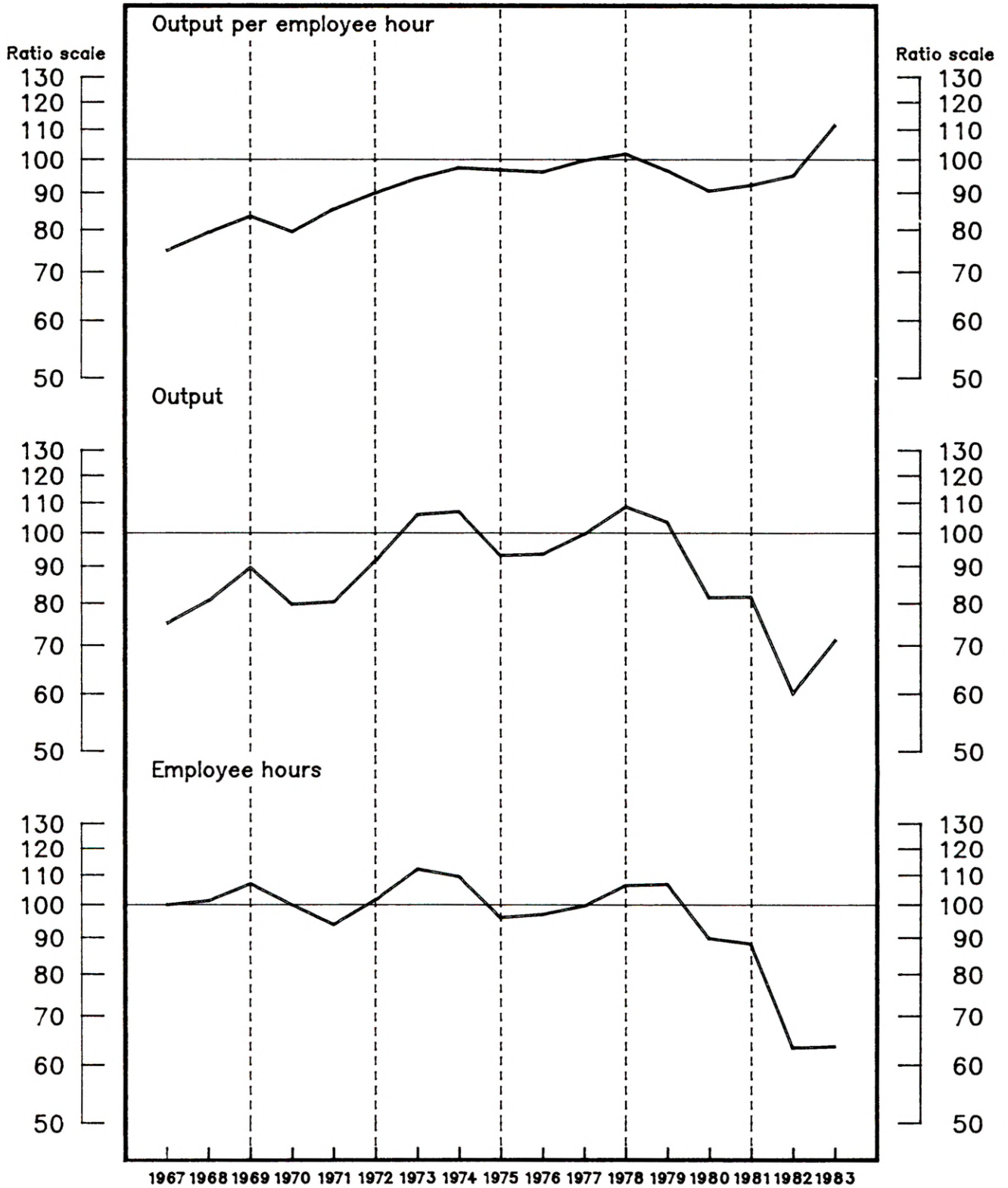
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	73.1	109.4	117.9	79.5	116.4	126.3	81.7
1955	96.4	127.0	139.8	81.9	127.4	139.8	84.2
1956	94.8	126.8	137.7	88.9	127.4	137.7	91.4
1957	91.5	125.5	134.1	95.9	129.8	138.8	98.5
1958	68.4	101.5	104.2	91.7	108.4	112.5	94.2
1959	79.1	104.5	107.8	93.1	105.8	109.0	95.7
1960	79.3	111.4	115.2	98.2	117.4	122.3	101.1
1961	75.9	103.4	106.3	93.3	107.3	110.6	96.3
1962	79.8	103.5	106.6	92.6	106.9	110.1	95.8
1963	84.7	105.1	110.0	88.1	106.3	110.8	91.1
1964	96.2	114.4	121.3	90.3	113.4	119.2	93.4
1965	104.6	119.6	126.7	94.5	118.4	124.5	97.7
1966	105.3	118.0	124.2	96.2	117.5	122.9	99.5
1967	97.9	113.3	117.1	99.9	114.5	117.8	103.3
1968	103.7	115.9	118.4	107.1	114.7	117.1	106.6
1969	106.3	118.1	121.2	107.5	116.2	118.7	107.0
1970	98.3	112.2	114.3	105.2	113.1	115.5	104.6
1971	93.5	101.7	102.8	98.0	103.4	105.1	98.0
1972	100.3	103.1	105.0	96.1	102.5	104.6	95.2
1973	119.4	112.0	115.6	99.6	109.0	112.0	98.5
1974	119.3	112.0	115.0	101.4	110.0	112.6	100.4
1975	90.3	96.8	96.6	97.7	98.9	98.9	98.7
1976	97.6	98.6	99.1	97.2	99.1	99.5	97.7
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	112.0	103.4	104.8	98.5	101.0	102.1	97.6
1979	111.7	104.5	106.3	98.7	102.9	104.4	98.0
1980	92.7	90.1	88.9	94.1	92.3	91.5	95.5
1981	101.8	90.9	90.2	93.4	91.3	90.5	94.0
1982	61.7	67.9	63.6	82.8	71.5	68.0	84.1
1983 <sup>1</sup>	70.8	61.0	58.2	70.8	61.9	59.7	69.9
Average annual percent change:							
1947-83	.7	-9	-1.3	.7	-1.0	-1.4	.6
1978-83	-10.7	-10.6	-12.0	-6.1	-9.6	-10.7	-5.9

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the American Iron and Steel Institute; the Energy Information Administration, U.S. Department of Energy; and the Bureau of the Census. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 72. Gray iron foundries (SIC 3321): Output per hour and related data, 1967-83  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 140. Gray iron foundries (SIC 3321): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	58.7	56.6	75.9	57.2	54.5	77.6
1955 .....	63.3	60.4	88.5	65.1	62.0	90.2
1956 .....	62.9	60.6	80.3	63.0	60.3	81.9
1957 .....	61.1	59.7	71.2	58.7	56.6	72.5
1958 .....	63.3	63.3	63.5	58.9	57.9	64.7
1959 .....	65.3	63.9	76.0	64.8	62.9	77.3
1960 .....	65.0	64.4	68.4	62.2	61.0	69.8
1961 .....	66.7	66.4	68.9	63.1	61.9	70.1
1962 .....	69.2	68.1	77.1	68.5	66.8	78.7
1963 .....	70.7	69.1	82.8	72.2	70.2	84.6
1964 .....	75.1	72.6	94.2	79.6	77.1	96.7
1965 .....	78.8	76.2	98.8	84.1	81.5	101.0
1966 .....	79.3	76.7	98.3	83.3	80.8	100.1
1967 .....	75.1	73.3	87.2	75.8	73.8	88.6
1968 .....	79.6	77.9	91.5	82.6	80.4	96.2
1969 .....	83.8	81.6	99.1	86.7	84.3	101.9
1970 .....	79.8	78.8	86.6	78.7	77.3	87.1
1971 .....	85.6	84.7	91.2	84.4	83.4	90.1
1972 .....	90.2	88.3	103.4	92.2	90.9	99.6
1973 .....	94.5	92.1	110.8	96.9	94.9	107.8
1974 .....	97.7	95.7	111.2	98.2	96.4	108.3
1975 .....	97.0	96.9	97.3	94.0	93.6	95.5
1976 .....	96.4	96.4	96.4	95.7	95.6	95.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.1	102.0	102.4	101.4	101.2	102.4
1979 .....	96.8	98.1	90.2	94.7	95.6	90.7
1980 .....	90.8	94.8	73.0	86.5	89.5	73.7
1981 .....	92.5	95.7	78.1	88.4	90.7	78.4
1982 .....	95.3	102.0	69.0	86.2	90.3	69.3
1983 <sup>2</sup> .....	111.9	117.6	87.6	107.9	112.6	87.7
Average annual percent change:						
1954-83 .....	2.0	2.3	.7	1.9	2.2	.5
1978-83 .....	1.2	2.4	-4.2	.1	1.1	-4.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 141. Gray iron foundries (SIC 3321): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	55.2	94.0	97.5	72.7	96.5	101.3	71.1
1955 .....	67.9	107.3	112.5	76.7	104.3	109.6	75.3
1956 .....	64.8	103.1	107.0	80.7	102.8	107.4	79.1
1957 .....	57.5	94.1	96.3	80.8	98.0	101.6	79.3
1958 .....	47.8	75.5	75.5	75.3	81.1	82.5	73.9
1959 .....	58.8	90.0	92.0	77.4	90.7	93.5	76.1
1960 .....	54.5	83.9	84.6	79.7	87.6	89.4	78.1
1961 .....	51.7	77.5	77.9	75.0	81.9	83.5	73.7
1962 .....	58.8	85.0	86.4	76.3	85.9	88.0	74.7
1963 .....	62.7	88.7	90.8	75.7	86.8	89.3	74.1
1964 .....	72.5	96.5	99.9	77.0	91.1	94.0	75.0
1965 .....	81.7	103.7	107.2	82.7	97.1	100.3	80.9
1966 .....	84.5	106.6	110.1	86.0	101.4	104.6	84.4
1967 .....	75.3	100.3	102.7	86.4	99.4	102.1	85.0
1968 .....	80.9	101.6	103.9	88.4	98.0	100.6	84.1
1969 .....	89.9	107.3	110.2	90.7	103.7	106.6	88.2
1970 .....	80.0	100.2	101.5	92.4	101.6	103.5	91.8
1971 .....	80.6	94.2	95.2	88.4	95.5	96.6	89.5
1972 .....	91.9	101.9	104.1	88.9	99.7	101.1	92.3
1973 .....	106.3	112.5	115.4	95.9	109.7	112.0	98.6
1974 .....	107.3	109.8	112.1	96.5	109.3	111.3	99.1
1975 .....	93.4	96.3	96.4	96.0	99.4	99.8	97.8
1976 .....	93.8	97.3	97.3	97.3	98.0	98.1	97.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	109.0	106.8	106.9	106.4	107.5	107.7	106.4
1979 .....	103.8	107.2	105.8	115.1	109.6	108.6	114.5
1980 .....	81.7	90.0	86.2	111.9	94.4	91.3	110.9
1981 .....	81.9	88.5	85.6	104.9	92.6	90.3	104.5
1982 .....	60.5	63.5	59.3	87.7	70.2	67.0	87.3
1983 <sup>1</sup> .....	71.4	63.8	60.7	81.5	66.2	63.4	81.4
Average annual percent change:							
1954-83 .....	1.8	-.2	-.4	1.2	-.1	-.3	1.3
1978-83 .....	-10.1	-11.2	-12.2	-6.1	-10.2	-11.1	-6.1

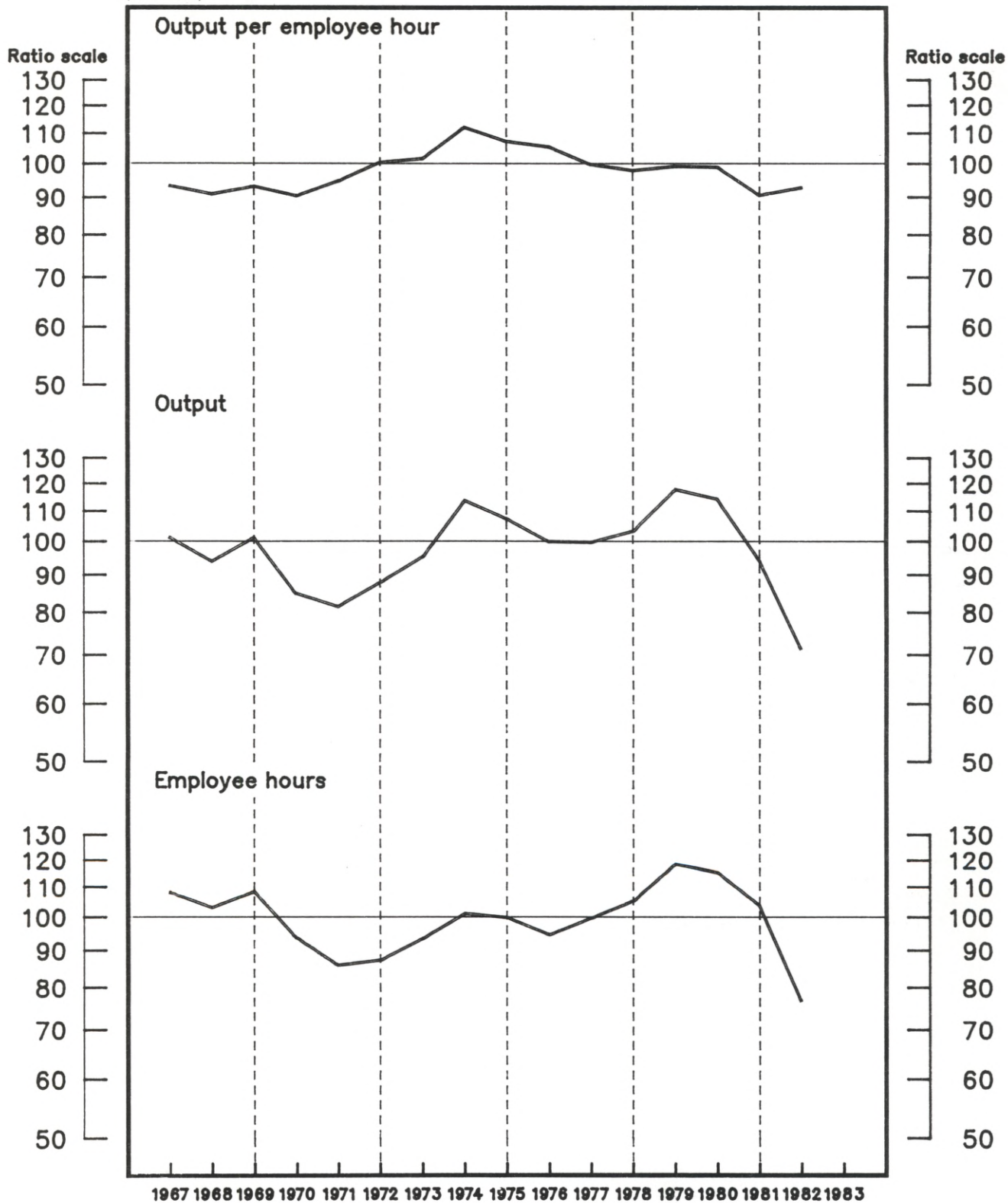
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 73. Steel foundries (SIC 3324, 3325): Output per hour and related data, 1967-82  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 142. Steel foundries (SIC 3324, 3325): Indexes of output per employee hour and output per employee, 1954-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	73.2	71.7	79.9	70.3	67.8	81.8
1955 .....	80.3	76.6	102.0	82.2	78.1	104.0
1956 .....	84.9	79.6	120.4	88.8	82.9	123.0
1957 .....	83.1	79.2	106.0	83.8	79.4	108.2
1958 .....	75.8	75.5	76.6	71.9	70.4	78.2
1959 .....	81.5	78.2	100.9	81.0	76.9	102.6
1960 .....	80.7	78.7	92.0	79.6	76.7	93.8
1961 .....	81.8	80.1	89.8	80.2	77.7	91.5
1962 .....	85.8	82.8	102.3	86.4	82.8	104.5
1963 .....	91.2	87.7	111.2	92.3	88.1	113.6
1964 .....	91.7	86.6	122.5	95.9	90.5	125.9
1965 .....	94.1	88.8	126.4	99.4	93.9	129.1
1966 .....	95.6	90.4	127.9	102.0	96.8	130.3
1967 .....	93.5	90.2	111.8	95.8	92.2	113.8
1968 .....	91.1	89.5	98.6	92.4	90.0	103.9
1969 .....	93.3	90.5	107.7	95.8	92.4	110.9
1970 .....	90.6	88.4	101.7	91.0	88.6	102.4
1971 .....	94.9	94.5	96.6	94.1	93.7	95.7
1972 .....	100.7	98.7	110.3	99.3	97.8	106.0
1973 .....	101.9	99.1	116.9	102.8	100.2	113.8
1974 .....	112.4	108.4	134.1	112.1	108.2	131.2
1975 .....	107.5	105.0	120.1	107.9	105.6	118.6
1976 .....	105.7	105.3	107.3	104.4	103.7	106.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.1	97.1	102.8	97.6	96.4	102.8
1979 .....	99.4	96.8	112.4	100.3	97.7	112.8
1980 .....	99.1	99.0	99.5	97.1	96.3	100.6
1981 .....	90.8	92.1	85.5	88.6	89.2	85.9
1982 <sup>2</sup> .....	93.0	99.3	72.5	86.1	90.0	73.0
Average annual percent change:						
1954-82 .....	1.0	1.2	( <sup>3</sup> )	.9	1.1	-.1
1978-82 .....	-2.0	( <sup>3</sup> )	-9.3	-3.7	-2.3	-9.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 143. Steel foundries (SIC 3324, 3325): Indexes of output, employee hours, and employees, 1954-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	59.2	80.9	82.6	74.1	84.2	87.3	72.4
1955 .....	75.8	94.4	99.0	74.3	92.2	97.1	72.9
1956 .....	95.6	112.6	120.1	79.4	107.7	115.3	77.7
1957 .....	86.6	104.2	109.3	81.7	103.3	109.1	80.0
1958 .....	54.1	71.4	71.7	70.6	75.2	76.8	69.2
1959 .....	67.0	82.2	85.7	66.4	82.7	87.1	65.3
1960 .....	61.9	76.7	78.7	67.3	77.8	80.7	66.0
1961 .....	57.4	70.2	71.7	63.9	71.6	73.9	62.7
1962 .....	66.8	77.9	80.7	65.3	77.3	80.7	63.9
1963 .....	80.3	88.0	91.6	72.2	87.0	91.1	70.7
1964 .....	91.0	99.2	105.1	74.3	94.9	100.6	72.3
1965 .....	99.7	106.0	112.3	78.9	100.3	106.2	77.2
1966 .....	110.6	115.7	122.4	86.5	108.4	114.3	84.9
1967 .....	101.5	108.5	112.5	90.8	105.9	110.1	89.2
1968 .....	94.2	103.4	105.2	95.5	101.9	104.7	90.7
1969 .....	101.5	108.8	112.1	94.2	106.0	109.8	91.5
1970 .....	85.1	93.9	96.3	83.7	93.5	96.1	83.1
1971 .....	81.7	86.1	86.5	84.6	86.8	87.2	85.4
1972 .....	88.1	87.5	89.3	79.9	88.7	90.1	83.1
1973 .....	95.5	93.7	96.4	81.7	92.9	95.3	83.9
1974 .....	114.0	101.4	105.2	85.0	101.7	105.4	86.9
1975 .....	107.6	100.1	102.5	89.6	99.7	101.9	90.7
1976 .....	100.2	94.8	95.2	93.4	96.0	96.6	93.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.6	105.6	106.7	100.8	106.1	107.5	100.8
1979 .....	118.0	118.7	121.9	105.0	117.6	120.8	104.6
1980 .....	114.5	115.5	115.6	115.1	117.9	118.9	113.8
1981 .....	94.5	104.1	102.6	110.5	106.7	105.9	110.0
1982 <sup>1</sup> .....	71.3	76.7	71.8	98.3	82.8	79.2	97.7
Average annual percent change:							
1954-82 .....	1.6	.6	.4	1.6	.7	.5	1.7
1978-82 .....	-9.2	-7.4	-9.2	( <sup>2</sup> )	-5.8	-7.2	-.1

<sup>1</sup> Preliminary.

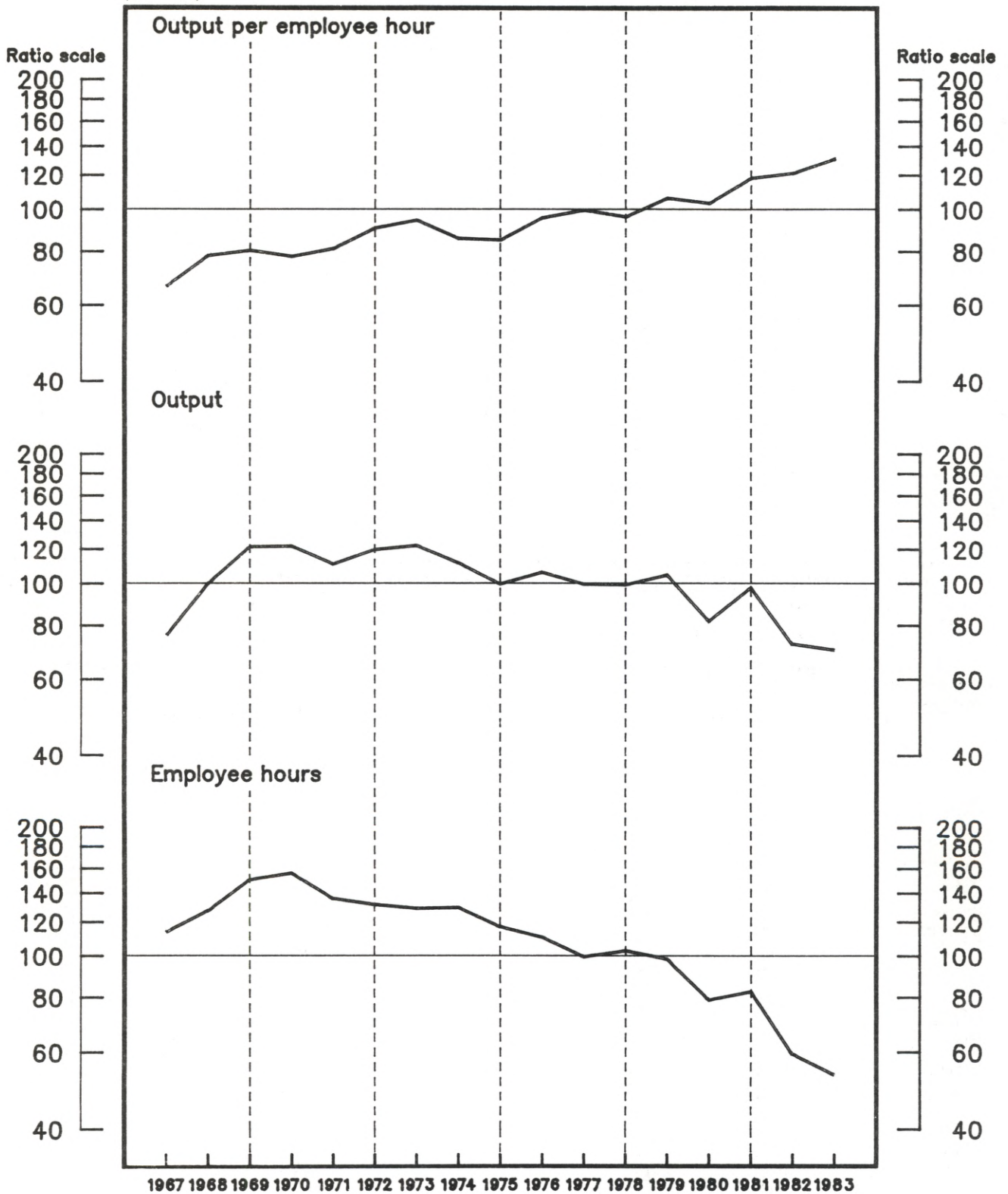
<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 74. Primary copper, lead, and zinc (SIC 3331, 3332, 3333): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 144. Primary copper, lead, and zinc (SIC 3331, 3332, 3333): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	56.2	54.0	67.4	56.9	54.4	69.5
1955 .....	62.7	59.3	81.5	65.3	61.8	83.4
1956 .....	63.6	59.7	87.4	67.0	63.0	89.8
1957 .....	63.9	60.7	81.4	66.0	62.5	83.5
1958 .....	62.6	61.2	69.3	63.7	62.1	71.0
1959 .....	58.9	58.1	63.0	59.0	57.8	64.5
1960 .....	65.7	63.2	78.6	68.0	65.3	80.6
1961 .....	68.7	66.3	81.2	71.7	69.2	83.2
1962 .....	73.0	70.2	87.7	75.9	73.0	90.2
1963 .....	74.7	71.3	92.9	77.0	73.3	95.5
1964 .....	77.6	73.8	99.0	79.2	74.9	102.3
1965 .....	80.0	75.8	104.6	83.2	78.4	107.8
1966 .....	79.0	74.8	103.6	82.9	78.5	106.1
1967 .....	66.6	67.0	64.8	68.6	69.2	66.3
1968 .....	78.5	75.6	93.1	80.9	77.4	98.0
1969 .....	80.7	76.3	106.5	83.3	78.7	108.7
1970 .....	78.1	74.6	96.5	80.8	77.3	98.4
1971 .....	81.5	79.9	88.8	83.0	81.5	89.5
1972 .....	90.9	86.7	114.0	92.3	88.4	112.0
1973 .....	94.8	91.5	110.9	95.0	92.0	109.3
1974 .....	86.0	84.8	91.3	87.4	86.8	90.0
1975 .....	85.3	86.4	80.7	85.6	87.2	80.5
1976 .....	96.0	96.2	95.1	96.6	97.0	94.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	96.5	95.8	99.7	97.7	97.3	99.7
1979 .....	106.5	105.1	112.6	106.7	105.1	113.4
1980 .....	103.7	106.1	94.8	101.2	102.6	96.3
1981 .....	118.6	121.4	108.4	118.1	120.8	109.0
1982 .....	121.8	125.4	108.8	124.3	128.5	110.2
1983 <sup>2</sup> .....	131.6	134.9	119.9	136.7	141.6	120.3
Average annual percent change:						
1947-83 .....	2.4	2.7	1.1	2.2	2.5	.9
1978-83 .....	6.1	7.0	2.8	6.8	7.8	2.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 145. Primary copper, lead, and zinc (SIC 3331, 3332, 3333): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

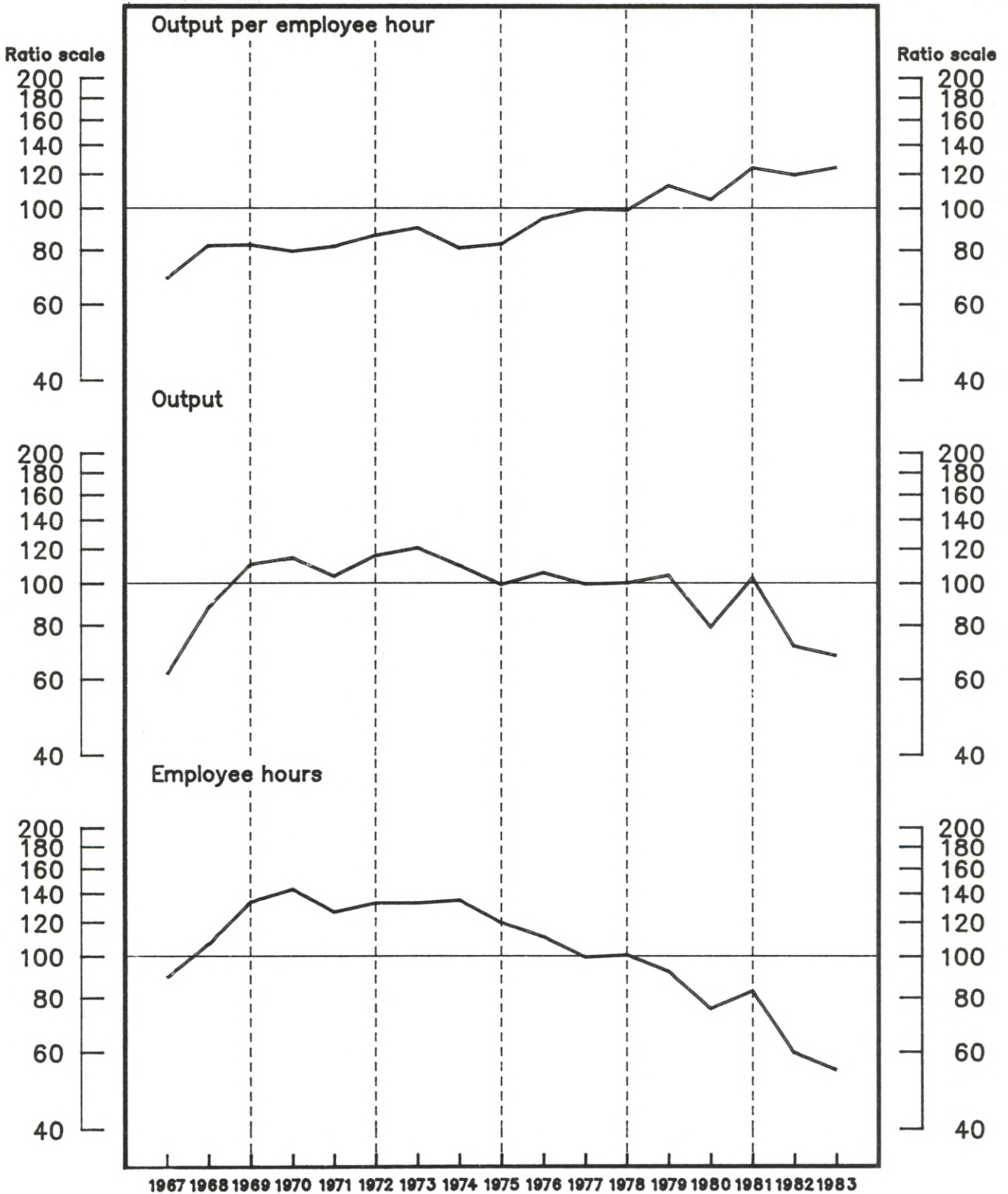
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	82.3	146.5	152.4	122.1	144.6	151.2	118.5
1955 .....	93.7	149.5	158.0	114.9	143.6	151.6	112.3
1956 .....	101.7	159.9	170.3	116.3	151.7	161.5	113.3
1957 .....	99.2	155.3	163.4	121.9	150.3	158.6	118.8
1958 .....	85.8	137.0	140.2	123.8	134.7	138.1	120.8
1959 .....	71.2	120.8	122.6	113.1	120.6	123.2	110.4
1960 .....	92.4	140.6	146.1	117.5	135.9	141.4	114.6
1961 .....	93.8	136.5	141.5	115.5	130.8	135.5	112.8
1962 .....	98.5	135.0	140.3	112.3	129.7	134.9	109.2
1963 .....	97.5	130.5	136.8	104.9	126.7	133.0	102.1
1964 .....	102.4	131.9	138.7	103.4	129.3	136.8	100.1
1965 .....	108.1	135.1	142.7	103.3	130.0	137.8	100.3
1966 .....	111.2	140.7	148.7	107.3	134.1	141.6	104.8
1967 .....	76.1	114.3	113.6	117.4	110.9	109.9	114.7
1968 .....	100.5	128.1	133.0	108.0	124.3	129.8	102.5
1969 .....	122.1	151.3	160.1	114.7	146.5	155.2	112.3
1970 .....	122.4	156.7	164.0	126.8	151.4	158.4	124.4
1971 .....	111.3	136.6	139.3	125.4	134.1	136.6	124.4
1972 .....	120.2	132.2	138.6	105.4	130.2	135.9	107.3
1973 .....	122.8	129.6	134.2	110.7	129.2	133.5	112.3
1974 .....	112.0	130.2	132.0	122.7	128.2	129.1	124.4
1975 .....	100.1	117.4	115.8	124.1	116.9	114.8	124.4
1976 .....	106.6	111.0	110.8	112.1	110.4	109.9	112.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.7	103.3	104.1	100.0	102.0	102.5	100.0
1979 .....	105.1	98.7	100.0	93.3	98.5	100.0	92.7
1980 .....	82.2	79.3	77.5	86.7	81.2	80.1	85.4
1981 .....	98.3	82.9	81.0	90.7	83.2	81.4	90.2
1982 .....	72.6	59.6	57.9	66.7	58.4	56.5	65.9
1983 <sup>1</sup> .....	70.4	53.5	52.2	58.7	51.5	49.7	58.5
Average annual percent change:							
1947-83 .....	.4	-2.0	-2.3	-.7	-1.8	-2.1	-.6
1978-83 .....	-7.3	-12.7	-13.4	-9.8	-13.2	-14.1	-9.9

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 75. Primary copper (SIC 3331): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 146. Primary copper (SIC 3331): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	58.1	55.6	72.4	60.1	57.6	74.2
1955 .....	68.6	64.9	92.6	72.9	69.3	94.3
1956 .....	69.9	65.2	103.7	75.6	70.8	106.1
1957 .....	69.2	64.9	99.3	73.0	68.5	101.5
1958 .....	65.1	62.6	79.5	67.1	64.4	81.1
1959 .....	61.4	60.1	68.0	59.2	57.2	69.4
1960 .....	68.4	64.6	92.5	70.1	66.1	94.3
1961 .....	69.7	67.4	82.7	72.3	69.9	84.2
1962 .....	75.7	73.0	91.2	79.0	76.2	93.4
1963 .....	75.4	71.7	98.3	78.8	75.0	100.7
1964 .....	80.2	76.4	103.0	81.9	77.7	105.8
1965 .....	81.9	76.9	116.3	86.2	80.9	119.0
1966 .....	79.9	75.9	104.7	84.9	80.9	106.7
1967 .....	69.0	70.4	63.3	69.9	71.3	64.5
1968 .....	82.3	79.9	94.7	84.0	80.8	100.6
1969 .....	82.6	78.4	108.7	85.1	80.6	111.1
1970 .....	79.8	76.6	97.9	83.6	80.7	99.1
1971 .....	81.9	80.7	87.2	82.8	81.9	86.9
1972 .....	87.0	83.4	107.0	88.5	85.6	103.8
1973 .....	90.6	87.5	107.1	93.3	91.0	104.5
1974 .....	81.3	81.5	80.5	82.5	83.5	78.8
1975 .....	83.0	85.3	74.0	84.4	87.5	73.4
1976 .....	95.2	96.6	88.7	97.2	99.5	88.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.4	98.2	105.1	101.4	100.6	104.8
1979 .....	113.3	111.3	123.6	115.4	113.3	124.8
1980 .....	105.3	109.6	89.6	101.5	104.5	90.7
1981 .....	124.4	126.3	116.3	126.8	129.2	117.7
1982 .....	119.9	123.2	106.5	123.8	128.9	105.6
1983 <sup>2</sup> .....	124.6	129.1	108.4	131.6	139.1	106.7
Average annual percent change:						
1947-83 .....	2.0	2.3	.5	1.8	2.1	.4
1978-83 .....	4.3	5.3	-.1	5.1	6.5	-.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 147. Primary copper (SIC 3331): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	67.4	116.1	121.2	93.1	112.1	117.1	90.8
1955 .....	79.2	115.4	122.1	85.5	108.6	114.3	84.0
1956 .....	87.2	124.7	133.7	84.1	115.3	123.1	82.2
1957 .....	83.9	121.2	129.3	84.5	114.9	122.5	82.7
1958 .....	75.4	115.8	120.4	94.9	112.4	117.0	93.0
1959 .....	59.4	96.8	98.9	87.3	100.4	103.8	85.6
1960 .....	86.3	126.1	133.5	93.3	123.1	130.6	91.5
1961 .....	85.0	121.9	126.1	102.8	117.6	121.6	100.9
1962 .....	92.0	121.5	126.1	100.9	116.5	120.7	98.5
1963 .....	90.0	119.3	125.5	91.6	114.2	120.0	89.4
1964 .....	93.1	116.1	121.9	90.4	113.7	119.8	88.0
1965 .....	100.0	122.1	130.1	86.0	116.0	123.6	84.0
1966 .....	102.4	128.2	135.0	97.8	120.6	126.5	96.0
1967 .....	61.9	89.7	87.9	97.8	88.6	86.8	96.0
1968 .....	88.5	107.5	110.7	93.5	105.4	109.5	88.0
1969 .....	111.1	134.5	141.7	102.2	130.6	137.8	100.0
1970 .....	114.9	144.0	150.0	117.4	137.5	142.4	115.9
1971 .....	104.3	127.4	129.2	119.6	126.0	127.3	120.0
1972 .....	116.3	133.7	139.4	108.7	131.4	135.9	112.0
1973 .....	121.1	133.7	138.4	113.1	129.8	133.1	115.9
1974 .....	110.3	135.7	135.4	137.0	133.7	132.1	139.9
1975 .....	99.8	120.3	117.0	134.8	118.3	114.1	136.0
1976 .....	106.1	111.5	109.8	119.6	109.2	106.6	120.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.6	101.2	102.4	95.7	99.2	100.0	96.0
1979 .....	104.8	92.5	94.2	84.8	90.8	92.5	84.0
1980 .....	79.8	75.8	72.8	89.1	78.6	76.4	88.0
1981 .....	103.6	83.3	82.0	89.1	81.7	80.2	88.0
1982 .....	71.8	59.9	58.3	67.4	58.0	55.7	68.0
1983 <sup>1</sup> .....	68.3	54.8	52.9	63.0	51.9	49.1	64.0
Average annual percent change:							
1947-83 .....	1.1	-1.0	-1.3	.6	-.7	-1.0	.7
1978-83 .....	-7.7	-11.5	-12.4	-7.6	-12.2	-13.4	-7.3

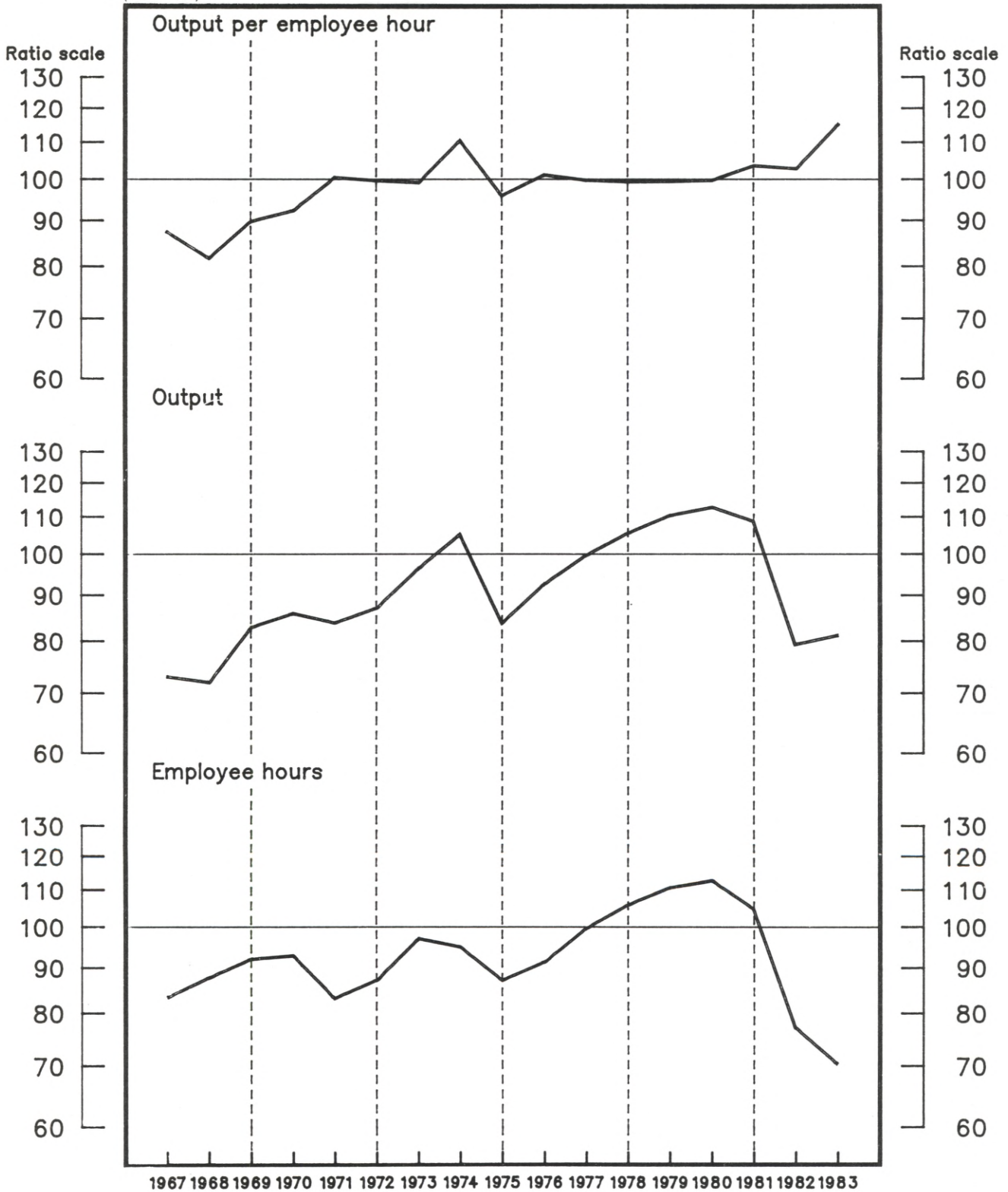
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 76. Primary aluminum (SIC 3334): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 148. Primary aluminum (SIC 3334): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	45.3	43.8	53.0	47.2	45.7	54.1
1955 .....	50.3	48.9	57.1	52.0	50.7	58.1
1956 .....	51.6	50.9	54.3	52.7	52.1	55.3
1957 .....	51.9	51.8	52.0	53.1	53.3	52.9
1958 .....	57.8	59.2	52.1	59.5	61.4	53.0
1959 .....	68.6	68.2	70.6	71.5	71.4	71.9
1960 .....	71.7	71.9	70.5	73.9	74.5	71.7
1961 .....	74.7	75.9	70.0	76.7	78.5	71.1
1962 .....	78.4	78.5	77.2	80.1	80.5	78.9
1963 .....	81.0	80.9	81.1	82.6	82.6	82.6
1964 .....	83.4	81.8	90.0	81.3	78.8	92.2
1965 .....	85.4	84.1	90.7	86.0	84.4	92.4
1966 .....	88.3	87.3	93.0	90.1	89.2	94.5
1967 .....	87.6	86.7	91.0	88.0	86.9	92.3
1968 .....	81.9	82.0	81.2	82.5	81.8	85.3
1969 .....	90.0	89.0	94.5	91.5	90.2	96.4
1970 .....	92.5	92.2	94.0	92.3	91.7	94.2
1971 .....	100.7	101.7	96.7	99.3	100.2	95.6
1972 .....	99.9	101.3	94.4	97.5	99.5	90.5
1973 .....	99.4	97.8	106.6	99.2	98.0	103.9
1974 .....	110.8	109.1	118.8	109.0	107.4	115.4
1975 .....	96.2	100.1	82.6	95.1	99.4	81.3
1976 .....	101.4	102.1	98.4	101.1	101.9	98.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.6	98.6	103.8	101.9	101.3	104.0
1979 .....	99.7	99.2	102.1	100.5	100.2	101.9
1980 .....	100.0	102.3	91.6	98.5	100.3	92.3
1981 .....	103.8	107.6	90.4	102.9	106.7	90.3
1982 .....	103.0	112.0	76.7	99.3	107.3	76.9
1983 <sup>2</sup> .....	115.5	122.6	92.6	112.4	119.0	92.6
Average annual percent change:						
1947-83 .....	3.2	3.4	2.3	3.0	3.1	2.2
1978-83 .....	2.5	4.4	-4.0	1.4	3.1	-4.0

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 149. Primary aluminum (SIC 3334): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	34.0	75.1	77.7	64.1	72.0	74.4	62.9
1955 .....	36.4	72.4	74.5	63.7	70.0	71.8	62.7
1956 .....	38.9	75.4	76.4	71.6	73.8	74.7	70.3
1957 .....	38.1	73.4	73.5	73.3	71.7	71.5	72.0
1958 .....	36.1	62.5	61.0	69.3	60.7	58.8	68.1
1959 .....	45.0	65.6	66.0	63.7	62.9	63.0	62.6
1960 .....	46.1	64.3	64.1	65.4	62.4	61.9	64.3
1961 .....	43.5	58.2	57.3	62.1	56.7	55.4	61.2
1962 .....	48.2	61.5	61.4	62.4	60.2	59.9	61.1
1963 .....	52.4	64.7	64.8	64.6	63.4	63.4	63.4
1964 .....	57.7	69.2	70.5	64.1	71.0	73.2	62.6
1965 .....	62.1	72.7	73.8	68.5	72.2	73.6	67.2
1966 .....	66.6	75.4	76.3	71.6	73.9	74.7	70.5
1967 .....	73.2	83.6	84.4	80.4	83.2	84.2	79.3
1968 .....	72.1	88.0	87.9	88.8	87.4	88.1	84.5
1969 .....	83.1	92.3	93.4	87.9	90.8	92.1	86.2
1970 .....	86.1	93.1	93.4	91.6	93.3	93.9	91.4
1971 .....	84.0	83.4	82.6	86.9	84.6	83.8	87.9
1972 .....	87.3	87.4	86.2	92.5	89.5	87.7	96.5
1973 .....	96.7	97.3	98.9	90.7	97.5	98.7	93.1
1974 .....	105.5	95.2	96.7	88.8	96.8	98.2	91.4
1975 .....	84.1	87.4	84.0	101.8	88.4	84.6	103.4
1976 .....	92.9	91.6	91.0	94.4	91.9	91.2	94.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.8	106.2	107.3	101.9	103.8	104.4	101.7
1979 .....	110.7	111.0	111.6	108.4	110.1	110.5	108.6
1980 .....	113.0	113.0	110.5	123.4	114.7	112.7	122.4
1981 .....	109.0	105.0	101.3	120.6	105.9	102.2	120.7
1982 .....	79.5	77.2	71.0	103.7	80.1	74.1	103.4
1983 <sup>1</sup> .....	81.4	70.5	66.4	87.9	72.4	68.4	87.9
Average annual percent change:							
1947-83 .....	5.8	2.3	2.1	3.3	2.6	2.4	3.4
1978-83 .....	-6.5	-8.8	-10.4	-2.5	-7.8	-9.3	-2.5

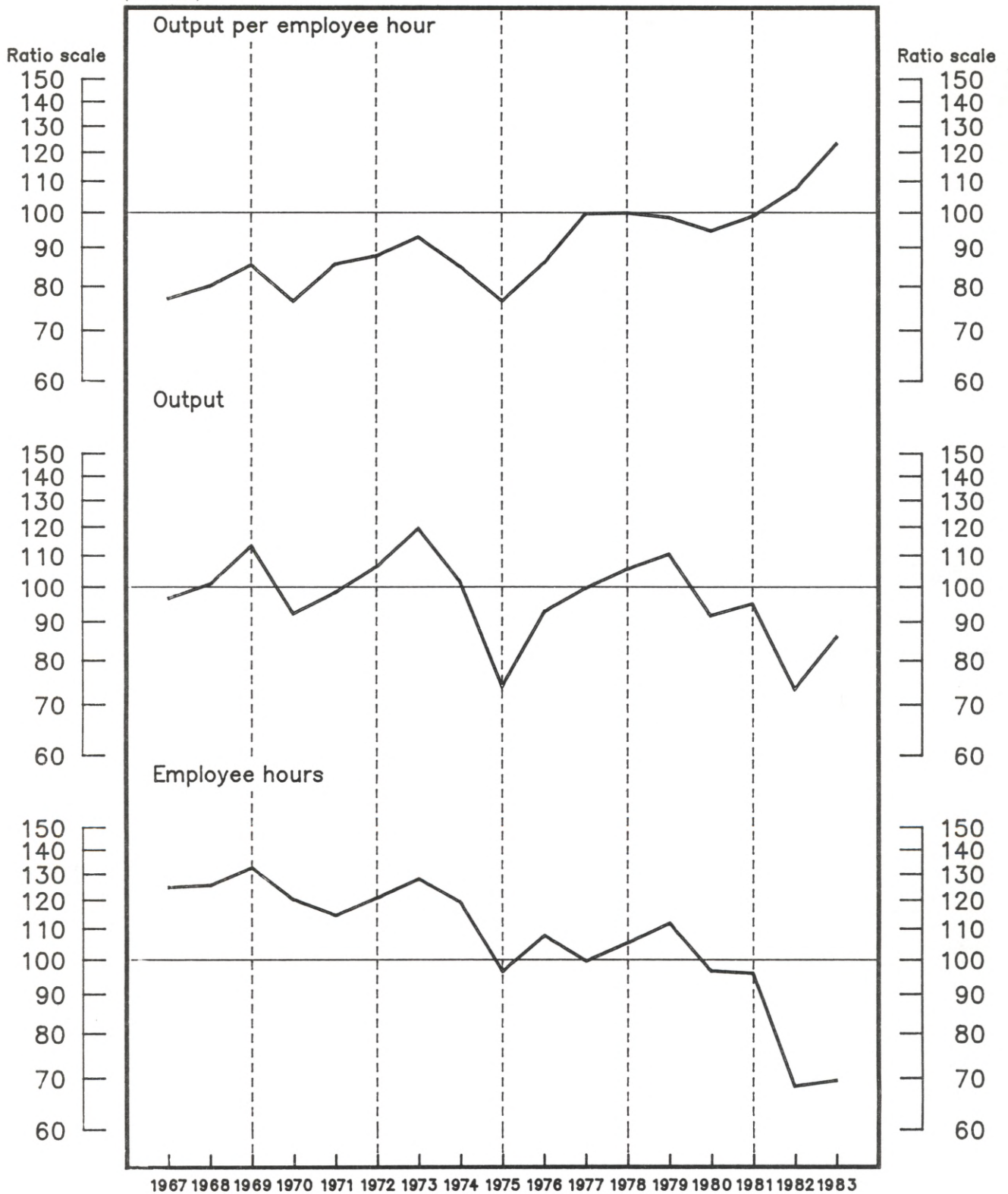
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Mines, U.S. Department of the Interior; and the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 77. Copper rolling and drawing (SIC 3351): Output per hour and related data, 1967-83

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 150. Copper rolling and drawing (SIC 3351): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	54.9	54.7	56.0	53.2	52.2	57.0
1959 .....	60.4	58.5	68.9	61.0	58.8	70.0
1960 .....	58.2	57.0	63.7	56.2	54.2	64.8
1961 .....	63.1	62.9	64.1	62.3	61.5	65.1
1962 .....	67.6	66.9	70.3	67.7	66.6	71.7
1963 .....	74.0	71.3	86.5	74.7	71.3	88.3
1964 .....	81.5	78.6	95.3	83.0	79.4	97.9
1965 .....	86.1	82.6	103.0	87.9	83.9	105.0
1966 .....	91.0	86.6	113.8	94.5	89.7	115.3
1967 .....	77.3	75.9	83.5	75.3	72.9	85.0
1968 .....	80.3	79.5	83.4	79.4	77.3	87.7
1969 .....	85.6	83.9	92.6	86.5	84.2	95.2
1970 .....	76.8	76.9	76.3	74.3	73.8	76.5
1971 .....	85.8	84.9	89.2	83.7	82.7	87.6
1972 .....	88.0	85.3	100.0	88.5	86.5	96.0
1973 .....	93.2	90.0	108.3	94.1	91.2	105.2
1974 .....	85.2	84.2	89.7	84.5	83.7	87.3
1975 .....	76.8	80.4	65.5	72.5	75.2	64.6
1976 .....	86.1	85.6	87.8	85.5	85.1	87.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.2	99.7	102.1	99.6	99.1	101.7
1979 .....	98.8	97.9	102.3	96.9	95.5	102.2
1980 .....	94.9	96.9	88.0	92.9	94.4	88.3
1981 .....	99.2	101.4	91.2	95.7	97.0	91.6
1982 .....	107.6	114.6	87.1	99.6	103.8	87.3
1983 <sup>2</sup> .....	123.6	130.2	103.7	121.2	127.3	103.9
Average annual percent change:						
1958-83 .....	2.3	2.5	1.4	2.2	2.4	1.2
1978-83 .....	3.9	5.4	-1.0	3.2	4.5	-9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Copper Development Association Inc., the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 151. Copper rolling and drawing (SIC 3351): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	68.5	124.7	125.3	122.3	128.8	131.2	120.2
1959 .....	84.0	139.1	143.6	121.9	137.7	142.8	120.0
1960 .....	71.1	122.1	124.8	111.7	126.4	131.2	109.8
1961 .....	78.4	124.2	124.6	122.4	125.9	127.4	120.5
1962 .....	89.1	131.8	133.1	126.7	131.7	133.8	124.2
1963 .....	92.8	125.4	130.1	107.3	124.3	130.1	105.1
1964 .....	104.7	128.4	133.2	109.9	126.1	131.8	107.0
1965 .....	110.9	128.8	134.2	107.7	126.1	132.2	105.6
1966 .....	123.4	135.6	142.5	108.4	130.6	137.5	107.0
1967 .....	96.9	125.3	127.7	116.0	128.7	133.0	114.0
1968 .....	101.2	126.1	127.3	121.3	127.4	130.9	115.4
1969 .....	113.8	133.0	135.6	122.9	131.5	135.1	119.6
1970 .....	92.6	120.6	120.4	121.3	124.6	125.5	121.1
1971 .....	98.7	115.0	116.2	110.7	117.9	119.4	112.7
1972 .....	106.8	121.4	125.2	106.8	120.7	123.5	111.2
1973 .....	119.9	128.6	133.2	110.7	127.4	131.4	114.0
1974 .....	102.0	119.7	121.2	113.7	120.7	121.8	116.9
1975 .....	74.5	97.0	92.7	113.7	102.8	99.1	115.4
1976 .....	93.1	108.1	108.7	106.0	108.9	109.4	107.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.0	105.8	106.3	103.8	106.4	107.0	104.2
1979 .....	110.9	112.3	113.3	108.4	114.4	116.1	108.5
1980 .....	92.0	96.9	94.9	104.6	99.0	97.5	104.2
1981 .....	95.4	96.2	94.1	104.6	99.7	98.3	104.2
1982 .....	73.8	68.6	64.4	84.7	74.1	71.1	84.5
1983 <sup>1</sup> .....	86.3	69.8	66.3	83.2	71.2	67.8	83.1
Average annual percent change:							
1958-83 .....	.4	-1.8	-2.1	-9	-1.7	-2.0	-8
1978-83 .....	-6.1	-9.7	-11.0	-5.1	-9.0	-10.1	-5.2

<sup>1</sup> Preliminary.

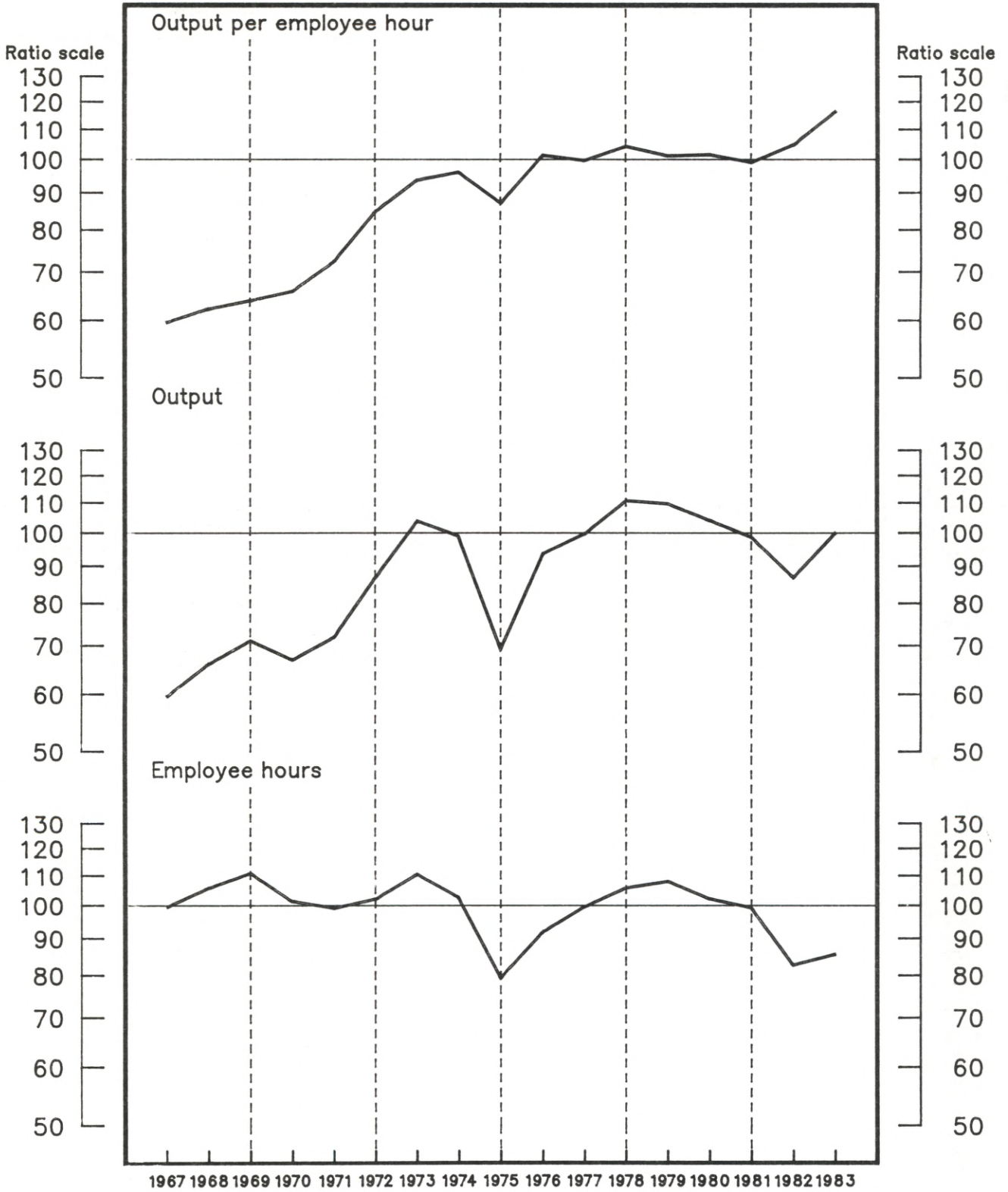
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Copper Development Association Inc.,

the Bureau of the Census, and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 78. Aluminum rolling and drawing (SIC 3353, 3354, 3355): Output per hour and related data, 1967-83

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 152. Aluminum rolling and drawing (SIC 3353, 3354, 3355): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	38.1	38.9	34.8	38.6	39.5	35.5
1959 .....	41.1	40.6	42.9	42.5	42.2	43.7
1960 .....	39.0	39.7	36.1	40.1	41.0	36.7
1961 .....	42.8	43.3	40.8	44.2	45.0	41.4
1962 .....	46.5	47.0	44.7	47.8	48.3	45.7
1963 .....	51.5	51.8	49.9	52.9	53.5	51.1
1964 .....	54.8	55.2	53.4	56.7	57.1	54.8
1965 .....	60.0	60.0	60.5	63.1	63.5	61.7
1966 .....	60.4	59.6	64.1	63.4	63.0	65.2
1967 .....	59.8	60.0	58.7	60.8	61.0	59.7
1968 .....	62.4	63.5	58.1	62.8	63.3	61.0
1969 .....	64.1	64.8	60.9	65.5	66.3	62.5
1970 .....	66.0	68.6	56.5	64.6	67.0	56.9
1971 .....	72.5	74.9	63.7	70.0	72.1	62.8
1972 .....	85.1	84.7	86.4	85.8	86.5	83.3
1973 .....	94.0	92.8	99.5	95.5	95.2	96.7
1974 .....	96.4	96.1	97.3	94.9	94.9	94.8
1975 .....	87.5	92.5	70.9	82.6	86.8	69.8
1976 .....	101.7	102.7	97.6	100.3	101.2	96.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.6	104.9	103.3	103.2	103.3	103.1
1979 .....	101.5	102.4	97.6	101.4	102.4	97.8
1980 .....	101.9	105.6	88.6	99.9	103.2	89.1
1981 .....	99.4	103.3	85.3	97.7	101.4	85.6
1982 .....	105.1	111.2	85.1	100.3	105.2	85.2
1983 <sup>2</sup> .....	116.8	122.0	98.2	115.4	121.0	98.0
Average annual percent change:						
1958-83 .....	4.6	4.8	4.2	4.4	4.5	4.1
1978-83 .....	1.8	2.8	-2.0	1.4	2.5	-2.0

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 153. Aluminum rolling and drawing (SIC 3353, 3354, 3355): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	28.9	75.8	74.2	83.0	74.9	73.2	81.5
1959 .....	37.6	91.5	92.5	87.6	88.4	89.1	86.1
1960 .....	33.7	86.5	84.8	93.4	84.1	82.1	91.8
1961 .....	36.8	85.9	85.0	90.2	83.2	81.8	88.8
1962 .....	41.5	89.2	88.3	92.9	86.9	85.9	90.9
1963 .....	45.9	89.1	88.6	91.9	86.7	85.8	89.9
1964 .....	50.8	92.7	92.1	95.1	89.6	88.9	92.7
1965 .....	58.0	96.6	96.7	95.9	91.9	91.4	94.0
1966 .....	64.2	106.3	107.8	100.2	101.2	101.9	98.5
1967 .....	59.7	99.9	99.5	101.7	98.2	97.8	100.0
1968 .....	66.2	106.1	104.3	114.0	105.4	104.6	108.6
1969 .....	71.3	111.3	110.0	117.0	108.9	107.6	114.1
1970 .....	67.1	101.7	97.8	118.7	103.8	100.2	118.0
1971 .....	72.1	99.5	96.3	113.1	103.0	100.0	114.8
1972 .....	87.2	102.5	102.9	100.9	101.6	100.8	104.7
1973 .....	104.2	110.9	112.3	104.7	109.1	109.4	107.8
1974 .....	99.3	103.0	103.3	102.1	104.6	104.6	104.7
1975 .....	69.8	79.8	75.5	98.4	84.5	80.4	100.0
1976 .....	93.9	92.3	91.4	96.2	93.6	92.6	96.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	111.1	106.2	105.9	107.6	107.7	107.6	107.8
1979 .....	110.0	108.4	107.4	112.7	108.5	107.4	112.5
1980 .....	104.4	102.5	98.9	117.8	104.5	101.2	117.2
1981 .....	99.0	99.6	95.8	116.1	101.3	97.6	115.6
1982 .....	87.2	83.0	78.4	102.5	86.9	82.9	102.3
1983 <sup>1</sup> .....	100.3	85.9	82.2	102.1	86.9	82.9	102.3
Average annual percent change:							
1958-83 .....	5.0	.4	.3	.8	.7	.6	.9
1978-83 .....	-3.5	-5.3	-6.2	-1.6	-4.9	-5.9	-1.6

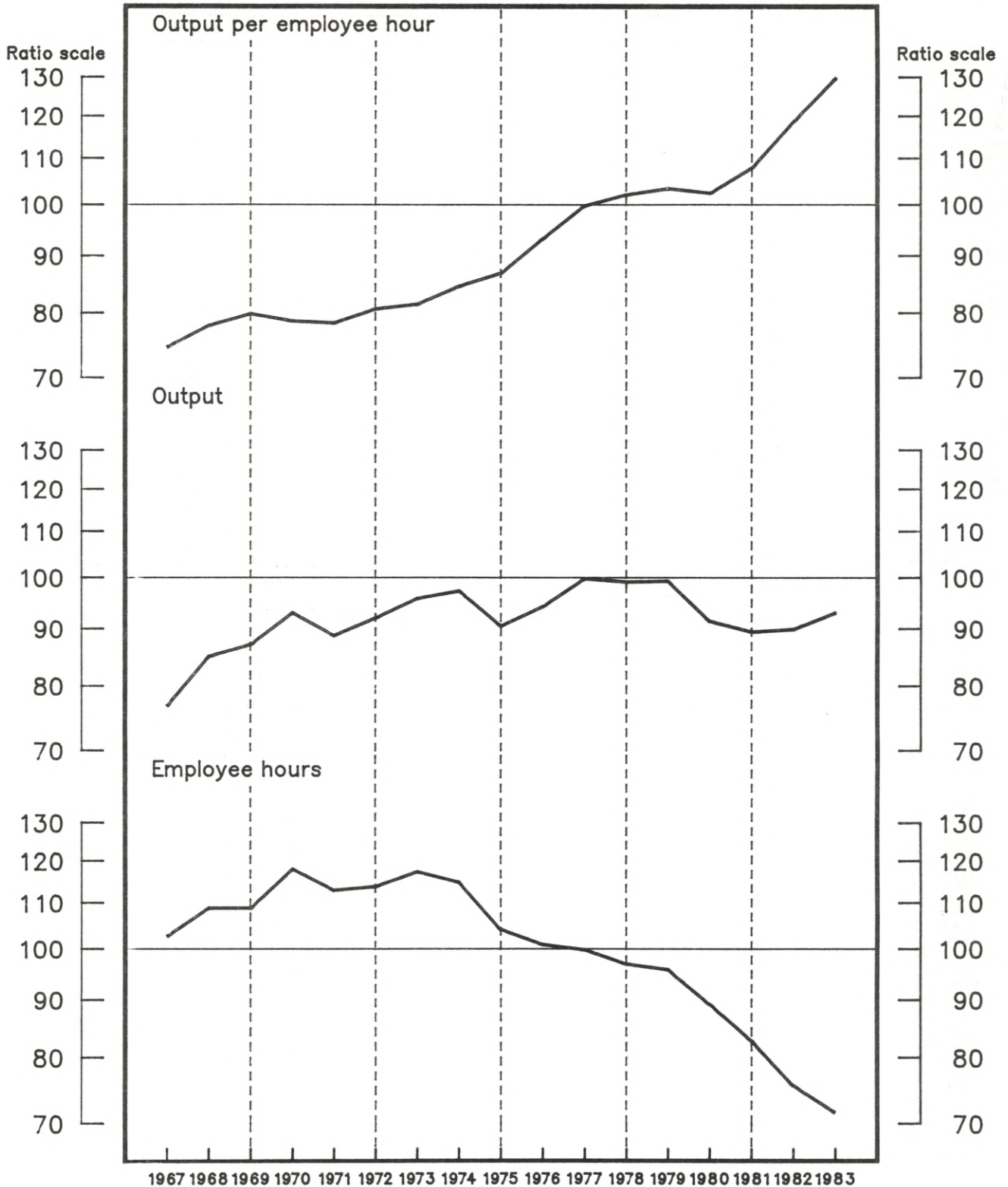
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census. Employment and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 79. Metal cans (SIC 3411): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 154. Metal cans (SIC 3411): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	54.7	53.5	63.5	53.2	51.4	65.3
1955	58.0	56.6	67.7	56.5	54.6	69.2
1956	60.5	58.8	72.4	59.6	57.4	74.3
1957	59.4	58.1	68.3	57.9	56.0	70.0
1958	62.3	61.2	69.5	59.9	58.1	71.3
1959	64.5	63.0	75.6	64.1	62.0	77.3
1960	66.1	64.6	76.2	65.0	63.0	77.8
1961	69.7	68.1	81.1	68.9	66.8	82.7
1962	67.4	65.6	80.9	68.4	66.2	82.7
1963	67.0	65.4	78.9	67.2	65.1	80.6
1964	68.5	66.9	79.1	69.7	67.9	81.1
1965	70.3	69.5	75.6	73.4	72.7	77.2
1966	72.2	70.1	87.6	72.5	70.0	89.1
1967	74.7	72.6	90.8	76.3	73.8	92.3
1968	78.1	75.9	94.9	80.0	77.6	95.1
1969	80.0	78.2	93.4	80.2	77.7	96.3
1970	78.8	77.5	87.6	79.5	77.3	93.2
1971	78.5	77.7	83.8	77.4	75.9	86.1
1972	80.8	79.3	91.3	80.5	78.9	90.3
1973	81.6	79.8	95.0	82.3	80.1	96.0
1974	84.7	84.2	87.6	84.4	83.4	90.0
1975	87.0	87.9	81.5	86.5	87.2	83.0
1976	93.4	93.9	90.3	92.5	92.5	91.5
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.3	102.6	100.4	100.8	100.9	100.3
1979	103.6	104.1	101.2	103.3	103.6	101.6
1980	102.6	104.0	94.8	102.2	103.6	95.6
1981	108.1	110.5	95.5	106.5	108.9	95.5
1982	119.0	120.9	109.2	113.5	114.2	109.5
1983 <sup>2</sup>	130.0	131.5	121.4	123.0	123.4	120.9
Average annual percent change:						
1947-83	2.5	2.6	1.8	2.5	2.7	1.7
1978-83	4.9	5.1	3.4	3.8	3.9	3.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 155. Metal cans (SIC 3411): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

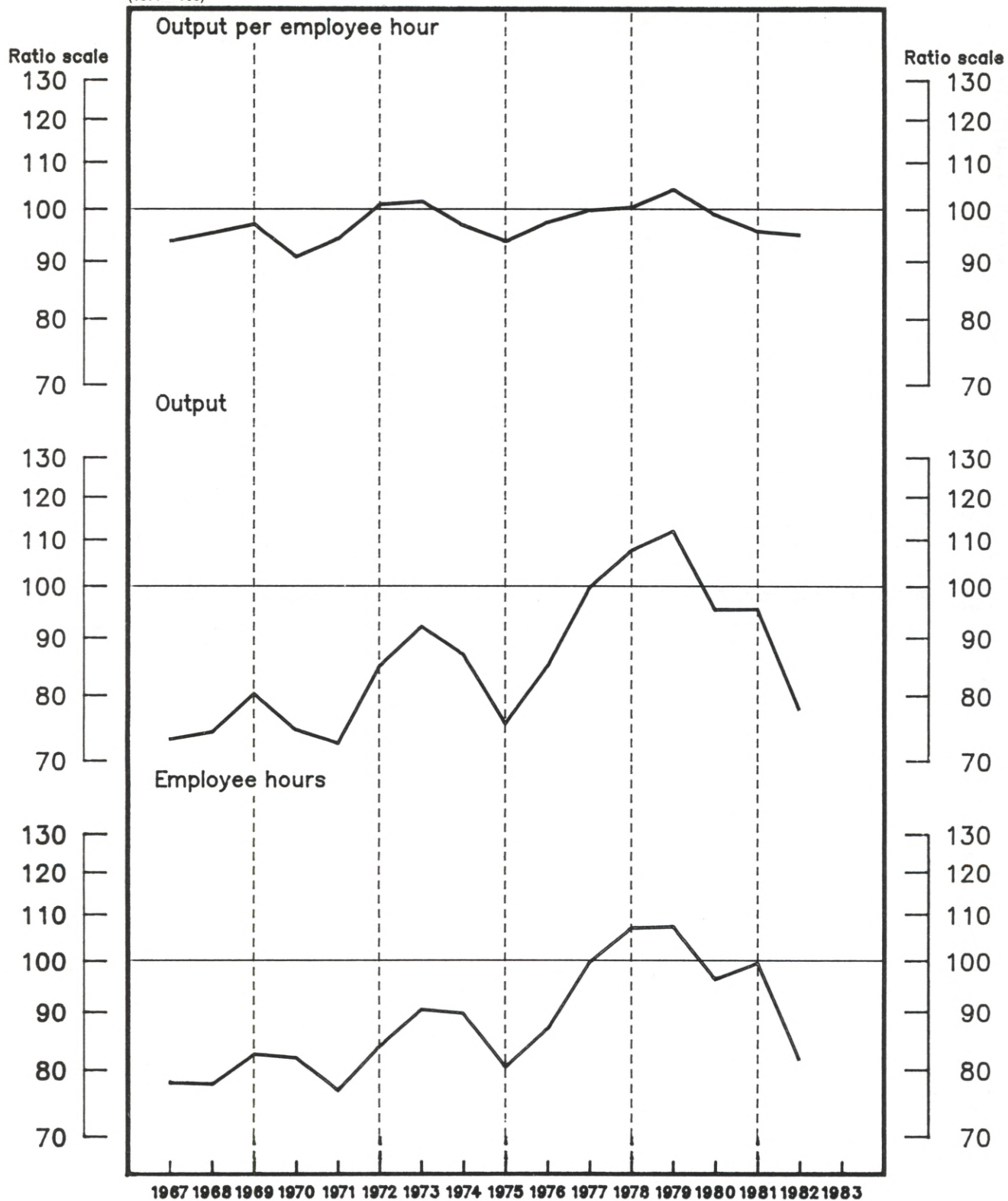
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	49.1	89.7	91.7	77.3	92.3	95.6	75.2
1955	51.5	88.8	91.0	76.1	91.2	94.4	74.4
1956	54.9	90.8	93.3	75.8	92.1	95.6	73.9
1957	53.0	89.2	91.2	77.6	91.6	94.6	75.7
1958	54.3	87.1	88.7	78.1	90.7	93.4	76.2
1959	57.6	89.3	91.5	76.2	89.9	92.9	74.5
1960	58.2	88.1	90.1	76.4	89.5	92.4	74.8
1961	61.5	88.2	90.3	75.8	89.2	92.1	74.4
1962	60.7	90.0	92.6	75.0	88.7	91.7	73.4
1963	59.8	89.2	91.5	75.8	89.0	91.9	74.2
1964	64.2	93.7	95.9	81.2	92.1	94.6	79.2
1965	67.3	95.7	96.9	89.0	91.7	92.6	87.2
1966	71.2	98.6	101.5	81.3	98.2	101.7	79.9
1967	76.9	102.9	105.9	84.7	100.8	104.2	83.3
1968	85.2	109.1	112.2	89.8	106.5	109.8	89.6
1969	87.3	109.1	111.7	93.5	108.9	112.3	90.7
1970	93.2	118.3	120.3	106.4	117.2	120.5	100.0
1971	88.9	113.2	114.4	106.1	114.8	117.1	103.2
1972	92.2	114.1	116.3	101.0	114.5	116.9	102.1
1973	96.0	117.6	120.3	101.1	116.7	119.9	100.0
1974	97.5	115.1	115.8	111.3	115.5	116.9	108.3
1975	90.7	104.3	103.2	111.3	104.8	104.0	109.3
1976	94.4	101.1	100.5	104.5	102.1	102.0	103.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	99.3	97.1	96.8	98.9	98.5	98.4	99.0
1979	99.5	96.0	95.6	98.3	96.3	96.0	97.9
1980	91.6	89.3	88.1	96.6	89.6	88.4	95.8
1981	89.6	82.9	81.1	93.8	84.1	82.3	93.8
1982	90.1	75.7	74.5	82.5	79.4	78.9	82.3
1983 <sup>1</sup>	93.2	71.7	70.9	76.8	75.8	75.5	77.1
Average annual percent change:							
1947-83	2.9	.4	.3	1.1	.4	.2	1.2
1978-83	-1.8	-6.4	-6.6	-5.1	-5.4	-5.5	-5.0

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 80. Hand and edge tools (SIC 3423): Output per hour and related data, 1967-82  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 156. Hand and edge tools (SIC 3423): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	74.0	75.2	69.7	73.2	73.7	71.2
1959 .....	79.0	78.8	79.9	81.0	80.9	81.7
1960 .....	77.0	77.5	74.5	78.7	79.4	76.3
1961 .....	79.8	81.3	74.6	81.8	83.5	76.0
1962 .....	81.5	82.2	79.1	84.8	86.0	80.9
1963 .....	84.0	85.1	80.1	84.9	85.7	82.1
1964 .....	86.1	87.0	82.9	88.4	89.4	85.1
1965 .....	91.2	91.1	91.3	93.5	93.5	93.4
1966 .....	88.8	87.6	93.8	93.4	93.0	95.5
1967 .....	93.9	92.2	101.0	95.9	94.2	102.8
1968 .....	95.5	94.2	100.9	97.1	96.0	101.5
1969 .....	97.2	96.3	101.0	99.1	97.9	104.1
1970 .....	91.0	90.8	92.0	93.1	91.9	98.0
1971 .....	94.4	93.6	98.0	96.0	94.8	100.6
1972 .....	101.2	99.9	106.2	101.8	100.9	104.8
1973 .....	101.8	101.4	103.4	102.7	102.2	104.7
1974 .....	96.9	96.2	99.4	97.4	96.2	102.4
1975 .....	93.9	94.5	91.5	93.7	93.8	93.3
1976 .....	97.6	98.4	94.8	97.0	97.3	96.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.6	98.8	107.8	100.9	99.2	107.8
1979 .....	104.3	105.2	100.7	103.1	103.7	101.1
1980 .....	99.0	102.8	86.2	95.1	97.6	86.9
1981 .....	95.8	98.1	88.0	95.0	97.0	88.6
1982 <sup>2</sup> .....	95.1	102.6	73.8	91.0	97.0	74.1
Average annual percent change:						
1958-82 .....	1.1	1.2	.9	.9	1.0	.8
1978-82 .....	-2.0	.1	-8.5	-2.8	-1.1	-8.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 157. Hand and edge tools (SIC 3423): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	47.2	63.8	62.8	67.7	64.5	64.0	66.3
1959 .....	55.0	69.6	69.8	68.8	67.9	68.0	67.3
1960 .....	52.1	67.7	67.2	69.9	66.2	65.6	68.3
1961 .....	55.7	69.8	68.5	74.7	68.1	66.7	73.3
1962 .....	60.8	74.6	74.0	76.9	71.7	70.7	75.2
1963 .....	56.9	67.7	66.9	71.0	67.0	66.4	69.3
1964 .....	61.5	71.4	70.7	74.2	69.6	68.8	72.3
1965 .....	70.2	77.0	77.1	76.9	75.1	75.1	75.2
1966 .....	75.6	85.1	86.3	80.6	80.9	81.3	79.2
1967 .....	73.3	78.1	79.5	72.6	76.4	77.8	71.3
1968 .....	74.4	77.9	79.0	73.7	76.6	77.5	73.3
1969 .....	80.4	82.7	83.5	79.6	81.1	82.1	77.2
1970 .....	74.7	82.1	82.3	81.2	80.2	81.3	76.2
1971 .....	72.7	77.0	77.7	74.2	75.7	76.7	72.3
1972 .....	85.1	84.1	85.2	80.1	83.6	84.3	81.2
1973 .....	92.2	90.6	90.9	89.2	89.8	90.2	88.1
1974 .....	87.1	89.9	90.5	87.6	89.4	90.5	85.1
1975 .....	75.8	80.7	80.2	82.8	80.9	80.8	81.2
1976 .....	85.1	87.2	86.5	89.8	87.7	87.5	88.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.8	107.2	109.1	100.0	106.8	108.7	100.0
1979 .....	112.1	107.5	106.6	111.3	108.7	108.1	110.9
1980 .....	95.5	96.5	92.9	110.8	100.4	97.8	109.9
1981 .....	95.6	99.8	97.5	108.6	100.6	98.6	107.9
1982 <sup>1</sup> .....	77.8	81.8	75.8	105.4	85.5	80.2	105.0
Average annual percent change:							
1958-82 .....	2.9	1.7	1.6	2.0	1.9	1.9	2.1
1978-82 .....	-7.8	-6.0	-7.9	.8	-5.1	-6.8	.7

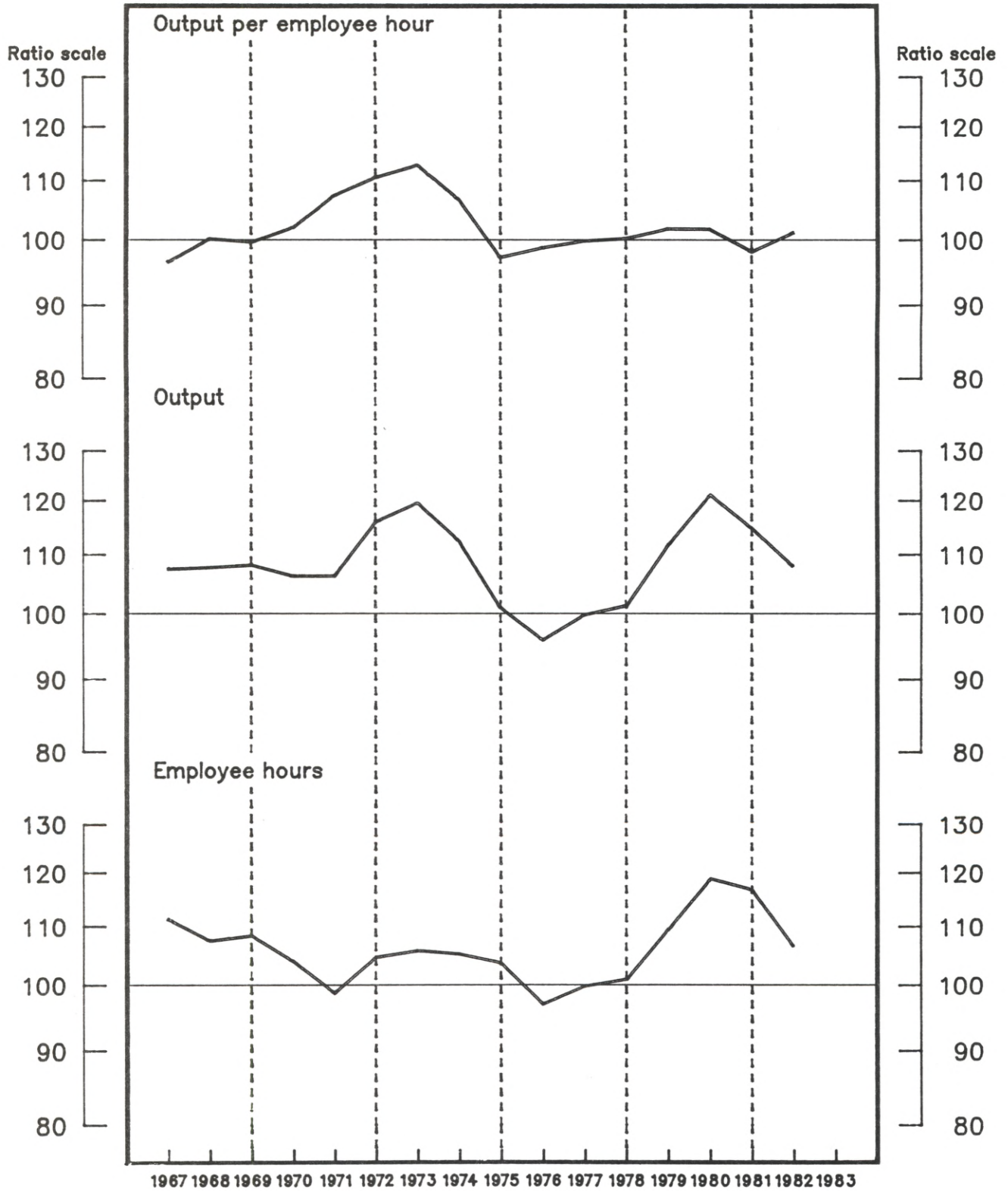
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 81. Fabricated structural metal (SIC 3441): Output per hour and related data, 1967-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 158. Fabricated structural metal (SIC 3441): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	80.2	79.3	83.2	81.3	80.0	85.2
1959 .....	78.6	79.7	75.2	79.7	80.7	76.8
1960 .....	81.1	81.0	81.1	84.7	85.3	82.9
1961 .....	85.2	84.4	87.8	87.3	86.3	89.4
1962 .....	88.5	86.7	94.0	91.6	90.1	95.9
1963 .....	91.9	90.4	95.8	93.4	91.8	97.8
1964 .....	92.9	91.5	97.7	96.5	95.1	100.2
1965 .....	97.1	94.9	103.9	99.5	97.3	106.2
1966 .....	95.0	92.3	103.4	97.0	94.4	105.1
1967 .....	96.6	94.8	102.3	99.4	97.8	104.1
1968 .....	100.3	98.5	105.9	102.7	101.3	106.2
1969 .....	99.8	99.0	102.2	102.9	102.0	105.5
1970 .....	102.2	102.2	102.0	105.8	104.6	108.5
1971 .....	107.6	106.9	109.5	109.7	108.7	112.8
1972 .....	110.8	109.8	113.3	110.6	109.9	112.3
1973 .....	113.0	112.7	113.8	112.8	111.9	115.3
1974 .....	106.9	106.0	109.7	108.0	106.3	112.6
1975 .....	97.4	96.9	98.6	97.1	95.8	100.7
1976 .....	98.9	98.7	99.0	98.7	98.1	100.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.4	99.3	103.9	100.2	98.9	103.9
1979 .....	102.0	100.2	107.5	101.9	99.9	107.8
1980 .....	101.9	99.7	109.2	102.2	99.6	110.1
1981 .....	98.3	95.6	107.2	98.7	95.8	107.6
1982 <sup>2</sup> .....	101.4	101.8	100.1	102.5	103.1	100.6
Average annual percent change:						
1958-82 .....	1.0	1.0	1.0	.8	.8	.9
1978-82 .....	-.2	( <sup>3</sup> )	-.8	.1	.4	-.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 159. Fabricated structural metal (SIC 3441): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	74.7	93.1	94.2	89.8	91.9	93.4	87.7
1959 .....	66.3	84.4	83.2	88.2	83.2	82.2	86.3
1960 .....	74.9	92.4	92.5	92.3	88.4	87.8	90.4
1961 .....	74.0	86.9	87.7	84.3	84.8	85.7	82.8
1962 .....	73.1	82.6	84.3	77.8	79.8	81.1	76.2
1963 .....	80.3	87.4	88.8	83.8	86.0	87.5	82.1
1964 .....	85.6	92.1	93.6	87.6	88.7	90.0	85.4
1965 .....	93.2	96.0	98.2	89.7	93.7	95.8	87.8
1966 .....	95.2	100.2	103.1	92.1	98.1	100.9	90.6
1967 .....	107.6	111.4	113.5	105.2	108.2	110.0	103.4
1968 .....	107.9	107.6	109.5	101.9	105.1	106.5	101.6
1969 .....	108.3	108.5	109.4	106.0	105.2	106.2	102.7
1970 .....	106.4	104.1	104.1	104.3	100.6	101.7	98.1
1971 .....	106.4	98.9	99.5	97.2	97.0	97.9	94.3
1972 .....	116.1	104.8	105.7	102.5	105.0	105.6	103.4
1973 .....	119.7	105.9	106.2	105.2	106.1	107.0	103.8
1974 .....	112.6	105.3	106.2	102.9	104.3	105.9	100.0
1975 .....	101.1	103.8	104.3	102.5	104.1	105.5	100.4
1976 .....	96.0	97.1	97.3	97.0	97.3	97.9	95.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.5	101.1	102.2	97.7	101.3	102.6	97.7
1979 .....	111.9	109.7	111.7	104.1	109.8	112.0	103.8
1980 .....	121.3	119.0	121.7	111.1	118.7	121.8	110.2
1981 .....	114.9	116.9	120.2	107.2	116.4	119.9	106.8
1982 <sup>1</sup> .....	108.1	106.6	106.2	108.0	105.5	104.8	107.5
Average annual percent change:							
1958-82 .....	2.0	1.0	1.0	1.0	1.1	1.2	1.1
1978-82 .....	1.5	1.7	1.5	2.3	1.4	1.1	2.2

<sup>1</sup> Preliminary.

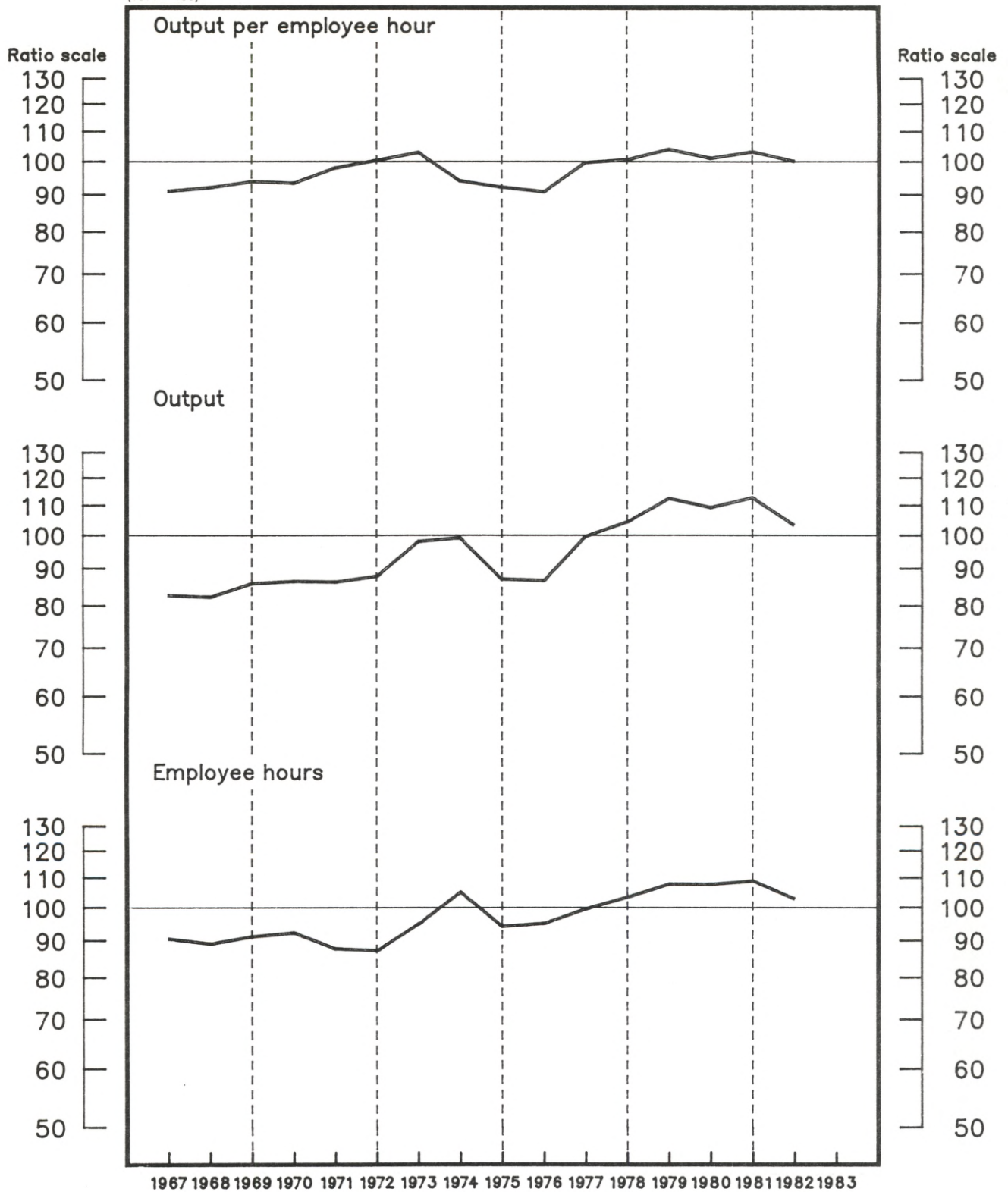
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 82. Valves and pipe fittings (SIC 3494): Output per hour and related data, 1967-82

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 160. Valves and pipe fittings (SIC 3494): Indexes of output per employee hour and output per employee, 1954-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	70.3	63.4	96.4	72.0	64.5	99.0
1955	78.7	70.4	111.2	83.2	74.6	113.6
1956	82.7	73.0	123.0	86.6	76.3	126.4
1957	79.3	73.3	98.9	82.2	76.0	101.1
1958	72.2	69.8	78.9	73.0	70.1	80.8
1959	76.5	73.0	86.7	77.3	73.2	88.7
1960	75.0	73.3	79.6	75.1	72.7	81.4
1961	81.3	80.4	83.5	82.1	80.9	85.0
1962	83.4	82.0	87.3	85.3	83.7	89.1
1963	84.3	81.7	91.7	86.2	83.5	93.5
1964	86.6	83.4	95.9	91.2	88.3	98.6
1965	96.4	93.5	104.7	100.1	97.6	106.9
1966	95.1	91.7	104.7	100.2	97.7	106.5
1967	91.3	89.2	97.0	94.5	92.9	98.6
1968	92.3	90.8	96.5	93.9	92.8	96.7
1969	94.1	92.7	97.8	97.3	95.8	100.9
1970	93.6	95.5	89.4	96.7	97.3	95.2
1971	98.3	99.1	96.4	99.8	100.1	99.2
1972	100.7	100.3	101.4	101.5	102.1	100.3
1973	103.3	102.8	104.2	105.6	105.6	105.5
1974	94.3	92.7	98.3	100.5	100.2	101.3
1975	92.4	95.3	85.8	92.7	95.1	87.6
1976	91.1	92.8	87.1	92.0	93.5	88.5
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.9	100.4	102.1	100.7	100.0	102.2
1979	104.3	104.6	103.5	104.5	104.8	103.9
1980	101.4	103.4	96.9	101.6	103.3	97.7
1981	103.5	106.4	96.8	103.8	106.8	97.3
1982 <sup>2</sup>	100.4	108.3	85.0	98.4	105.3	85.3
Average annual percent change:						
1954-82	1.2	1.7	( <sup>3</sup> )	1.1	1.5	-.1
1978-82	-2	1.7	-4.2	-5	1.2	-4.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 161. Valves and pipe fittings (SIC 3494): Indexes of output, employee hours, and employees, 1954-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	50.9	72.4	80.3	52.8	70.7	78.9	51.4
1955	58.4	74.2	82.9	52.5	70.2	78.3	51.4
1956	64.2	77.6	87.9	52.2	74.1	84.1	50.8
1957	61.9	78.1	84.4	62.6	75.3	81.4	61.2
1958	51.6	71.5	73.9	65.4	70.7	73.6	63.9
1959	54.0	70.6	74.0	62.3	69.9	73.8	60.9
1960	51.8	69.1	70.7	65.1	69.0	71.3	63.6
1961	57.7	71.0	71.8	69.1	70.3	71.3	67.9
1962	63.8	76.5	77.8	73.1	74.8	76.2	71.6
1963	63.8	75.7	78.1	69.6	74.0	76.4	68.2
1964	68.7	79.3	82.4	71.6	75.3	77.8	69.7
1965	81.0	84.0	86.6	77.4	80.9	83.0	75.8
1966	85.0	89.4	92.7	81.2	84.8	87.0	79.8
1967	82.9	90.8	92.9	85.5	87.7	89.2	84.1
1968	82.5	89.4	90.9	85.5	87.9	88.9	85.3
1969	86.1	91.5	92.9	88.0	88.5	89.9	85.3
1970	86.7	92.6	90.8	89.7	89.7	89.1	91.1
1971	86.5	88.0	87.3	89.7	86.7	86.4	87.2
1972	88.1	87.5	87.8	86.9	86.8	86.3	87.8
1973	98.4	95.3	95.7	94.4	93.2	93.2	93.3
1974	99.5	105.5	107.3	101.2	99.0	99.3	98.2
1975	87.3	94.5	91.6	101.8	94.2	91.8	99.7
1976	86.9	95.4	93.6	99.8	94.5	92.9	98.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.7	103.8	104.3	102.5	104.0	104.7	102.4
1979	112.8	108.2	107.8	109.0	107.9	107.6	108.6
1980	109.6	108.1	106.0	113.1	107.9	106.1	112.2
1981	113.1	109.3	106.3	116.8	109.0	105.9	116.2
1982 <sup>1</sup>	103.6	103.2	95.7	121.9	105.3	98.4	121.4
Average annual percent change:							
1954-82	2.9	1.6	1.2	2.9	1.7	1.3	2.9
1978-82	-2	( <sup>2</sup> )	-1.8	4.2	.4	-1.4	4.2

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

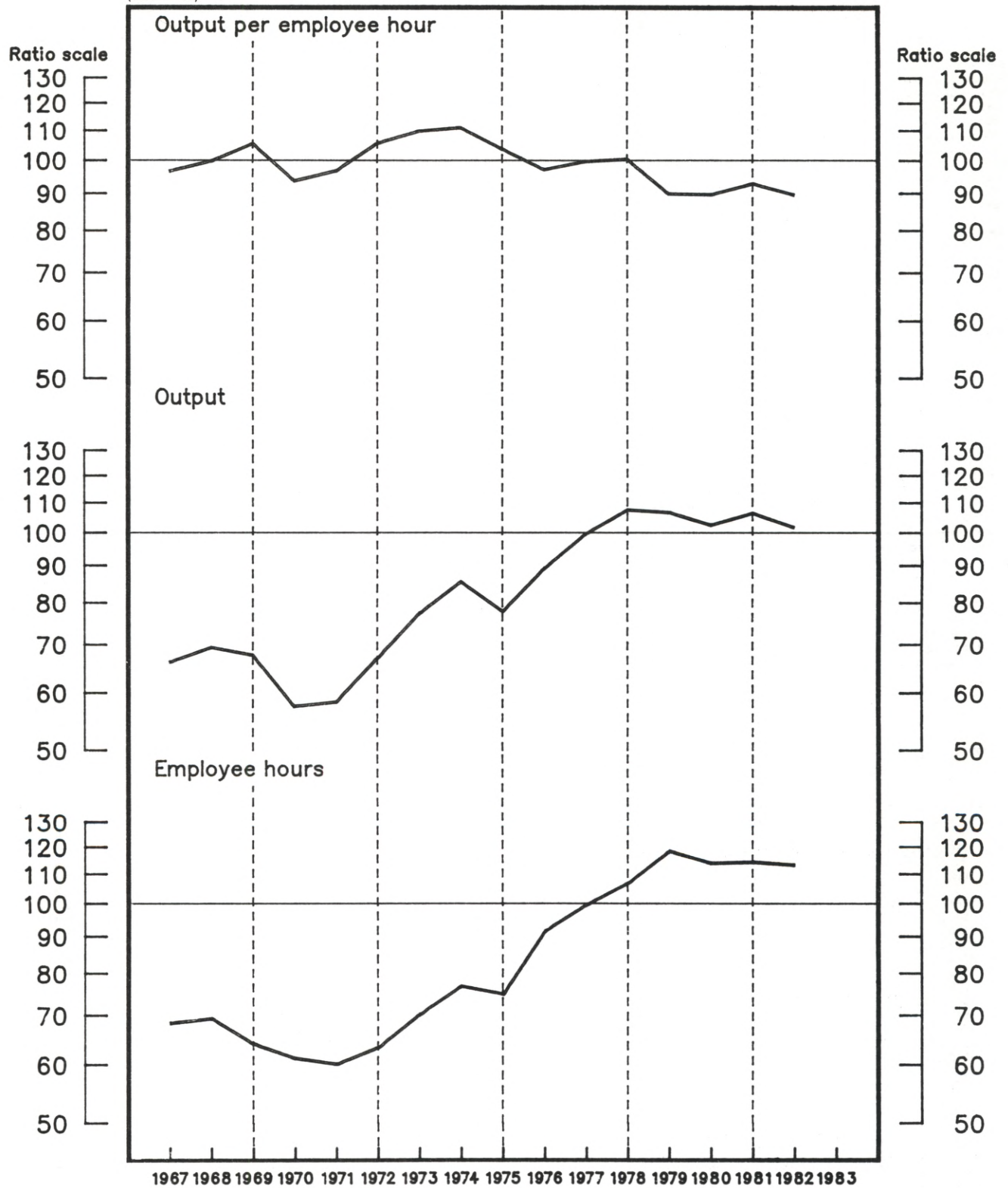
NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 83. Fabricated pipe and fittings (SIC 3498): Output per hour and related data, 1967-82

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 162. Fabricated pipe and fittings (SIC 3498): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	84.9	87.4	77.6	88.7	92.1	79.3
1959 .....	94.7	97.0	87.9	101.3	105.5	90.4
1960 .....	84.9	88.4	75.2	90.4	95.6	77.5
1961 .....	97.5	101.7	85.9	101.9	107.3	87.8
1962 .....	98.5	102.5	87.7	104.7	110.3	89.8
1963 .....	93.0	97.6	80.4	97.6	103.4	82.7
1964 .....	97.3	98.3	93.9	103.0	105.1	96.6
1965 .....	100.9	101.8	98.3	105.1	106.9	100.0
1966 .....	100.3	103.2	92.3	107.3	112.5	93.7
1967 .....	96.9	98.4	92.2	102.9	106.1	94.1
1968 .....	100.1	98.9	104.8	106.7	107.1	105.1
1969 .....	105.8	104.8	108.8	116.1	117.3	112.6
1970 .....	94.0	92.9	97.5	100.5	99.7	103.2
1971 .....	97.0	96.5	98.8	100.0	99.3	101.9
1972 .....	106.0	105.5	107.9	108.4	109.1	106.5
1973 .....	110.2	110.5	109.0	112.8	113.8	109.9
1974 .....	111.4	111.7	110.6	115.8	116.3	114.4
1975 .....	104.0	104.7	101.7	106.4	107.1	104.1
1976 .....	97.4	95.4	104.6	99.0	96.8	106.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.7	99.5	104.6	100.7	99.5	104.9
1979 .....	90.1	86.6	103.7	91.7	88.4	104.0
1980 .....	89.9	89.5	91.1	90.6	90.2	91.9
1981 .....	93.1	92.2	96.0	94.1	93.3	96.8
1982 <sup>2</sup> .....	89.8	93.2	80.2	91.6	95.8	80.6
Average annual percent change:						
1958-82 .....	.2	( <sup>3</sup> )	.8	-.1	-.3	.7
1978-82 .....	-1.9	-7	-5.9	-1.6	-2	-5.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 163. Fabricated pipe and fittings (SIC 3498): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	47.8	56.3	54.7	61.6	53.9	51.9	60.3
1959 .....	47.8	50.5	49.3	54.4	47.2	45.3	52.9
1960 .....	43.3	51.0	49.0	57.6	47.9	45.3	55.9
1961 .....	42.6	43.7	41.9	49.6	41.8	39.7	48.5
1962 .....	44.9	45.6	43.8	51.2	42.9	40.7	50.0
1963 .....	45.0	48.4	46.1	56.0	46.1	43.5	54.4
1964 .....	51.1	52.5	52.0	54.4	49.6	48.6	52.9
1965 .....	57.4	56.9	56.4	58.4	54.6	53.7	57.4
1966 .....	62.0	61.8	60.1	67.2	57.8	55.1	66.2
1967 .....	66.4	68.5	67.5	72.0	64.5	62.6	70.6
1968 .....	69.6	69.5	70.4	66.4	65.2	65.0	66.2
1969 .....	67.9	64.2	64.8	62.4	58.5	57.9	60.3
1970 .....	57.7	61.4	62.1	59.2	57.4	57.9	55.9
1971 .....	58.5	60.3	60.6	59.2	58.5	58.9	57.4
1972 .....	67.3	63.5	63.8	62.4	62.1	61.7	63.2
1973 .....	77.6	70.4	70.2	71.2	68.8	68.2	70.6
1974 .....	85.8	77.0	76.8	77.6	74.1	73.8	75.0
1975 .....	78.1	75.1	74.6	76.8	73.4	72.9	75.0
1976 .....	89.5	91.9	93.8	85.6	90.4	92.5	83.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.9	107.2	108.4	103.2	107.1	108.4	102.9
1979 .....	107.0	118.8	123.6	103.2	116.7	121.0	102.9
1980 .....	102.8	114.3	114.8	112.8	113.5	114.0	111.8
1981 .....	106.8	114.7	115.8	111.2	113.5	114.5	110.3
1982 <sup>1</sup> .....	102.0	113.6	109.4	127.2	111.3	106.5	126.5
Average annual percent change:							
1958-82 .....	4.2	4.1	4.3	3.4	4.3	4.6	3.5
1978-82 .....	-1.1	.8	-.5	5.1	.5	-.9	4.9

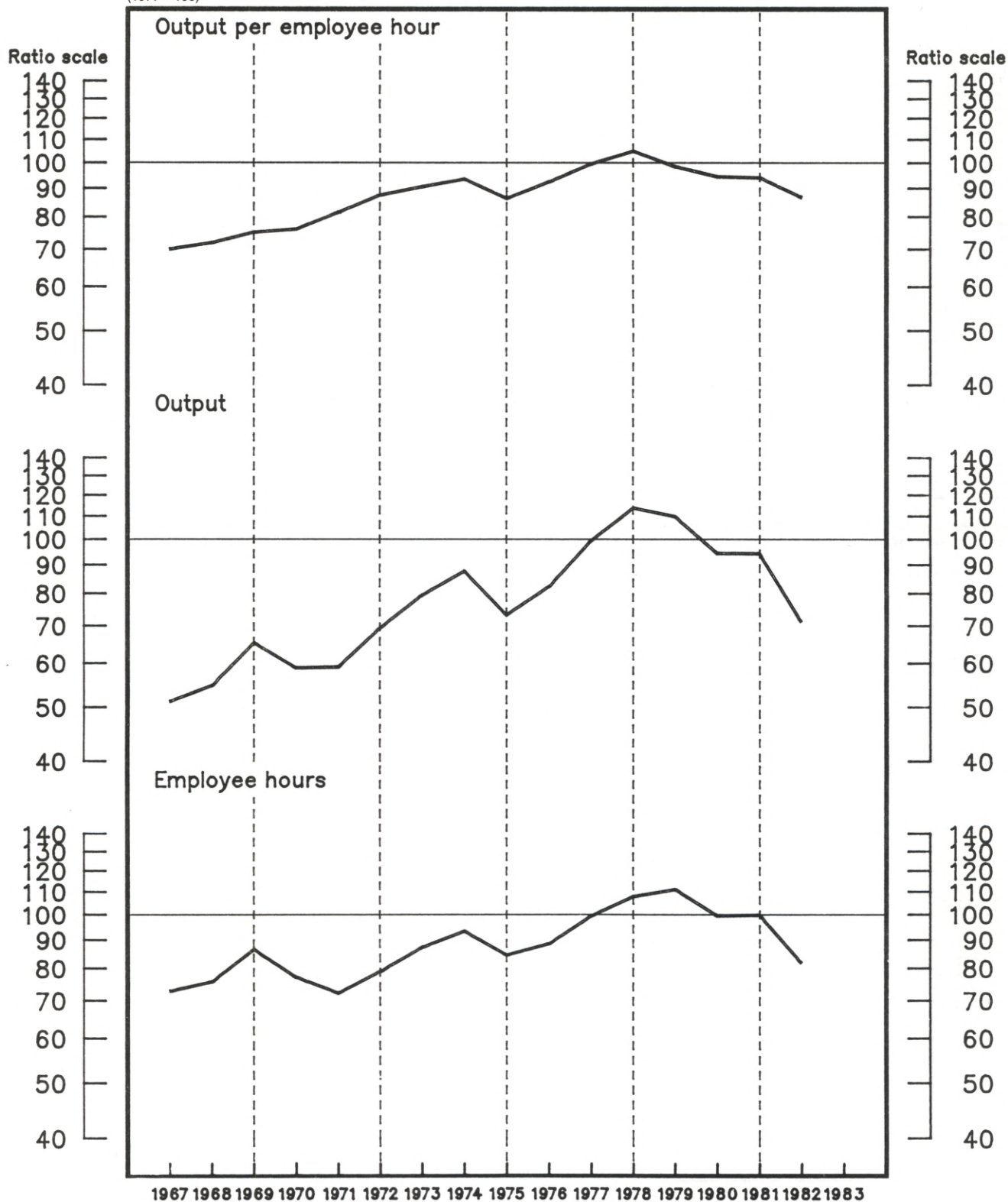
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 84. Internal combustion engines, not elsewhere classified (SIC 3519): Output per hour and related data, 1967-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 164. Internal combustion engines, not elsewhere classified (SIC 3519): Indexes of output per employee hour and output per employee, 1967-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1967 .....	70.3	68.8	75.1	71.7	70.7	74.6
1968 .....	72.2	71.4	74.7	73.8	72.4	77.8
1969 .....	75.4	74.6	77.8	77.2	76.2	79.9
1970 .....	76.4	76.6	75.7	75.8	75.4	76.8
1971 .....	81.8	82.5	79.9	79.9	79.4	81.5
1972 .....	87.9	86.9	90.9	88.6	87.2	92.6
1973 .....	91.0	88.9	97.8	93.4	91.4	99.7
1974 .....	93.9	91.9	100.9	96.8	94.9	102.4
1975 .....	86.7	89.5	79.1	84.3	86.0	80.1
1976 .....	92.8	94.3	88.7	91.9	92.7	89.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.4	106.0	103.8	105.8	106.6	103.7
1979 .....	98.8	99.8	95.9	96.8	97.1	96.3
1980 .....	94.8	98.5	85.0	94.1	97.6	85.7
1981 .....	94.4	97.8	85.6	94.4	97.8	85.9
1982 <sup>2</sup> .....	87.0	99.2	63.5	81.4	90.4	63.8
Average annual percent change:						
1967-82 .....	2.1	2.6	.6	1.8	2.3	.5
1978-82 .....	-4.2	-1.5	-10.4	-5.3	-3.2	-10.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 165. Internal combustion engines, not elsewhere classified (SIC 3519): Indexes of output, employee hours, and employees, 1967-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1967 .....	51.4	73.1	74.7	68.4	71.7	72.7	68.9
1968 .....	54.9	76.0	76.9	73.5	74.4	75.8	70.6
1969 .....	65.6	87.0	87.9	84.3	85.0	86.1	82.1
1970 .....	59.1	77.4	77.2	78.1	78.0	78.4	77.0
1971 .....	59.3	72.5	71.9	74.2	74.2	74.7	72.8
1972 .....	69.7	79.3	80.2	76.7	78.7	79.9	75.3
1973 .....	79.8	87.7	89.8	81.6	85.4	87.3	80.0
1974 .....	88.1	93.8	95.9	87.3	91.0	92.8	86.0
1975 .....	73.6	84.9	82.2	93.1	87.3	85.6	91.9
1976 .....	82.6	89.0	87.6	93.1	89.9	89.1	91.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	114.3	108.4	107.8	110.1	108.0	107.2	110.2
1979 .....	110.3	111.6	110.5	115.0	113.9	113.6	114.5
1980 .....	94.8	100.0	96.2	111.5	100.7	97.1	110.6
1981 .....	94.7	100.3	96.8	110.6	100.3	96.8	110.2
1982 <sup>1</sup> .....	71.4	82.1	72.0	112.4	87.7	79.0	111.9
Average annual percent change:							
1967-82 .....	4.2	2.1	1.5	3.6	2.4	1.9	3.7
1978-82 .....	-10.4	-6.4	-9.0	( <sup>2</sup> )	-5.3	-7.4	-1

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

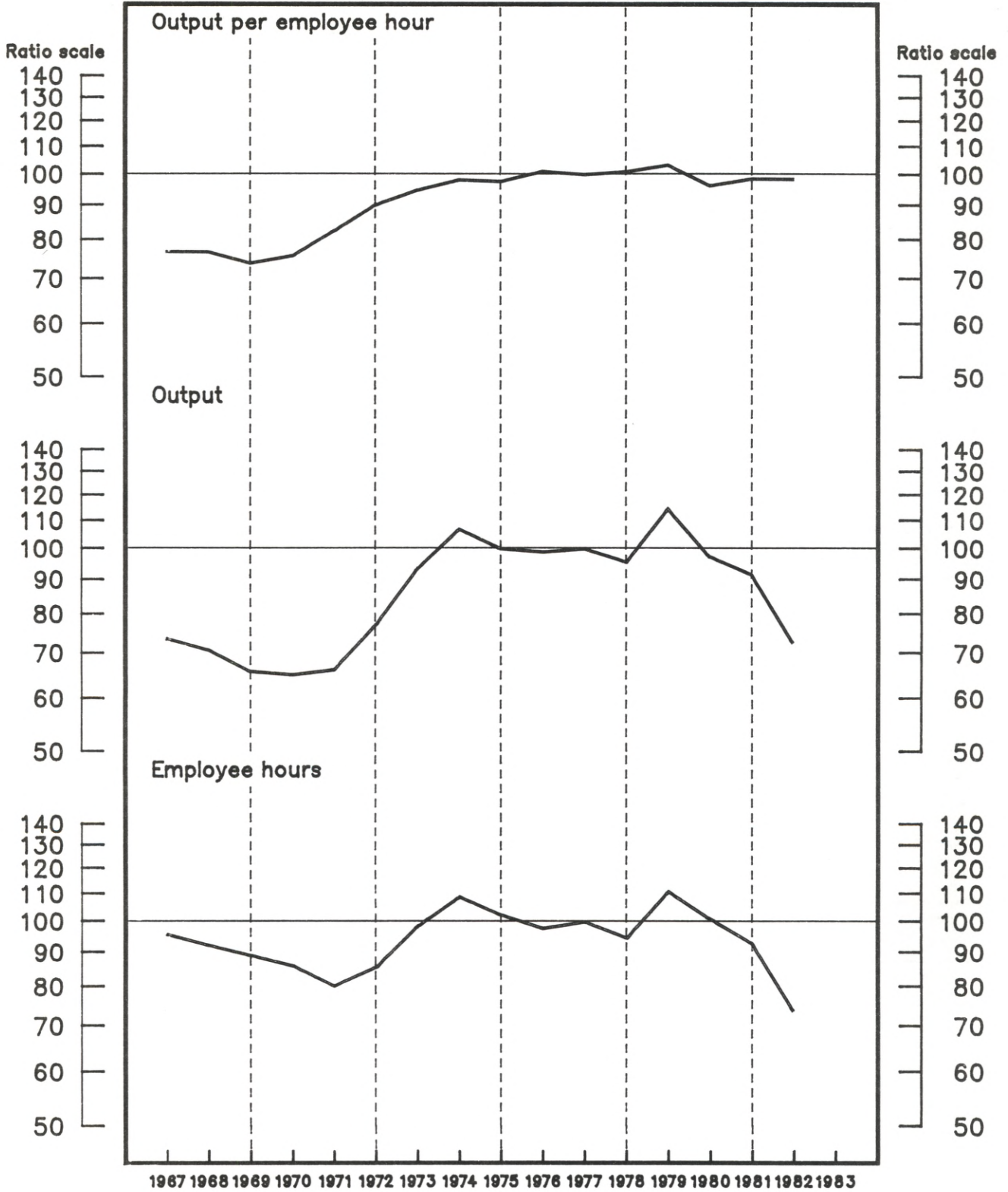
NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 85. Farm and garden machinery (SIC 352): Output per hour and related data, 1967-82  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 166. Farm and garden machinery (SIC 352): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	65.1	64.9	65.5	66.2	66.0	66.8
1959	65.1	63.4	70.3	67.5	66.1	71.4
1960	60.5	61.3	58.6	63.0	64.5	59.2
1961	62.9	61.3	67.7	64.9	63.9	67.7
1962	65.1	65.1	64.8	66.8	67.7	64.6
1963	66.6	64.3	74.3	69.4	67.8	74.1
1964	70.2	66.9	82.0	73.7	71.1	82.0
1965	72.2	68.6	84.8	75.6	72.8	84.5
1966	76.7	72.3	92.7	80.9	77.6	92.0
1967	76.8	73.3	88.8	78.5	75.6	88.1
1968	76.7	75.0	82.1	79.1	77.0	85.6
1969	73.8	73.2	75.9	75.5	74.7	77.9
1970	75.7	75.2	77.3	76.8	76.2	78.4
1971	82.4	83.0	81.0	83.8	84.3	82.4
1972	90.1	87.0	99.9	92.9	90.0	101.8
1973	94.8	90.7	109.2	97.4	93.2	111.3
1974	98.2	92.6	118.3	102.2	96.9	120.1
1975	97.7	95.3	105.2	100.9	99.0	106.4
1976	101.1	100.5	103.1	102.2	101.4	104.3
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	101.0	100.1	103.5	101.0	100.1	103.4
1979	103.3	101.7	108.4	104.7	103.4	108.7
1980	96.3	99.5	88.2	95.5	98.1	88.9
1981	98.6	103.9	86.3	96.6	100.8	86.7
1982 <sup>2</sup>	98.5	110.7	75.1	96.0	106.5	75.3
Average annual percent change:						
1958-82	2.4	2.6	1.7	2.2	2.4	1.7
1978-82	-1.0	2.3	-8.3	-1.8	1.0	-8.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 167. Farm and garden machinery (SIC 352): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

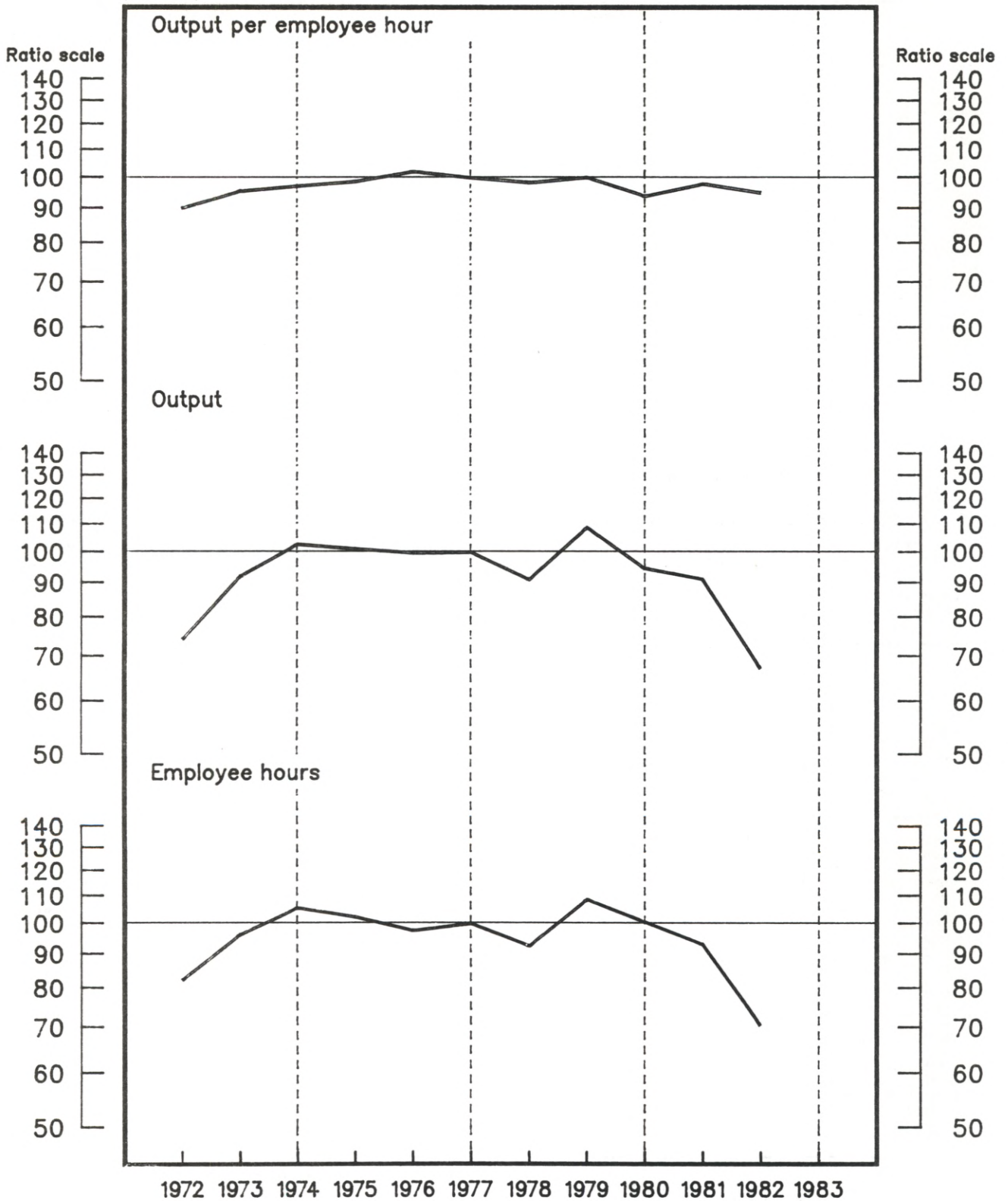
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	49.4	75.9	76.1	75.4	74.6	74.8	74.0
1959	52.5	80.7	82.8	74.7	77.8	79.4	73.5
1960	42.9	70.9	70.0	73.2	68.1	66.5	72.5
1961	45.7	72.7	74.5	67.5	70.4	71.5	67.5
1962	48.8	75.0	75.0	75.3	73.0	72.1	75.5
1963	53.7	80.6	83.5	72.3	77.4	79.2	72.5
1964	60.1	85.6	89.9	73.3	81.5	84.5	73.3
1965	64.0	88.6	93.3	75.5	84.7	87.9	75.7
1966	76.4	99.6	105.6	82.4	94.4	98.5	83.0
1967	73.6	95.8	100.4	82.9	93.7	97.4	83.5
1968	70.8	92.3	94.4	86.2	89.5	92.0	82.7
1969	65.8	89.1	89.9	86.7	87.1	88.1	84.5
1970	65.1	86.0	86.6	84.2	84.8	85.4	83.0
1971	66.2	80.3	79.8	81.7	79.0	78.5	80.3
1972	77.1	85.6	88.6	77.2	83.0	85.7	75.7
1973	93.5	98.6	103.1	85.6	96.0	100.3	84.0
1974	106.9	108.9	115.4	90.4	104.6	110.3	89.0
1975	100.0	102.4	104.9	95.1	99.1	101.0	94.0
1976	98.9	97.8	98.4	95.9	96.8	97.5	94.8
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	95.6	94.7	95.5	92.4	94.7	95.5	92.5
1979	114.7	111.0	112.8	105.8	109.5	110.9	105.5
1980	97.3	101.0	97.8	110.3	101.9	99.2	109.5
1981	91.6	92.9	88.2	106.1	94.8	90.9	105.7
1982 <sup>1</sup>	72.5	73.6	65.5	96.6	75.5	68.1	96.3
Average annual percent change:							
1958-82	3.5	1.1	.8	1.7	1.3	1.1	1.7
1978-82	-7.5	-6.6	-9.5	.9	-5.8	-8.4	.8

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Chart 86. Farm machinery and equipment (SIC 3523): Output per hour and related data, 1972-82**  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 168. Farm machinery and equipment (SIC 3523): Indexes of output per employee hour and output per employee, 1972-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	90.2	86.3	103.3	93.1	89.3	105.4
1973 .....	95.6	91.1	111.5	98.2	93.6	113.8
1974 .....	97.3	91.0	120.5	101.7	95.7	122.6
1975 .....	98.8	95.6	109.2	102.1	99.3	110.5
1976 .....	102.2	101.3	104.7	102.8	101.7	106.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.4	97.6	100.6	98.8	98.3	100.6
1979 .....	100.2	98.6	105.2	101.9	100.6	105.6
1980 .....	94.0	96.6	87.2	93.1	95.2	87.8
1981 .....	98.0	103.3	85.6	95.8	99.9	86.0
1982 <sup>2</sup> .....	95.0	108.2	70.6	91.5	102.4	70.9
Average annual percent change:						
1972-82 .....	.2	1.7	-3.6	-.4	.8	-3.8
1978-82 .....	-9	2.6	-8.7	-2.1	.8	-8.7

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 169. Farm machinery and equipment (SIC 3523): Indexes of output, employee hours, and employees, 1972-82**  
(1977 = 100)

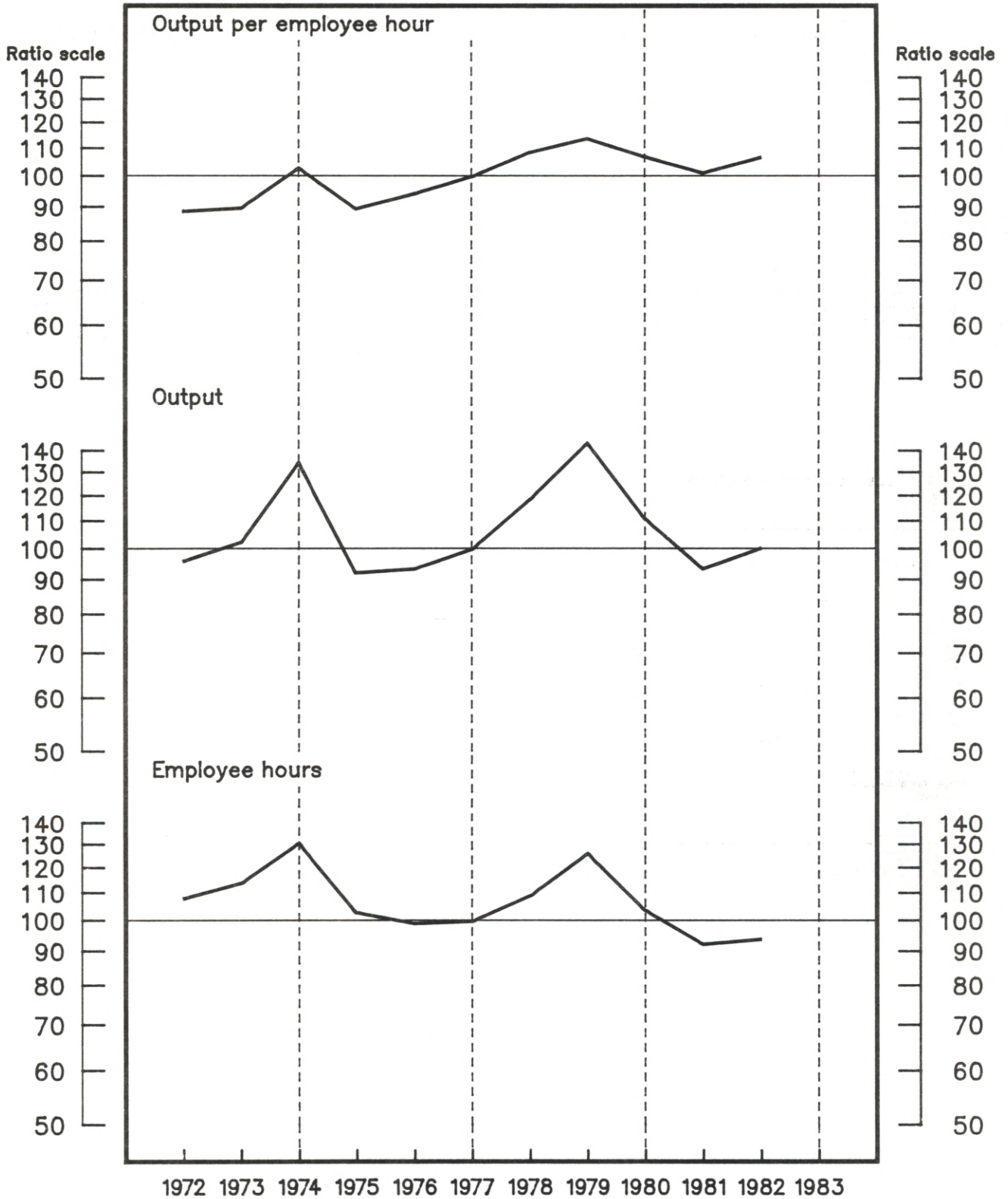
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	74.2	82.3	86.0	71.8	79.7	83.1	70.4
1973 .....	92.1	96.3	101.1	82.6	93.8	98.4	80.9
1974 .....	102.7	105.6	112.9	85.2	101.0	107.3	83.8
1975 .....	101.1	102.3	105.7	92.6	99.0	101.8	91.5
1976 .....	99.7	97.6	98.4	95.2	97.0	98.0	94.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	91.1	92.6	93.3	90.6	92.2	92.7	90.6
1979 .....	108.9	108.7	110.5	103.5	106.9	108.2	103.1
1980 .....	94.6	100.6	97.9	108.5	101.6	99.4	107.7
1981 .....	91.2	93.1	88.3	106.5	95.2	91.3	106.0
1982 <sup>1</sup> .....	67.1	70.6	62.0	95.1	73.3	65.5	94.6
Average annual percent change:							
1972-82 .....	-.7	-.9	-2.3	3.1	-.2	-1.5	3.2
1978-82 .....	-7.6	-6.7	-9.9	1.3	-5.6	-8.3	1.1

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 87. Lawn and garden equipment (SIC 3524): Output per hour and related data, 1972-82  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 170. Lawn and garden equipment (SIC 3524): Indexes of output per employee hour and output per employee, 1972-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	88.8	90.8	83.3	91.0	93.6	84.1
1973 .....	89.8	88.2	95.2	92.6	91.4	96.6
1974 .....	103.0	102.1	105.8	104.5	103.8	106.6
1975 .....	89.6	92.7	81.5	92.3	96.2	82.3
1976 .....	94.3	94.8	92.5	98.0	99.6	93.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.6	108.1	110.1	106.2	105.0	109.6
1979 .....	113.9	112.7	118.0	113.8	112.6	117.6
1980 .....	107.0	113.9	90.3	107.2	114.2	90.8
1981 .....	101.3	106.2	88.7	101.4	106.6	88.2
1982 <sup>2</sup> .....	106.8	113.1	91.4	110.6	119.0	91.1
Average annual percent change:						
1972-82 .....	2.0	2.5	.6	1.8	2.3	.4
1978-82 .....	-1.5	.3	-6.4	-3	2.0	-6.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 171. Lawn and garden equipment (SIC 3524): Indexes of output, employee hours, and employees, 1972-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	96.1	108.2	105.8	115.4	105.6	102.7	114.3
1973 .....	102.5	114.1	116.2	107.7	110.7	112.2	106.1
1974 .....	134.9	131.0	132.1	127.5	129.1	129.9	126.5
1975 .....	92.3	103.0	99.6	113.2	100.0	95.9	112.2
1976 .....	93.5	99.2	98.6	101.1	95.4	93.9	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	118.6	109.2	109.7	107.7	111.7	112.9	108.2
1979 .....	144.0	126.4	127.8	122.0	126.5	127.9	122.4
1980 .....	111.1	103.8	97.5	123.1	103.6	97.3	122.4
1981 .....	93.6	92.4	88.1	105.5	92.3	87.8	106.1
1982 <sup>1</sup> .....	100.4	94.0	88.8	109.9	90.8	84.4	110.2
Average annual percent change:							
1972-82 .....	.4	-1.6	-2.1	-2	-1.4	-1.9	(?)
1978-82 .....	-7.4	-5.9	-7.6	-1.0	-7.0	-9.1	-1.1

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table

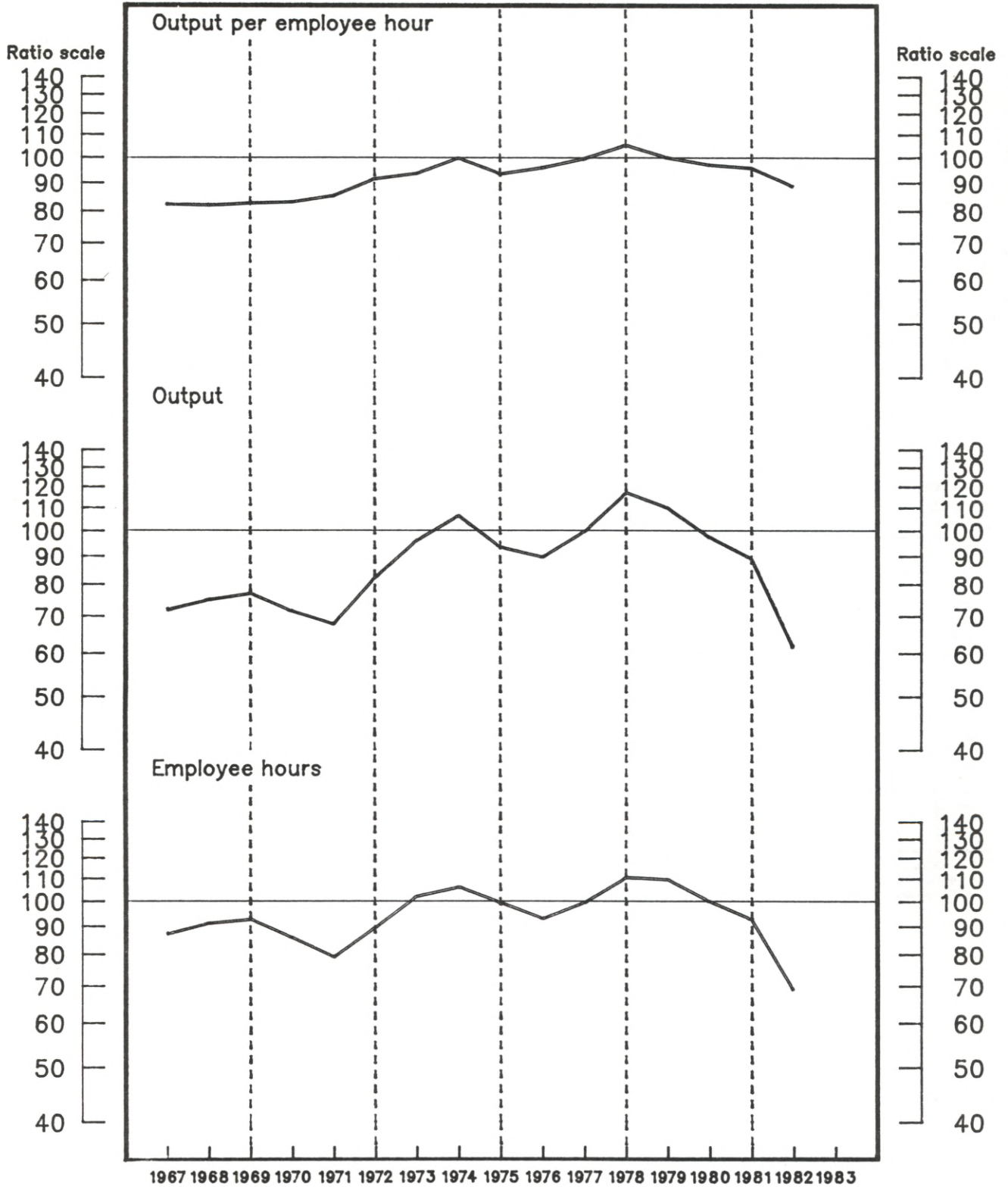
may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 88. Construction machinery and equipment (SIC 3531): Output per hour and related data, 1967-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 172. Construction machinery and equipment (SIC 3531): Indexes of output per employee hour and output per employee, 1958-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	74.2	77.0	67.8	73.5	75.4	69.1
1959 .....	69.6	68.4	73.5	73.6	73.2	74.5
1960 .....	62.3	63.7	59.3	63.4	65.0	59.8
1961 .....	68.2	68.5	67.5	69.4	70.2	67.4
1962 .....	74.1	72.8	77.8	76.3	76.0	77.5
1963 .....	75.0	72.2	83.4	78.3	76.6	83.0
1964 .....	77.9	73.8	91.4	82.2	79.2	91.4
1965 .....	80.0	75.4	95.1	84.3	80.8	94.7
1966 .....	81.2	75.1	104.1	87.1	82.1	103.0
1967 .....	82.5	79.1	93.0	84.1	81.3	92.2
1968 .....	82.2	80.3	87.5	84.9	82.6	91.0
1969 .....	83.0	79.9	92.6	86.8	84.0	94.7
1970 .....	83.4	82.0	87.3	85.9	84.8	88.5
1971 .....	85.6	85.3	86.6	87.1	86.6	88.1
1972 .....	91.9	89.0	100.5	95.9	93.5	102.2
1973 .....	94.0	90.0	106.2	99.1	95.9	108.2
1974 .....	100.2	96.0	112.9	105.3	102.0	114.6
1975 .....	93.9	92.3	98.2	96.9	95.9	99.3
1976 .....	96.3	97.8	92.3	96.5	97.7	93.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.8	104.4	109.8	108.0	107.3	109.8
1979 .....	100.3	101.3	98.0	97.8	97.6	98.3
1980 .....	97.4	102.1	86.8	96.1	100.0	87.4
1981 .....	96.1	99.8	87.6	95.2	98.3	88.0
1982 <sup>2</sup> .....	89.0	106.2	62.6	82.0	93.5	62.8
Average annual percent change:						
1958-82 .....	1.7	2.0	1.0	1.5	1.7	1.0
1978-82 .....	-3.8	.2	-11.6	-5.6	-2.6	-11.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 173. Construction machinery and equipment (SIC 3531): Indexes of output, employee hours, and employees, 1958-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	45.1	60.8	58.6	66.5	61.4	59.8	65.3
1959 .....	53.4	76.7	78.1	72.7	72.6	73.0	71.7
1960 .....	45.6	73.2	71.6	76.9	71.9	70.2	76.2
1961 .....	42.5	62.3	62.0	63.0	61.2	60.5	63.1
1962 .....	48.7	65.7	66.9	62.6	63.8	64.1	62.8
1963 .....	52.7	70.3	73.0	63.2	67.3	68.8	63.5
1964 .....	61.6	79.1	83.5	67.4	74.9	77.8	67.4
1965 .....	65.9	82.4	87.4	69.3	78.2	81.6	69.6
1966 .....	68.0	83.7	90.6	65.3	78.1	82.8	66.0
1967 .....	72.1	87.4	91.2	77.5	85.7	88.7	78.2
1968 .....	75.2	91.5	93.7	85.9	88.6	91.0	82.6
1969 .....	77.2	93.0	96.6	83.4	88.9	91.9	81.5
1970 .....	71.7	86.0	87.4	82.1	83.5	84.6	81.0
1971 .....	68.0	79.4	79.7	78.5	78.1	78.5	77.2
1972 .....	82.6	89.9	92.8	82.2	86.1	88.3	80.8
1973 .....	96.4	102.6	107.1	90.8	97.3	100.5	89.1
1974 .....	106.8	106.6	111.2	94.6	101.4	104.7	93.2
1975 .....	93.7	99.8	101.5	95.4	96.7	97.7	94.4
1976 .....	89.9	93.4	91.9	97.4	93.2	92.0	96.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	117.5	111.1	112.6	107.0	108.8	109.5	107.0
1979 .....	110.3	110.0	108.9	112.6	112.8	113.0	112.2
1980 .....	97.7	100.3	95.7	112.5	101.7	97.7	111.8
1981 .....	89.4	93.0	89.6	102.0	93.9	90.9	101.6
1982 <sup>1</sup> .....	61.5	69.1	57.9	98.3	75.0	65.8	98.0
Average annual percent change:							
1958-82 .....	3.4	1.7	1.4	2.4	1.9	1.7	2.4
1978-82 .....	-14.0	-10.6	-14.1	-2.6	-8.9	-11.6	-2.7

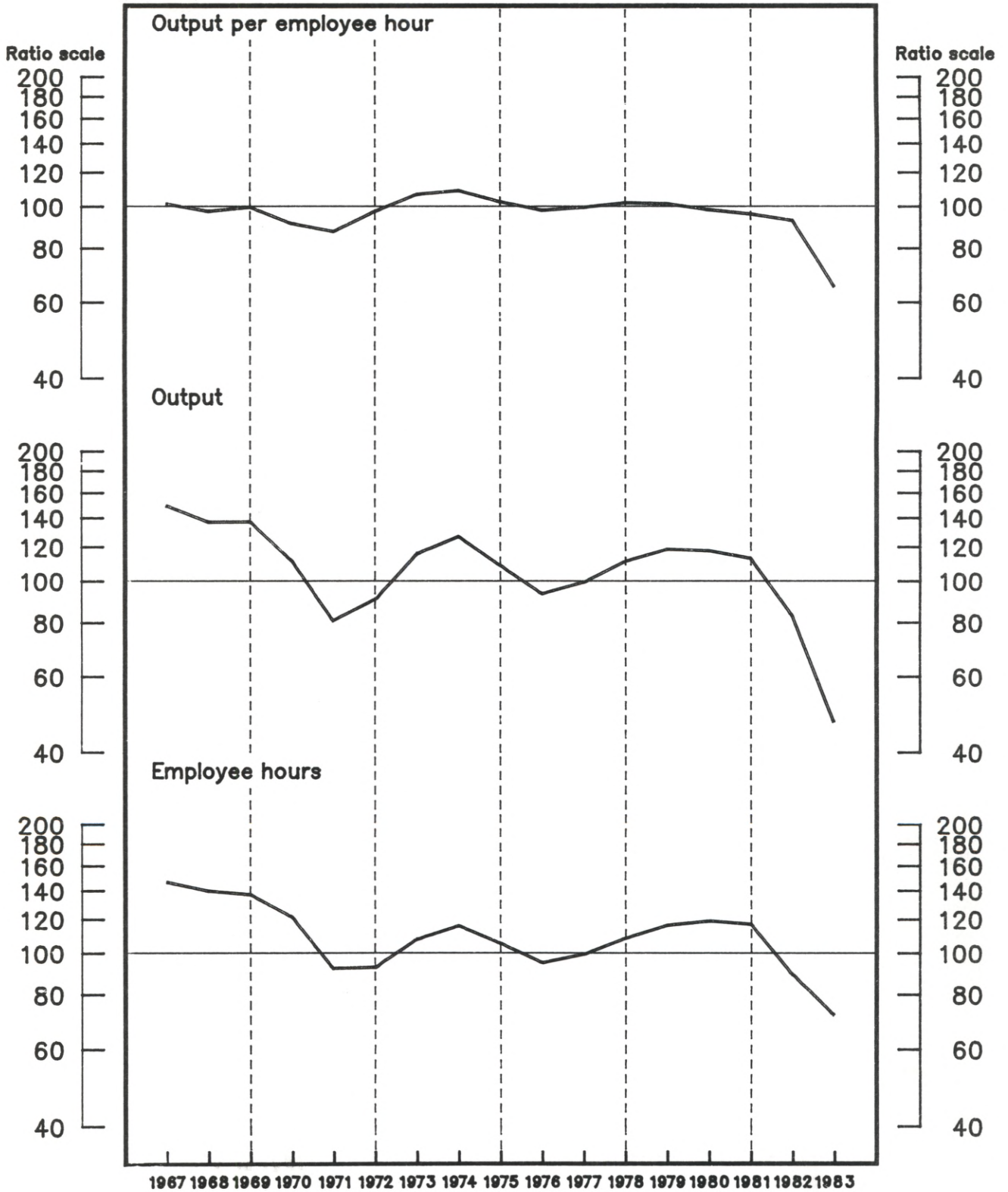
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 89. Machine tools (SIC 3541, 3542): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 174. Machine tools (SIC 3541, 3542): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	71.5	68.6	78.1	69.5	64.9	79.5
1959 .....	88.0	80.9	106.6	87.8	79.4	108.2
1960 .....	84.7	77.6	103.1	84.8	77.0	104.0
1961 .....	84.5	78.8	98.6	82.5	75.6	98.5
1962 .....	88.5	81.5	106.8	89.0	81.4	106.5
1963 .....	90.1	84.0	105.3	93.0	87.4	105.0
1964 .....	99.9	90.9	124.4	106.0	98.0	124.2
1965 .....	101.4	91.7	128.6	108.3	99.5	128.4
1966 .....	111.7	99.8	146.3	120.0	109.4	145.3
1967 .....	101.8	92.2	128.4	107.1	98.4	127.6
1968 .....	97.9	92.4	111.4	102.1	95.5	116.0
1969 .....	100.1	95.2	111.5	103.7	98.5	114.3
1970 .....	91.7	89.8	96.0	93.0	90.7	97.2
1971 .....	87.9	91.6	81.6	86.3	88.4	83.1
1972 .....	98.0	97.0	100.2	99.1	97.4	102.1
1973 .....	107.3	101.7	120.5	111.3	105.8	122.8
1974 .....	109.4	102.7	125.4	112.7	105.9	127.4
1975 .....	103.0	101.7	106.0	102.2	99.5	107.2
1976 .....	98.4	97.4	100.4	96.5	93.7	101.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.5	99.2	109.8	103.9	100.8	109.9
1979 .....	101.9	97.7	111.4	103.1	98.8	111.9
1980 .....	98.7	96.4	103.6	98.6	95.6	104.4
1981 .....	96.5	95.9	97.8	96.0	94.7	98.3
1982 .....	93.2	102.5	79.0	88.6	94.9	79.3
1983 <sup>2</sup> .....	65.3	74.9	52.1	62.2	69.7	52.2
Average annual percent change:						
1958-83 .....	.3	.9	-.8	.2	.7	-.8
1978-83 .....	-7.0	-3.6	-12.9	-8.3	-5.5	-12.9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.  
<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.  
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 175. Machine tools (SIC 3541, 3542): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	63.0	88.1	91.9	80.7	90.6	97.0	79.2
1959 .....	79.2	90.0	97.9	74.3	90.2	99.8	73.2
1960 .....	82.8	97.8	106.7	80.3	97.6	107.6	79.6
1961 .....	77.4	91.6	98.2	78.5	93.8	102.4	78.6
1962 .....	88.0	99.4	108.0	82.4	98.9	108.1	82.6
1963 .....	93.0	103.2	110.7	88.3	100.0	106.4	88.6
1964 .....	112.3	112.4	123.6	90.3	105.9	114.6	90.4
1965 .....	125.3	123.6	136.6	97.4	115.7	125.9	97.6
1966 .....	156.1	139.8	156.4	106.7	130.1	142.7	107.4
1967 .....	149.9	147.3	162.6	116.7	139.9	152.4	117.5
1968 .....	137.6	140.5	148.9	123.5	134.8	144.1	118.6
1969 .....	137.8	137.7	144.7	123.6	132.9	139.9	120.6
1970 .....	112.0	122.1	124.7	116.7	120.4	123.5	115.2
1971 .....	81.4	92.6	88.9	99.8	94.3	92.1	98.0
1972 .....	91.2	93.1	94.0	91.0	92.0	93.6	89.3
1973 .....	116.3	108.4	114.3	96.5	104.5	109.9	94.7
1974 .....	127.4	116.5	124.1	101.6	113.0	120.3	100.0
1975 .....	109.1	105.9	107.3	102.9	106.7	109.6	101.8
1976 .....	93.9	95.4	96.4	93.5	97.3	100.2	92.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	111.8	109.1	112.7	101.8	107.6	110.9	101.7
1979 .....	119.1	116.9	121.9	106.9	115.5	120.6	106.4
1980 .....	118.1	119.6	122.5	114.0	119.8	123.6	113.1
1981 .....	113.4	117.5	118.2	116.0	118.1	119.7	115.4
1982 .....	83.3	89.4	81.3	105.5	94.0	87.8	105.0
1983 <sup>1</sup> .....	47.1	72.1	62.9	90.4	75.7	67.6	90.3
Average annual percent change:							
1958-83 .....	.2	-.1	-.7	1.0	( <sup>2</sup> )	-.5	1.0
1978-83 .....	-14.4	-7.9	-11.2	-1.7	-6.6	-9.4	-1.7

<sup>1</sup> Preliminary.

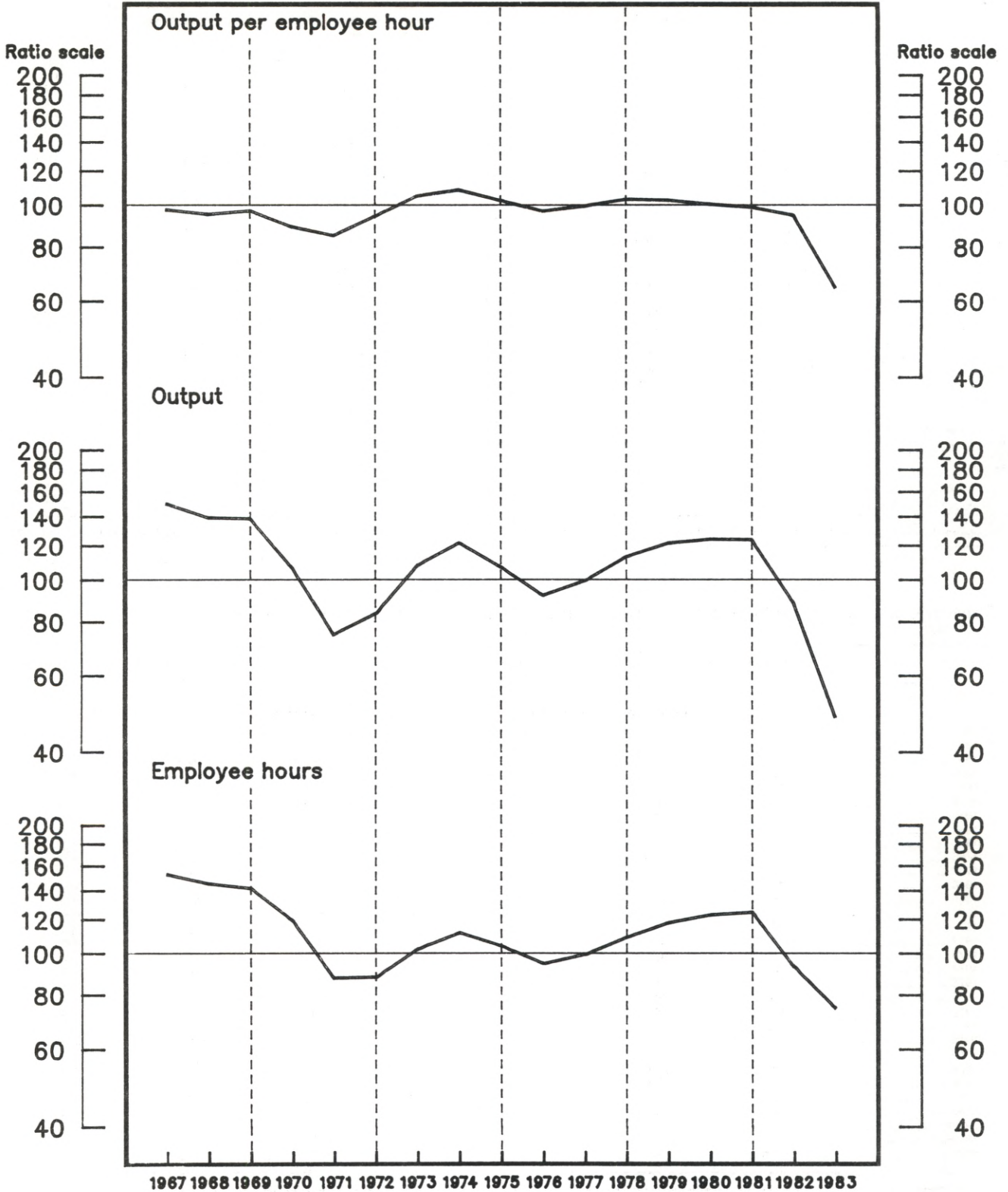
<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 90. Metal cutting machine tools (SIC 3541): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 176. Metal cutting machine tools (SIC 3541): Indexes of output per employee hour and output per employee, 1958-83 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	67.6	63.9	75.8	65.3	60.0	77.3
1959 .....	83.2	78.7	93.0	83.5	78.3	94.5
1960 .....	81.5	76.6	92.3	82.0	76.6	93.1
1961 .....	80.0	76.5	87.2	78.7	74.5	87.2
1962 .....	83.2	78.3	94.2	83.8	78.8	94.0
1963 .....	84.3	78.3	97.9	86.0	80.4	97.6
1964 .....	94.9	86.0	117.4	99.7	91.5	117.5
1965 .....	98.7	88.4	125.7	104.8	95.6	125.3
1966 .....	107.8	95.7	141.3	115.3	104.5	140.0
1967 .....	98.0	87.5	126.2	102.7	92.9	125.2
1968 .....	95.7	89.0	111.0	98.6	90.8	115.7
1969 .....	97.5	91.7	110.2	100.1	93.9	113.0
1970 .....	89.5	88.1	91.9	89.4	87.4	93.3
1971 .....	85.5	89.3	78.7	82.8	84.5	80.3
1972 .....	94.8	94.3	95.8	95.0	93.7	97.6
1973 .....	105.5	99.8	117.8	107.8	101.9	119.9
1974 .....	108.9	101.2	126.5	112.0	103.9	128.6
1975 .....	102.9	100.7	107.3	101.8	98.4	108.4
1976 .....	97.3	96.4	99.0	94.7	91.9	100.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.6	98.8	114.3	105.2	100.5	114.3
1979 .....	103.1	97.6	115.4	105.3	99.8	115.9
1980 .....	100.9	96.7	110.0	101.9	97.3	110.7
1981 .....	99.3	96.7	104.3	99.6	96.9	104.6
1982 .....	95.1	103.9	82.3	90.1	95.3	82.5
1983 <sup>2</sup> .....	64.5	73.8	52.2	61.0	67.9	52.2
Average annual percent change:						
1958-83 .....	.6	1.1	-.2	.5	.9	-.2
1978-83 .....	-7.2	-3.6	-13.3	-8.8	-5.8	-13.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 177. Metal cutting machine tools (SIC 3541): Indexes of output, employee hours, and employees, 1958-83 (1977=100)**

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	58.1	85.9	90.9	76.6	89.0	96.9	75.2
1959 .....	74.2	89.2	94.3	79.8	88.9	94.8	78.5
1960 .....	81.0	99.4	105.7	87.8	98.8	105.8	87.0
1961 .....	72.7	90.9	95.0	83.4	92.4	97.6	83.4
1962 .....	83.0	99.7	106.0	88.1	99.0	105.3	88.3
1963 .....	88.4	104.9	112.9	90.3	102.8	109.9	90.6
1964 .....	109.2	115.1	127.0	93.0	109.5	119.3	92.9
1965 .....	124.8	126.4	141.1	99.3	119.1	130.5	99.6
1966 .....	154.7	143.5	161.6	109.5	134.2	148.1	110.5
1967 .....	150.6	153.6	172.1	119.3	146.6	162.1	120.3
1968 .....	139.8	146.1	157.0	125.9	141.8	154.0	120.8
1969 .....	139.0	142.5	151.5	126.1	138.9	148.1	123.0
1970 .....	107.2	119.8	121.7	116.7	119.9	122.7	114.9
1971 .....	75.2	88.0	84.2	95.5	90.8	89.0	93.7
1972 .....	83.9	88.5	89.0	87.6	88.3	89.5	86.0
1973 .....	108.6	102.9	108.8	92.2	100.7	106.6	90.6
1974 .....	122.3	112.3	120.8	96.7	109.2	117.7	95.1
1975 .....	107.5	104.5	106.7	100.2	105.6	109.2	99.2
1976 .....	92.5	95.1	96.0	93.4	97.7	100.6	92.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	113.7	109.7	115.1	99.5	108.1	113.1	99.5
1979 .....	122.2	118.5	125.2	105.9	116.1	122.5	105.4
1980 .....	124.7	123.6	129.0	113.4	122.4	128.2	112.6
1981 .....	124.4	125.3	128.6	119.3	124.9	128.4	118.9
1982 .....	88.9	93.5	85.6	108.0	98.7	93.3	107.7
1983 <sup>1</sup> .....	48.2	74.7	65.3	92.4	79.0	71.0	92.3
Average annual percent change:							
1958-83 .....	.6	-.1	-.5	.8	.1	-.3	.8
1978-83 .....	-13.9	-7.2	-10.7	-7	-5.6	-8.6	-7

<sup>1</sup> Preliminary.

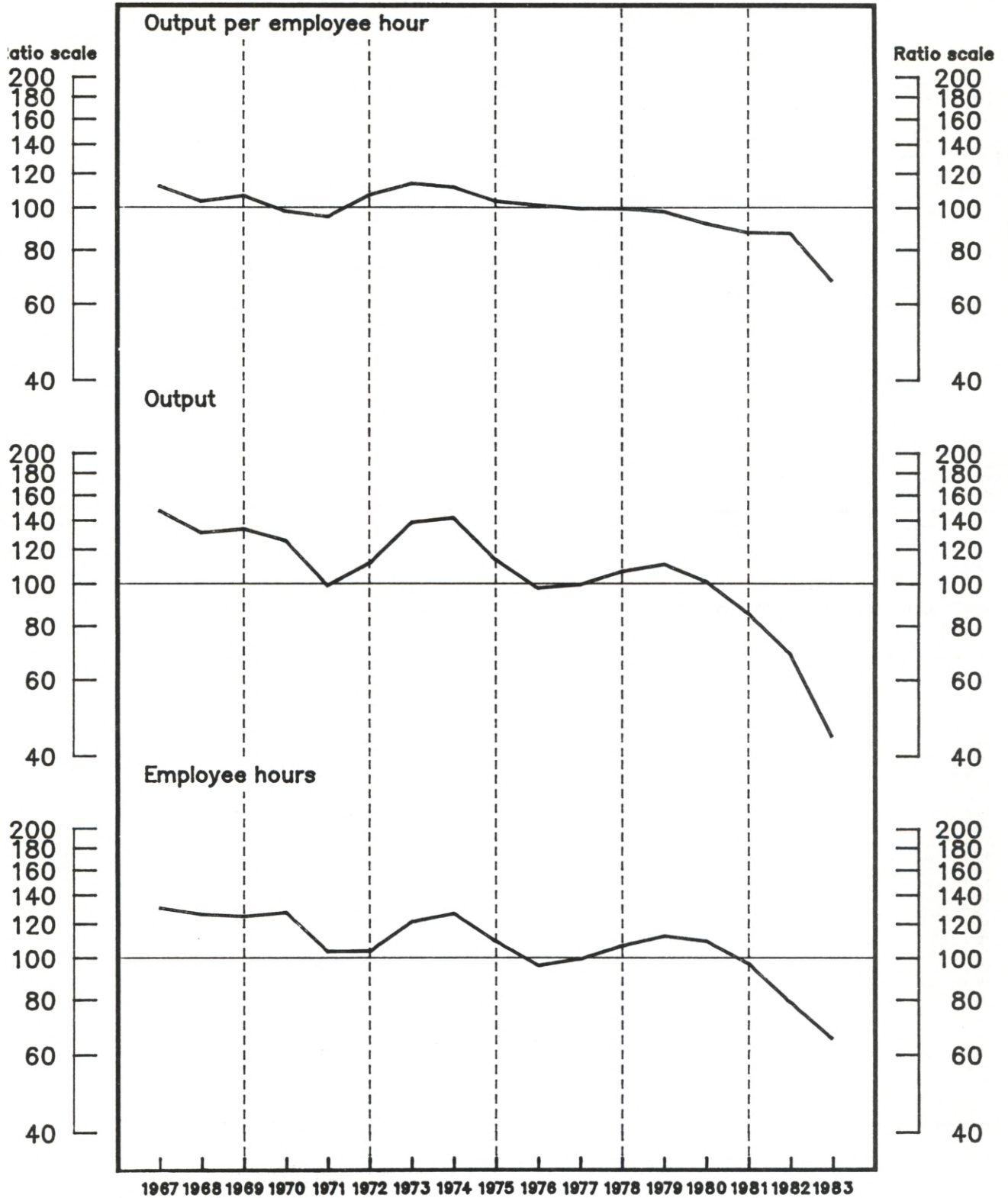
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 91. Metal forming machine tools (SIC 3542): Output per hour and related data, 1967-83

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 178. Metal forming machine tools (SIC 3542): Indexes of output per employee hour and output per employee, 1958-83 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	83.6	83.2	84.5	82.5	80.9	86.4
1959 .....	102.8	89.0	160.4	101.1	85.5	164.2
1960 .....	94.5	81.4	152.0	94.1	79.5	153.5
1961 .....	98.0	86.6	141.4	93.9	80.8	142.7
1962 .....	105.7	92.5	158.8	105.8	91.3	158.8
1963 .....	108.4	101.3	129.8	115.3	109.5	129.7
1964 .....	115.5	105.8	147.6	126.0	117.7	147.4
1965 .....	109.3	100.5	137.9	118.2	110.6	138.2
1966 .....	123.1	111.3	164.4	134.2	123.8	162.9
1967 .....	112.7	105.0	136.2	120.0	113.9	135.4
1968 .....	103.9	100.7	112.4	112.0	109.3	117.8
1969 .....	107.0	103.9	115.4	113.7	111.5	118.7
1970 .....	98.5	95.4	107.0	103.5	101.0	109.1
1971 .....	95.7	99.3	88.3	96.7	100.1	90.1
1972 .....	107.5	106.0	111.2	110.3	108.7	113.6
1973 .....	114.1	109.2	122.4	122.2	118.6	130.6
1974 .....	111.9	108.0	122.4	116.5	113.0	124.6
1975 .....	104.0	104.5	102.8	104.1	103.7	104.5
1976 .....	101.7	100.5	104.8	101.6	99.3	106.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.9	100.2	99.4	100.8	101.5	99.4
1979 .....	98.4	97.3	101.1	97.6	95.8	101.8
1980 .....	92.4	94.6	87.7	89.4	89.8	88.6
1981 .....	88.0	91.3	81.1	84.6	86.2	81.4
1982 .....	87.6	97.6	70.8	84.2	92.2	71.1
1983 <sup>2</sup> .....	67.9	77.5	52.7	65.8	74.5	52.7
Average annual percent change:						
1958-83 .....	-6	.2	-2.6	-8	-.1	-2.6
1978-83 .....	-6.4	-3.7	-11.6	-7.2	-4.7	-11.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 179. Metal forming machine tools (SIC 3542): Indexes of output, employee hours, and employees, 1958-83 (1977=100)**

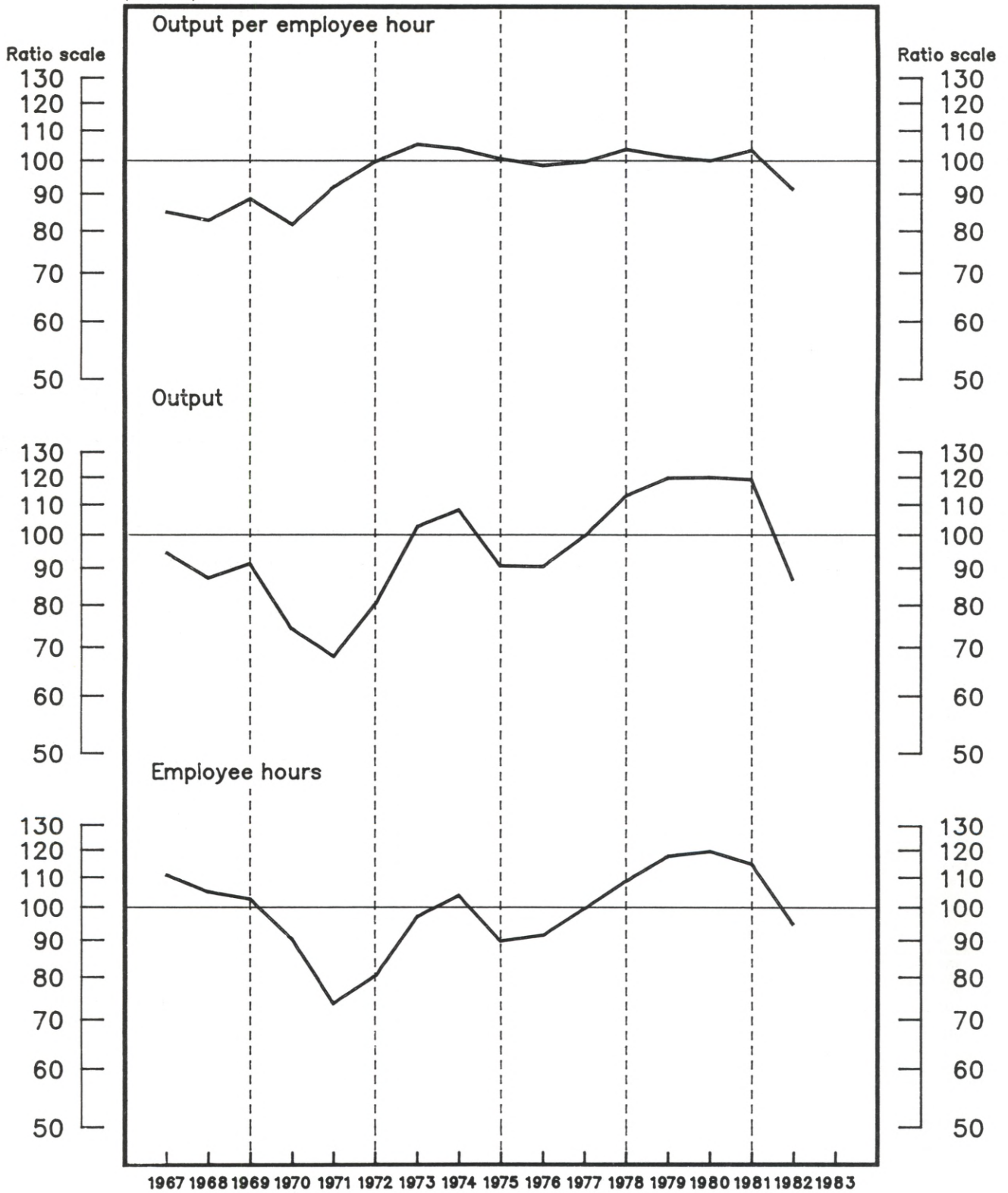
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	78.4	93.8	94.2	92.8	95.0	96.9	90.7
1959 .....	95.1	92.5	106.8	59.3	94.1	111.2	57.9
1960 .....	88.9	94.1	109.2	58.5	94.5	111.8	57.9
1961 .....	91.9	93.8	106.1	65.0	97.9	113.8	64.4
1962 .....	104.3	98.7	112.8	65.7	98.6	114.3	65.7
1963 .....	107.5	99.2	106.1	82.8	93.2	98.2	82.9
1964 .....	122.2	105.8	115.5	82.8	97.0	103.8	82.9
1965 .....	127.1	116.3	126.5	92.2	107.5	114.9	92.0
1966 .....	160.8	130.6	144.5	97.8	119.8	129.9	98.7
1967 .....	147.9	131.2	140.8	108.6	123.2	129.9	109.2
1968 .....	131.7	126.8	130.8	117.2	117.6	120.5	111.8
1969 .....	134.3	125.5	129.3	116.4	118.1	120.5	113.1
1970 .....	126.2	128.1	132.3	117.9	121.9	124.9	115.7
1971 .....	99.6	104.1	100.3	112.8	103.0	99.5	110.5
1972 .....	112.1	104.3	105.8	100.8	101.6	103.1	98.7
1973 .....	139.2	122.0	127.5	109.3	113.9	117.4	106.6
1974 .....	142.5	127.4	132.0	116.4	122.3	126.1	114.4
1975 .....	114.1	109.7	109.2	111.0	109.6	110.0	109.2
1976 .....	98.1	96.5	97.6	93.6	96.6	98.8	92.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.2	107.3	107.0	107.9	106.3	105.6	107.9
1979 .....	111.2	113.0	114.3	110.0	113.9	116.1	109.2
1980 .....	101.5	109.8	107.3	115.7	113.5	113.0	114.5
1981 .....	85.7	97.4	93.9	105.7	101.3	99.4	105.3
1982 .....	69.3	79.1	71.0	97.9	82.3	75.2	97.4
1983 <sup>1</sup> .....	44.4	65.4	57.3	84.3	67.5	59.6	84.2
Average annual percent change:							
1958-83 .....	-1.0	-.4	-1.1	1.7	-.2	-.9	1.7
1978-83 .....	-15.7	-9.9	-12.5	-4.7	-9.2	-11.5	-4.7

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 92. Machine tool accessories (SIC 3545): Output per hour and related data, 1967-82  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 180. Machine tool accessories (SIC 3545): Indexes of output per employee hour and output per employee, 1963-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	80.0	78.2	85.3	79.4	77.5	84.5
1964 .....	81.2	79.2	86.7	81.2	79.4	85.8
1965 .....	82.0	78.5	92.8	85.4	83.0	91.9
1966 .....	82.0	77.1	98.7	87.4	83.8	97.6
1967 .....	85.2	81.1	97.9	87.5	84.2	97.0
1968 .....	83.0	81.8	86.6	83.9	82.2	88.6
1969 .....	88.9	87.4	93.3	90.1	88.4	94.4
1970 .....	82.0	82.3	81.4	79.9	79.1	81.7
1971 .....	92.4	96.2	83.7	88.2	90.0	84.3
1972 .....	100.1	101.0	97.8	100.1	100.6	99.0
1973 .....	105.7	102.7	115.0	109.0	106.3	116.1
1974 .....	104.2	101.5	112.4	105.7	102.9	113.4
1975 .....	100.9	102.8	96.2	96.2	96.0	96.7
1976 .....	98.8	100.1	95.6	97.2	97.7	95.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.0	103.5	105.5	105.5	105.5	105.5
1979 .....	101.7	100.3	105.6	102.8	101.7	105.6
1980 .....	100.3	100.4	100.1	99.5	99.3	100.1
1981 .....	103.7	105.5	99.4	101.7	102.7	99.4
1982 <sup>2</sup> .....	91.5	99.8	75.2	85.8	91.0	75.2
Average annual percent change:						
1963-82 .....	1.4	1.8	.5	1.2	1.4	.5
1978-82 .....	-2.3	-2	-7.1	-4.2	-2.8	-7.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 181. Machine tool accessories (SIC 3545): Indexes of output, employee hours, and employees, 1963-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	62.9	78.6	80.4	73.7	79.2	81.2	74.4
1964 .....	68.5	84.4	86.5	79.0	84.4	86.3	79.8
1965 .....	78.8	96.1	100.4	84.9	92.3	94.9	85.7
1966 .....	90.7	110.6	117.7	91.9	103.8	108.2	92.9
1967 .....	94.7	111.2	116.8	96.7	108.2	112.5	97.6
1968 .....	87.5	105.4	107.0	101.0	104.3	106.5	98.8
1969 .....	91.6	103.0	104.8	98.2	101.7	103.6	97.0
1970 .....	74.4	90.7	90.4	91.4	93.1	94.0	91.1
1971 .....	68.3	73.9	71.0	81.6	77.4	75.9	81.0
1972 .....	80.7	80.6	79.9	82.5	80.6	80.2	81.5
1973 .....	103.0	97.4	100.3	89.6	94.5	96.9	88.7
1974 .....	108.6	104.2	107.0	96.6	102.7	105.5	95.8
1975 .....	90.9	90.1	88.4	94.5	94.5	94.7	94.0
1976 .....	90.7	91.8	90.6	94.9	93.3	92.8	94.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	113.6	109.2	109.8	107.7	107.7	107.7	107.7
1979 .....	120.1	118.1	119.8	113.7	116.8	118.1	113.7
1980 .....	120.3	119.9	119.8	120.2	120.9	121.2	120.2
1981 .....	119.5	115.2	113.3	120.2	117.5	116.4	120.2
1982 <sup>1</sup> .....	86.8	94.9	87.0	115.5	101.2	95.4	115.5
Average annual percent change:							
1963-82 .....	2.4	1.0	.6	1.9	1.2	.9	1.9
1978-82 .....	-5.3	-3.0	-5.1	2.0	-1.2	-2.5	2.0

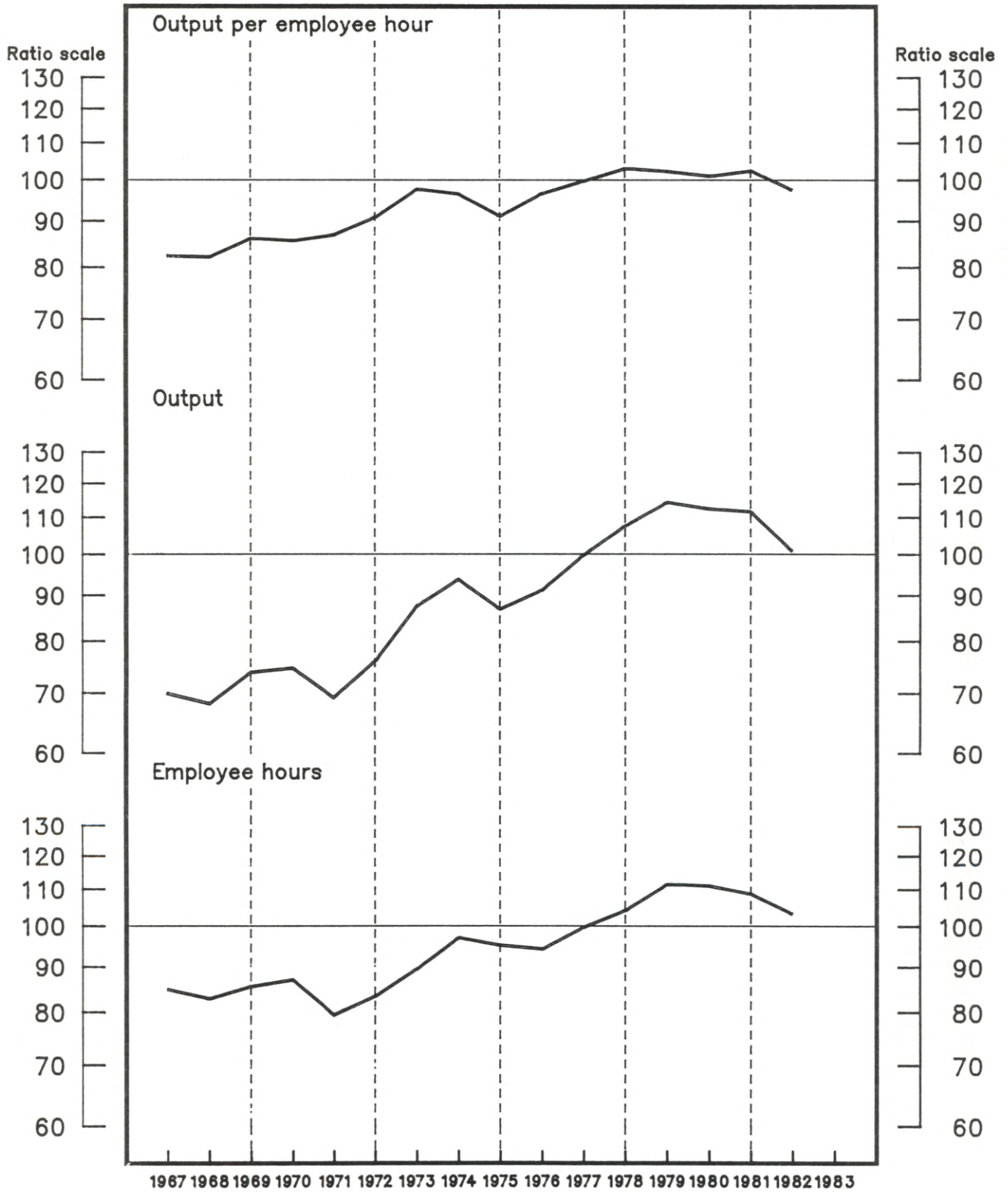
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 93. Pumps and compressors (SIC 3561, 3563): Output per hour and related data, 1967-82

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 182. Pumps and compressors (SIC 3561, 3563): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	64.5	64.5	64.5	65.1	64.7	65.7
1959 .....	68.8	66.9	72.5	69.3	67.1	73.6
1960 .....	66.6	65.2	69.0	67.5	66.2	69.7
1961 .....	69.2	68.3	70.7	70.1	69.9	70.8
1962 .....	73.6	72.8	75.2	74.9	75.0	75.0
1963 .....	78.2	75.5	84.0	80.2	78.5	83.5
1964 .....	79.4	76.2	85.6	82.5	80.8	85.5
1965 .....	81.0	77.2	88.8	83.8	81.1	88.7
1966 .....	81.2	76.5	91.1	85.2	82.4	90.4
1967 .....	82.5	78.9	89.6	85.1	83.0	88.8
1968 .....	82.3	82.0	82.8	85.1	84.3	86.2
1969 .....	86.3	84.5	89.6	88.8	87.1	91.8
1970 .....	85.8	85.8	85.9	87.2	87.3	87.1
1971 .....	87.1	89.8	82.8	87.4	89.4	84.4
1972 .....	91.1	90.7	91.9	92.4	91.6	93.5
1973 .....	97.9	95.9	101.4	99.1	96.7	103.3
1974 .....	96.7	93.6	102.5	96.6	92.6	104.1
1975 .....	91.4	92.2	89.9	90.7	90.6	90.9
1976 .....	96.8	97.8	95.1	96.9	97.4	96.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.3	103.0	103.8	102.6	101.9	103.8
1979 .....	102.5	102.1	103.2	101.6	100.4	103.6
1980 .....	101.3	102.9	98.4	100.4	101.1	99.1
1981 .....	102.7	106.5	96.5	101.5	104.5	96.8
1982 <sup>2</sup> .....	97.7	109.5	82.0	94.8	104.6	82.3
Average annual percent change:						
1958-82 .....	1.9	2.2	1.4	1.7	1.9	1.4
1978-82 .....	-1.1	1.7	-5.2	-1.6	.9	-5.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 183. Pumps and compressors (SIC 3561, 3563): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	41.1	63.7	63.7	63.7	63.1	63.5	62.6
1959 .....	43.4	63.1	64.9	59.9	62.6	64.7	59.0
1960 .....	44.6	67.0	68.4	64.6	66.1	67.4	64.0
1961 .....	43.9	63.4	64.3	62.1	62.6	62.8	62.0
1962 .....	48.6	66.0	66.8	64.6	64.9	64.8	64.8
1963 .....	51.8	66.2	68.6	61.7	64.6	66.0	62.0
1964 .....	59.0	74.3	77.4	68.9	71.5	73.0	69.0
1965 .....	65.3	80.6	84.6	73.5	77.9	80.5	73.6
1966 .....	70.6	86.9	92.3	77.5	82.9	85.7	78.1
1967 .....	70.1	85.0	88.9	78.2	82.4	84.5	78.9
1968 .....	68.3	83.0	83.3	82.5	80.3	81.0	79.2
1969 .....	74.0	85.7	87.6	82.6	83.3	85.0	80.6
1970 .....	74.8	87.2	87.2	87.1	85.8	85.7	85.9
1971 .....	69.4	79.7	77.3	83.8	79.4	77.6	82.2
1972 .....	76.2	83.6	84.0	82.9	82.5	83.2	81.5
1973 .....	87.8	89.7	91.6	86.6	88.6	90.8	85.0
1974 .....	94.0	97.2	100.4	91.7	97.3	101.5	90.3
1975 .....	87.1	95.3	94.5	96.9	96.0	96.1	95.8
1976 .....	91.4	94.4	93.5	96.1	94.3	93.8	95.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.8	104.4	104.7	103.9	105.1	105.8	103.9
1979 .....	114.5	111.7	112.1	110.9	112.7	114.1	110.5
1980 .....	112.6	111.2	109.4	114.4	112.2	111.4	113.6
1981 .....	111.8	108.9	105.0	115.9	110.2	107.0	115.5
1982 <sup>1</sup> .....	101.0	103.4	92.2	123.1	106.5	96.6	122.7
Average annual percent change:							
1958-82 .....	4.4	2.4	2.2	2.9	2.6	2.4	2.9
1978-82 .....	-1.5	-.4	-3.1	3.9	( <sup>2</sup> )	-2.4	3.8

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table

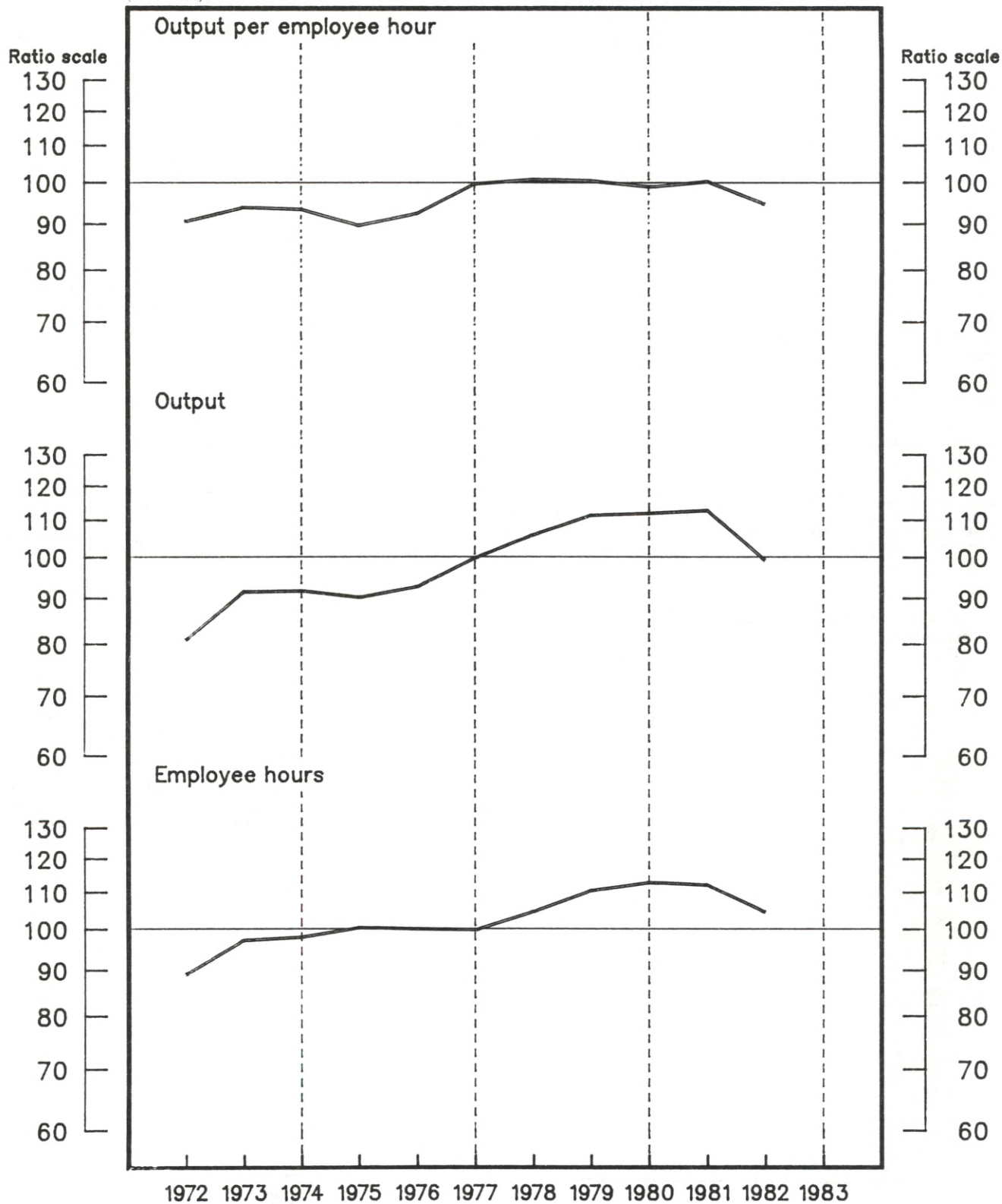
may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 94. Pumps and pumping equipment (SIC 3561): Output per hour and related data, 1972-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 184. Pumps and pumping equipment (SIC 3561): Indexes of output per employee hour and output per employee, 1972-82 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	90.8	89.9	92.5	91.9	90.8	94.0
1973 .....	94.1	92.0	98.6	96.7	94.8	100.3
1974 .....	93.6	90.6	99.6	93.5	89.7	101.1
1975 .....	89.9	92.2	85.8	89.2	90.7	86.7
1976 .....	92.7	94.6	89.6	93.2	94.8	90.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	101.1	101.2	101.0	99.9	99.3	100.9
1979 .....	100.7	100.7	100.8	98.8	97.4	101.2
1980 .....	99.2	101.6	95.2	97.5	98.6	95.7
1981 .....	100.6	105.1	93.4	98.9	102.2	93.6
1982 <sup>2</sup> .....	94.9	106.7	78.8	91.7	101.2	79.0
Average annual percent change:						
1972-82 .....	.9	1.8	-.6	.4	1.2	-.8
1978-82 .....	-1.3	1.5	-5.6	-1.7	.9	-5.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 185. Pumps and pumping equipment (SIC 3561): Indexes of output, employee hours, and employees, 1972-82 (1977=100)**

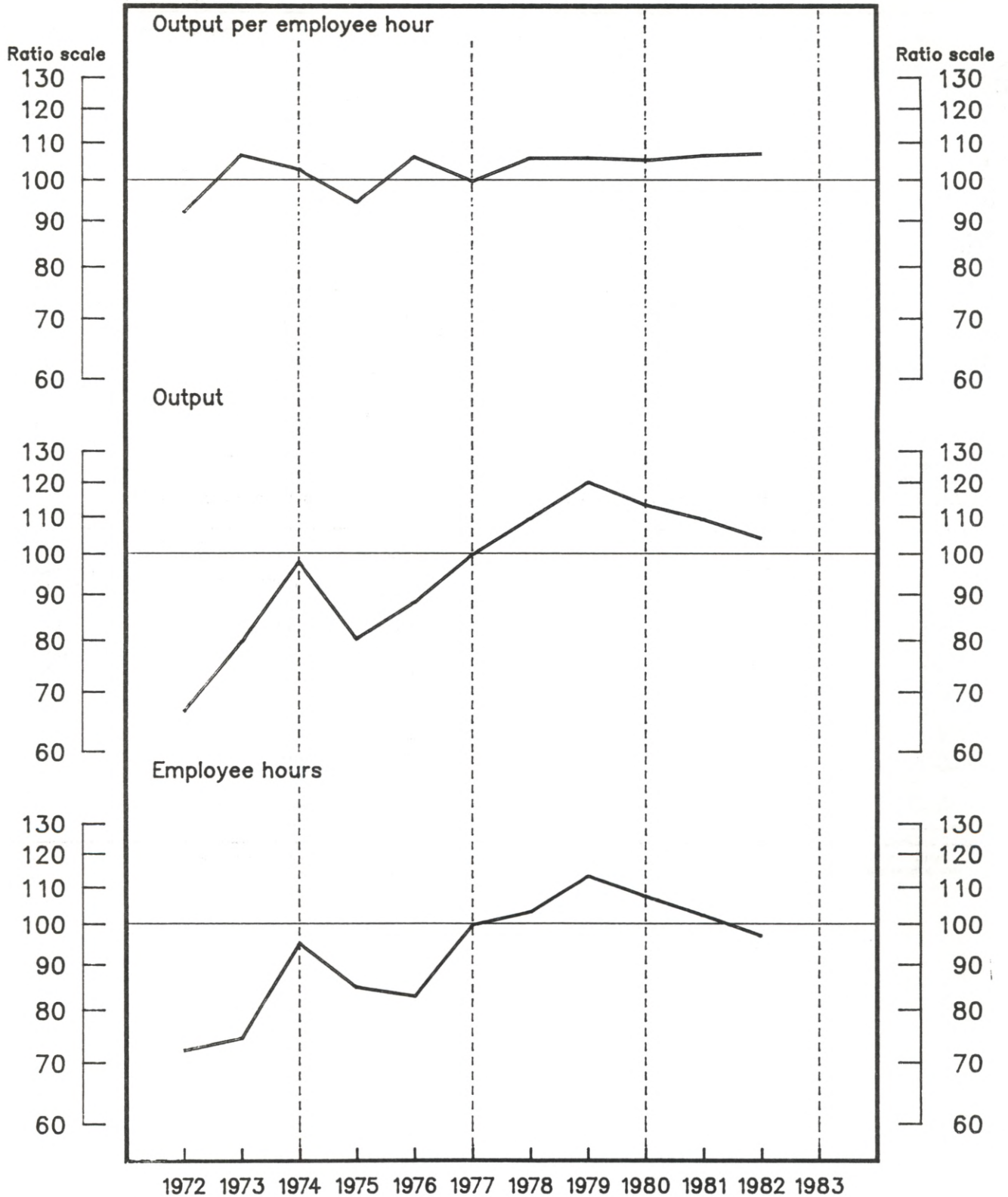
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	81.0	89.2	90.1	87.6	88.1	89.2	86.2
1973 .....	91.7	97.4	99.7	93.0	94.8	96.7	91.4
1974 .....	91.9	98.2	101.4	92.3	98.3	102.5	90.9
1975 .....	90.4	100.6	98.0	105.4	101.4	99.7	104.3
1976 .....	92.9	100.2	98.2	103.7	99.7	98.0	102.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.1	104.9	104.8	105.1	106.2	106.8	105.2
1979 .....	111.6	110.8	110.8	110.7	113.0	114.6	110.3
1980 .....	112.2	113.1	110.4	117.9	115.1	113.8	117.2
1981 .....	113.0	112.3	107.5	121.0	114.3	110.6	120.7
1982 <sup>1</sup> .....	99.4	104.7	93.2	126.1	108.4	98.2	125.9
Average annual percent change:							
1972-82 .....	2.8	1.9	.9	3.4	2.3	1.6	3.6
1978-82 .....	-1.2	.1	-2.6	4.6	.5	-2.0	4.6

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 95. Air and gas compressors (SIC 3563): Output per hour and related data, 1972-82  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 186. Air and gas compressors (SIC 3563): Indexes of output per employee hour and output per employee, 1972-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	92.1	93.7	89.7	93.2	94.3	91.5
1973 .....	106.8	107.4	106.1	104.2	101.7	108.4
1974 .....	103.0	100.0	108.1	103.0	98.7	110.2
1975 .....	94.7	92.3	98.8	94.4	91.0	99.9
1976 .....	106.4	105.9	107.3	105.5	103.6	108.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.1	105.0	107.9	106.7	105.8	108.0
1979 .....	106.1	104.8	108.2	107.3	106.5	108.6
1980 .....	105.5	105.8	105.1	106.5	106.8	106.1
1981 .....	106.8	109.7	102.5	107.0	109.9	103.0
1982 <sup>2</sup> .....	107.3	118.8	92.9	105.1	115.0	93.4
Average annual percent change:						
1972-82 .....	1.0	1.5	.1	1.0	1.7	( <sup>3</sup> )
1978-82 .....	.3	3.0	-3.5	-3	2.0	-3.4

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 187. Air and gas compressors (SIC 3563): Indexes of output, employee hours, and employees, 1972-82**  
(1977=100)

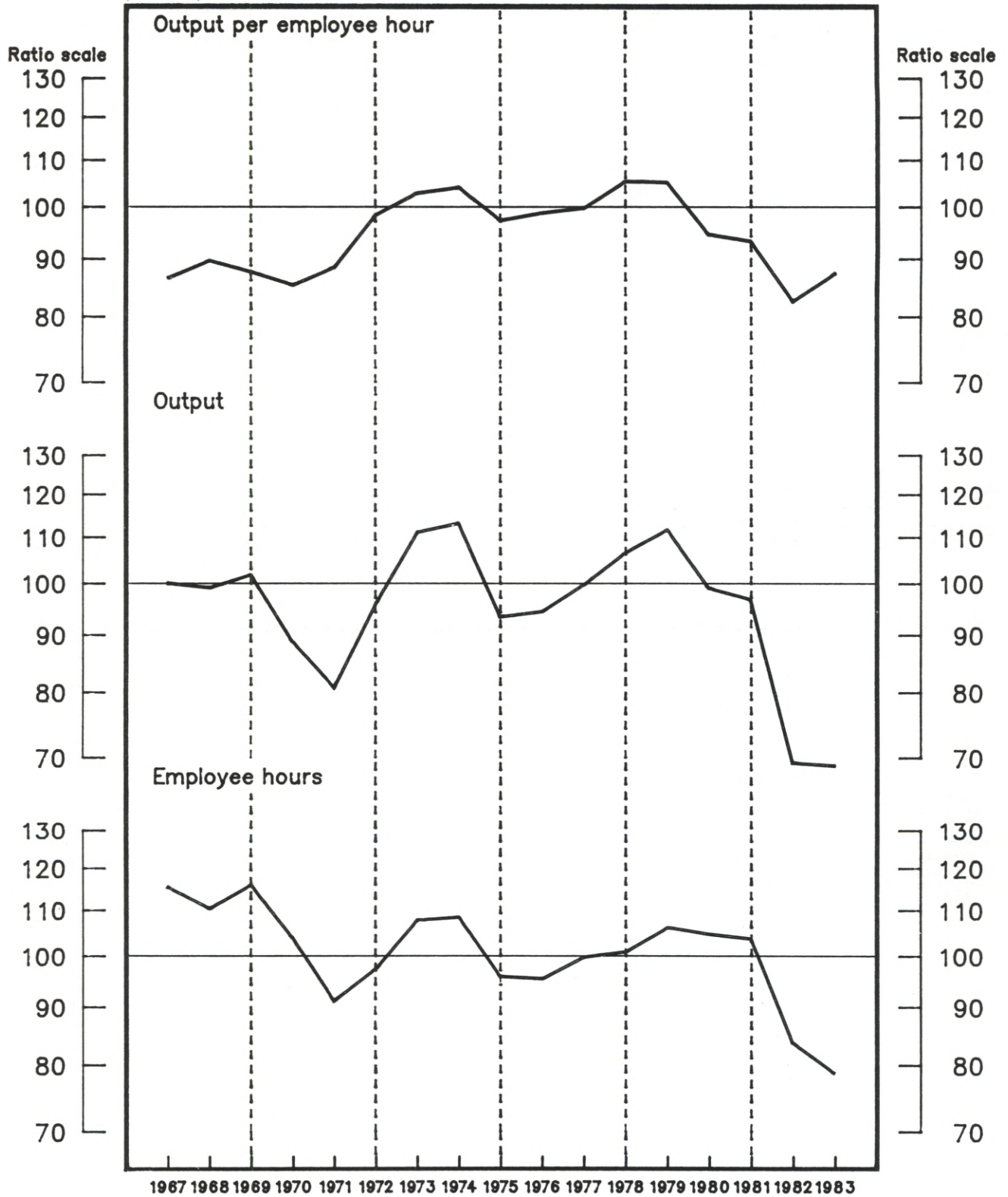
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	66.7	72.4	71.2	74.4	71.6	70.7	72.9
1973 .....	79.8	74.7	74.3	75.2	76.6	78.5	73.6
1974 .....	98.2	95.3	98.2	90.8	95.3	99.5	89.1
1975 .....	80.5	85.0	87.2	81.5	85.3	88.5	80.6
1976 .....	88.4	83.1	83.5	82.4	83.8	85.3	81.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	109.7	103.4	104.5	101.7	102.8	103.7	101.6
1979 .....	120.4	113.5	114.9	111.3	112.2	113.1	110.9
1980 .....	113.5	107.6	107.3	108.0	106.6	106.3	107.0
1981 .....	109.4	102.4	99.7	106.7	102.2	99.5	106.2
1982 <sup>1</sup> .....	104.2	97.1	87.7	112.2	99.1	90.6	111.6
Average annual percent change:							
1972-82 .....	4.6	3.6	3.0	4.5	3.6	2.8	4.7
1978-82 .....	-2.0	-2.3	-4.8	1.6	-1.7	-3.9	1.5

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 96. Ball and roller bearings (SIC 3562): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 188. Ball and roller bearings (SIC 3562): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	52.7	51.9	55.6	50.3	48.7	56.2
1959 .....	66.0	62.1	84.2	65.7	61.3	85.3
1960 .....	64.7	62.4	73.9	60.9	57.7	74.3
1961 .....	66.5	64.8	72.8	63.9	61.6	72.6
1962 .....	72.4	69.6	83.9	71.6	68.6	83.0
1963 .....	73.5	72.4	77.5	71.7	70.3	76.7
1964 .....	79.3	76.9	88.5	78.6	76.1	87.6
1965 .....	90.0	86.3	105.0	91.9	88.6	103.9
1966 .....	90.1	86.3	106.3	93.4	90.4	105.1
1967 .....	86.7	84.1	96.8	87.9	85.6	95.8
1968 .....	89.8	89.2	91.5	90.7	89.9	93.5
1969 .....	87.8	86.5	92.2	88.9	87.6	93.4
1970 .....	85.5	86.3	82.4	81.2	80.7	82.6
1971 .....	88.6	90.6	82.3	85.4	86.4	82.9
1972 .....	98.6	97.4	102.8	100.2	99.0	104.1
1973 .....	103.1	100.5	112.8	106.8	104.8	113.9
1974 .....	104.3	102.0	113.4	104.4	101.7	114.2
1975 .....	97.5	97.9	96.1	95.3	94.9	96.5
1976 .....	99.0	98.7	99.7	98.5	98.0	99.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.6	105.1	107.7	104.2	103.1	107.7
1979 .....	105.3	103.0	113.6	105.8	103.5	113.6
1980 .....	94.7	92.6	102.4	94.4	92.2	102.4
1981 .....	93.4	92.3	96.9	93.0	91.8	96.9
1982 .....	82.8	86.4	72.7	79.3	81.6	72.7
1983 <sup>2</sup> .....	87.6	89.8	80.7	87.6	90.0	80.7
Average annual percent change:						
1958-83 .....	1.8	2.0	1.1	1.8	2.1	1.1
1978-83 .....	-4.7	-3.7	-7.8	-4.9	-3.9	-7.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 189. Ball and roller bearings (SIC 3562): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	39.9	75.7	76.9	71.8	79.4	82.0	71.0
1959 .....	62.5	94.7	100.7	74.2	95.1	102.0	73.3
1960 .....	51.3	88.6	91.8	77.5	94.1	99.3	77.1
1961 .....	55.5	83.4	85.6	76.2	86.8	90.1	76.4
1962 .....	66.5	91.9	95.6	79.3	92.9	97.0	80.1
1963 .....	68.5	93.2	94.6	88.4	95.6	97.4	89.3
1964 .....	78.2	98.6	101.7	88.4	99.5	102.7	89.3
1965 .....	95.2	105.8	110.3	90.7	103.6	107.5	91.6
1966 .....	106.8	118.5	123.8	100.5	114.3	118.1	101.6
1967 .....	100.2	115.6	119.2	103.5	114.0	117.0	104.6
1968 .....	99.3	110.6	111.3	108.5	109.5	110.5	106.2
1969 .....	102.0	116.2	117.9	110.6	114.7	116.5	109.2
1970 .....	88.9	104.0	103.0	107.9	109.5	110.1	107.6
1971 .....	81.0	91.4	89.4	98.4	94.8	93.8	97.7
1972 .....	96.2	97.6	98.8	93.6	96.0	97.2	92.4
1973 .....	111.3	108.0	110.8	98.7	104.2	106.2	97.7
1974 .....	113.4	108.7	111.2	100.0	108.6	111.5	99.3
1975 .....	93.6	96.0	95.6	97.4	98.2	98.6	97.0
1976 .....	94.6	95.6	95.8	94.9	96.0	96.5	94.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.8	101.1	101.6	99.2	102.5	103.6	99.2
1979 .....	111.9	106.3	108.6	98.5	105.8	108.1	98.5
1980 .....	99.2	104.8	107.1	96.9	105.1	107.6	96.9
1981 .....	96.9	103.8	105.0	100.0	104.2	105.5	100.0
1982 .....	69.4	83.8	80.3	95.4	87.5	85.0	95.4
1983 <sup>1</sup> .....	69.0	78.8	76.8	85.5	78.8	76.7	85.5
Average annual percent change:							
1958-83 .....	2.0	.2	( <sup>2</sup> )	.9	.1	-.1	.9
1978-83 .....	-9.9	-5.5	-6.4	-2.3	-5.3	-6.2	-2.3

<sup>1</sup> Preliminary.

<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table

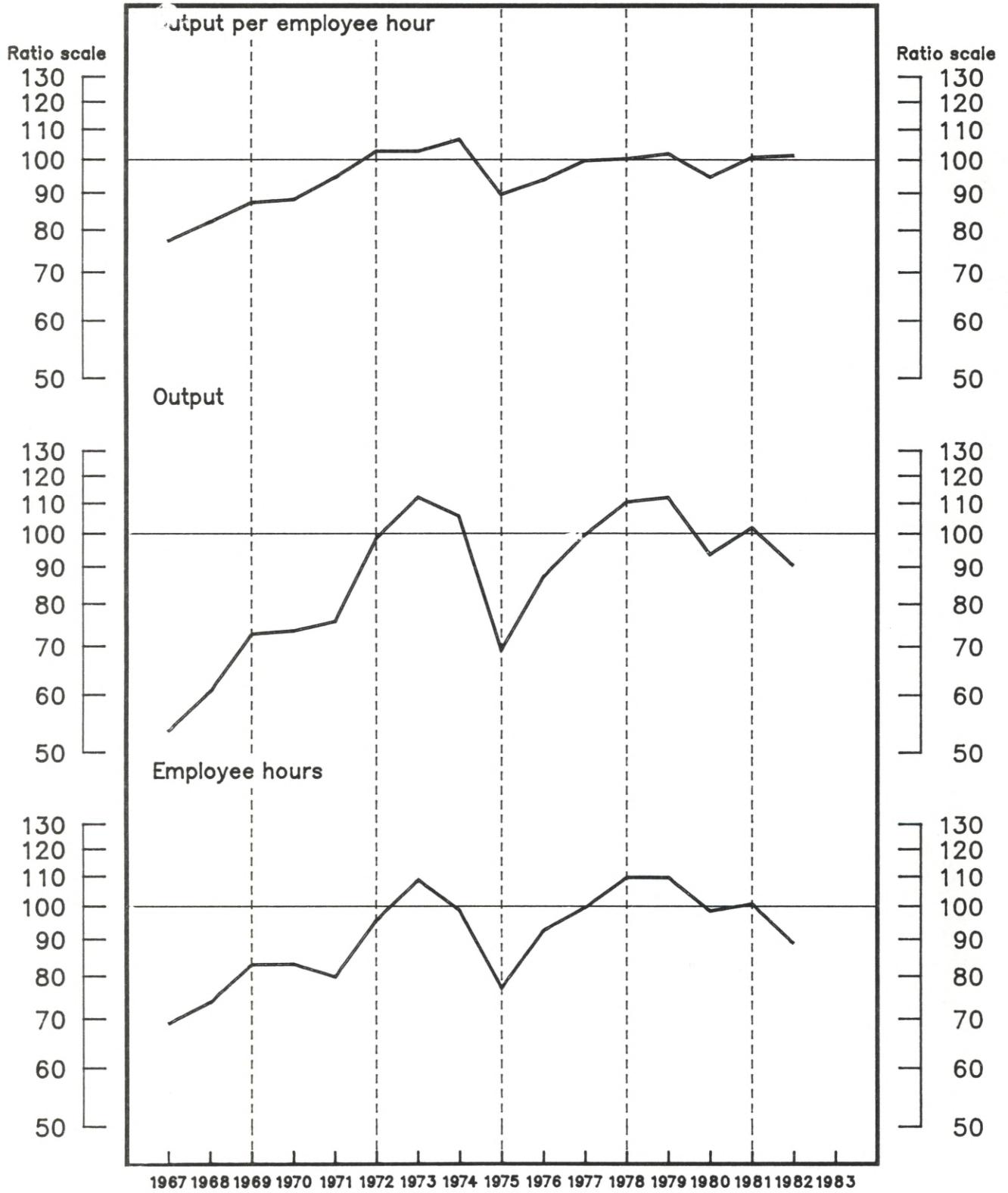
may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 97. Refrigeration and heating equipment (SIC 3585): Output per hour and related data, 1967-82

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 190. Refrigeration and heating equipment (SIC 3585): Indexes of output per employee hour and output per employee, 1967-82 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1967 .....	77.5	76.8	79.1	78.4	78.4	78.2
1968 .....	82.3	82.5	81.8	83.2	82.9	83.6
1969 .....	87.6	85.6	93.0	89.4	87.5	94.1
1970 .....	88.4	87.1	91.3	87.9	86.5	91.7
1971 .....	94.8	93.6	97.4	94.3	92.7	98.2
1972 .....	103.0	99.5	112.9	105.9	102.7	114.3
1973 .....	103.0	100.0	111.1	105.1	102.5	112.2
1974 .....	106.9	105.7	109.7	106.8	105.2	110.7
1975 .....	89.9	93.8	81.6	88.3	91.2	82.1
1976 .....	94.1	93.4	96.0	95.5	95.2	96.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.6	98.8	105.1	103.0	102.0	105.1
1979 .....	102.2	100.4	106.9	102.7	101.1	106.9
1980 .....	95.0	97.4	90.0	94.6	96.6	90.0
1981 .....	101.1	101.3	100.8	100.9	101.0	100.8
1982 <sup>2</sup> .....	101.7	105.0	94.7	100.3	102.8	94.7
Average annual percent change:						
1967-82 .....	1.3	1.5	.8	1.2	1.4	.8
1978-82 .....	.1	1.3	-2.6	-.7	.1	-2.6

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 191. Refrigeration and heating equipment (SIC 3585): Indexes of output, employee hours, and employees, 1967-82 (1977=100)**

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1967 .....	53.6	69.2	69.8	67.8	68.4	68.4	68.5
1968 .....	60.8	73.9	73.7	74.3	73.1	73.3	72.7
1969 .....	73.0	83.3	85.3	78.5	81.7	83.4	77.6
1970 .....	73.7	83.4	84.6	80.7	83.8	85.2	80.4
1971 .....	75.9	80.1	81.1	77.9	80.5	81.9	77.3
1972 .....	99.0	96.1	99.5	87.7	93.5	96.4	86.6
1973 .....	112.5	109.2	112.5	101.3	107.0	109.8	100.3
1974 .....	105.9	99.1	100.2	96.5	99.2	100.7	95.7
1975 .....	69.7	77.5	74.3	85.4	78.9	76.4	84.9
1976 .....	87.5	93.0	93.7	91.1	91.6	91.9	90.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	110.8	110.1	112.1	105.4	107.6	108.6	105.4
1979 .....	112.4	110.0	112.0	105.1	109.4	111.2	105.1
1980 .....	94.0	98.9	96.5	104.5	99.4	97.3	104.5
1981 .....	102.2	101.1	100.9	101.4	101.3	101.2	101.4
1982 <sup>1</sup> .....	90.6	89.1	86.3	95.7	90.3	88.1	95.7
Average annual percent change:							
1967-82 .....	3.4	2.1	1.9	2.5	2.2	2.0	2.6
1978-82 .....	-4.9	-4.9	-6.1	-2.3	-4.2	-5.0	-2.3

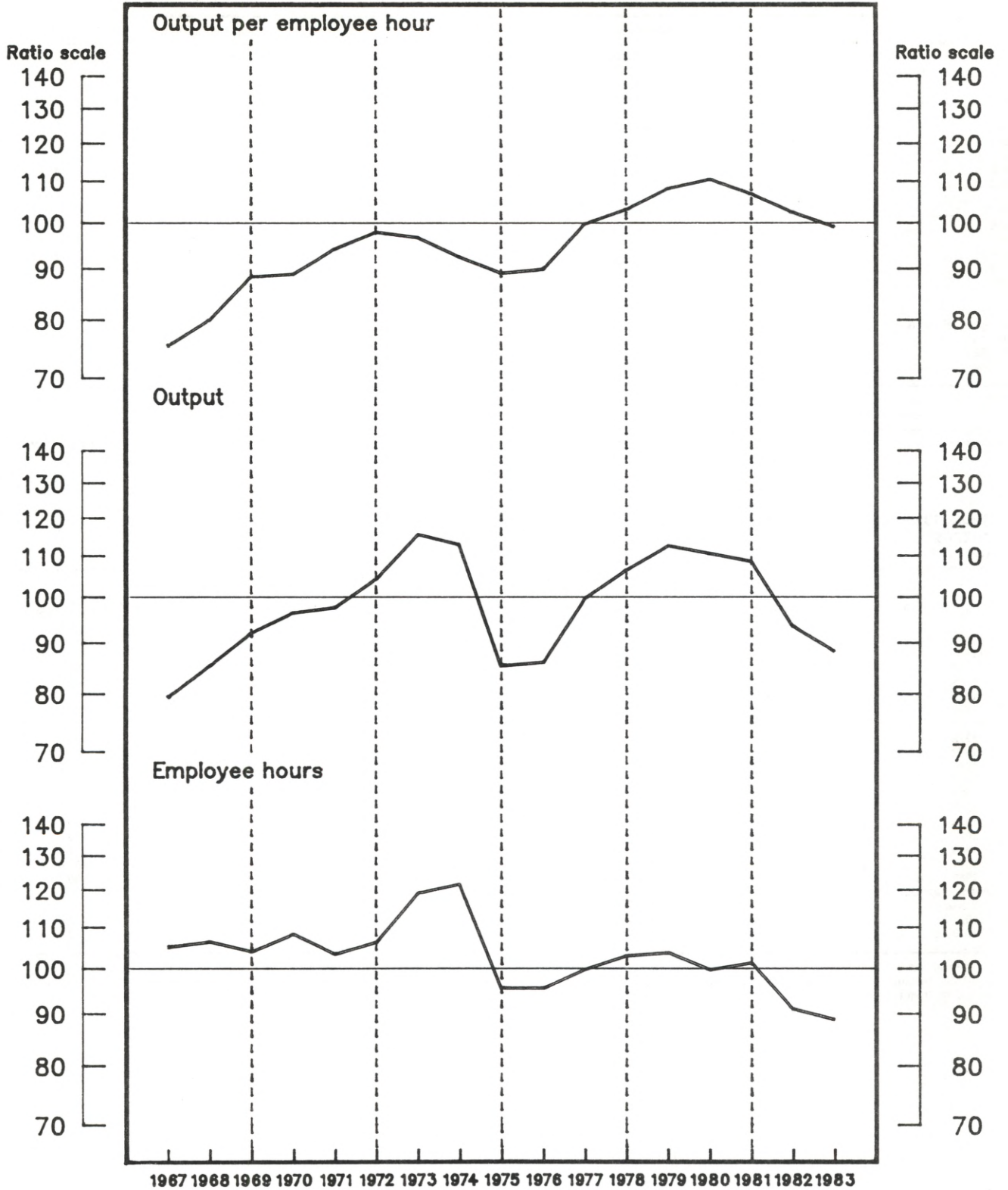
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 98. Transformers (SIC 3612): Output per hour and related data, 1967-83

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 192. Transformers (SIC 3612): Indexes of output per employee hour and output per employee, 1963-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	67.5	67.6	67.1	67.1	68.5	64.2
1964 .....	73.3	71.9	77.0	73.7	73.7	73.7
1965 .....	79.9	77.0	87.4	81.1	80.0	83.7
1966 .....	75.8	72.9	83.7	77.9	76.9	80.1
1967 .....	75.5	73.0	82.1	76.7	75.9	78.6
1968 .....	80.2	77.5	87.1	80.6	79.1	84.0
1969 .....	88.6	85.1	97.7	89.6	87.3	95.3
1970 .....	89.1	84.9	100.6	89.6	86.1	99.2
1971 .....	94.4	90.1	105.8	92.8	88.6	104.4
1972 .....	98.1	94.1	109.1	97.2	93.6	107.2
1973 .....	96.9	91.5	112.4	96.9	92.1	110.2
1974 .....	92.7	88.5	104.2	91.9	88.3	101.7
1975 .....	89.3	92.0	83.9	86.6	88.6	82.4
1976 .....	90.1	92.0	85.9	89.1	91.0	85.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.4	102.1	106.7	103.8	102.6	106.7
1979 .....	108.5	105.9	114.9	108.7	106.2	114.9
1980 .....	110.8	111.5	109.4	110.3	110.7	109.4
1981 .....	107.1	106.2	109.4	107.3	106.5	109.4
1982 .....	102.6	102.4	103.2	99.9	98.6	103.2
1983 <sup>2</sup> .....	99.3	99.9	98.1	99.3	99.9	98.1
Average annual percent change:						
1963-83 .....	2.1	2.2	1.6	2.0	2.0	1.9
1978-83 .....	-1.1	-7	-2.1	-1.4	-1.1	-2.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 193. Transformers (SIC 3612): Indexes of output, employee hours, and employees, 1963-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	51.9	76.9	76.8	77.3	77.3	75.8	80.8
1964 .....	59.0	80.5	82.1	76.6	80.1	80.0	80.1
1965 .....	69.6	87.1	90.4	79.6	85.8	87.0	83.2
1966 .....	74.1	97.7	101.7	88.5	95.1	96.3	92.5
1967 .....	79.5	105.3	108.9	96.8	103.7	104.8	101.2
1968 .....	85.5	106.6	110.3	98.2	106.1	108.1	101.8
1969 .....	92.3	104.2	108.5	94.5	103.0	105.7	96.9
1970 .....	96.7	108.5	113.9	96.1	107.9	112.3	97.5
1971 .....	97.8	103.6	108.5	92.4	105.4	110.4	93.7
1972 .....	104.5	106.5	111.1	95.8	107.5	111.7	97.5
1973 .....	115.7	119.4	126.5	102.9	119.4	125.6	105.0
1974 .....	113.0	121.9	127.7	108.4	122.9	128.0	111.1
1975 .....	85.5	95.7	92.9	101.9	98.7	96.5	103.7
1976 .....	86.2	95.7	93.7	100.3	96.7	94.7	101.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	106.7	103.2	104.5	100.0	102.8	104.0	100.0
1979 .....	112.7	103.9	106.4	98.1	103.7	106.1	98.1
1980 .....	110.7	99.9	99.3	101.2	100.4	100.0	101.2
1981 .....	108.7	101.5	102.4	99.4	101.3	102.1	99.4
1982 .....	93.6	91.2	91.4	90.7	93.7	94.9	90.7
1983 <sup>1</sup> .....	88.4	89.0	88.5	90.1	89.0	88.5	90.1
Average annual percent change:							
1963-83 .....	2.5	.4	.2	.9	.5	.5	.6
1978-83 .....	-4.2	-3.1	-3.5	-2.2	-2.9	-3.2	-2.2

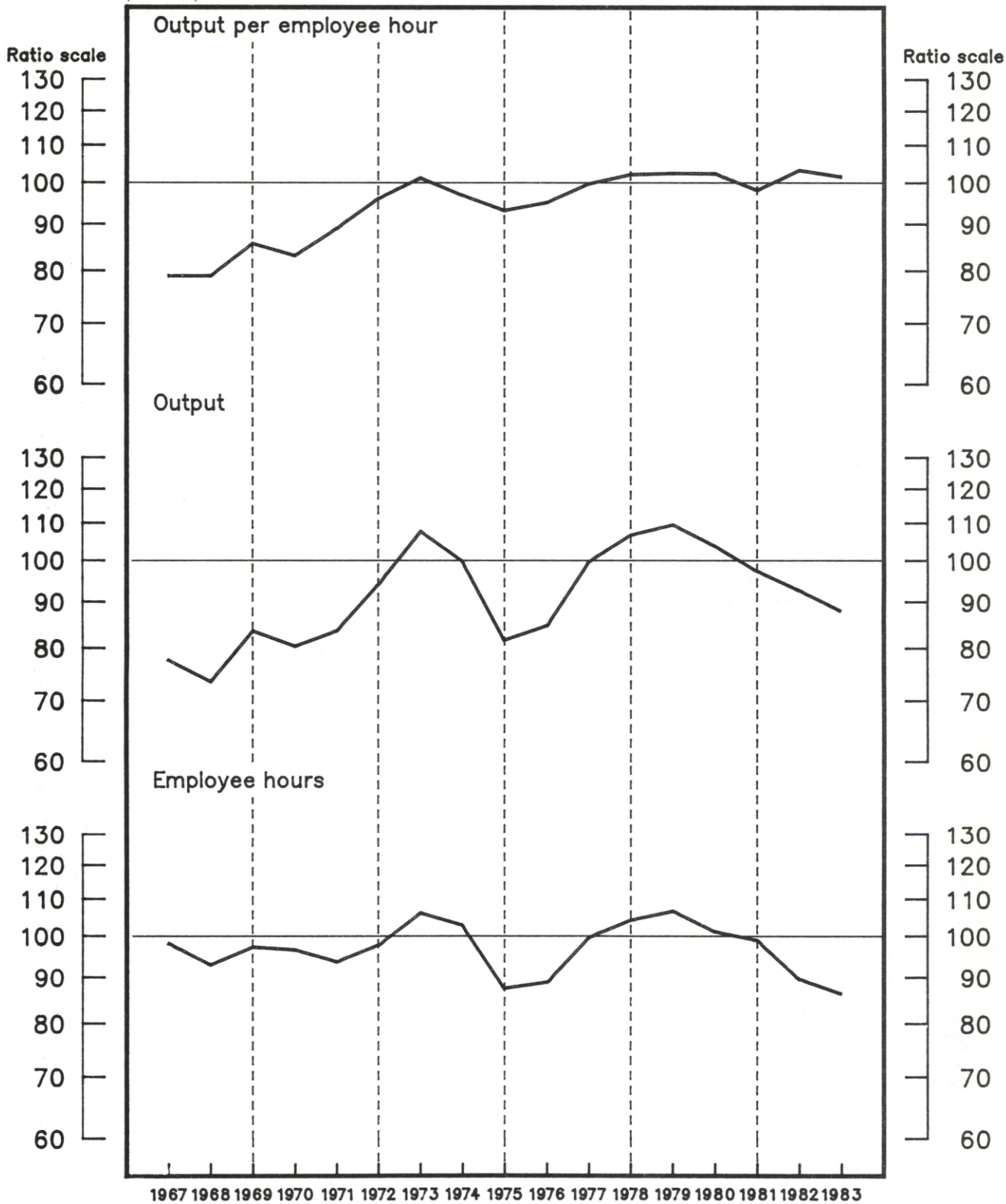
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 99. Switchgear and switchboard apparatus (SIC 3613): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 194. Switchgear and switchboard apparatus (SIC 3613): Indexes of output per employee hour and output per employee, 1963-83 (1977=100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963 .....	70.9	71.3	69.8	73.2	75.1	68.7
1964 .....	70.2	72.4	64.8	74.1	78.9	64.0
1965 .....	74.4	74.3	74.5	77.6	79.5	73.1
1966 .....	78.7	76.8	84.5	82.8	82.9	82.8
1967 .....	79.1	77.3	84.1	81.8	81.6	82.3
1968 .....	79.1	78.8	79.7	82.0	82.7	80.1
1969 .....	85.9	85.2	88.3	89.3	89.4	89.1
1970 .....	83.3	84.1	81.0	86.1	87.5	82.7
1971 .....	89.2	90.7	85.6	92.0	93.8	87.3
1972 .....	96.3	97.1	94.4	98.2	99.2	95.8
1973 .....	101.5	100.7	103.5	104.5	104.5	104.3
1974 .....	97.1	96.2	99.8	98.4	98.0	99.6
1975 .....	93.4	99.2	80.8	91.1	95.9	80.7
1976 .....	95.3	99.1	86.5	93.6	96.4	87.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.4	102.6	101.8	102.6	102.9	101.9
1979 .....	102.7	104.2	98.9	103.5	105.2	99.3
1980 .....	102.6	107.1	92.2	103.6	108.3	92.8
1981 .....	98.4	102.2	89.5	99.1	103.2	90.0
1982 .....	103.5	111.9	86.0	101.9	109.3	86.4
1983 <sup>2</sup> .....	101.8	104.9	94.7	101.6	104.5	94.7
Average annual percent change:						
1963-83 .....	2.0	2.2	1.4	1.7	1.8	1.5
1978-83 .....	-1	.8	-2.3	-4	.4	-2.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 195. Switchgear and switchboard apparatus (SIC 3613): Indexes of output, employee hours, and employees, 1963-83 (1977=100)**

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963 .....	54.9	77.4	77.0	78.6	75.0	73.1	79.9
1964 .....	57.5	81.9	79.4	88.8	77.6	72.9	89.9
1965 .....	62.1	83.5	83.6	83.4	80.0	78.1	84.9
1966 .....	74.4	94.5	96.9	88.0	89.9	89.8	89.9
1967 .....	77.8	98.4	100.6	92.5	95.1	95.4	94.5
1968 .....	73.7	93.2	93.5	92.5	89.9	89.1	92.0
1969 .....	83.8	97.5	98.4	94.9	93.8	93.7	94.0
1970 .....	80.6	96.8	95.8	99.5	93.6	92.1	97.5
1971 .....	83.8	93.9	92.4	97.9	91.1	89.3	96.0
1972 .....	94.4	98.0	97.2	100.0	96.1	95.2	98.5
1973 .....	108.0	106.4	107.2	104.3	103.3	103.3	103.5
1974 .....	100.1	103.1	104.1	100.3	101.7	102.1	100.5
1975 .....	81.9	87.7	82.6	101.3	89.9	85.4	101.5
1976 .....	84.9	89.1	85.7	98.1	90.7	88.1	97.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.0	104.5	104.3	105.1	104.3	104.0	105.0
1979 .....	109.8	106.9	105.4	111.0	106.1	104.4	110.6
1980 .....	104.0	101.4	97.1	112.8	100.4	96.0	112.1
1981 .....	97.6	99.2	95.5	109.1	98.5	94.6	108.5
1982 .....	92.9	89.8	83.0	108.0	91.2	85.0	107.5
1983 <sup>1</sup> .....	88.1	86.5	84.0	93.0	86.7	84.3	93.0
Average annual percent change:							
1963-83 .....	2.6	.6	.4	1.2	.9	.8	1.1
1978-83 .....	-4.3	-4.2	-5.1	-2.1	-3.9	-4.7	-2.0

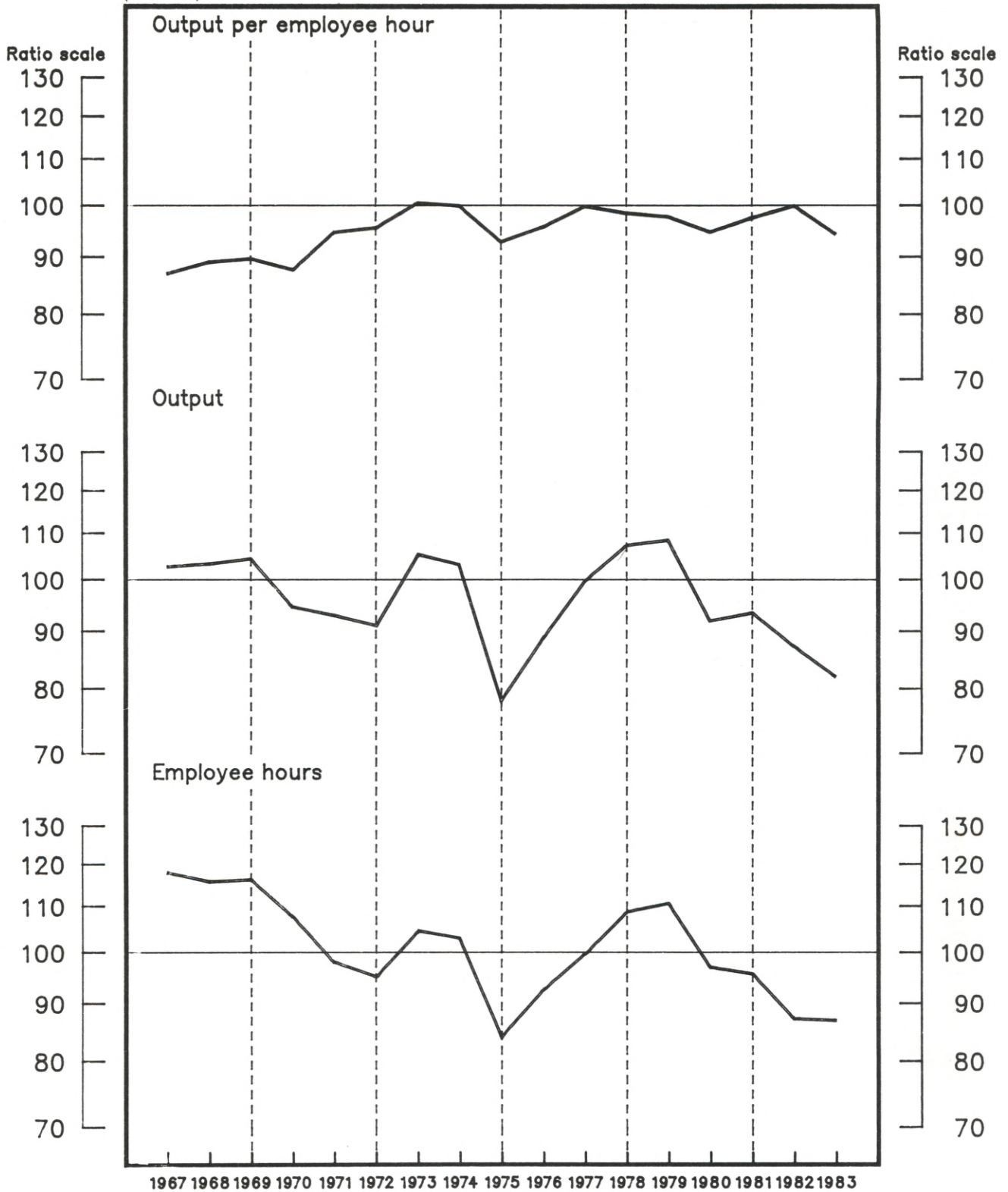
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 100. Motors and generators (SIC 3621): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 196. Motors and generators (SIC 3621): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	49.9	51.9	43.9	49.7	51.7	44.0
1955 .....	51.1	52.8	46.0	51.7	53.7	45.8
1956 .....	54.1	55.6	49.7	54.3	55.9	49.6
1957 .....	52.5	56.5	42.2	52.2	56.3	42.2
1958 .....	52.1	57.2	39.9	52.0	57.4	39.7
1959 .....	60.5	64.1	50.6	61.1	65.3	50.4
1960 .....	62.0	66.5	50.3	61.4	66.2	49.8
1961 .....	66.3	71.3	53.3	65.9	71.4	52.5
1962 .....	73.7	77.4	63.4	74.3	79.0	62.2
1963 .....	74.7	77.1	67.3	76.3	80.2	66.0
1964 .....	82.5	85.2	74.3	84.8	89.1	73.3
1965 .....	88.3	88.6	87.1	90.6	92.3	85.5
1966 .....	90.3	88.3	97.6	91.1	89.9	95.4
1967 .....	87.1	87.1	86.8	88.4	89.6	84.9
1968 .....	89.2	89.8	87.3	91.7	93.0	87.6
1969 .....	89.8	90.2	88.1	92.6	93.8	88.9
1970 .....	87.8	89.5	82.2	88.3	89.8	84.0
1971 .....	94.8	96.9	87.8	96.3	98.5	89.5
1972 .....	95.7	95.5	96.7	97.9	97.9	98.1
1973 .....	100.7	98.0	110.2	101.6	99.2	110.8
1974 .....	100.1	98.8	104.6	99.9	98.7	104.1
1975 .....	93.0	96.3	83.3	92.7	96.1	83.1
1976 .....	95.9	94.6	100.6	95.1	93.4	101.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.6	97.8	101.3	98.2	97.3	101.2
1979 .....	97.9	98.3	96.8	98.3	98.6	97.1
1980 .....	94.9	98.3	84.7	94.9	98.2	85.4
1981 .....	97.7	99.6	91.7	97.1	98.8	91.9
1982 .....	100.1	107.2	81.7	97.1	102.9	82.0
1983 <sup>2</sup> .....	94.4	98.6	82.5	94.3	98.6	82.4
Average annual percent change:						
1954-83 .....	2.5	2.3	2.9	2.4	2.2	3.0
1978-83 .....	-3	.9	-4.1	-6	.6	-4.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 197. Motors and generators (SIC 3621): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

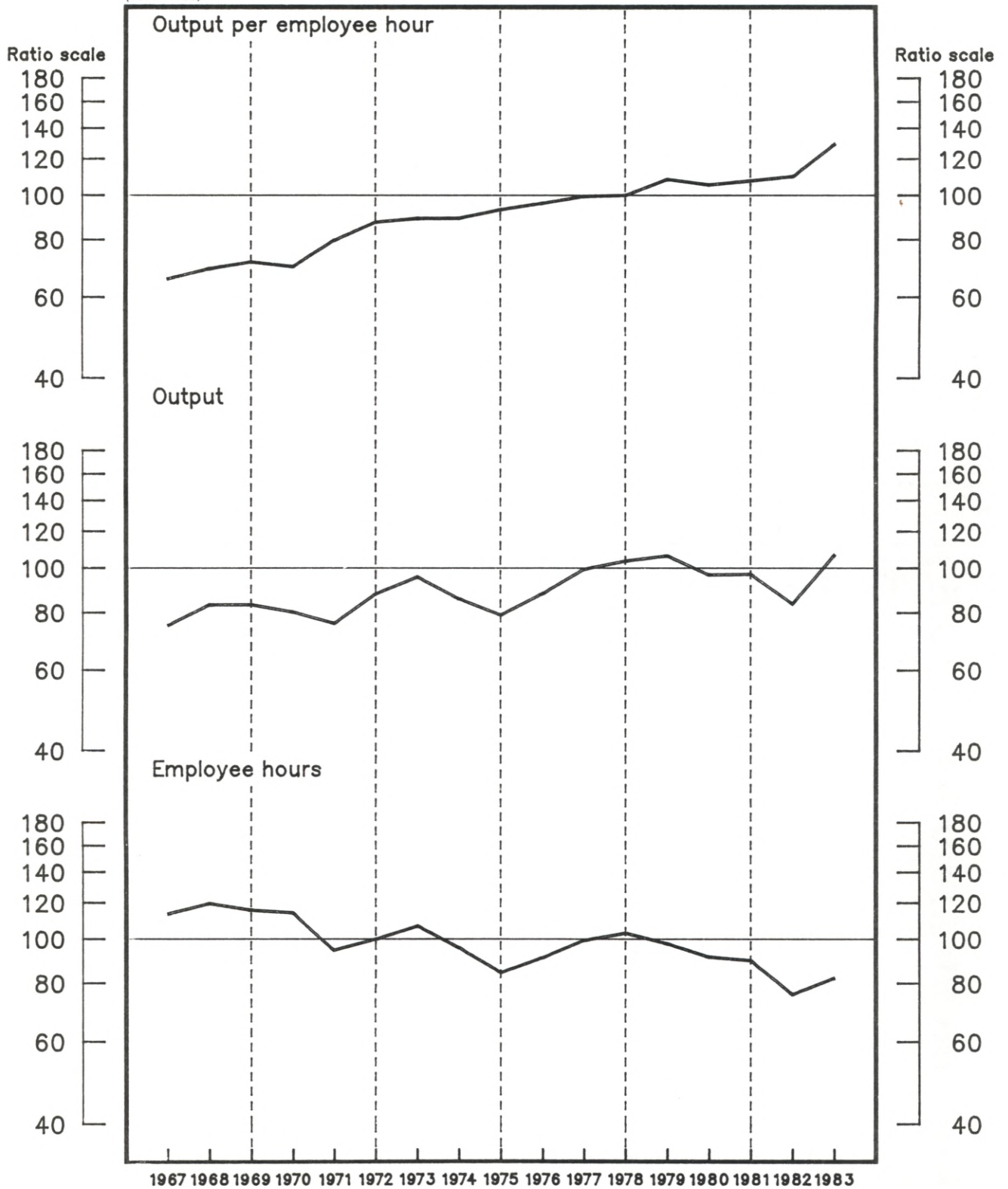
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	57.4	115.1	110.6	130.7	115.6	111.0	130.4
1955 .....	60.4	118.1	114.3	131.2	116.9	112.4	131.8
1956 .....	68.9	127.3	124.0	138.6	126.9	123.2	138.8
1957 .....	63.2	120.3	111.9	149.6	121.1	112.3	149.8
1958 .....	50.2	96.3	87.7	125.9	96.5	87.4	126.5
1959 .....	62.8	103.8	98.0	124.1	102.8	96.1	124.7
1960 .....	64.5	104.0	97.0	128.3	105.0	97.5	129.6
1961 .....	65.2	98.3	91.5	122.3	99.0	91.3	124.2
1962 .....	72.1	97.8	93.1	113.7	97.0	91.3	115.9
1963 .....	74.2	99.3	96.2	110.3	97.2	92.5	112.4
1964 .....	83.0	100.6	97.4	111.7	97.9	93.2	113.3
1965 .....	95.3	107.9	107.6	109.4	105.2	103.3	111.5
1966 .....	105.6	116.9	119.6	108.2	115.9	117.5	110.7
1967 .....	102.9	118.2	118.2	118.5	116.4	114.9	121.2
1968 .....	103.5	116.0	115.2	118.5	112.9	111.3	118.2
1969 .....	104.6	116.5	116.0	118.7	112.9	111.5	117.7
1970 .....	94.7	107.9	105.8	115.2	107.2	105.5	112.8
1971 .....	93.1	98.2	96.1	106.0	96.7	94.5	104.0
1972 .....	91.2	95.3	95.5	94.3	93.2	93.2	93.0
1973 .....	105.5	104.8	107.7	95.7	103.8	106.4	95.2
1974 .....	103.3	103.2	104.6	98.8	103.4	104.7	99.2
1975 .....	78.4	84.3	81.4	94.1	84.6	81.6	94.3
1976 .....	89.0	92.8	94.1	88.5	93.6	95.3	88.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	107.5	109.0	109.9	106.1	109.5	110.5	106.2
1979 .....	108.6	110.9	110.5	112.2	110.5	110.1	111.9
1980 .....	92.1	97.1	93.7	108.7	97.1	93.8	107.9
1981 .....	93.6	95.8	94.0	102.1	96.4	94.7	101.8
1982 .....	87.4	87.3	81.5	107.0	90.0	84.9	106.6
1983 <sup>1</sup> .....	82.1	87.0	83.3	99.5	87.1	83.3	99.6
Average annual percent change:							
1954-83 .....	1.8	-6	-5	-1.1	-6	-4	-1.1
1978-83 .....	-5.5	-5.2	-6.3	-1.5	-4.9	-6.0	-1.5

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 101. Major household appliances (SIC 3631, 3632, 3633, 3639): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 198. Major household appliances (SIC 3631, 3632, 3633, 3639): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	38.5	40.2	32.5	39.5	41.8	32.4
1959 .....	42.0	42.8	38.9	42.9	44.2	38.7
1960 .....	43.8	45.2	38.5	43.9	45.5	38.1
1961 .....	46.6	48.4	40.3	47.6	50.1	39.6
1962 .....	50.8	51.5	48.0	52.9	54.5	47.1
1963 .....	57.9	57.7	59.1	59.6	60.0	58.0
1964 .....	60.4	59.9	62.5	62.6	62.8	61.5
1965 .....	62.2	61.9	63.4	65.0	65.7	62.2
1966 .....	62.4	61.2	67.8	64.0	63.4	66.2
1967 .....	66.0	65.7	67.7	66.5	66.7	66.2
1968 .....	69.5	68.6	73.7	71.3	70.7	74.0
1969 .....	71.9	71.9	71.8	72.6	72.8	72.4
1970 .....	70.2	70.5	69.1	71.6	71.9	70.4
1971 .....	80.1	80.7	77.5	81.7	82.4	79.2
1972 .....	87.9	87.2	91.0	89.5	89.0	92.4
1973 .....	89.5	88.5	94.1	90.7	89.8	94.7
1974 .....	89.6	90.3	87.0	88.4	89.0	86.7
1975 .....	93.6	96.0	84.6	91.7	93.6	84.5
1976 .....	96.6	99.1	88.0	95.9	98.0	88.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.5	100.4	101.1	98.2	97.6	101.0
1979 .....	108.9	109.1	107.9	107.9	107.9	108.1
1980 .....	105.9	107.0	101.6	103.7	104.2	102.1
1981 .....	108.1	108.2	107.6	105.9	105.4	107.9
1982 .....	110.5	114.6	96.2	106.4	109.1	96.6
1983 <sup>2</sup> .....	129.9	129.4	132.0	130.1	129.7	132.0
Average annual percent change:						
1958-83 .....	4.5	4.4	4.6	4.2	4.1	4.7
1978-83 .....	3.9	4.2	3.0	4.0	4.3	3.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 199. Major household appliances (SIC 3631, 3632, 3633, 3639): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

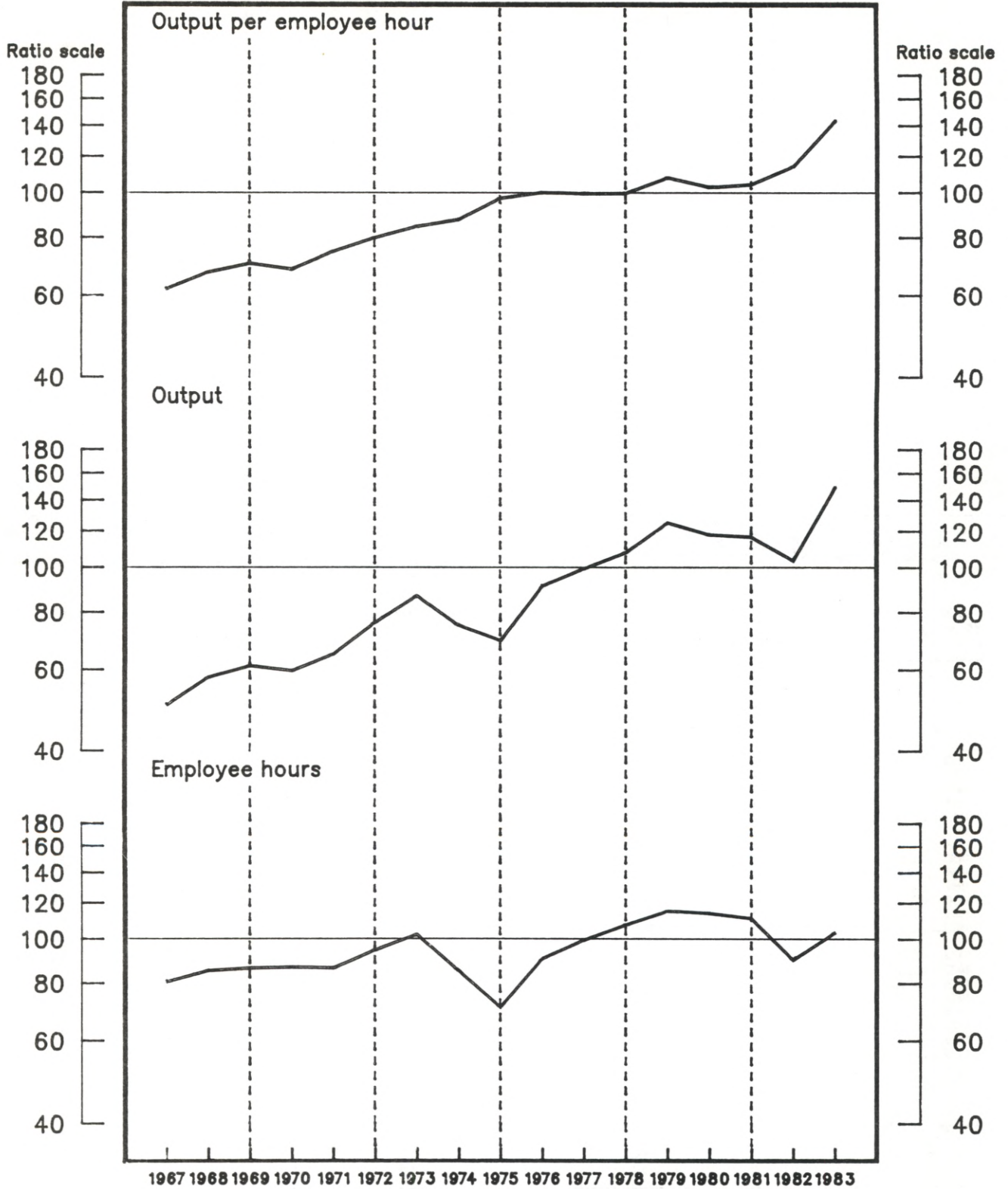
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	40.6	105.5	100.9	124.9	102.7	97.2	125.4
1959 .....	47.4	112.8	110.7	121.8	110.4	107.3	122.4
1960 .....	47.1	107.6	104.1	122.4	107.4	103.5	123.6
1961 .....	46.6	99.9	96.2	115.7	98.0	93.1	117.8
1962 .....	52.3	103.0	101.6	109.0	98.8	95.9	111.0
1963 .....	58.0	100.1	100.6	98.1	97.3	96.7	100.0
1964 .....	64.4	106.6	107.6	103.0	102.9	102.5	104.7
1965 .....	69.8	112.2	112.7	110.1	107.4	106.2	112.2
1966 .....	73.5	117.8	120.1	108.4	114.9	115.9	111.0
1967 .....	75.4	114.2	114.8	111.4	113.3	113.0	113.9
1968 .....	83.6	120.3	121.9	113.4	117.3	118.3	112.9
1969 .....	83.6	116.3	116.2	116.5	115.2	114.9	115.5
1970 .....	80.6	114.8	114.4	116.7	112.6	114.5	114.5
1971 .....	76.2	95.1	94.4	98.3	93.3	92.5	96.2
1972 .....	88.4	100.6	101.4	97.1	98.8	99.3	95.7
1973 .....	96.2	107.5	108.7	102.2	106.1	107.1	101.6
1974 .....	86.2	96.2	95.5	99.1	97.5	96.8	99.4
1975 .....	79.5	84.9	82.8	94.0	86.7	84.9	94.1
1976 .....	88.5	91.6	89.3	100.6	92.3	90.3	100.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.2	103.7	103.8	103.1	106.1	106.8	103.2
1979 .....	106.9	98.2	98.0	99.1	99.1	99.1	98.9
1980 .....	97.2	91.8	90.8	95.7	93.7	93.3	95.2
1981 .....	97.5	90.2	90.1	90.6	92.1	92.5	90.4
1982 .....	84.2	76.2	73.5	87.5	79.1	77.2	87.2
1983 <sup>1</sup> .....	107.3	82.6	82.9	81.3	82.5	82.7	81.3
Average annual percent change:							
1958-83 .....	3.4	-1.0	-1.0	-1.2	-8	-6	-1.2
1978-83 .....	-1.6	-5.3	-5.5	-4.5	-5.4	-5.7	-4.5

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 102. Household cooking equipment (SIC 3631): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 200. Household cooking equipment (SIC 3631): Indexes of output per employee hour and output per employee, 1958-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	49.5	47.7	55.9	51.0	49.5	56.1
1959 .....	52.0	49.2	63.1	53.6	51.0	63.1
1960 .....	50.8	50.9	50.2	51.1	51.4	49.9
1961 .....	52.6	52.2	53.7	53.2	53.2	53.1
1962 .....	54.5	54.1	55.6	54.0	53.8	54.8
1963 .....	59.5	56.3	72.2	61.5	58.8	71.4
1964 .....	60.1	57.9	68.3	60.9	58.9	68.1
1965 .....	63.1	59.4	78.1	65.4	62.5	76.8
1966 .....	62.4	58.6	78.3	64.3	61.1	76.8
1967 .....	62.3	59.4	73.6	62.9	60.3	72.3
1968 .....	67.7	63.9	82.4	69.8	66.4	83.1
1969 .....	70.7	68.2	79.6	72.2	69.9	80.6
1970 .....	68.7	66.4	76.8	70.1	67.8	78.6
1971 .....	75.0	72.7	83.5	77.2	74.9	85.4
1972 .....	80.3	76.4	96.0	83.3	79.3	98.2
1973 .....	84.9	80.3	102.9	88.0	83.8	103.8
1974 .....	87.9	87.2	89.7	86.2	85.2	89.5
1975 .....	97.8	98.4	95.7	95.2	95.2	95.6
1976 .....	100.7	101.3	98.4	100.9	101.3	99.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.3	98.4	106.5	98.3	95.3	106.6
1979 .....	108.5	109.9	104.5	109.7	111.1	105.6
1980 .....	103.4	103.0	105.0	107.0	107.1	106.5
1981 .....	104.9	102.3	114.1	108.8	106.9	115.2
1982 .....	114.8	121.6	97.5	111.1	116.3	97.9
1983 <sup>2</sup> .....	144.3	143.3	147.4	144.8	143.9	147.5
Average annual percent change:						
1958-83 .....	3.9	4.1	3.2	3.8	4.0	3.3
1978-83 .....	5.9	6.4	4.4	5.9	6.4	4.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 201. Household cooking equipment (SIC 3631): Indexes of output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	36.5	73.8	76.6	65.3	71.6	73.8	65.1
1959 .....	40.1	77.1	81.5	63.6	74.8	78.6	63.5
1960 .....	40.4	79.6	79.3	80.5	79.1	78.6	80.9
1961 .....	39.6	75.3	75.8	73.7	74.4	74.4	74.6
1962 .....	40.0	73.4	73.9	72.0	74.1	74.4	73.0
1963 .....	46.5	78.1	82.6	64.4	75.6	79.1	65.1
1964 .....	47.5	79.0	82.1	69.5	78.0	80.6	69.8
1965 .....	53.6	84.9	90.2	68.6	81.9	85.8	69.8
1966 .....	52.4	84.0	89.4	66.9	81.5	85.8	68.2
1967 .....	50.5	81.0	85.0	68.6	80.3	83.8	69.8
1968 .....	58.0	85.7	90.7	70.4	83.1	87.4	69.8
1969 .....	61.4	86.8	90.0	77.1	85.1	87.9	76.2
1970 .....	59.9	87.2	90.2	78.0	85.5	88.4	76.2
1971 .....	65.1	86.8	89.6	78.0	84.3	86.9	76.2
1972 .....	76.4	95.1	100.0	79.6	91.7	96.3	77.8
1973 .....	87.3	102.8	108.7	84.8	99.2	104.2	84.1
1974 .....	75.3	85.7	86.4	83.9	87.4	88.4	84.1
1975 .....	69.8	71.4	70.9	72.9	73.3	73.3	73.0
1976 .....	91.7	91.1	90.5	93.2	90.9	90.5	92.0
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	108.3	108.0	110.1	101.7	110.2	113.1	101.6
1979 .....	125.7	115.8	114.4	120.3	114.6	113.1	119.0
1980 .....	118.3	114.4	114.9	112.7	110.6	110.5	111.1
1981 .....	117.0	111.5	114.4	102.5	107.5	109.4	101.6
1982 .....	104.1	90.7	85.6	106.8	93.7	89.5	106.3
1983 <sup>1</sup> .....	149.9	103.9	104.6	101.7	103.5	104.2	101.6
Average annual percent change:							
1958-83 .....	5.5	1.5	1.3	2.2	1.6	1.4	2.1
1978-83 .....	3.0	-2.7	-3.2	-1.3	-2.7	-3.2	-1.2

<sup>1</sup> Preliminary.

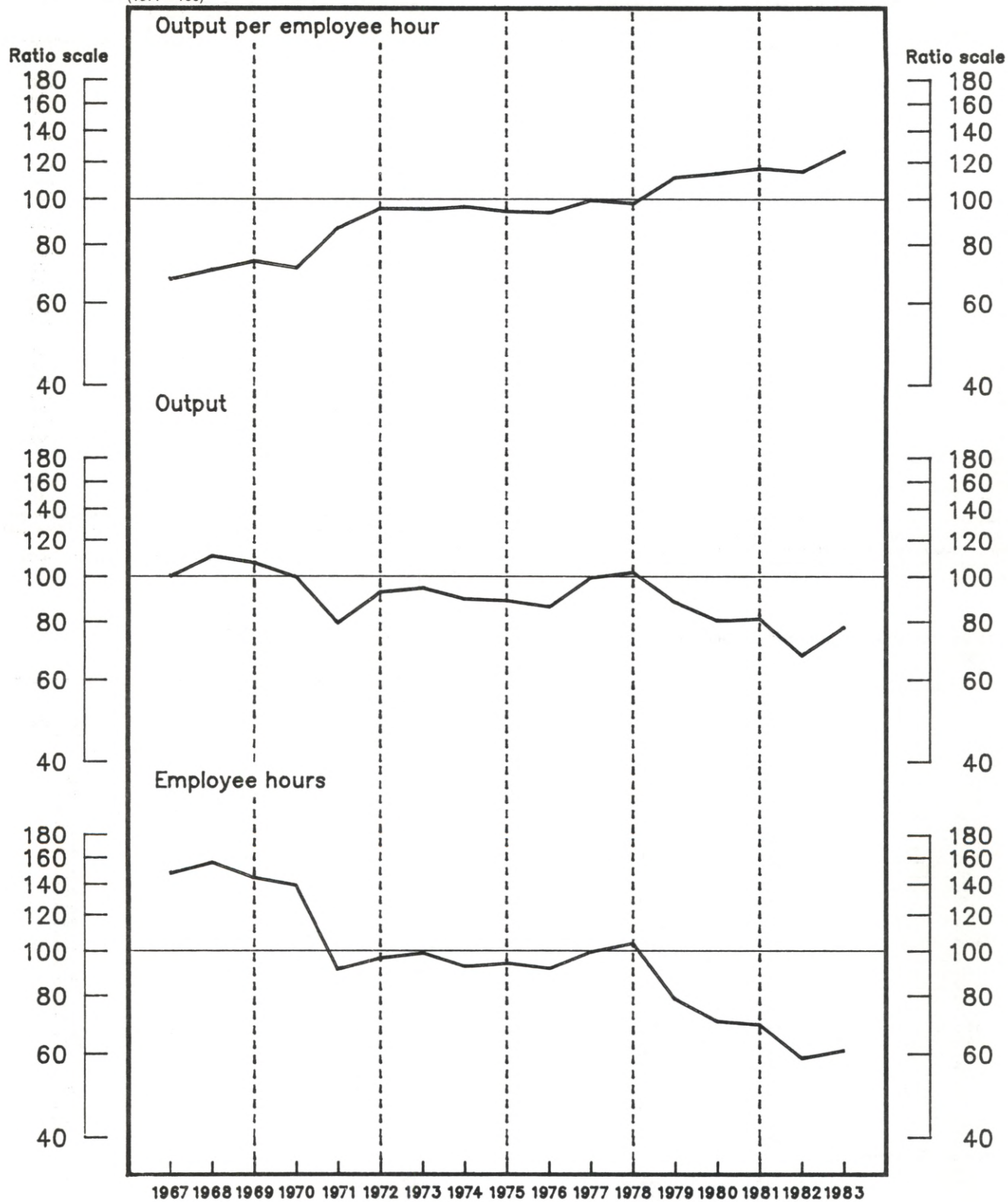
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 103. Household refrigerators and freezers (SIC 3632): Output per hour and related data, 1967-83

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 202. Household refrigerators and freezers (SIC 3632): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	33.9	35.0	29.3	34.8	36.3	29.2
1959 .....	37.3	37.1	38.1	38.4	38.6	37.9
1960 .....	41.0	41.3	39.2	40.8	41.2	38.8
1961 .....	43.8	44.3	40.9	44.7	45.8	40.1
1962 .....	47.2	46.7	50.2	50.9	51.3	49.2
1963 .....	55.5	55.9	53.3	57.1	58.3	52.2
1964 .....	59.5	59.2	60.7	62.0	62.6	59.5
1965 .....	61.4	61.3	61.7	64.6	65.6	60.5
1966 .....	62.1	61.1	67.5	63.0	63.0	65.8
1967 .....	67.7	67.6	68.0	67.9	68.2	66.2
1968 .....	70.9	70.6	72.2	72.5	72.6	72.4
1969 .....	74.1	74.8	71.1	75.3	76.1	71.6
1970 .....	71.7	72.4	68.6	73.4	74.2	69.8
1971 .....	87.2	87.7	85.3	88.1	88.3	87.2
1972 .....	96.0	95.1	100.1	97.6	97.0	101.4
1973 .....	95.6	95.9	94.1	97.0	97.5	94.9
1974 .....	96.8	97.9	90.7	98.4	100.4	89.9
1975 .....	94.5	97.9	80.1	93.0	96.3	79.9
1976 .....	94.0	97.6	79.4	92.4	95.5	79.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	98.4	97.9	100.9	96.3	95.4	101.0
1979 .....	112.2	110.2	123.4	109.7	107.1	123.4
1980 .....	114.3	114.3	114.1	106.3	104.7	115.4
1981 .....	117.2	117.2	116.7	107.8	106.2	116.6
1982 .....	115.2	117.8	104.0	109.8	110.9	104.8
1983 <sup>2</sup> .....	127.5	127.7	126.5	127.3	127.5	126.9
Average annual percent change:						
1958-83 .....	5.0	5.0	5.0	4.7	4.6	5.1
1978-83 .....	4.1	4.5	1.8	4.1	4.6	1.9

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 203. Household refrigerators and freezers (SIC 3632): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	40.4	119.0	115.3	138.0	116.0	111.3	138.4
1959 .....	50.5	135.5	136.1	132.6	131.4	130.8	133.4
1960 .....	53.7	131.0	130.0	137.1	131.7	130.2	138.4
1961 .....	52.1	119.0	117.5	127.3	116.6	113.7	130.0
1962 .....	59.9	126.9	128.4	119.4	117.6	116.8	121.7
1963 .....	68.8	124.0	123.0	129.1	120.4	118.1	131.7
1964 .....	79.4	133.5	134.2	130.9	128.0	126.8	133.4
1965 .....	87.8	143.0	143.2	142.4	135.9	133.9	145.1
1966 .....	95.5	153.7	156.2	141.5	150.7	151.7	145.1
1967 .....	100.5	148.4	148.6	147.7	148.1	147.3	151.7
1968 .....	111.1	156.7	157.4	153.9	153.2	153.0	153.4
1969 .....	107.5	145.0	143.8	151.3	142.8	141.2	150.1
1970 .....	100.1	139.6	138.3	145.9	136.4	134.9	143.4
1971 .....	80.0	91.7	91.2	93.8	90.8	90.6	91.7
1972 .....	93.0	96.9	97.8	92.9	95.3	95.9	91.7
1973 .....	94.9	99.3	99.0	100.9	97.8	97.3	100.0
1974 .....	89.9	92.9	91.8	99.1	91.4	89.5	100.0
1975 .....	89.2	94.4	91.1	111.4	95.9	92.6	111.7
1976 .....	86.5	92.0	88.6	108.9	93.6	90.6	108.3
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	102.7	104.4	104.9	101.8	106.7	107.7	101.7
1979 .....	88.5	78.9	80.3	71.7	80.7	82.6	71.7
1980 .....	80.8	70.7	70.7	70.8	76.0	77.2	70.0
1981 .....	81.6	69.6	69.6	69.9	75.7	76.8	70.0
1982 .....	68.1	59.1	57.8	65.5	62.0	61.4	65.0
1983 <sup>1</sup> .....	78.3	61.4	61.3	61.9	61.5	61.4	61.7
Average annual percent change:							
1958-83 .....	1.8	-3.0	-3.0	-3.0	-2.7	-2.6	-3.1
1978-83 .....	-5.9	-9.6	-10.0	-7.6	-9.6	-10.0	-7.7

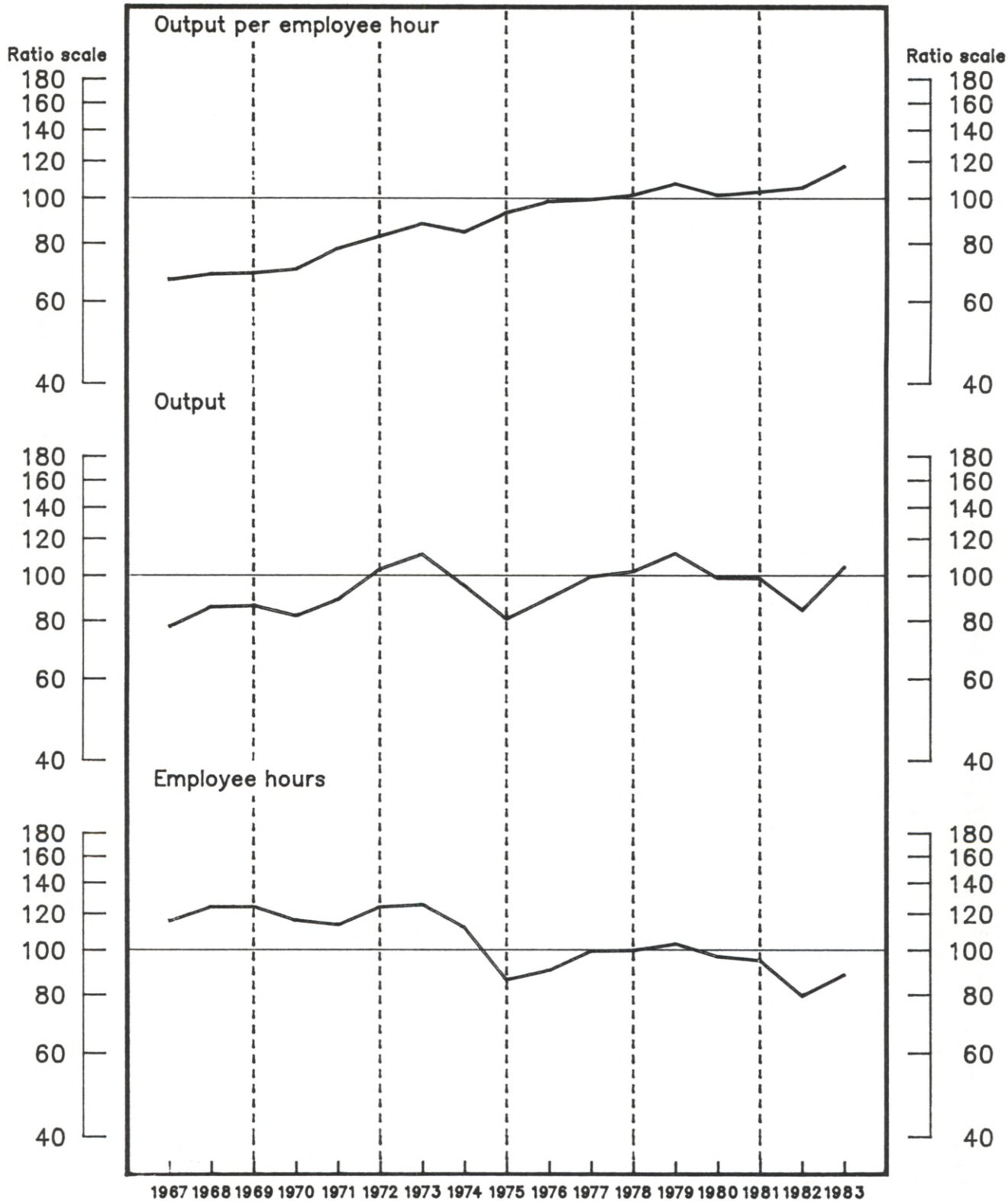
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 104. Household laundry equipment (SIC 3633): Output per hour and related data, 1967-83

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 204. Household laundry equipment (SIC 3633): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	39.8	43.8	28.4	42.0	47.1	28.2
1959	43.3	46.9	32.4	44.8	49.0	32.2
1960	42.5	46.7	30.3	43.4	48.1	30.0
1961	46.4	51.5	32.3	48.1	54.3	31.6
1962	51.6	56.2	37.9	53.8	59.6	37.2
1963	61.3	61.5	60.3	63.9	65.2	58.6
1964	60.8	60.5	61.9	64.2	65.0	60.6
1965	61.5	64.4	51.1	65.1	69.6	50.2
1966	63.5	64.2	60.4	66.1	68.0	58.6
1967	67.1	67.9	63.5	68.1	69.6	61.9
1968	69.0	68.7	70.1	71.0	71.2	70.0
1969	69.4	69.6	68.0	69.4	69.5	68.8
1970	70.7	72.0	65.4	72.3	73.5	67.0
1971	78.3	79.2	74.6	82.1	83.4	76.1
1972	83.2	82.6	85.6	85.3	84.9	86.3
1973	88.5	87.7	92.1	90.6	90.0	92.9
1974	85.0	86.2	79.9	82.1	82.6	79.6
1975	93.6	95.3	86.4	91.0	92.1	86.0
1976	99.0	100.6	92.8	98.6	100.0	92.5
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.3	102.3	102.6	101.6	101.3	102.6
1979	108.2	106.7	115.6	108.2	106.8	115.4
1980	102.2	102.8	99.3	100.3	100.6	99.3
1981	104.0	103.7	105.5	101.7	101.0	105.1
1982	106.1	108.0	98.3	101.7	102.3	99.1
1983 <sup>2</sup>	118.0	113.8	141.4	118.3	114.3	141.2
Average annual percent change:						
1958-83	4.2	3.8	5.6	3.9	3.4	5.7
1978-83	1.9	1.7	3.4	1.7	1.4	3.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 205. Household laundry equipment (SIC 3633): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

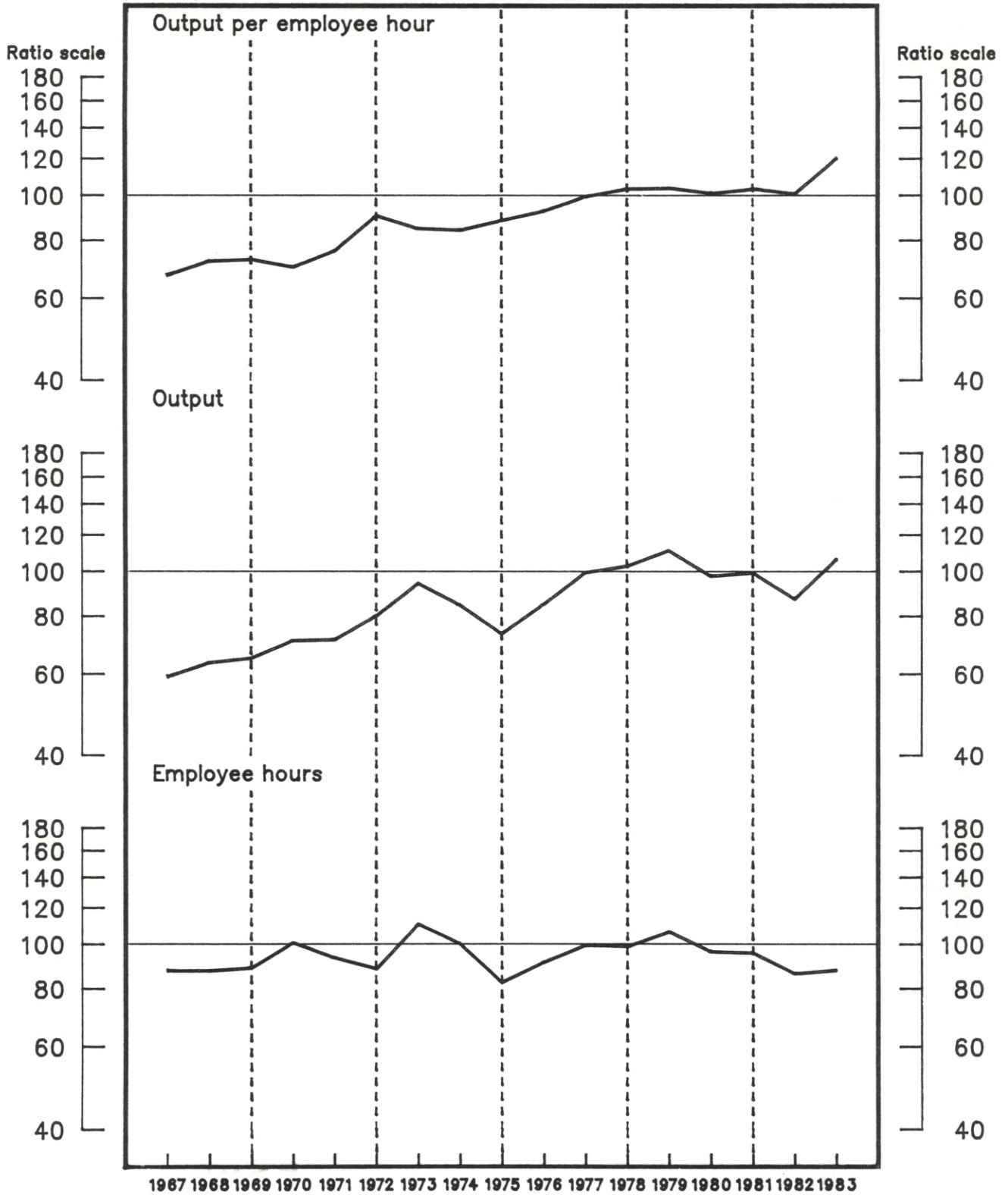
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	53.3	133.9	121.8	187.9	126.8	113.2	188.7
1959	59.8	138.1	127.6	184.8	133.5	122.1	185.8
1960	52.3	123.1	111.9	172.6	120.6	108.8	174.3
1961	53.3	114.8	103.4	165.2	110.8	98.1	168.7
1962	58.5	113.4	104.1	154.5	108.7	98.1	157.2
1963	60.3	98.4	98.1	100.0	94.3	92.5	102.9
1964	67.5	111.1	111.6	109.1	105.1	103.8	111.4
1965	70.4	114.5	109.3	137.8	108.2	101.2	140.1
1966	78.7	123.9	122.5	130.3	119.1	115.8	134.3
1967	77.9	116.1	114.7	122.7	114.4	112.0	125.8
1968	86.0	124.7	125.2	122.7	121.2	120.8	122.9
1969	86.5	124.7	124.2	127.2	124.7	124.5	125.8
1970	82.3	116.4	114.3	125.8	113.8	112.0	122.9
1971	89.2	113.9	112.6	119.6	108.7	106.9	117.2
1972	103.7	124.7	125.6	121.2	121.6	122.1	120.1
1973	111.6	126.1	127.3	121.2	123.2	124.0	120.1
1974	95.6	112.5	110.9	119.6	116.5	115.8	120.1
1975	81.1	86.6	85.1	93.9	89.1	88.1	94.3
1976	89.9	90.8	89.4	96.9	91.2	89.9	97.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.6	100.3	100.3	100.0	101.0	101.3	100.0
1979	112.1	103.6	105.1	97.0	103.6	105.0	97.1
1980	99.3	97.2	96.6	100.0	99.0	98.7	100.0
1981	99.1	95.3	95.6	93.9	97.4	98.1	94.3
1982	84.9	80.0	78.6	86.4	83.5	83.0	85.7
1983 <sup>1</sup>	104.9	88.9	92.2	74.2	88.7	91.8	74.3
Average annual percent change:							
1958-83	2.8	-1.4	-1.0	-2.7	-1.1	-6	-2.8
1978-83	-2.0	-3.9	-3.7	-5.3	-3.7	-3.4	-5.3

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 105. Household appliances, not elsewhere classified (SIC 3639): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 206. Household appliances, not elsewhere classified (SIC 3639): Indexes of output per employee hour and output per employee, 1958-83 (1977 = 100)**

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	43.4	50.6	26.4	43.3	51.1	26.0
1959 .....	49.1	57.6	29.2	47.5	55.8	28.7
1960 .....	51.6	57.8	34.6	51.7	58.6	33.9
1961 .....	54.6	62.0	35.3	55.4	64.0	34.6
1962 .....	60.9	65.9	45.0	61.3	67.2	43.9
1963 .....	63.8	67.8	50.1	64.5	69.6	48.8
1964 .....	69.0	73.4	54.2	69.8	75.3	52.8
1965 .....	70.4	73.1	60.2	71.4	74.9	59.1
1966 .....	65.6	68.4	55.3	67.3	71.5	53.5
1967 .....	67.6	72.4	51.9	69.6	76.1	50.7
1968 .....	72.5	76.5	58.4	74.2	79.1	57.8
1969 .....	73.1	78.6	55.2	73.7	79.5	55.6
1970 .....	70.4	74.8	55.2	70.8	75.3	55.8
1971 .....	76.2	82.3	57.0	75.9	81.7	57.6
1972 .....	90.8	96.8	70.4	90.4	96.4	70.8
1973 .....	85.2	86.7	78.9	82.6	83.6	78.5
1974 .....	84.5	85.3	80.6	81.9	82.4	79.5
1975 .....	88.8	93.4	72.4	87.0	91.6	71.3
1976 .....	93.0	95.7	82.4	92.5	95.1	82.6
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.0	107.2	91.7	98.9	101.0	90.8
1979 .....	104.3	105.6	98.9	101.2	101.9	98.0
1980 .....	101.6	104.0	91.5	98.2	99.8	91.9
1981 .....	103.9	105.7	96.3	101.7	103.0	96.5
1982 .....	101.3	102.8	94.6	98.3	99.3	94.2
1983 <sup>2</sup> .....	121.1	120.3	124.9	120.7	119.9	123.9
Average annual percent change:						
1958-83 .....	3.4	2.9	5.2	3.3	2.7	5.3
1978-83 .....	2.0	1.5	4.3	2.7	2.3	4.3

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 207. Household appliances, not elsewhere classified (SIC 3639): Indexes of output, employee hours, and employees, 1958-83 (1977 = 100)**

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	40.3	92.8	79.7	152.7	93.0	78.9	155.2
1959 .....	43.6	88.8	75.7	149.1	91.7	78.1	151.7
1960 .....	42.1	81.6	72.9	121.8	81.5	71.9	124.2
1961 .....	43.0	78.7	69.4	121.8	77.6	67.2	124.2
1962 .....	51.5	84.6	78.1	114.5	84.0	76.6	117.2
1963 .....	53.8	84.3	79.3	107.3	83.4	77.3	110.3
1964 .....	58.2	84.3	79.3	107.3	83.4	77.3	110.3
1965 .....	59.1	83.9	80.9	98.2	82.8	78.9	100.0
1966 .....	55.3	84.3	80.9	100.0	82.2	77.3	103.4
1967 .....	59.4	87.9	82.1	114.5	85.3	78.1	117.2
1968 .....	63.7	87.9	83.3	109.0	85.9	80.5	110.3
1969 .....	65.2	89.2	82.9	118.2	88.5	82.0	117.2
1970 .....	71.2	101.2	95.2	129.1	100.6	94.5	127.5
1971 .....	71.5	93.8	86.9	125.4	94.2	87.5	124.2
1972 .....	80.6	88.8	83.3	114.5	89.2	83.6	113.8
1973 .....	94.7	111.1	109.2	120.0	114.6	113.3	120.6
1974 .....	85.0	100.6	99.7	105.5	103.8	103.1	106.9
1975 .....	73.7	83.0	78.9	101.8	84.7	80.5	103.4
1976 .....	85.4	91.8	89.2	103.7	92.3	89.8	103.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.3	99.3	96.4	112.7	104.5	102.3	113.8
1979 .....	111.5	106.9	105.6	112.7	110.2	109.4	113.8
1980 .....	98.2	96.7	94.4	107.3	100.0	98.4	106.9
1981 .....	99.8	96.1	94.4	103.6	98.1	96.9	103.4
1982 .....	87.7	86.6	85.3	92.7	89.2	88.3	93.1
1983 <sup>1</sup> .....	106.8	88.2	88.8	85.5	88.5	89.1	86.2
Average annual percent change:							
1958-83 .....	4.0	.6	1.1	-1.1	.7	-1.3	-1.2
1978-83 .....	-1.5	-3.5	-3.0	-5.6	-4.2	-3.8	-5.6

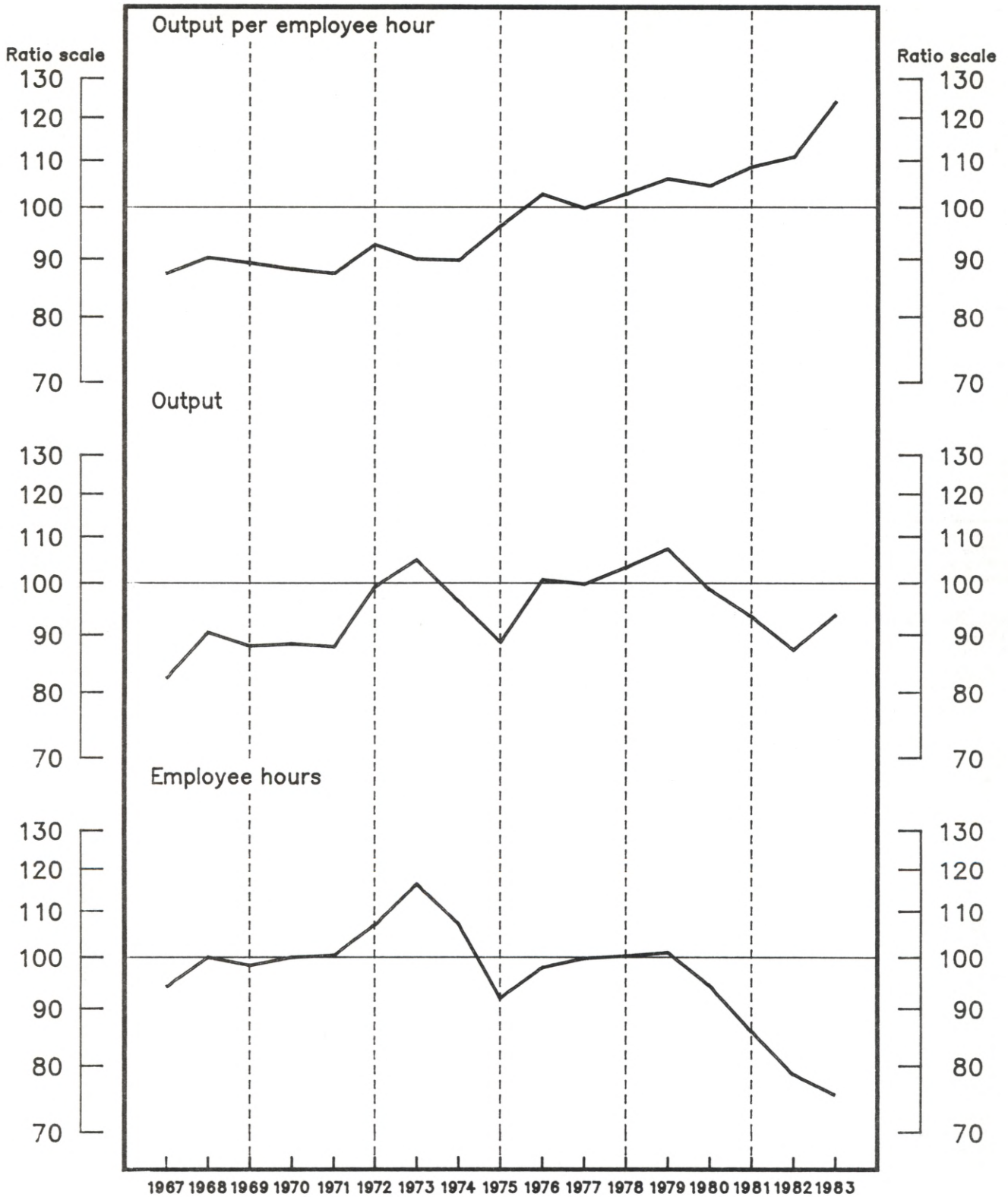
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 106. Electric lamps (SIC 3641): Output per hour and related data, 1967-83  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 208. Electric lamps (SIC 3641): Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954 .....	62.5	62.9	60.1	60.2	60.3	59.1
1955 .....	66.6	66.5	67.0	65.6	65.6	66.0
1956 .....	69.4	68.7	75.8	69.3	68.6	74.6
1957 .....	66.8	67.4	62.3	65.3	66.0	61.3
1958 .....	68.9	70.9	57.8	66.9	68.6	56.9
1959 .....	73.7	74.4	68.8	73.9	74.8	67.7
1960 .....	75.5	76.1	71.8	73.1	73.5	70.2
1961 .....	74.5	75.3	68.9	72.9	73.8	67.1
1962 .....	79.2	79.6	76.1	78.3	79.0	73.7
1963 .....	80.8	80.8	82.0	80.1	80.2	79.5
1964 .....	83.4	83.4	84.0	82.4	82.6	81.3
1965 .....	88.7	88.0	94.4	88.7	88.4	91.3
1966 .....	89.3	88.0	100.1	89.4	88.3	96.9
1967 .....	87.5	86.8	93.1	85.2	84.5	90.2
1968 .....	90.4	89.6	97.0	89.0	88.2	94.6
1969 .....	89.4	89.2	91.2	87.1	86.8	90.0
1970 .....	88.3	87.3	96.9	87.5	86.4	96.7
1971 .....	87.5	86.9	92.1	85.8	84.9	91.9
1972 .....	92.8	91.6	101.9	92.5	91.2	101.6
1973 .....	90.1	88.5	103.5	89.9	88.3	102.9
1974 .....	89.9	89.5	91.7	87.7	87.3	90.8
1975 .....	96.4	96.9	93.5	94.7	94.9	92.8
1976 .....	102.9	102.7	103.5	103.7	103.7	103.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.0	102.6	105.7	104.3	104.1	105.7
1979 .....	106.2	105.1	114.9	106.6	105.6	114.9
1980 .....	104.7	104.2	108.1	103.2	102.6	108.1
1981 .....	108.8	109.1	107.3	108.6	108.7	107.3
1982 .....	111.0	111.0	111.2	109.6	109.4	111.2
1983 <sup>2</sup> .....	124.2	124.5	122.6	128.3	129.2	122.6
Average annual percent change:						
1954-83 .....	1.9	1.9	2.2	2.0	2.0	2.3
1978-83 .....	3.2	3.4	1.8	3.4	3.6	1.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

<sup>2</sup> Preliminary.

**Table 209. Electric lamps (SIC 3641): Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

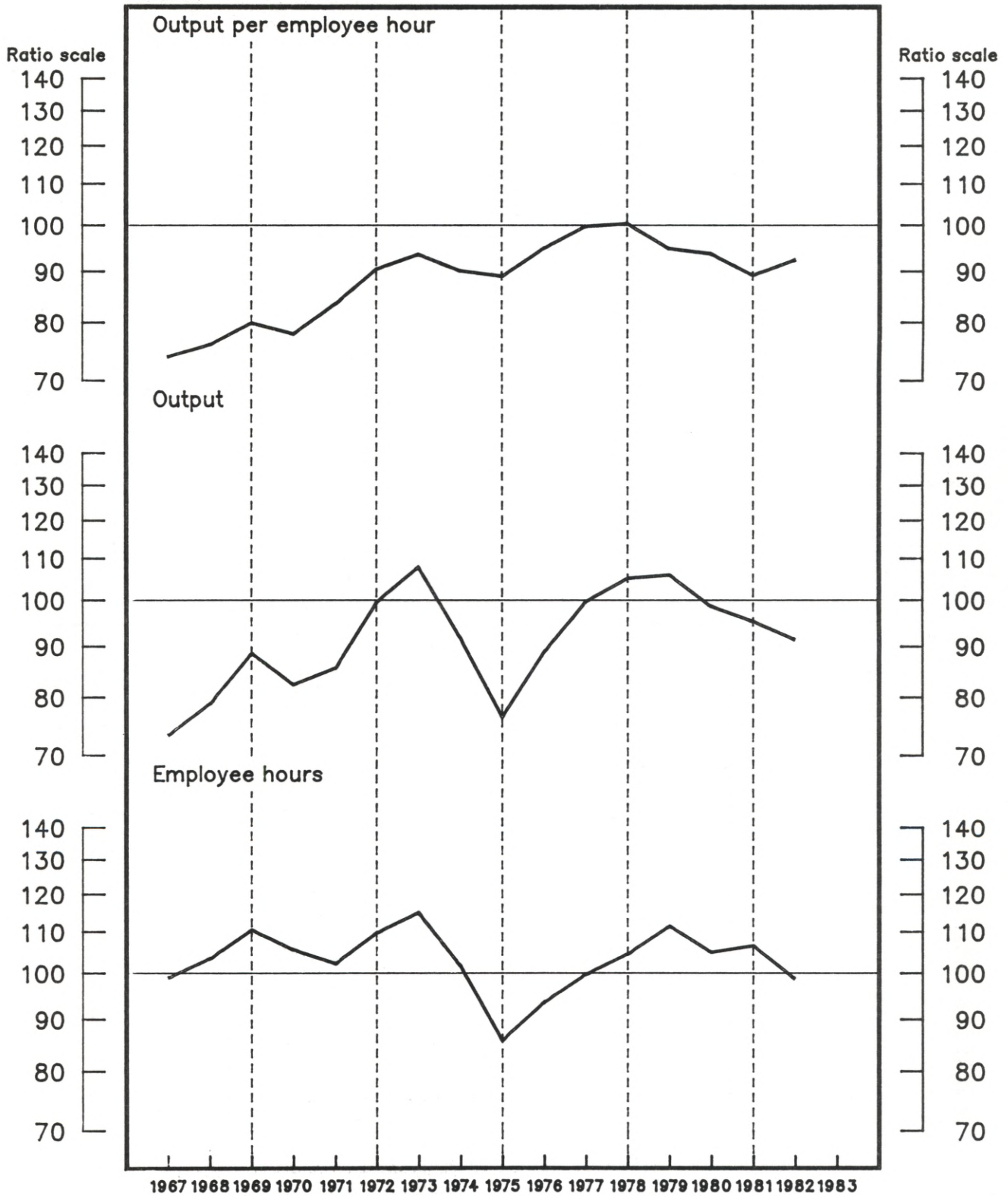
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954 .....	41.5	66.4	66.0	69.1	68.9	68.8	70.2
1955 .....	46.3	69.5	69.6	69.1	70.6	70.6	70.2
1956 .....	52.4	75.5	76.3	69.1	75.6	76.4	70.2
1957 .....	52.2	78.1	77.4	83.8	79.9	79.1	85.1
1958 .....	47.2	68.5	66.6	81.7	70.6	68.8	83.0
1959 .....	56.2	76.3	75.5	81.7	76.1	75.1	83.0
1960 .....	56.8	75.2	74.6	79.1	77.7	77.3	80.9
1961 .....	52.8	70.9	70.1	76.6	72.4	71.5	78.7
1962 .....	59.6	75.3	74.9	78.3	76.1	75.4	80.9
1963 .....	62.6	77.5	77.5	76.3	78.2	78.1	78.7
1964 .....	65.8	78.9	78.9	78.3	79.9	79.7	80.9
1965 .....	73.9	83.3	84.0	78.3	83.3	83.6	80.9
1966 .....	82.5	92.4	93.8	82.4	92.3	93.4	85.1
1967 .....	82.5	94.3	95.1	88.6	96.8	97.6	91.5
1968 .....	90.6	100.2	101.1	93.4	101.8	102.7	95.8
1969 .....	88.1	98.5	98.8	96.6	101.1	101.5	97.9
1970 .....	88.5	100.2	101.4	91.3	101.1	102.4	91.5
1971 .....	88.0	100.6	101.3	95.6	102.6	103.6	95.8
1972 .....	99.5	107.2	108.6	97.6	107.6	109.1	97.9
1973 .....	105.1	116.6	118.7	101.5	116.9	119.0	102.1
1974 .....	96.6	107.5	107.9	105.3	110.1	110.6	106.4
1975 .....	88.9	92.2	91.7	95.1	93.9	93.7	95.8
1976 .....	100.9	98.1	98.2	97.5	97.3	97.3	97.9
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	103.5	100.5	100.9	97.9	99.2	99.4	97.9
1979 .....	107.5	101.2	102.3	93.6	100.8	101.8	93.6
1980 .....	98.9	94.5	94.9	91.5	95.8	96.4	91.5
1981 .....	93.6	86.0	85.8	87.2	86.2	86.1	87.2
1982 .....	87.5	78.8	78.8	78.7	79.8	80.0	78.7
1983 <sup>1</sup> .....	93.9	75.6	75.4	76.6	73.2	72.7	76.6
Average annual percent change:							
1954-83 .....	3.1	1.1	1.2	.9	1.0	1.1	.8
1978-83 .....	-3.3	-6.3	-6.5	-5.0	-6.4	-6.6	-5.0

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 107. Lighting fixtures (SIC 3645, 3646, 3647, 3648): Output per hour and related data, 1967-82  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor



**Table 210. Lighting fixtures (SIC 3645, 3646, 3647, 3648): Indexes of output per employee hour and output per employee, 1961-82**  
(1977 = 100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1961 .....	61.9	58.4	75.7	62.2	58.9	74.4
1962 .....	67.5	63.3	84.4	68.5	64.7	83.0
1963 .....	67.5	63.9	81.2	69.2	66.3	79.8
1964 .....	69.0	66.0	80.0	70.2	67.7	78.7
1965 .....	72.3	67.5	91.2	74.9	71.0	89.7
1966 .....	74.4	70.1	91.7	75.8	72.1	89.8
1967 .....	74.1	70.7	86.7	75.8	73.2	84.6
1968 .....	76.2	73.5	85.8	79.0	76.8	86.2
1969 .....	80.1	77.8	88.5	82.2	80.1	89.3
1970 .....	78.1	77.3	80.8	80.0	79.1	82.6
1971 .....	83.7	82.1	88.9	84.3	82.3	90.7
1972 .....	90.7	88.3	99.0	92.9	90.7	100.5
1973 .....	93.8	89.9	107.4	95.3	91.6	108.2
1974 .....	90.3	89.0	94.8	90.6	89.4	94.4
1975 .....	89.2	90.1	86.7	88.8	89.6	86.6
1976 .....	95.1	93.5	100.7	94.7	92.7	101.2
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.6	99.4	104.0	100.4	99.2	104.2
1979 .....	95.0	94.7	95.6	95.3	95.2	95.9
1980 .....	93.9	95.7	88.7	93.8	95.6	89.3
1981 .....	89.4	91.4	84.1	90.4	92.5	84.4
1982 <sup>2</sup> .....	92.6	94.8	86.7	92.6	94.6	86.9
Average annual percent change:						
1961-82 .....	2.1	2.5	.7	1.9	2.3	.8
1978-82 .....	-2.2	-1.3	-4.8	-2.1	-1.2	-4.8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 211. Lighting fixtures (SIC 3645, 3646, 3647, 3648): Indexes of output, employee hours, and employees, 1961-82**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1961 .....	46.5	75.1	79.6	61.4	74.8	78.9	62.5
1962 .....	53.4	79.1	84.3	63.3	77.9	82.5	64.3
1963 .....	56.0	83.0	87.6	69.0	80.9	84.5	70.2
1964 .....	60.0	87.0	90.9	75.0	85.5	88.6	76.2
1965 .....	69.3	95.9	102.6	76.0	92.5	97.6	77.3
1966 .....	73.7	99.0	105.2	80.4	97.2	102.2	82.1
1967 .....	73.5	99.2	104.0	84.8	97.0	100.4	86.9
1968 .....	79.0	103.7	107.5	92.1	100.0	102.8	91.7
1969 .....	88.8	110.8	114.2	100.3	108.0	110.8	99.4
1970 .....	82.6	105.8	106.9	102.2	103.3	104.4	100.0
1971 .....	85.8	102.5	104.5	96.5	101.8	104.2	94.6
1972 .....	99.9	110.1	113.1	100.9	107.5	110.2	99.4
1973 .....	108.2	115.4	120.3	100.7	113.5	118.1	100.0
1974 .....	92.1	102.0	103.5	97.2	101.6	103.0	97.6
1975 .....	76.8	86.1	85.2	88.6	86.5	85.7	88.7
1976 .....	89.2	93.8	95.4	88.6	94.2	96.2	88.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	105.4	104.8	106.0	101.3	105.0	106.2	101.2
1979 .....	106.2	111.8	112.1	111.1	111.4	111.6	110.7
1980 .....	98.8	105.2	103.2	111.4	105.3	103.4	110.7
1981 .....	95.5	106.8	104.5	113.6	105.7	103.2	113.1
1982 <sup>1</sup> .....	91.6	98.9	96.6	105.7	98.9	96.8	105.4
Average annual percent change:							
1961-82 .....	3.2	1.1	.7	2.4	1.2	.8	2.3
1978-82 .....	-3.8	-1.6	-2.5	1.1	-1.7	-2.6	1.0

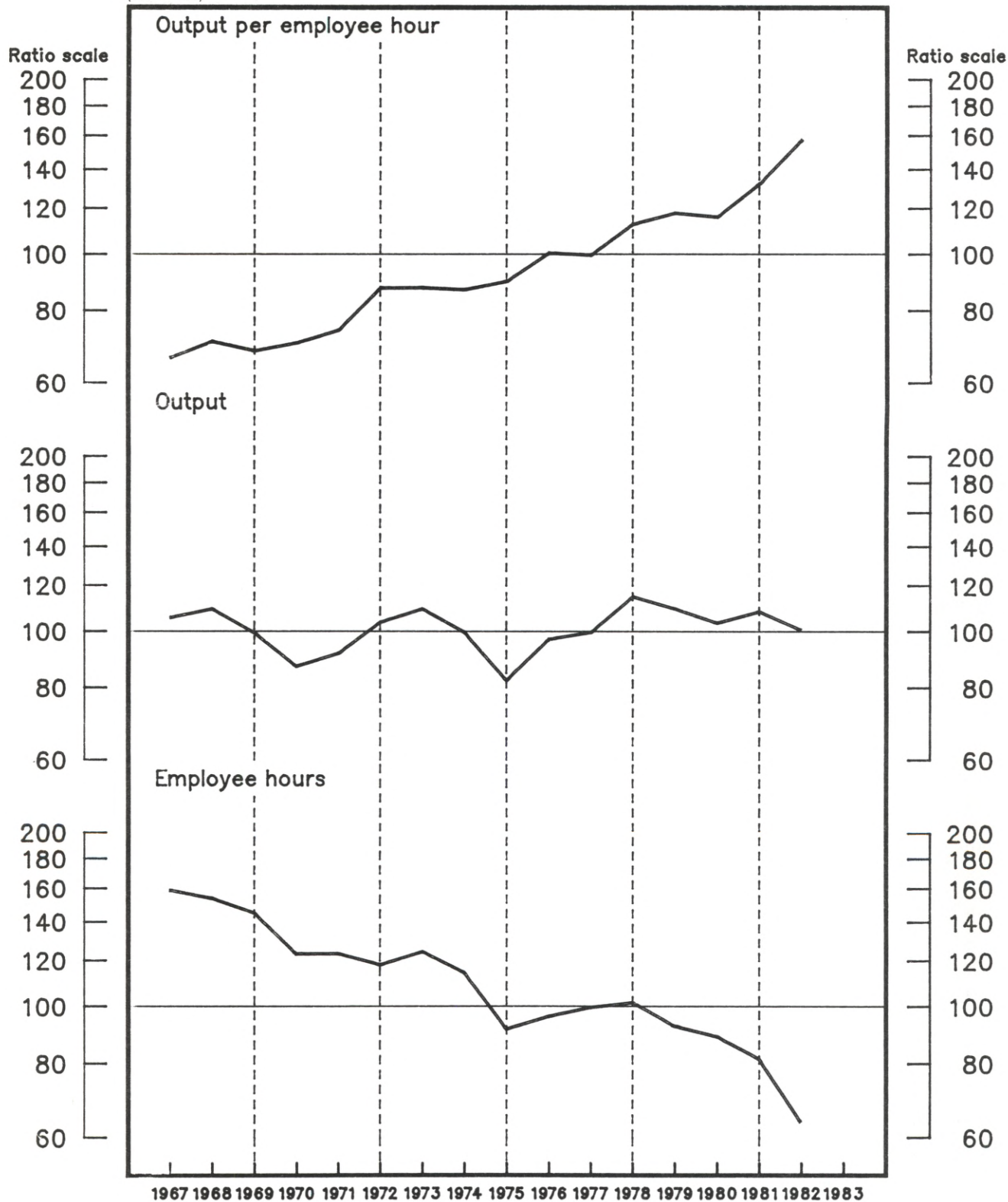
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 108. Radio and television receiving sets (SIC 3651): Output per hour and related data, 1967-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 212. Radio and television receiving sets (SIC 3651): Indexes of output per employee hour and output per employee, 1958-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958 .....	41.8	40.8	45.5	43.2	42.6	45.3
1959 .....	44.6	42.5	53.8	46.1	44.3	53.5
1960 .....	45.8	44.5	50.3	47.1	46.4	49.7
1961 .....	46.9	46.3	48.7	47.3	47.1	47.9
1962 .....	52.2	50.0	61.2	53.6	52.0	60.1
1963 .....	58.1	54.1	76.7	59.9	56.5	75.2
1964 .....	57.9	53.7	77.8	60.8	57.3	76.7
1965 .....	63.5	58.1	92.1	67.5	62.8	90.4
1966 .....	65.5	59.1	101.3	68.0	62.3	99.0
1967 .....	66.5	61.6	90.0	67.7	63.5	87.9
1968 .....	71.0	66.7	90.2	72.7	68.8	90.5
1969 .....	68.4	65.2	81.3	70.5	67.8	81.9
1970 .....	70.6	71.2	68.4	72.7	73.6	69.8
1971 .....	74.2	73.2	77.4	76.3	75.5	78.9
1972 .....	87.8	83.7	104.5	89.7	85.9	105.9
1973 .....	87.9	83.2	108.5	88.9	84.3	109.1
1974 .....	87.2	85.9	91.0	85.2	83.8	90.5
1975 .....	90.1	91.6	85.5	89.7	91.2	85.3
1976 .....	100.8	103.4	92.9	101.5	104.3	93.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	113.1	116.7	102.1	112.1	115.4	102.0
1979 .....	118.2	121.7	107.8	119.7	123.8	107.9
1980 .....	116.4	121.7	101.3	119.2	125.4	102.0
1981 .....	132.8	139.2	115.0	133.7	140.3	115.4
1982 <sup>2</sup> .....	157.9	166.8	134.5	157.4	165.7	135.1
Average annual percent change:						
1958-82 .....	5.0	5.4	3.3	4.8	5.2	3.4
1978-82 .....	8.2	8.9	6.4	8.2	8.9	6.5

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 213. Radio and television receiving sets (SIC 3651): Indexes of output, employee hours, and employees, 1958-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958 .....	38.5	92.0	94.3	84.7	89.2	90.3	85.0
1959 .....	46.3	103.7	109.0	86.1	100.5	104.5	86.5
1960 .....	45.3	99.0	101.7	90.1	96.2	97.7	91.1
1961 .....	48.7	103.8	105.2	99.9	103.0	103.3	101.7
1962 .....	59.7	114.4	119.4	97.6	111.3	114.7	99.4
1963 .....	65.2	112.3	120.5	85.0	108.9	115.5	86.7
1964 .....	70.5	121.7	131.2	90.6	116.0	123.0	91.9
1965 .....	90.6	142.6	155.9	98.4	134.3	144.2	100.2
1966 .....	118.7	181.3	200.9	117.2	174.5	190.5	119.9
1967 .....	106.0	159.5	172.1	117.8	156.5	166.9	120.6
1968 .....	109.7	154.5	164.5	121.6	150.9	159.4	121.2
1969 .....	99.8	145.9	153.0	122.7	141.5	147.1	121.8
1970 .....	87.4	123.8	122.7	127.8	120.3	118.7	125.3
1971 .....	91.9	123.9	125.6	118.7	120.5	121.7	116.5
1972 .....	104.1	118.5	124.3	99.6	116.0	121.2	98.3
1973 .....	109.8	124.9	132.0	101.2	123.5	130.2	100.6
1974 .....	100.1	114.8	116.5	110.0	117.5	119.5	110.6
1975 .....	82.8	91.9	90.4	96.8	92.3	90.8	97.1
1976 .....	97.3	96.5	94.1	104.7	95.9	93.3	104.1
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	115.2	101.9	98.7	112.8	102.8	99.8	112.9
1979 .....	109.8	92.9	90.2	101.9	91.7	88.7	101.8
1980 .....	103.8	89.2	85.3	102.5	87.1	82.8	101.8
1981 .....	108.6	81.8	78.0	94.4	81.2	77.4	94.1
1982 <sup>1</sup> .....	100.9	63.9	60.5	75.0	64.1	60.9	74.7
Average annual percent change:							
1958-82 .....	3.6	-1.3	-1.8	.2	-1.2	-1.6	.1
1978-82 .....	-2.7	-10.1	-10.6	-8.5	-10.1	-10.6	-8.6

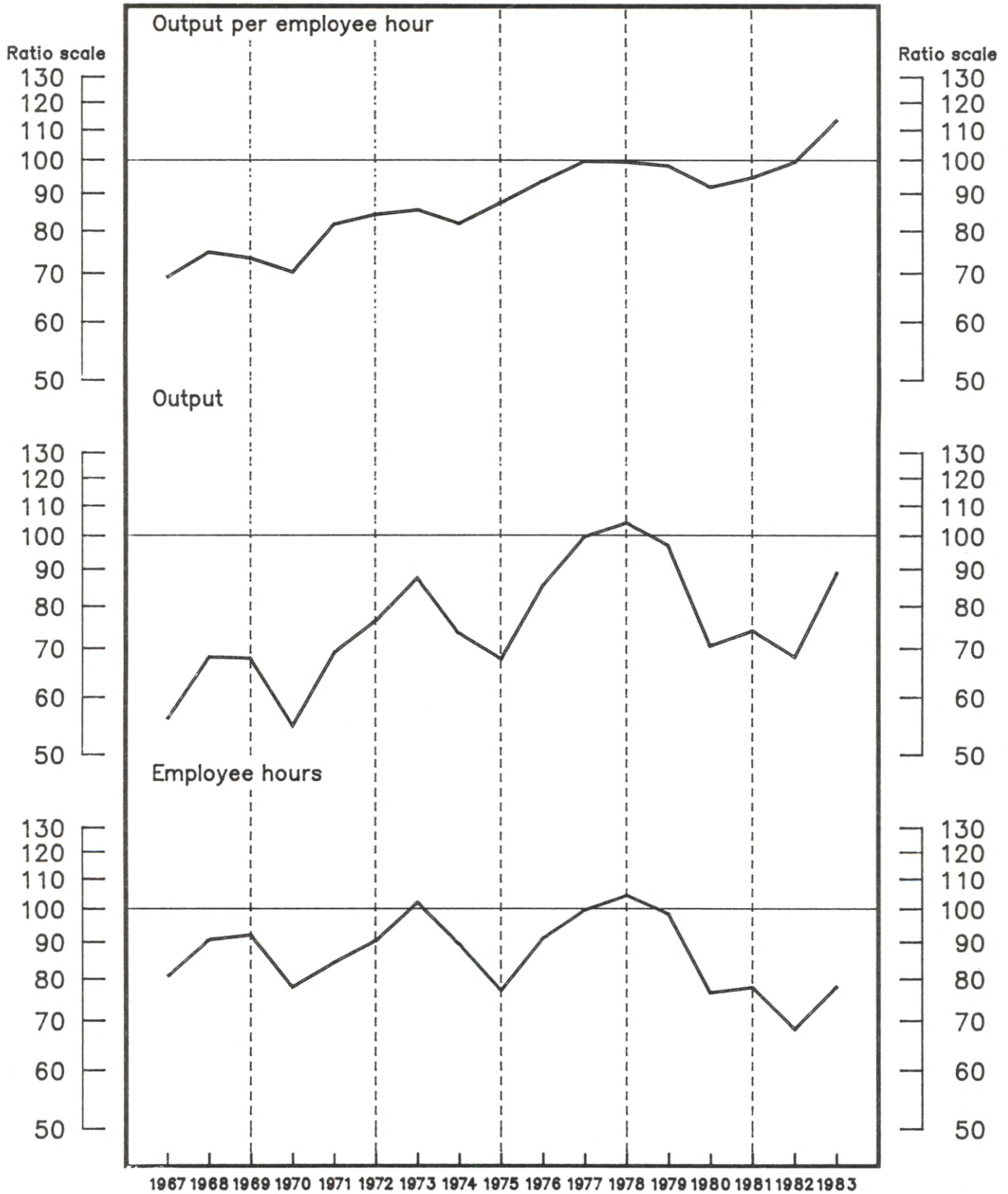
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.



Chart 109. Motor vehicles and equipment (SIC 371): Output per hour and related data, 1967-83  
 (1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 214. Motor vehicles and equipment (SIC 371): Indexes of output per employee hour and output per employee, 1957-83**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1957 .....	47.6	47.5	48.0	44.6	44.2	46.0
1958 .....	46.3	48.7	39.7	42.2	43.9	37.4
1959 .....	50.8	51.0	49.8	47.8	47.7	48.0
1960 .....	55.1	55.2	54.5	51.6	51.4	52.2
1961 .....	55.9	57.7	50.4	51.4	52.5	47.7
1962 .....	61.3	61.5	60.8	59.4	59.6	58.5
1963 .....	63.7	63.7	63.4	61.9	62.0	61.5
1964 .....	64.4	64.8	63.1	62.8	63.2	61.1
1965 .....	68.6	67.7	72.2	68.6	67.9	70.6
1966 .....	68.9	68.9	69.5	67.2	67.0	68.0
1967 .....	69.3	70.5	65.6	64.8	65.4	62.8
1968 .....	75.0	74.7	76.2	73.6	73.2	74.8
1969 .....	73.6	73.9	72.4	70.2	70.1	70.6
1970 .....	70.5	72.5	64.1	65.0	66.5	60.2
1971 .....	81.9	82.4	80.3	76.9	77.1	75.9
1972 .....	84.5	84.7	84.0	82.5	82.8	81.6
1973 .....	85.7	85.9	85.1	84.7	85.0	83.9
1974 .....	82.1	84.7	74.0	76.3	78.1	70.7
1975 .....	87.7	89.8	80.9	80.7	82.3	75.6
1976 .....	93.9	94.2	92.7	91.8	91.8	91.5
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	99.7	99.7	99.8	98.4	98.1	99.4
1979 .....	98.5	100.0	93.6	92.9	93.5	91.4
1980 .....	92.2	99.4	73.7	85.0	90.4	70.5
1981 .....	95.0	100.1	80.7	89.1	93.0	77.9
1982 .....	99.7	106.6	81.6	92.5	98.0	77.5
1983 <sup>2</sup> .....	113.9	116.4	105.9	111.5	114.7	101.8
Average annual percent change:						
1957-83 .....	3.1	3.2	2.7	3.1	3.3	2.8
1978-83 .....	2.1	2.8	-1	1.9	2.8	-8

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from company records; the Motor Vehicle Manufacturers Association of the U.S., Inc.; the Gousha/Times Mirror Company (Automobile Invoice Service); Ward's Communications, Inc. (Ward's Automotive Yearbooks); the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics and company records.

**Table 215. Motor vehicles and equipment (SIC 371): Indexes of output, employee hours, and employees, 1957-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1957 .....	36.4	76.4	76.6	75.8	81.6	82.4	79.2
1958 .....	27.2	58.7	55.9	68.6	64.4	62.0	72.8
1959 .....	35.1	69.1	68.8	70.5	73.5	73.6	73.1
1960 .....	39.7	72.1	71.9	72.9	76.9	77.2	76.0
1961 .....	34.5	61.7	59.8	68.5	67.1	65.7	72.4
1962 .....	43.6	71.1	70.9	71.7	73.4	73.1	74.5
1963 .....	48.7	76.5	76.4	76.8	78.7	78.5	79.2
1964 .....	50.2	78.0	77.5	79.6	79.9	79.4	82.1
1965 .....	61.3	89.3	90.6	84.9	89.4	90.3	86.8
1966 .....	61.5	89.2	89.3	88.5	91.5	91.8	90.4
1967 .....	56.1	80.9	79.6	85.5	86.6	85.8	89.3
1968 .....	68.2	90.9	91.3	89.5	92.7	93.2	91.2
1969 .....	67.9	92.3	91.9	93.8	96.7	96.9	96.2
1970 .....	55.1	78.2	76.0	86.0	84.8	82.9	91.5
1971 .....	69.2	84.5	84.0	86.2	90.0	89.7	91.2
1972 .....	76.6	90.6	90.4	91.2	92.8	92.5	93.9
1973 .....	87.8	102.4	102.2	103.2	103.6	103.3	104.7
1974 .....	73.6	89.6	86.9	99.5	96.4	94.2	104.1
1975 .....	67.9	77.4	75.6	83.9	84.1	82.5	89.8
1976 .....	85.8	91.4	91.1	92.6	93.5	93.5	93.8
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	104.4	104.7	104.7	104.6	106.1	106.4	105.0
1979 .....	97.2	98.7	97.2	103.9	104.6	104.0	106.3
1980 .....	70.8	76.8	71.2	96.1	83.3	78.3	100.4
1981 .....	74.2	78.1	74.1	92.0	83.3	79.8	95.3
1982 .....	68.3	68.5	64.1	83.7	73.8	69.7	88.1
1983 <sup>1</sup> .....	89.2	78.3	76.6	84.2	80.0	77.8	87.6
Average annual percent change:							
1957-83 .....	4.0	.9	.8	1.2	.8	.7	1.2
1978-83 .....	-5.0	-7.0	-7.6	-5.0	-6.8	-7.5	-4.3

<sup>1</sup> Preliminary.

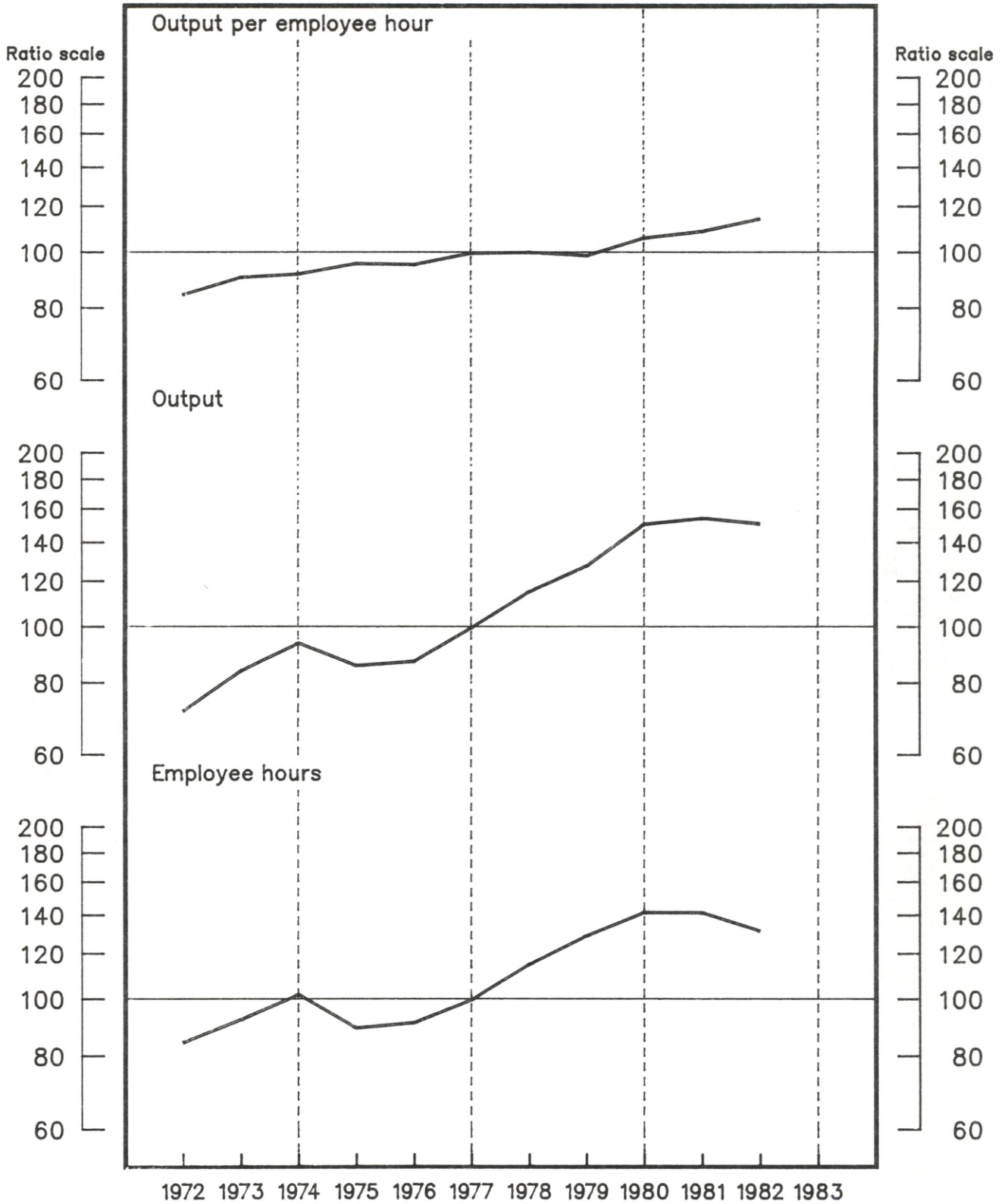
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from company records; the Motor Vehicle Manufacturers Association of the U.S., Inc.; the Gousha/Times Mirror Company

(Automobile Invoice Service); Ward's Communications, Inc. (Ward's Automotive Yearbooks); the Bureau of the Census; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics and company records.

Chart 110. Instruments to measure electricity (SIC 3825): Output per hour and related data, 1972-82

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 216. Instruments to measure electricity (SIC 3825): Indexes of output per employee hour and output per employee, 1972-82**  
(1977=100)

Year	Output per hour <sup>1</sup>			Output per employee <sup>1</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1972 .....	84.7	81.8	90.0	87.1	83.8	93.1
1973 .....	90.8	85.4	101.4	93.0	87.4	103.2
1974 .....	92.0	87.1	101.2	92.1	87.1	101.0
1975 .....	95.9	95.4	96.6	93.8	92.1	96.6
1976 .....	95.5	94.7	97.0	95.1	93.7	97.4
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	100.3	102.0	97.3	100.3	102.3	97.2
1979 .....	99.0	103.9	92.0	100.6	106.8	92.3
1980 .....	106.3	117.4	92.1	105.8	116.4	92.8
1981 .....	109.1	125.2	90.1	108.4	124.4	90.5
1982 <sup>2</sup> .....	114.7	128.7	97.3	113.0	125.9	97.6
Average annual percent change:						
1972-82 .....	2.6	4.6	-4	2.3	4.4	-6
1978-82 .....	3.7	6.7	-2	3.2	5.8	-1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

**Table 217. Instruments to measure electricity (SIC 3825): Indexes of output, employee hours, and employees, 1972-82**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1972 .....	71.7	84.7	87.7	79.7	82.3	85.6	77.0
1973 .....	84.2	92.7	98.6	83.0	90.5	96.3	81.6
1974 .....	94.0	102.2	107.9	92.9	102.1	107.9	93.1
1975 .....	85.9	89.6	90.0	88.9	91.6	93.3	88.9
1976 .....	87.4	91.5	92.3	90.1	91.9	93.3	89.7
1977 .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978 .....	115.5	115.2	113.2	118.7	115.2	112.9	118.8
1979 .....	128.0	129.3	123.2	139.2	127.2	119.8	138.7
1980 .....	151.0	142.0	128.6	163.9	142.7	129.7	162.8
1981 .....	154.6	141.7	123.5	171.5	142.6	124.3	170.9
1982 <sup>1</sup> .....	151.1	131.7	117.4	155.3	133.7	120.0	154.8
Average annual percent change:							
1972-82 .....	8.2	5.5	3.4	8.6	5.7	3.7	8.8
1978-82 .....	7.5	3.7	.8	7.7	4.2	1.6	7.7

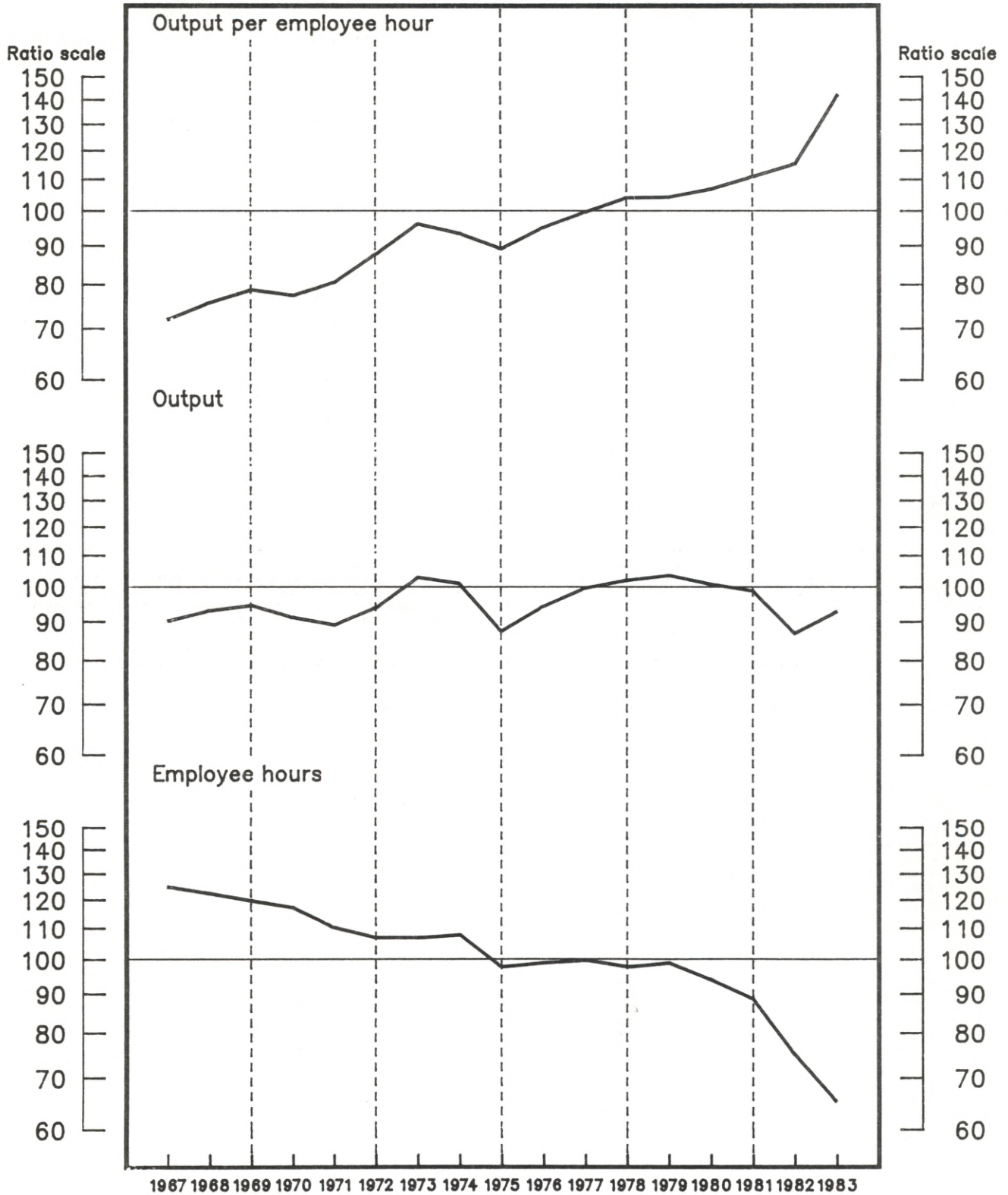
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Chart 111. Railroad transportation, revenue traffic (SIC 401): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 218. Railroad transportation, revenue traffic (SIC 401)<sup>1</sup>: Indexes of output per employee hour and output per employee, 1954-83**  
(1977=100)

Year	Output per hour <sup>2</sup>			Output per employee <sup>2</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	35.3	33.8	50.6	36.7	35.0	55.5
1955	37.4	35.9	53.6	39.6	37.7	60.8
1956	38.2	36.7	53.8	40.2	38.4	61.1
1957	38.2	36.9	51.6	39.8	38.0	58.5
1958	41.1	40.0	49.9	42.5	41.0	56.5
1959	43.9	42.8	53.3	45.6	44.1	60.5
1960	45.1	44.1	53.3	46.6	45.1	60.3
1961	48.7	47.9	55.2	50.1	48.7	62.2
1962	52.2	51.3	59.7	54.1	52.7	67.4
1963	54.9	53.9	62.7	57.3	55.8	70.7
1964	58.4	57.4	66.5	61.7	60.2	75.6
1965	65.1	64.3	71.4	68.1	66.6	81.0
1966	70.2	69.2	77.3	73.1	71.6	85.5
1967	72.2	71.2	79.8	73.6	72.4	83.5
1968	76.0	75.2	82.9	78.4	77.3	87.2
1969	79.0	78.1	85.7	81.3	80.3	89.4
1970	77.7	76.9	83.1	79.8	79.0	86.5
1971	80.8	80.5	83.5	79.6	78.9	86.3
1972	88.0	87.7	89.5	89.0	88.5	92.0
1973	96.4	95.9	99.0	96.4	95.8	101.0
1974	93.7	93.3	96.8	94.6	94.1	98.4
1975	89.5	89.9	86.1	88.5	88.7	87.2
1976	95.4	95.5	94.0	95.3	95.3	95.6
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.5	104.7	103.5	104.5	104.6	103.5
1979	104.7	104.8	104.1	105.4	105.5	104.4
1980	107.3	108.4	101.4	105.5	106.2	101.0
1981	111.5	113.3	101.4	108.8	109.9	102.0
1982	115.8	119.3	96.9	110.1	112.5	96.2
1983 <sup>3</sup>	142.4	146.6	118.6	136.7	140.0	117.8
Average annual percent change:						
1947-83	4.5	4.8	2.6	4.1	4.3	2.0
1978-83	5.5	6.2	1.3	4.4	4.9	1.2

<sup>1</sup> Class I railroads and Class I switching and terminal companies.

<sup>2</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may

differ from those previously published.

SOURCE: Output based on data from the Interstate Commerce Commission; the Association of American Railroads; the Federal Railroad Administration, U.S. Department of Transportation; and the National Railroad Passenger Corporation. Employment and hours based on data from the Interstate Commerce Commission.

**Table 219. Railroad transportation, revenue traffic (SIC 401)<sup>1</sup>: Indexes of output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	79.0	223.7	233.5	156.2	215.2	225.6	142.3
1955	84.7	226.2	236.2	158.0	214.0	224.6	139.4
1956	85.2	223.0	232.4	158.3	211.8	222.1	139.4
1957	79.9	208.9	216.8	154.7	200.9	210.0	136.5
1958	72.7	177.0	181.6	145.6	171.1	177.2	128.6
1959	75.7	172.5	176.9	142.0	166.1	171.8	125.1
1960	74.1	164.2	167.9	139.0	159.1	164.3	122.8
1961	73.2	150.3	152.9	132.6	146.2	150.3	117.6
1962	77.2	147.8	150.5	129.3	142.6	146.4	114.5
1963	79.3	144.4	147.1	126.5	138.5	142.2	112.1
1964	83.5	142.9	145.4	125.6	135.3	138.8	110.4
1965	88.1	135.3	137.1	123.4	129.4	132.3	108.8
1966	92.9	132.4	134.3	120.2	127.1	129.7	108.7
1967	90.4	125.2	126.9	113.3	122.9	124.8	108.2
1968	93.3	122.7	124.1	112.6	119.0	120.7	107.0
1969	94.8	120.0	121.4	110.6	116.6	118.1	106.0
1970	91.3	117.5	118.7	109.9	114.4	115.6	105.5
1971	89.3	110.5	111.0	107.0	112.2	113.2	103.5
1972	94.2	107.1	107.4	105.2	105.9	106.4	102.4
1973	103.2	107.1	107.6	104.2	107.0	107.7	102.2
1974	101.3	108.1	108.6	104.6	107.1	107.6	102.9
1975	87.7	98.0	97.5	101.9	99.1	98.9	100.6
1976	94.6	99.2	99.1	100.6	99.3	99.3	99.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.4	98.0	97.8	98.9	98.0	97.9	98.9
1979	103.9	99.2	99.1	99.8	98.6	98.5	99.5
1980	101.1	94.2	93.3	99.7	95.8	95.2	100.1
1981	99.1	88.9	87.5	97.7	91.1	90.2	97.2
1982	87.2	75.3	73.1	90.0	79.2	77.5	90.6
1983 <sup>2</sup>	93.1	65.4	63.5	78.5	68.1	66.5	79.0
Average annual percent change:							
1947-83	.5	-3.9	-4.1	-2.0	-3.4	-3.7	-1.5
1978-83	-2.9	-8.0	-8.6	-4.2	-7.0	-7.4	-4.0

<sup>1</sup> Class I railroads and Class I switching and terminal companies.

<sup>2</sup> Preliminary.

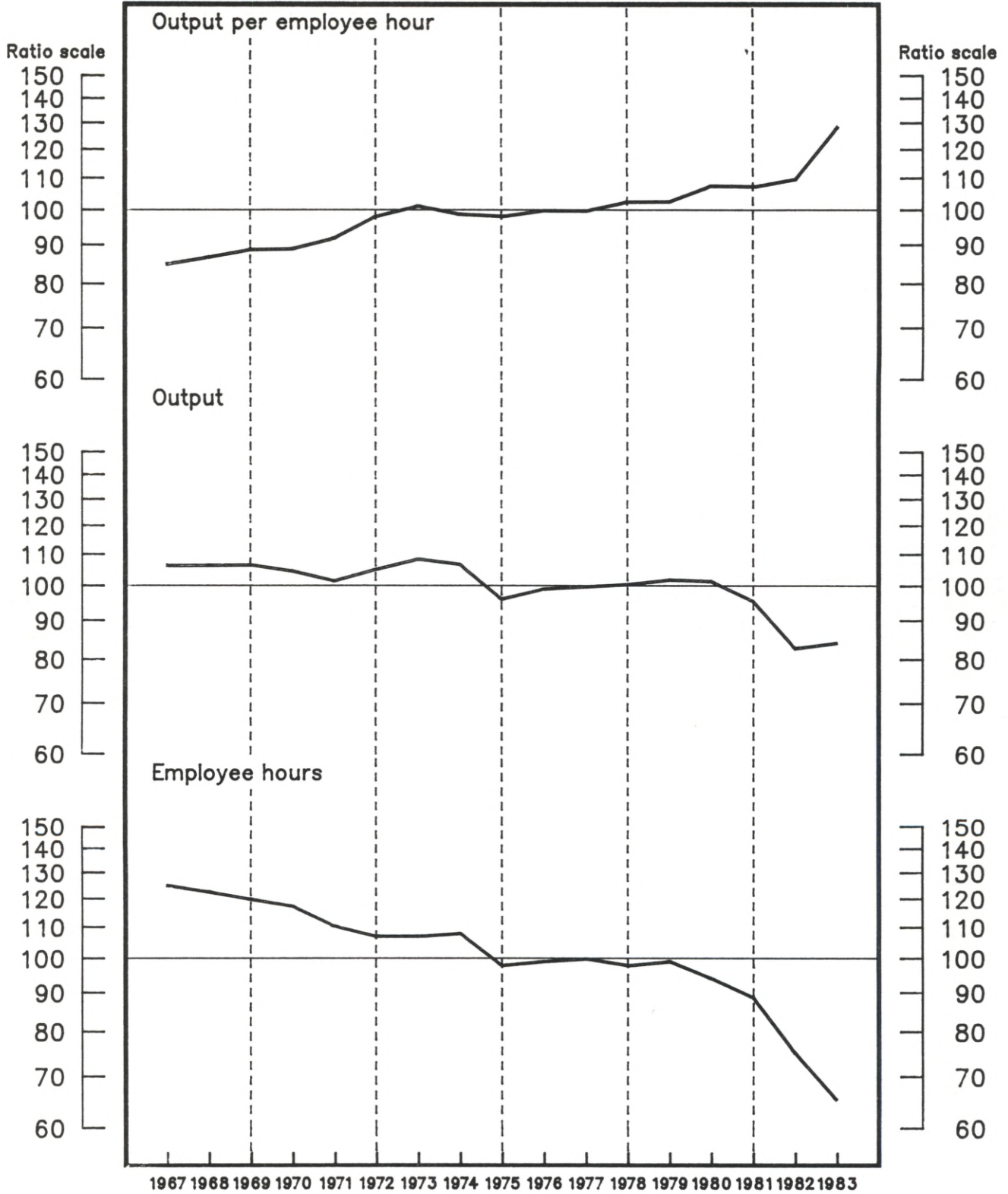
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Interstate Commerce Commission; the Association of American Railroads; the Federal Railroad Administration, U.S. Department of Transportation; and the National Railroad Passenger Corporation. Employment and hours based on data from the Interstate Commerce Commission.



Chart 112. Railroad transportation, car miles (SIC 401): Output per hour and related data, 1967-83

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 220. Railroad transportation, car miles (SIC 401)<sup>1</sup>: Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>2</sup>			Output per employee <sup>2</sup>		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	48.9	46.8	70.0	50.8	48.4	76.8
1955	51.8	49.6	74.1	54.7	52.1	84.0
1956	53.0	50.9	74.7	55.8	53.2	84.8
1957	54.7	52.7	73.9	56.9	54.4	83.7
1958	59.0	57.5	71.8	61.1	59.0	81.3
1959	61.4	59.9	74.6	63.8	61.6	84.7
1960	63.3	61.9	74.7	65.3	63.2	84.6
1961	66.7	65.5	75.6	68.5	66.7	85.2
1962	68.9	67.7	78.8	71.5	69.6	89.0
1963	71.3	70.0	81.4	74.4	72.4	91.9
1964	73.8	72.5	83.9	77.9	75.9	95.5
1965	78.7	77.7	86.3	82.3	80.5	97.9
1966	82.8	81.6	91.2	86.2	84.5	100.8
1967	85.1	83.9	94.0	86.7	85.3	98.4
1968	86.9	85.9	94.7	89.6	88.3	99.6
1969	88.9	87.9	96.5	91.5	90.3	100.7
1970	89.1	88.2	95.3	91.5	90.6	99.2
1971	92.0	91.6	95.0	90.6	89.8	98.3
1972	98.3	98.0	100.1	99.4	99.0	102.8
1973	101.4	100.9	104.2	101.5	100.8	106.3
1974	98.9	98.4	102.2	99.8	99.3	103.9
1975	98.3	98.8	94.5	97.2	97.4	95.7
1976	100.1	100.2	98.7	100.0	100.0	100.3
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.8	103.0	101.8	102.8	102.9	101.8
1979	102.9	103.0	102.3	103.5	103.7	102.6
1980	107.9	108.9	101.9	106.1	106.7	101.5
1981	107.6	109.4	98.0	105.0	106.1	98.5
1982	110.1	113.4	92.1	104.7	107.0	91.5
1983 <sup>3</sup>	128.9	132.8	107.4	123.8	126.8	106.7
Average annual percent change:						
1947-83	3.4	3.6	1.4	2.9	3.1	.9
1978-83	3.9	4.6	-2	2.8	3.3	-4

<sup>1</sup> Class I railroads and Class I switching and terminal companies.

<sup>2</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Interstate Commerce Commission and the Association of American Railroads. Employment and hours based on data from the Interstate Commerce Commission.

**Table 221. Railroad transportation, car miles (SIC 401)<sup>1</sup>: Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	109.3	223.7	233.5	156.2	215.2	225.6	142.3
1955	117.1	226.2	236.2	158.0	214.0	224.6	139.4
1956	118.2	223.0	232.4	158.3	211.8	222.1	139.4
1957	114.3	208.9	216.8	154.7	200.9	210.0	136.5
1958	104.5	177.0	181.6	145.6	171.1	177.2	128.6
1959	105.9	172.5	176.9	142.0	166.1	171.8	125.1
1960	103.9	164.2	167.9	139.0	159.1	164.3	122.8
1961	100.2	150.3	152.9	132.6	146.2	150.3	117.6
1962	101.9	147.8	150.5	129.3	142.6	146.4	114.5
1963	103.0	144.4	147.1	126.5	138.5	142.2	112.1
1964	105.4	142.9	145.4	125.6	135.3	138.8	110.4
1965	106.5	135.3	137.1	123.4	129.4	132.3	108.8
1966	109.6	132.4	134.3	120.2	127.1	129.7	108.7
1967	106.5	125.2	126.9	113.3	122.9	124.8	108.2
1968	106.6	122.7	124.1	112.6	119.0	120.7	107.0
1969	106.7	120.0	121.4	110.6	116.6	118.1	106.0
1970	104.7	117.5	118.7	109.9	114.4	115.6	105.5
1971	101.7	110.5	111.0	107.0	112.2	113.2	103.5
1972	105.3	107.1	107.4	105.2	105.9	106.4	102.4
1973	108.6	107.1	107.6	104.2	107.0	107.7	102.2
1974	106.9	108.1	108.6	104.6	107.1	107.6	102.9
1975	96.3	98.0	97.5	101.9	99.1	98.9	100.6
1976	99.3	99.2	99.1	100.6	99.3	99.3	99.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.7	98.0	97.8	98.9	98.0	97.9	98.9
1979	102.1	99.2	99.1	99.8	98.6	98.5	99.5
1980	101.6	94.2	93.3	99.7	95.8	95.2	100.1
1981	95.7	88.9	87.5	97.7	91.1	90.2	97.2
1982	82.9	75.3	73.1	90.0	79.2	77.5	90.6
1983 <sup>2</sup>	84.3	65.4	63.5	78.5	68.1	66.5	79.0
Average annual percent change:							
1947-83	-6	-3.9	-4.1	-2.0	-3.4	-3.7	-1.5
1978-83	-4.4	-8.0	-8.6	-4.2	-7.0	-7.4	-4.0

<sup>1</sup> Class I railroads and Class I switching and terminal companies.

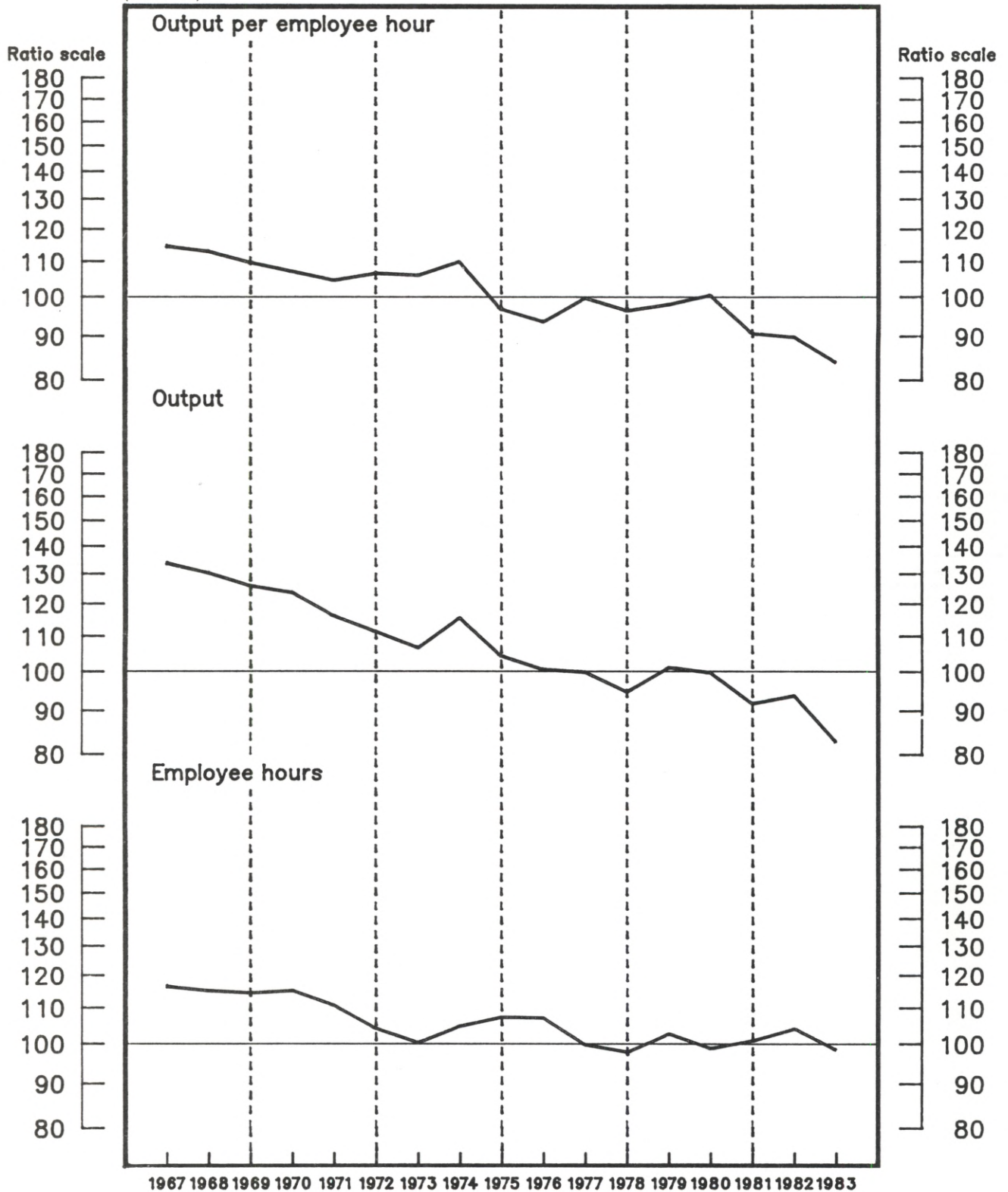
<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Interstate Commerce Commission and the Association of American Railroads. Employment and hours based on data from the Interstate Commerce Commission.

Chart 113. Bus carriers, Class I (parts of SIC 4111, 4131, 414): Output per hour and related data, 1967-83

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 222. Bus carriers, Class 1 (Parts of SIC 4111, 4131, 414): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1954-83**  
(1977=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1954 .....	88.9	96.3	107.8	121.2	111.9
1955 .....	92.3	99.3	105.8	114.6	106.5
1956 .....	93.2	100.0	104.4	112.0	104.4
1957 .....	93.7	100.3	104.8	111.9	104.5
1958 .....	94.2	99.5	99.1	105.2	99.6
1959 .....	97.2	102.6	99.1	102.0	96.6
1960 .....	96.1	102.3	100.9	105.0	98.6
1961 .....	97.9	103.5	103.2	105.4	99.7
1962 .....	107.1	114.3	115.4	107.7	101.0
1963 .....	108.7	114.6	115.9	106.6	101.1
1964 .....	109.8	116.1	120.7	109.9	104.0
1965 .....	116.3	122.0	127.2	109.4	104.3
1966 .....	118.8	124.5	132.8	111.8	106.7
1967 .....	114.8	121.2	133.9	116.6	110.5
1968 .....	113.2	119.6	130.5	115.3	109.1
1969 .....	109.9	115.6	126.1	114.7	109.1
1970 .....	107.3	112.8	123.8	115.4	109.8
1971 .....	104.8	108.1	116.3	111.0	107.6
1972 .....	106.8	105.7	111.5	104.4	105.5
1973 .....	106.2	107.7	106.8	100.6	99.2
1974 .....	110.2	112.0	115.8	105.1	103.4
1975 .....	97.0	97.9	104.4	107.6	106.6
1976 .....	93.8	95.1	100.7	107.3	105.9
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	96.7	94.9	94.9	98.1	100.0
1979 .....	98.3	98.6	101.3	103.0	102.7
1980 .....	100.8	94.1	99.9	99.1	106.2
1981 .....	90.9	86.4	92.0	101.2	106.5
1982 .....	90.0	85.8	94.0	104.4	109.6
1983 <sup>1</sup> .....	84.1	82.3	83.0	98.7	100.9
Average annual percent change:					
1954-83 .....	-.1	-.5	-.4	-.4	( <sup>2</sup> )
1978-83 .....	-3.0	-3.4	-2.8	.3	.7

<sup>1</sup> Preliminary.

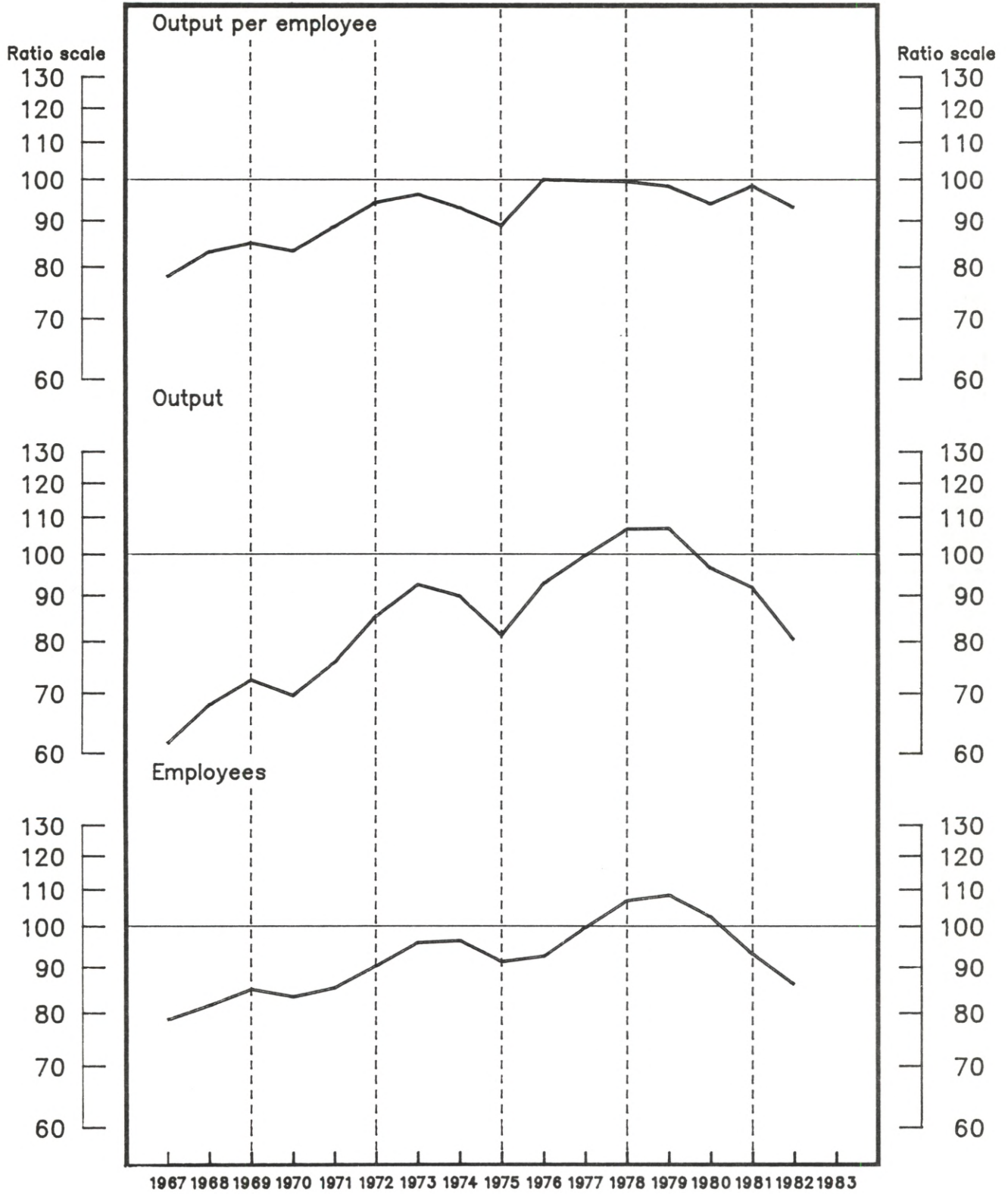
<sup>2</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, employment, and hours based on data from the Interstate Commerce Commission, the American Bus Association, and the Bureau of Labor Statistics.

Chart 114. Intercity trucking (SIC 4213 part): Output per employee and related data, 1967-82

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 223. Intercity trucking (SIC 4213 part)<sup>1</sup>: Indexes of output per employee, output, and employees, 1954-82**  
(1977=100)

Year	Output per employee	Output	Employees
Index:			
1954 .....	56.8	27.5	48.4
1955 .....	59.9	31.7	52.9
1956 .....	60.3	33.1	54.9
1957 .....	61.1	34.9	57.1
1958 .....	62.9	34.9	55.5
1959 .....	66.5	40.9	61.5
1960 .....	66.5	41.6	62.6
1961 .....	67.2	41.4	61.6
1962 .....	69.3	44.8	64.6
1963 .....	72.5	48.1	66.3
1964 .....	74.5	51.2	68.7
1965 .....	77.2	57.5	74.5
1966 .....	81.3	63.8	78.5
1967 .....	78.2	61.7	78.9
1968 .....	83.3	68.1	81.8
1969 .....	85.2	72.6	85.2
1970 .....	83.5	69.8	83.6
1971 .....	88.8	75.9	85.5
1972 .....	94.6	85.6	90.5
1973 .....	96.6	92.8	96.1
1974 .....	93.3	90.1	96.6
1975 .....	89.2	81.6	91.5
1976 .....	100.3	93.1	92.8
1977 .....	100.0	100.0	100.0
1978 .....	99.8	107.0	107.2
1979 .....	98.6	107.2	108.7
1980 .....	94.3	96.8	102.7
1981 .....	98.7	92.1	93.3
1982 <sup>2</sup> .....	93.3	80.5	86.3
Average annual percent change:			
1954-82 .....	2.1	4.8	2.6
1978-82 .....	-1.3	-7.0	-5.7

<sup>1</sup> Class I and II common and contract carriers.

<sup>2</sup> Preliminary.

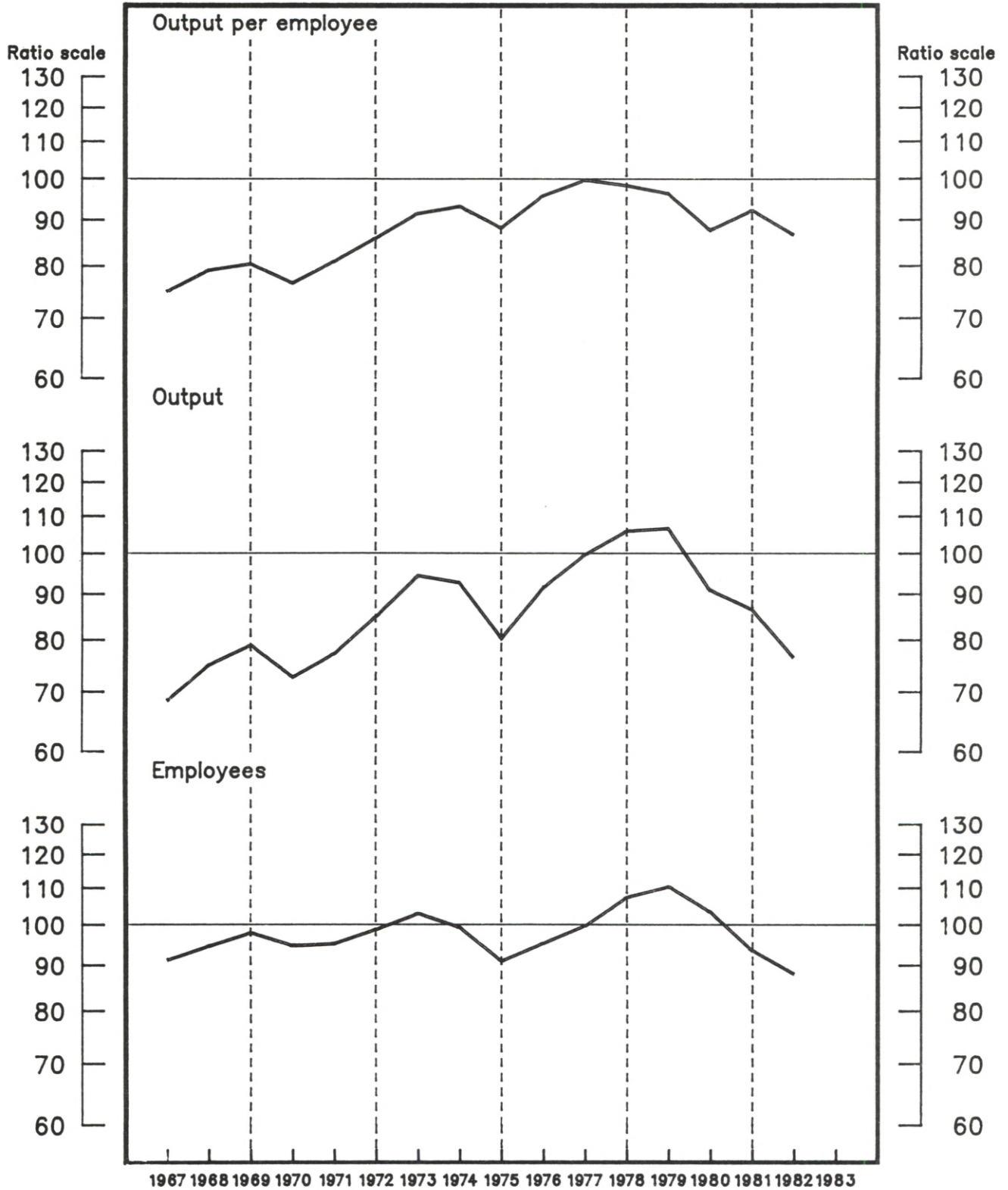
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those

previously published.

SOURCE: Based on data from the Interstate Commerce Commission and Trinc Transportation Consultants, a division of Dunn and Bradstreet, Inc.



Chart 115. Intercity trucking, general freight (SIC 4213 part): Output per employee and related data, 1967-82  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 224. Intercity trucking, general freight (SIC 4213 part)<sup>1</sup>: Indexes of output per employee, output, and employees, 1954-82**  
(1977=100)

Year	Output per employee	Output	Employees
Index:			
1954 .....	58.3	34.9	59.9
1955 .....	60.2	39.0	64.8
1956 .....	60.9	41.2	67.7
1957 .....	60.6	42.8	70.6
1958 .....	61.5	42.1	68.4
1959 .....	66.0	48.9	74.1
1960 .....	65.0	48.5	74.6
1961 .....	65.0	47.7	73.4
1962 .....	66.9	51.3	76.7
1963 .....	69.6	54.2	77.9
1964 .....	72.7	58.5	80.5
1965 .....	78.7	64.2	81.6
1966 .....	77.4	70.9	91.6
1967 .....	75.1	68.6	91.4
1968 .....	79.3	75.2	94.8
1969 .....	80.6	79.1	98.1
1970 .....	76.8	72.9	94.9
1971 .....	81.1	77.4	95.4
1972 .....	86.1	85.2	99.0
1973 .....	91.7	94.6	103.2
1974 .....	93.4	92.9	99.5
1975 .....	88.4	80.6	91.2
1976 .....	96.1	91.8	95.5
1977 .....	100.0	100.0	100.0
1978 .....	98.6	106.2	107.7
1979 .....	96.6	106.9	110.7
1980 .....	87.9	91.1	103.6
1981 .....	92.5	86.7	93.7
1982 <sup>2</sup> .....	86.8	76.6	88.2
Average annual percent change:			
1954-82 .....	1.9	3.7	1.8
1978-82 .....	-2.9	-8.3	-5.5

<sup>1</sup> Class I and II common carriers of general freight.

<sup>2</sup> Preliminary.

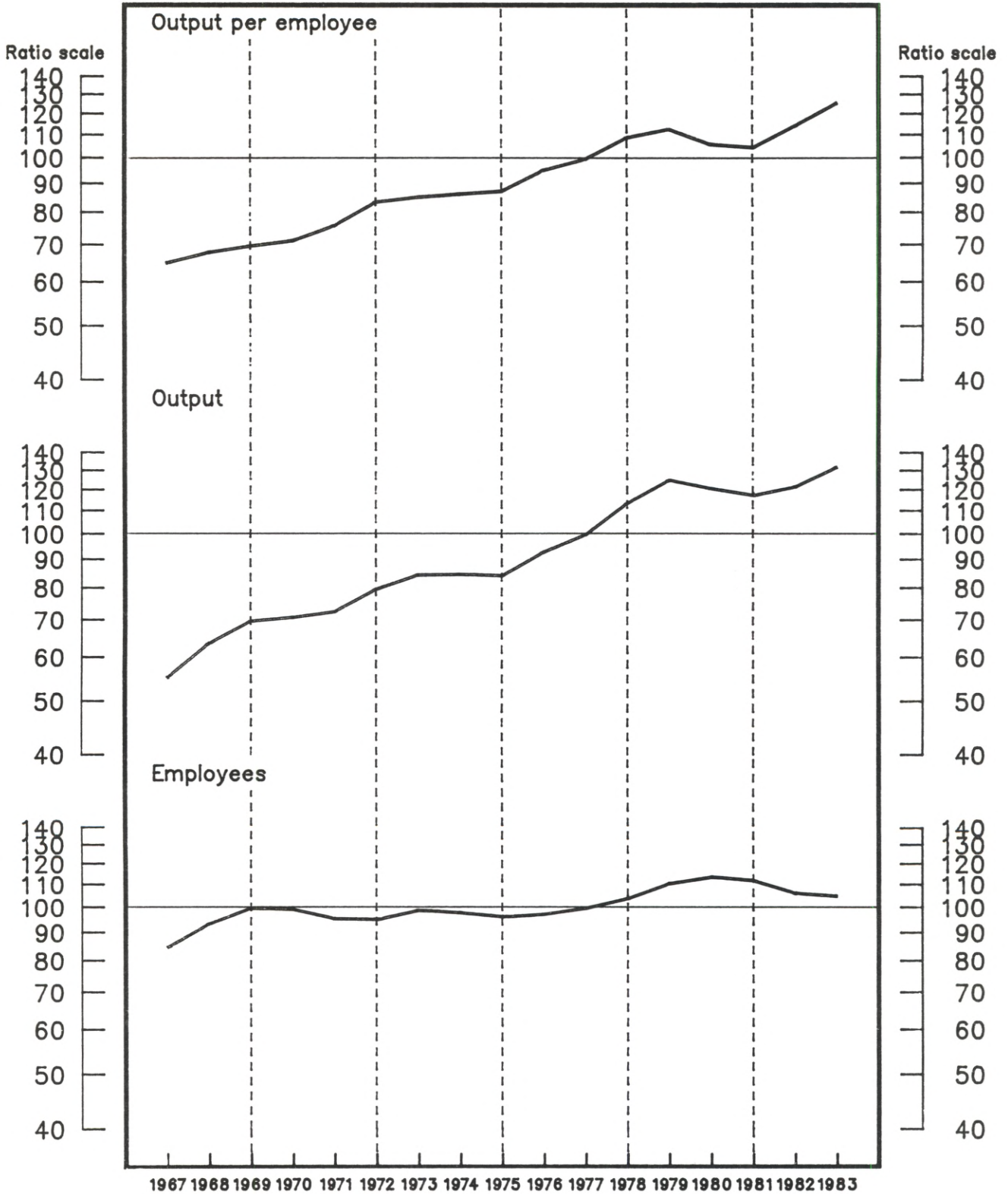
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those

previously published.

SOURCE: Based on data from the Interstate Commerce Commission and Trinc Transportation Consultants, a division of Dunn and Bradstreet, Inc.

Chart 116. Air transportation (SIC 4511, 4521 part): Output per employee and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 225. Air transportation (SIC 4511, 4521 part)<sup>1</sup>: Indexes of output per employee, output, and employees, 1954-83**  
(1977=100)

Year	Output per employee	Output	Employees
Index:			
1954 .....	25.5	9.6	37.6
1955 .....	28.7	11.4	39.7
1956 .....	29.6	13.2	44.6
1957 .....	30.7	15.0	48.9
1958 .....	31.6	15.2	48.1
1959 .....	34.0	17.5	51.4
1960 .....	34.3	18.6	54.3
1961 .....	36.2	19.7	54.4
1962 .....	40.4	22.3	55.2
1963 .....	44.4	25.2	56.7
1964 .....	48.8	29.4	60.2
1965 .....	54.4	35.5	65.3
1966 .....	61.1	43.6	71.4
1967 .....	65.1	55.2	84.8
1968 .....	68.0	63.7	93.7
1969 .....	69.9	69.9	100.0
1970 .....	71.4	71.0	99.4
1971 .....	76.0	72.7	95.6
1972 .....	83.8	79.9	95.3
1973 .....	85.5	84.7	99.1
1974 .....	86.6	84.9	98.0
1975 .....	87.6	84.4	96.4
1976 .....	95.5	93.1	97.5
1977 .....	100.0	100.0	100.0
1978 .....	109.3	113.9	104.2
1979 .....	113.1	125.4	110.9
1980 .....	106.2	121.0	113.9
1981 .....	104.9	117.7	112.2
1982 .....	114.7	122.0	106.4
1983 <sup>2</sup> .....	126.0	132.4	105.1
Average annual percent change:			
1947-83 .....	6.4	11.1	4.4
1978-83 .....	2.1	1.9	-3

<sup>1</sup> Due to airline deregulation, the measures from 1980 forward reflect the inclusion of some noncertificated carriers.

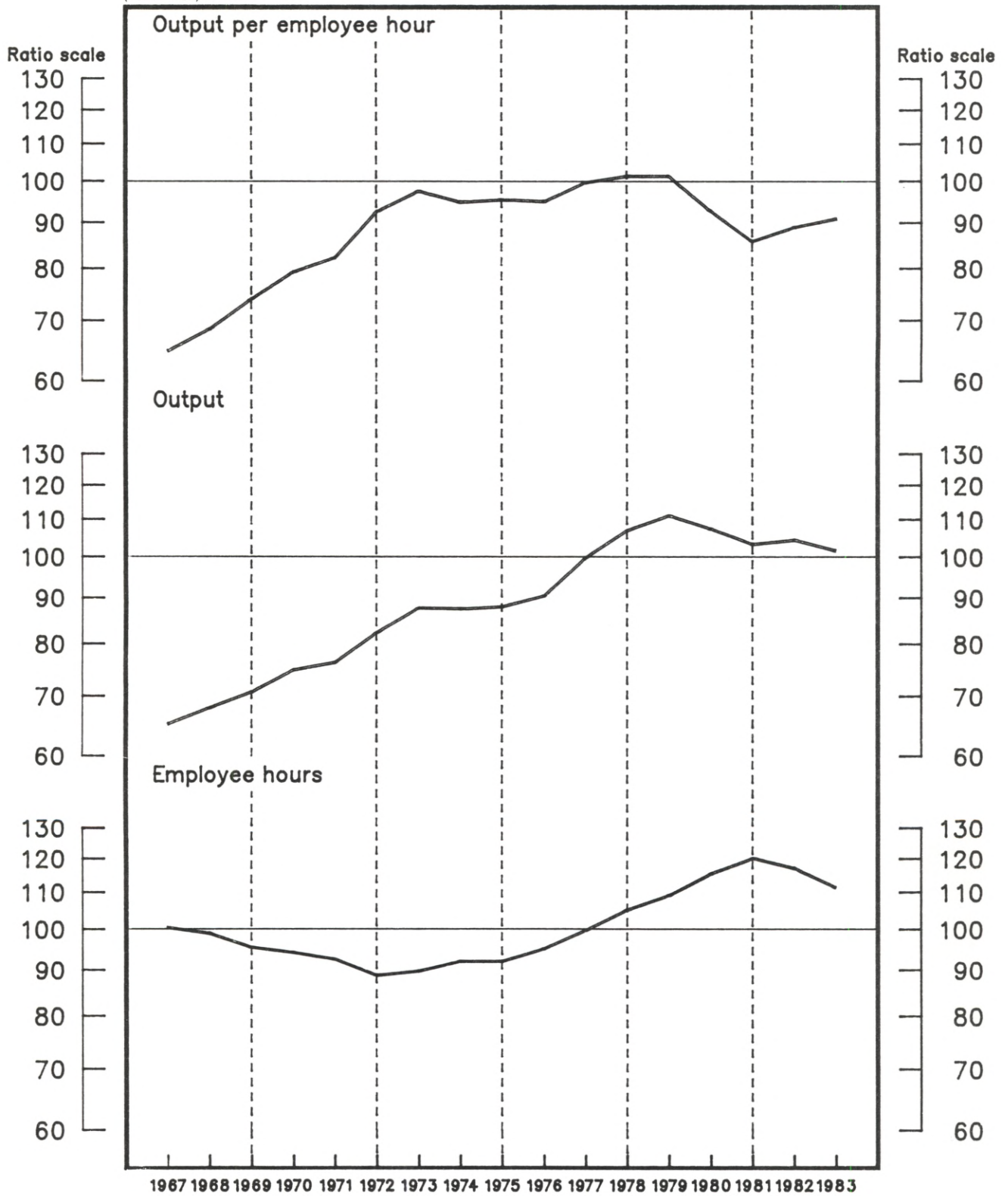
<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data,

the measures in this table may differ from those previously published.

SOURCE: Based on data from the Civil Aeronautics Board.

Chart 117. Petroleum pipelines (SIC 4612, 4613): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 226. Petroleum pipelines (SIC 4612, 4613): Indexes of output per employee hour and output per employee, 1958-83**  
(1977=100)

Year	Output per hour <sup>1</sup>		Output per employee <sup>1</sup>	
	All employees	Production workers <sup>2</sup>	All employees	Production workers <sup>2</sup>
Index:				
1958 .....	26.3	22.4	25.7	21.9
1959 .....	30.3	25.7	29.5	25.1
1960 .....	32.6	28.0	31.5	27.0
1961 .....	34.8	30.4	33.5	29.2
1962 .....	36.3	31.2	35.3	30.3
1963 .....	40.0	34.2	39.0	33.3
1964 .....	43.4	37.7	42.7	37.2
1965 .....	51.6	45.3	50.8	44.7
1966 .....	58.1	51.1	56.9	50.1
1967 .....	64.9	57.2	64.6	56.9
1968 .....	68.7	61.1	68.1	60.5
1969 .....	74.2	67.3	73.2	66.6
1970 .....	79.5	73.6	78.9	72.9
1971 .....	82.4	77.7	81.7	77.0
1972 .....	92.8	86.8	91.4	85.7
1973 .....	97.8	92.1	96.8	91.3
1974 .....	95.1	89.7	93.8	88.4
1975 .....	95.7	92.6	93.2	90.2
1976 .....	95.2	93.9	94.7	93.5
1977 .....	100.0	100.0	100.0	100.0
1978 .....	101.7	103.2	101.2	102.7
1979 .....	101.7	105.1	102.5	105.9
1980 .....	93.0	95.8	93.5	96.2
1981 .....	86.0	90.1	87.9	92.0
1982 .....	89.2	94.9	90.9	96.8
1983 <sup>3</sup> .....	91.2	95.1	91.0	93.9
Average annual percent change:				
1947-83 .....	( <sup>4</sup> )	( <sup>4</sup> )	7.0	( <sup>4</sup> )
1978-83 .....	-2.9	-2.2	-2.7	-2.2

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Represents nonsupervisory workers.

<sup>3</sup> Preliminary.

<sup>4</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the American Petroleum Institute and the Interstate Commerce Commission. Employment and hours based on data from the Bureau of Labor Statistics and the Interstate Commerce Commission.

**Table 227. Petroleum pipelines (SIC 4612, 4613): Indexes of output, employee hours, and employees, 1958-83**  
(1977=100)

Year	Output	Employee hours		Employees	
		All employees	Production workers <sup>1</sup>	All employees	Production workers <sup>1</sup>
Index:					
1958 .....	35.7	135.9	159.7	138.9	163.2
1959 .....	38.7	127.9	150.3	131.3	154.4
1960 .....	39.3	120.4	140.4	124.9	145.5
1961 .....	40.2	115.4	132.2	120.0	137.5
1962 .....	41.2	113.4	132.1	116.8	136.0
1963 .....	43.6	109.0	127.4	111.9	130.8
1964 .....	46.2	106.5	122.5	108.2	124.2
1965 .....	53.6	103.9	118.2	105.5	119.8
1966 .....	58.2	100.2	113.9	102.2	116.2
1967 .....	65.3	100.6	114.2	101.1	114.7
1968 .....	68.1	99.1	111.4	100.0	112.5
1969 .....	70.9	95.6	105.4	96.8	106.5
1970 .....	75.0	94.3	101.9	95.1	102.9
1971 .....	76.4	92.7	98.3	93.5	99.2
1972 .....	82.5	88.9	95.0	90.3	96.3
1973 .....	87.9	89.9	95.4	90.8	96.3
1974 .....	87.7	92.2	97.8	93.5	99.2
1975 .....	88.2	92.2	95.2	94.6	97.8
1976 .....	90.7	95.3	96.6	95.8	97.0
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	107.2	105.4	103.9	105.9	104.4
1979 .....	111.3	109.4	105.9	108.6	105.1
1980 .....	107.6	115.7	112.3	115.1	111.8
1981 .....	103.5	120.4	114.9	117.8	112.5
1982 .....	104.6	117.3	110.2	115.1	108.1
1983 <sup>2</sup> .....	101.8	111.6	107.1	111.9	108.4
Average annual percent change:					
1947-83 .....	5.5	( <sup>3</sup> )	( <sup>3</sup> )	-1.4	( <sup>3</sup> )
1978-83 .....	-1.4	1.5	.8	1.4	.8

<sup>1</sup> Represents nonsupervisory workers.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table

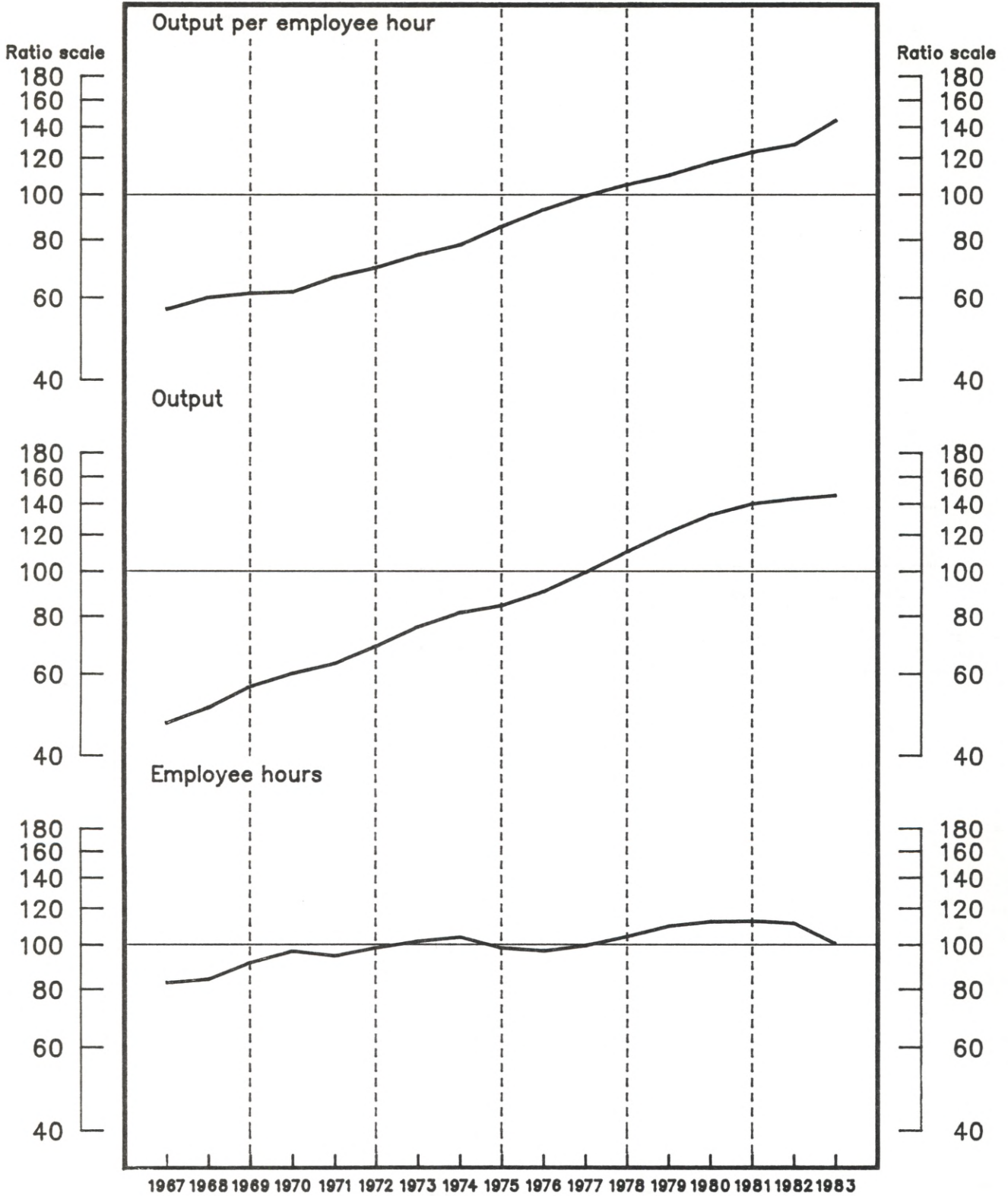
may differ from those previously published.

SOURCE: Output based on data from the American Petroleum Institute and the Interstate Commerce Commission. Employment and hours based on data from the Bureau of Labor Statistics and the Interstate Commerce Commission.



Chart 118. Telephone communications (SIC 4811): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 228. Telephone communications (SIC 4811): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1954 .....	23.2	22.6	16.5	71.2	73.0
1955 .....	25.0	24.8	18.3	73.3	73.8
1956 .....	25.6	25.4	19.9	77.7	78.4
1957 .....	28.1	27.4	22.0	78.4	80.3
1958 .....	31.8	30.6	23.4	73.6	76.5
1959 .....	35.3	34.6	25.6	72.6	73.9
1960 .....	37.4	37.2	27.4	73.2	73.7
1961 .....	40.7	40.1	29.1	71.5	72.5
1962 .....	43.5	43.5	31.2	71.8	71.8
1963 .....	46.7	46.8	33.5	71.8	71.6
1964 .....	48.5	48.9	36.1	74.4	73.8
1965 .....	50.6	51.3	39.4	77.8	76.8
1966 .....	52.9	53.8	43.5	82.2	80.8
1967 .....	56.9	56.1	47.2	83.0	84.2
1968 .....	60.4	60.1	51.0	84.5	84.8
1969 .....	61.7	62.3	56.6	91.8	90.9
1970 .....	62.1	61.4	60.4	97.2	98.4
1971 .....	66.8	63.8	63.4	94.9	99.4
1972 .....	70.0	69.3	69.2	98.9	99.8
1973 .....	74.6	74.3	76.2	102.2	102.5
1974 .....	78.4	78.3	81.8	104.3	104.5
1975 .....	85.9	84.0	84.8	98.7	101.0
1976 .....	93.3	91.2	90.8	97.3	99.6
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	105.8	106.6	110.8	104.7	103.9
1979 .....	110.8	111.6	122.2	110.3	109.5
1980 .....	118.1	118.9	133.2	112.8	112.0
1981 .....	124.4	125.1	140.7	113.1	112.5
1982 .....	129.1	128.8	144.2	111.7	112.0
1983 <sup>1</sup> .....	145.5	145.5	146.7	100.8	100.8
Average annual percent change:					
1951-83 .....	6.2	6.3	8.0	1.7	1.6
1978-83 .....	6.2	6.0	5.7	-4	-2

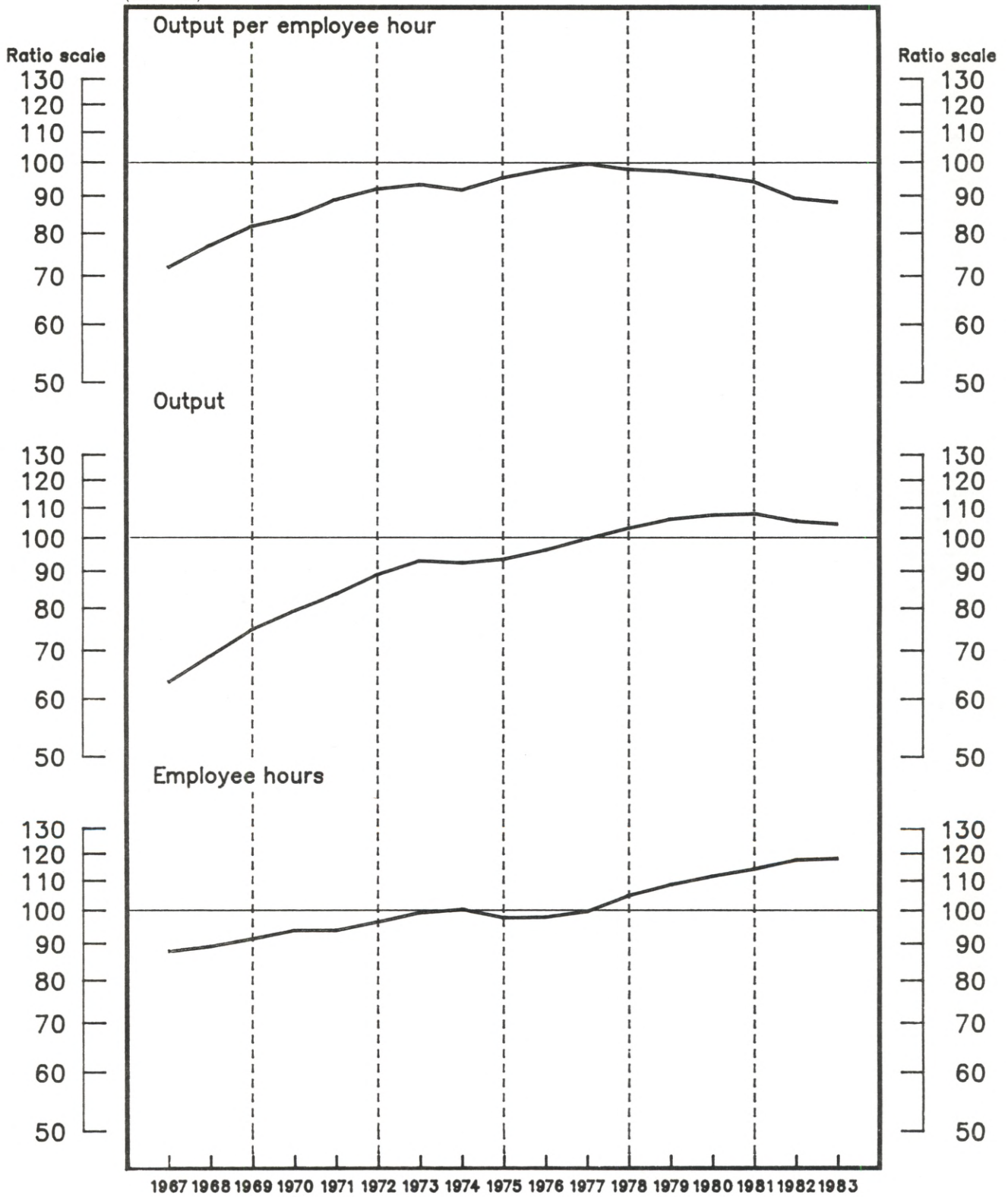
<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Federal Communications Commission, the American Telephone and Telegraph Company, and the GTE Corporation. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 119. Gas and electric utilities (SIC 491, 492, 493): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 229. Gas and electric utilities (SIC 491, 492, 493): Indexes of output per employee hour and output per employee, 1954-83**  
(1977 = 100)

Year	Output per hour <sup>1</sup>		Output per employee <sup>1</sup>	
	All employees	Production workers <sup>2</sup>	All employees	Production workers <sup>2</sup>
Index:				
1954 .....	30.6	27.5	30.7	27.6
1955 .....	34.0	30.8	34.2	30.9
1956 .....	36.9	33.6	37.0	33.7
1957 .....	38.7	35.4	38.5	35.3
1958 .....	40.6	37.4	40.2	36.9
1959 .....	44.3	41.0	44.1	40.7
1960 .....	47.2	43.9	46.9	43.6
1961 .....	50.0	46.6	49.5	46.2
1962 .....	54.0	50.5	53.8	50.3
1963 .....	57.4	54.1	57.3	53.9
1964 .....	61.6	58.3	61.6	58.1
1965 .....	64.3	60.8	64.5	61.0
1966 .....	69.0	65.5	69.5	65.9
1967 .....	72.0	68.7	72.5	69.1
1968 .....	77.2	73.6	77.6	74.0
1969 .....	82.0	78.6	82.7	79.2
1970 .....	84.6	81.1	85.2	81.7
1971 .....	89.2	85.9	89.4	86.1
1972 .....	92.3	89.2	92.9	89.8
1973 .....	93.6	91.0	94.8	92.2
1974 .....	92.0	91.1	92.5	90.5
1975 .....	95.7	94.3	95.3	93.9
1976 .....	98.2	97.4	98.1	97.2
1977 .....	100.0	100.0	100.0	100.0
1978 .....	98.2	99.3	99.4	100.5
1979 .....	97.6	98.7	98.8	99.9
1980 .....	96.2	97.3	97.5	98.5
1981 .....	94.4	95.5	94.9	95.9
1982 .....	89.5	91.3	90.1	92.0
1983 <sup>3</sup> .....	88.4	91.2	88.8	91.7
Average annual percent change:				
1947-83 .....	5.0	5.5	5.0	5.5
1978-83 .....	-2.3	-1.9	-2.4	-2.1

<sup>1</sup> The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.

<sup>2</sup> Represents nonsupervisory workers.

<sup>3</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures

in this table may differ from those previously published.

SOURCE: Output based on data from the American Gas Association; Rural Electrification Administration, U.S. Department of Agriculture; Federal Energy Regulatory Commission, U.S. Department of Energy; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

**Table 230. Gas and electric utilities (SIC 491, 492, 493): Indexes of output, employee hours, and employees, 1954-83**  
(1977 = 100)

Year	Output	Employee hours		Employees	
		All employees	Production workers <sup>1</sup>	All employees	Production workers <sup>1</sup>
Index:					
1954 .....	25.0	81.8	90.8	81.5	90.6
1955 .....	28.1	82.6	91.1	82.2	90.8
1956 .....	30.9	83.8	92.1	83.6	91.7
1957 .....	32.8	84.8	92.7	85.1	93.0
1958 .....	34.2	84.2	91.5	85.1	92.6
1959 .....	37.5	84.6	91.5	85.1	92.1
1960 .....	40.0	84.7	91.2	85.2	91.8
1961 .....	42.0	84.0	90.1	84.8	91.0
1962 .....	45.2	83.7	89.5	84.0	89.8
1963 .....	48.1	83.8	88.9	83.9	89.2
1964 .....	51.9	84.2	89.0	84.3	89.3
1965 .....	55.0	85.6	90.5	85.3	90.2
1966 .....	59.7	86.5	91.1	85.9	90.6
1967 .....	63.4	88.0	92.3	87.5	91.7
1968 .....	69.0	89.4	93.8	88.9	93.3
1969 .....	75.1	91.6	95.5	90.8	94.8
1970 .....	79.6	94.1	98.2	93.4	97.4
1971 .....	83.9	94.1	97.7	93.8	97.4
1972 .....	89.3	96.7	100.1	96.1	99.4
1973 .....	93.2	99.6	102.4	98.3	101.1
1974 .....	92.6	100.6	101.7	100.1	102.3
1975 .....	93.7	97.9	99.4	98.3	99.8
1976 .....	96.4	98.2	99.0	98.3	99.2
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	103.4	105.3	104.1	104.0	102.9
1979 .....	106.4	109.0	107.8	107.7	106.5
1980 .....	107.8	112.0	110.8	110.6	109.4
1981 .....	108.2	114.6	113.3	114.0	112.8
1982 .....	105.6	118.0	115.6	117.2	114.8
1983 <sup>2</sup> .....	104.7	118.5	114.8	117.9	114.2
Average annual percent change:					
1947-83 .....	6.2	1.2	.7	1.2	.7
1978-83 .....	.1	2.5	2.1	2.6	2.2

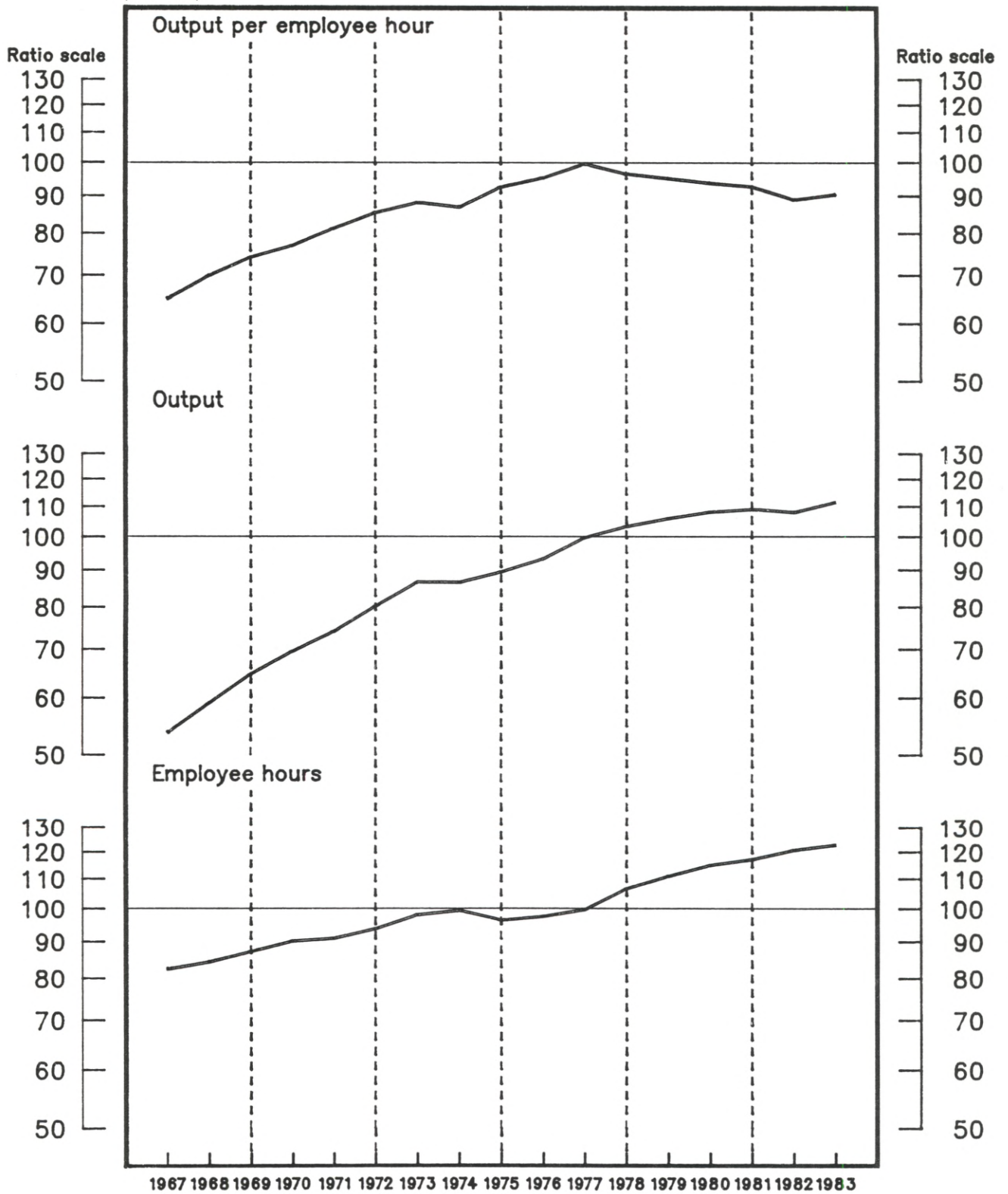
<sup>1</sup> Represents nonsupervisory workers.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the American Gas Association; Rural Electrification Administration, U.S. Department of Agriculture; Federal Energy Regulatory Commission, U.S. Department of Energy; and the Bureau of Labor Statistics. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 120. Electric utilities (SIC 491, 493 part): Output per hour and related data, 1967-83  
(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 231. Electric utilities (SIC 491, 493 part): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958 .....	34.7	34.4	27.4	78.9	79.7
1959 .....	38.7	38.4	30.3	78.3	78.9
1960 .....	41.3	41.0	32.4	78.5	79.0
1961 .....	44.1	43.6	34.2	77.6	78.4
1962 .....	47.6	47.3	36.8	77.3	77.8
1963 .....	51.0	50.8	39.5	77.4	77.7
1964 .....	54.9	54.7	42.8	77.9	78.3
1965 .....	57.9	58.1	46.1	79.6	79.4
1966 .....	62.5	62.8	50.4	80.7	80.2
1967 .....	65.1	65.4	53.8	82.6	82.3
1968 .....	70.1	70.4	59.2	84.5	84.1
1969 .....	74.3	75.0	64.9	87.4	86.5
1970 .....	77.1	77.6	69.7	90.4	89.8
1971 .....	81.4	81.7	74.2	91.2	90.8
1972 .....	85.6	86.3	80.5	94.0	93.3
1973 .....	88.4	90.1	86.9	98.3	96.5
1974 .....	87.1	87.9	86.8	99.7	98.8
1975 .....	92.9	92.1	89.7	96.6	97.4
1976 .....	95.6	95.4	93.5	97.8	98.0
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	96.8	98.6	103.6	107.0	105.1
1979 .....	95.4	97.0	106.2	111.3	109.5
1980 .....	94.0	95.6	108.4	115.3	113.4
1981 .....	93.0	93.5	109.3	117.5	116.9
1982 .....	89.3	90.1	108.2	121.1	120.1
1983 <sup>1</sup> .....	90.8	91.3	111.8	123.1	122.4
Average annual percent change:					
1958-83 .....	4.1	4.1	6.1	2.0	1.9
1978-83 .....	-1.5	-1.8	1.3	2.8	3.1

<sup>1</sup> Preliminary.

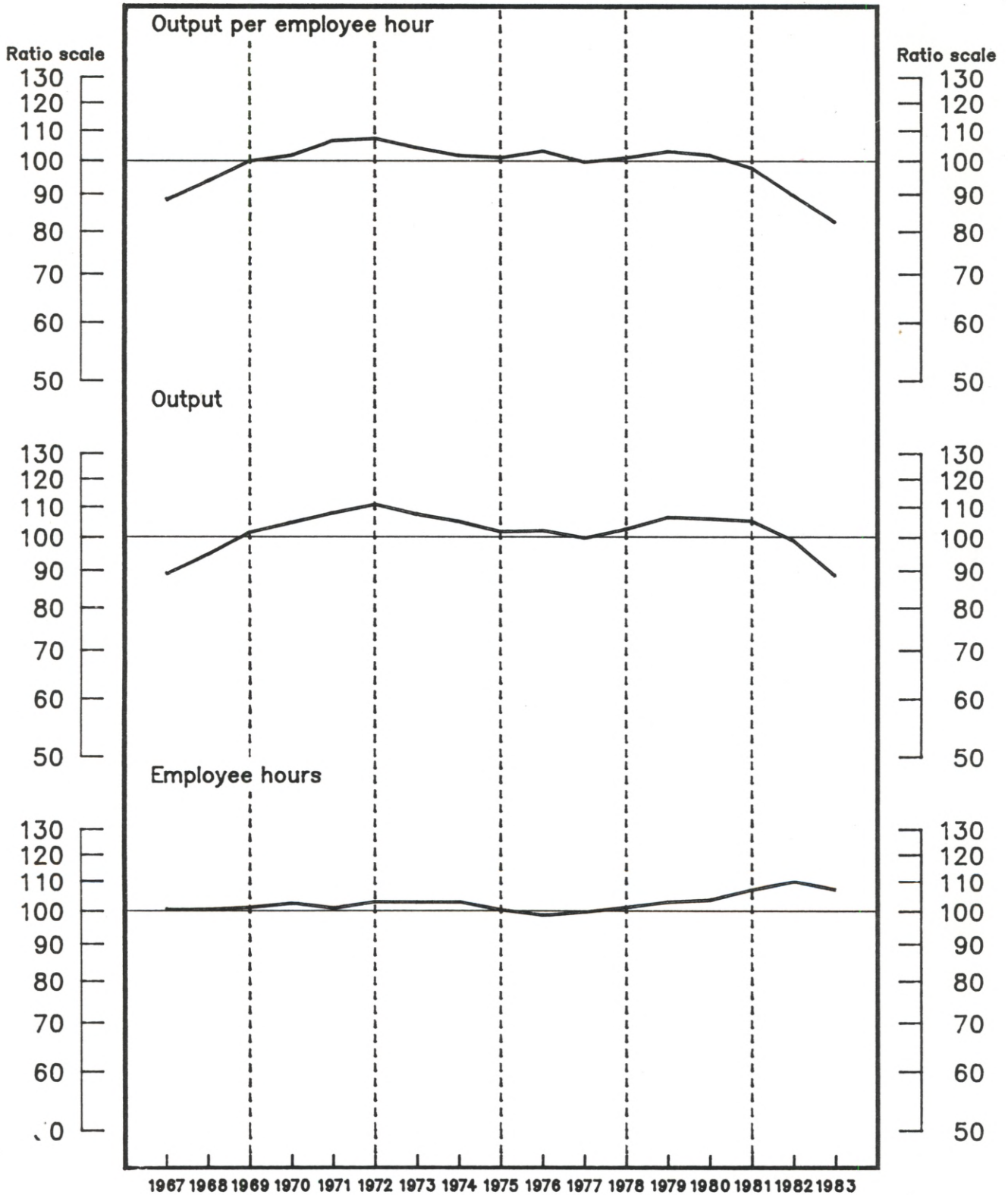
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Rural Electrification Administration, U.S.

Department of Agriculture; and the Federal Energy Regulatory Commission, U.S. Department of Energy. Employment and hours based on data from the Bureau of Labor Statistics.



Chart 121. Gas utilities (SIC 492, 493 part): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 232. Gas utilities (SIC 492, 493 part): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-83**  
(1977 = 100)

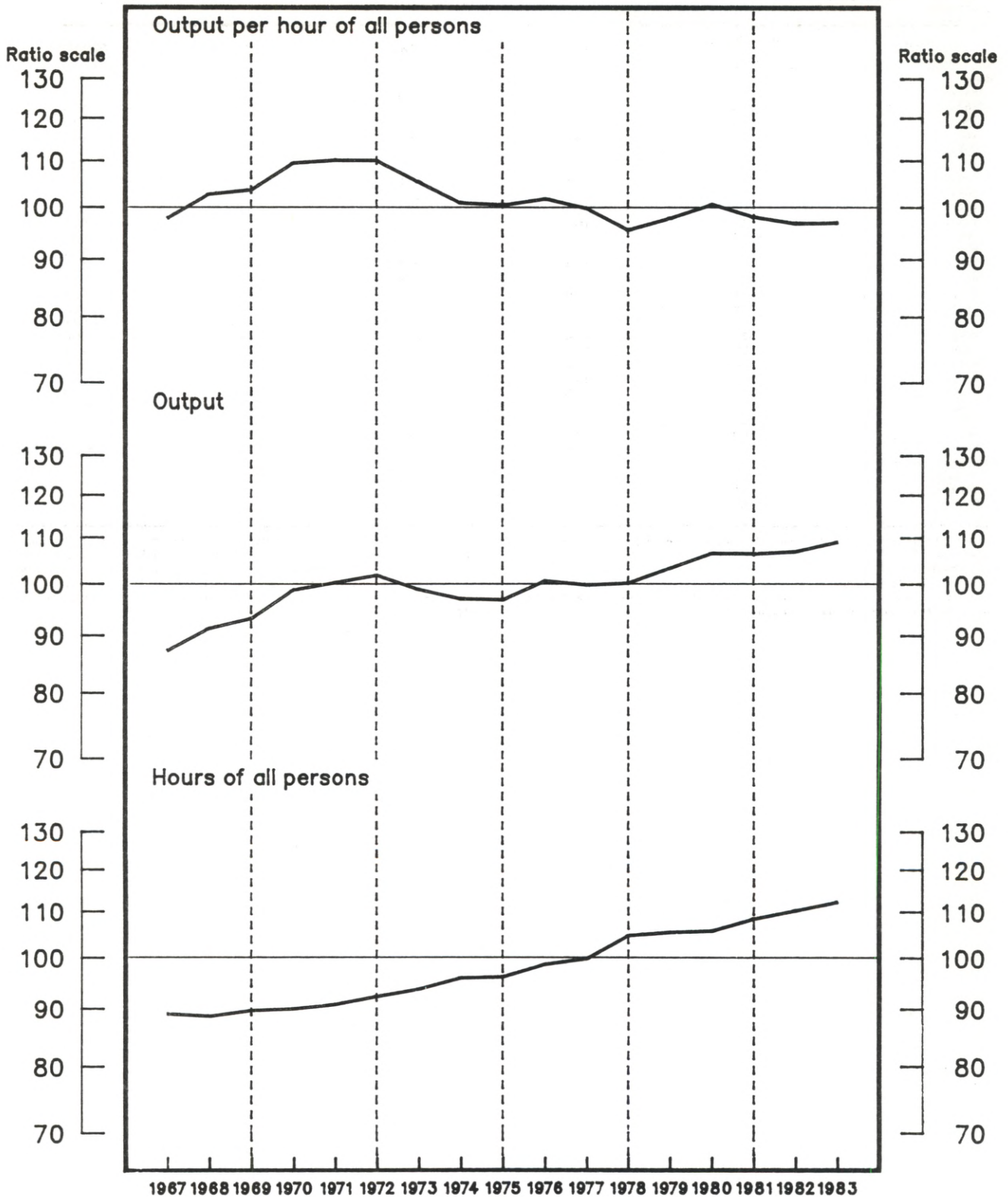
Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958 .....	55.7	55.1	54.1	97.2	98.1
1959 .....	58.4	58.3	58.3	99.9	100.0
1960 .....	62.3	62.0	62.2	99.8	100.3
1961 .....	64.6	64.4	64.5	99.9	100.2
1962 .....	69.6	69.6	69.0	99.2	99.2
1963 .....	72.6	72.9	72.2	99.5	99.1
1964 .....	77.7	78.0	77.3	99.5	99.1
1965 .....	79.6	80.3	80.1	100.6	99.7
1966 .....	84.5	85.3	85.2	100.8	99.9
1967 .....	88.6	89.2	89.2	100.7	100.0
1968 .....	94.1	94.6	94.9	100.9	100.3
1969 .....	100.3	100.6	101.8	101.5	101.2
1970 .....	102.1	102.9	105.0	102.8	102.0
1971 .....	106.9	106.9	108.2	101.2	101.2
1972 .....	107.6	108.2	111.1	103.3	102.7
1973 .....	104.5	105.0	107.7	103.1	102.6
1974 .....	102.0	102.1	105.3	103.2	103.1
1975 .....	101.4	101.4	102.0	100.6	100.6
1976 .....	103.5	103.1	102.4	98.9	99.3
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	101.4	101.5	102.9	101.5	101.4
1979 .....	103.4	103.4	106.8	103.3	103.3
1980 .....	102.1	102.1	106.2	104.0	104.0
1981 .....	98.1	98.4	105.5	107.5	107.2
1982 .....	89.9	90.2	99.2	110.3	110.0
1983 <sup>1</sup> .....	82.6	82.8	88.8	107.5	107.2
Average annual percent change:					
1958-83 .....	2.0	2.1	2.3	.3	.3
1978-83 .....	-4.2	-4.1	-2.7	1.5	1.4

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the American Gas Association. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 122. Retail food stores (SIC 54): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 233. Retail food stores (SIC 54): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1958-83**  
(1977=100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958 .....	73.8	88.7	68.5	92.8	77.2
1959 .....	76.9	92.3	71.6	93.1	77.6
1960 .....	79.3	93.8	73.5	92.7	78.4
1961 .....	82.4	96.4	75.3	91.4	78.1
1962 .....	83.5	97.6	76.9	92.1	78.8
1963 .....	87.6	100.5	77.5	88.5	77.1
1964 .....	89.5	102.8	81.3	90.8	79.1
1965 .....	91.9	103.7	84.3	91.7	81.3
1966 .....	94.4	104.0	85.7	90.8	82.4
1967 .....	98.0	106.1	87.4	89.2	82.4
1968 .....	103.0	109.3	91.5	88.8	83.7
1969 .....	103.9	108.5	93.4	89.9	86.1
1970 .....	109.8	113.7	99.0	90.2	87.1
1971 .....	110.4	113.9	100.5	91.0	88.2
1972 .....	110.3	113.5	102.0	92.5	89.9
1973 .....	105.5	108.5	99.1	93.9	91.3
1974 .....	101.1	102.5	97.2	96.1	94.8
1975 .....	100.7	100.4	97.0	96.3	96.6
1976 .....	102.0	103.0	100.8	98.8	97.9
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	95.7	95.2	100.4	104.9	105.5
1979 .....	98.0	95.9	103.5	105.6	107.9
1980 .....	100.8	96.2	106.7	105.9	110.9
1981 .....	98.2	93.4	106.6	108.6	114.1
1982 <sup>2</sup> .....	96.9	92.1	107.1	110.5	116.3
1983 <sup>2</sup> .....	97.1	91.8	109.2	112.5	118.9
Average annual percent change:					
1958-83 .....	1.0	( <sup>3</sup> )	1.8	.8	1.8
1978-83 .....	( <sup>3</sup> )	-9	1.5	1.5	2.5

<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

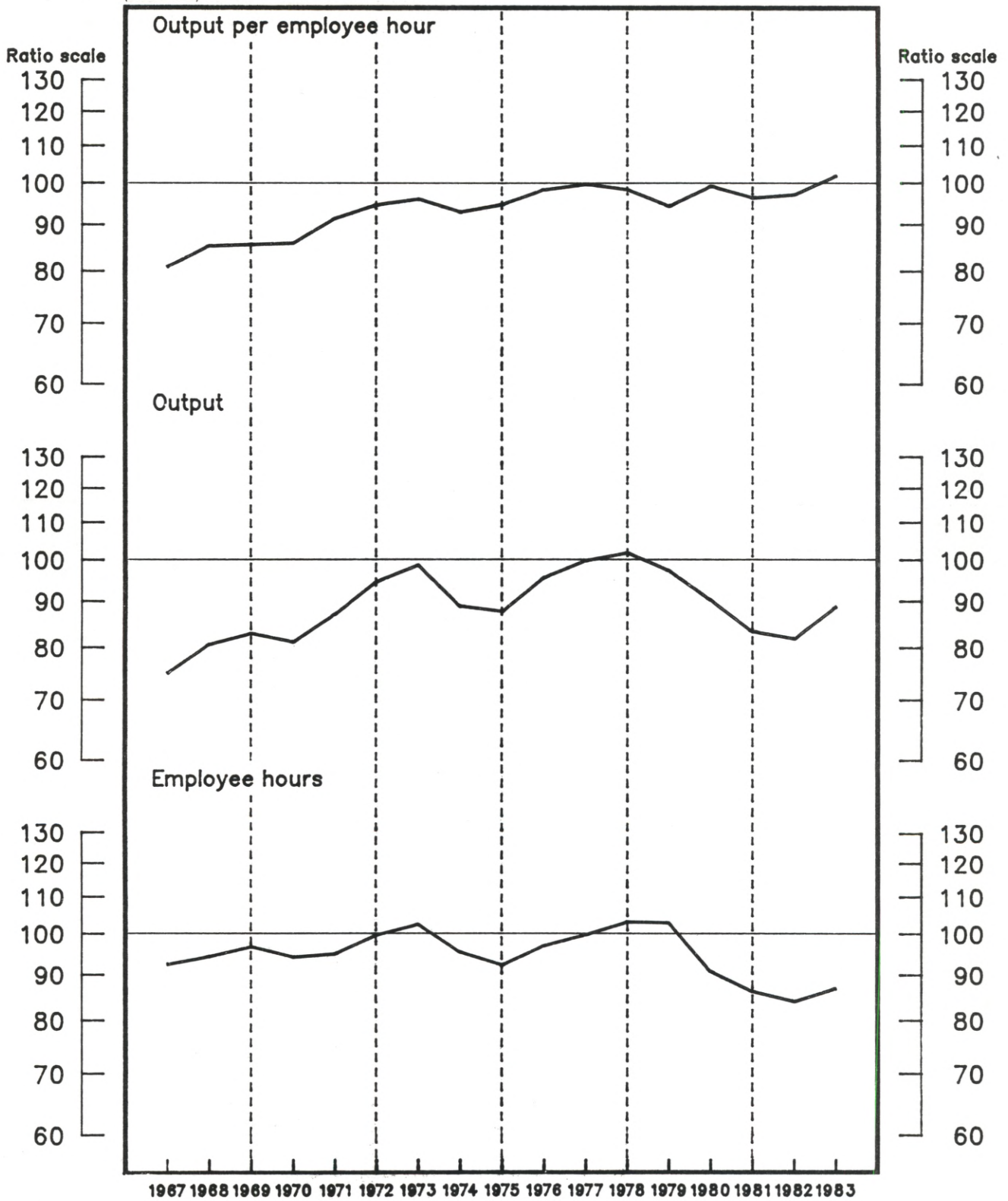
<sup>2</sup> Preliminary.

<sup>3</sup> Less than .05 percent.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Economic Analysis, U.S. Department of Commerce; the Bureau of Labor Statistics; and the Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 123. Franchised new car dealers (SIC 5511): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 234. Franchised new car dealers (SIC 5511): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-83**  
(1977 = 100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958 .....	62.3	70.6	52.4	84.1	74.2
1959 .....	70.6	80.7	61.2	86.7	75.8
1960 .....	71.5	81.4	62.9	88.0	77.3
1961 .....	68.1	76.8	56.1	82.4	73.0
1962 .....	73.0	81.8	61.2	83.8	74.8
1963 .....	74.4	83.5	65.2	87.6	78.1
1964 .....	73.8	83.3	67.4	91.3	80.9
1965 .....	79.2	88.8	75.2	95.0	84.7
1966 .....	79.9	88.0	76.1	95.2	86.5
1967 .....	81.0	87.4	75.0	92.6	85.8
1968 .....	85.5	91.0	80.8	94.5	88.8
1969 .....	85.8	90.2	83.1	96.9	92.1
1970 .....	86.1	89.7	81.3	94.4	90.6
1971 .....	91.7	95.2	87.3	95.2	91.7
1972 .....	94.9	98.0	94.8	99.9	96.7
1973 .....	96.3	98.8	98.9	102.7	100.1
1974 .....	93.2	94.9	89.1	95.6	93.9
1975 .....	95.0	96.5	87.9	92.5	91.1
1976 .....	98.6	99.8	95.8	97.2	96.0
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	98.6	97.4	102.0	103.4	104.7
1979 .....	94.6	93.6	97.5	103.1	104.2
1980 .....	99.5	97.4	90.5	91.0	92.9
1981 .....	96.6	94.7	83.5	86.4	88.2
1982 .....	97.4	94.7	82.0	84.2	86.6
1983 <sup>1</sup> .....	102.2	99.0	89.0	87.1	89.9
Average annual percent change:					
1958-83 .....	1.8	1.0	2.1	.3	1.1
1978-83 .....	.7	.3	-3.6	-4.2	-3.8

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

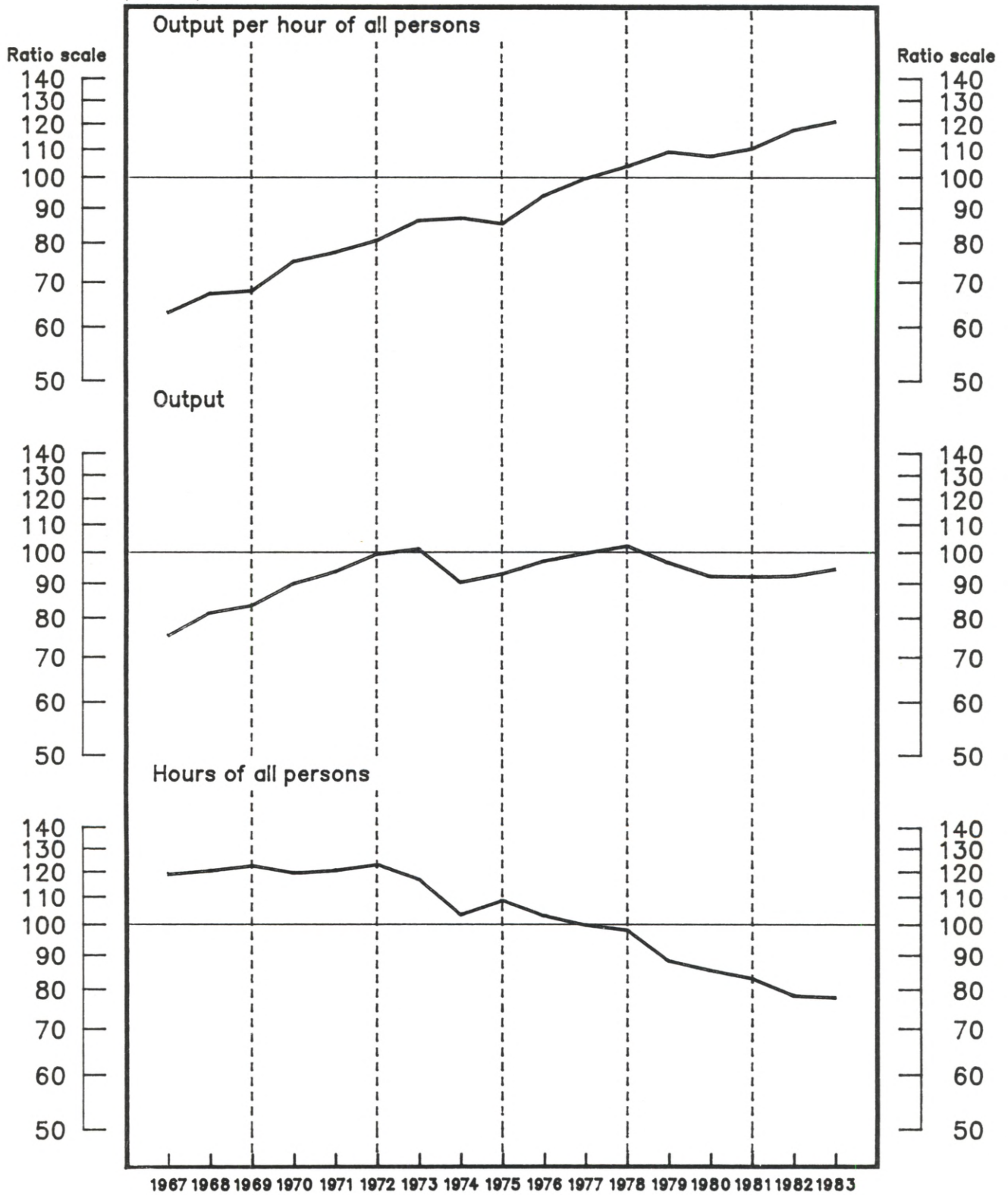
SOURCE: Output based on data from the Bureau of the Census, the Bureau of

Labor Statistics, the National Automobile Dealers Association, and Ward's Communications, Inc. (Ward's Automotive Yearbooks). Employment and hours based on data from the Bureau of Labor Statistics.



Chart 124. Gasoline service stations (SIC 5541): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 235. Gasoline service stations (SIC 5541): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1958-83**  
(1977 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958 .....	48.9	59.9	53.7	109.8	89.6
1959 .....	50.7	61.9	55.8	110.0	90.2
1960 .....	51.9	63.2	58.0	111.7	91.7
1961 .....	53.5	65.1	60.5	113.1	92.9
1962 .....	53.7	64.9	60.2	112.2	92.8
1963 .....	56.3	67.8	64.4	114.3	95.0
1964 .....	57.2	69.2	66.8	116.8	96.6
1965 .....	59.2	70.8	70.4	119.0	99.5
1966 .....	62.0	73.0	74.2	119.7	101.6
1967 .....	63.2	73.3	75.4	119.3	102.8
1968 .....	67.5	77.1	81.6	120.8	105.9
1969 .....	68.2	76.7	83.7	122.8	109.1
1970 .....	75.3	82.9	90.2	119.8	108.8
1971 .....	77.7	85.8	93.9	120.9	109.4
1972 .....	80.9	88.9	99.7	123.3	112.1
1973 .....	86.6	91.9	101.5	117.2	110.5
1974 .....	87.3	91.2	90.6	103.8	99.3
1975 .....	85.6	90.0	93.2	108.9	103.5
1976 .....	94.3	95.7	97.4	103.3	101.8
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	104.3	103.6	102.5	98.3	98.9
1979 .....	109.5	106.5	96.8	88.4	90.9
1980 .....	107.9	105.4	92.4	85.6	87.7
1981 .....	110.8	108.1	92.3	83.3	85.4
1982 <sup>2</sup> .....	118.0	113.6	92.6	78.5	81.5
1983 <sup>2</sup> .....	121.5	116.3	94.8	78.0	81.5
Average annual percent change:					
1958-83 .....	3.9	2.7	2.5	-1.3	-2
1978-83 .....	2.9	2.3	-1.5	-4.3	-3.7

<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

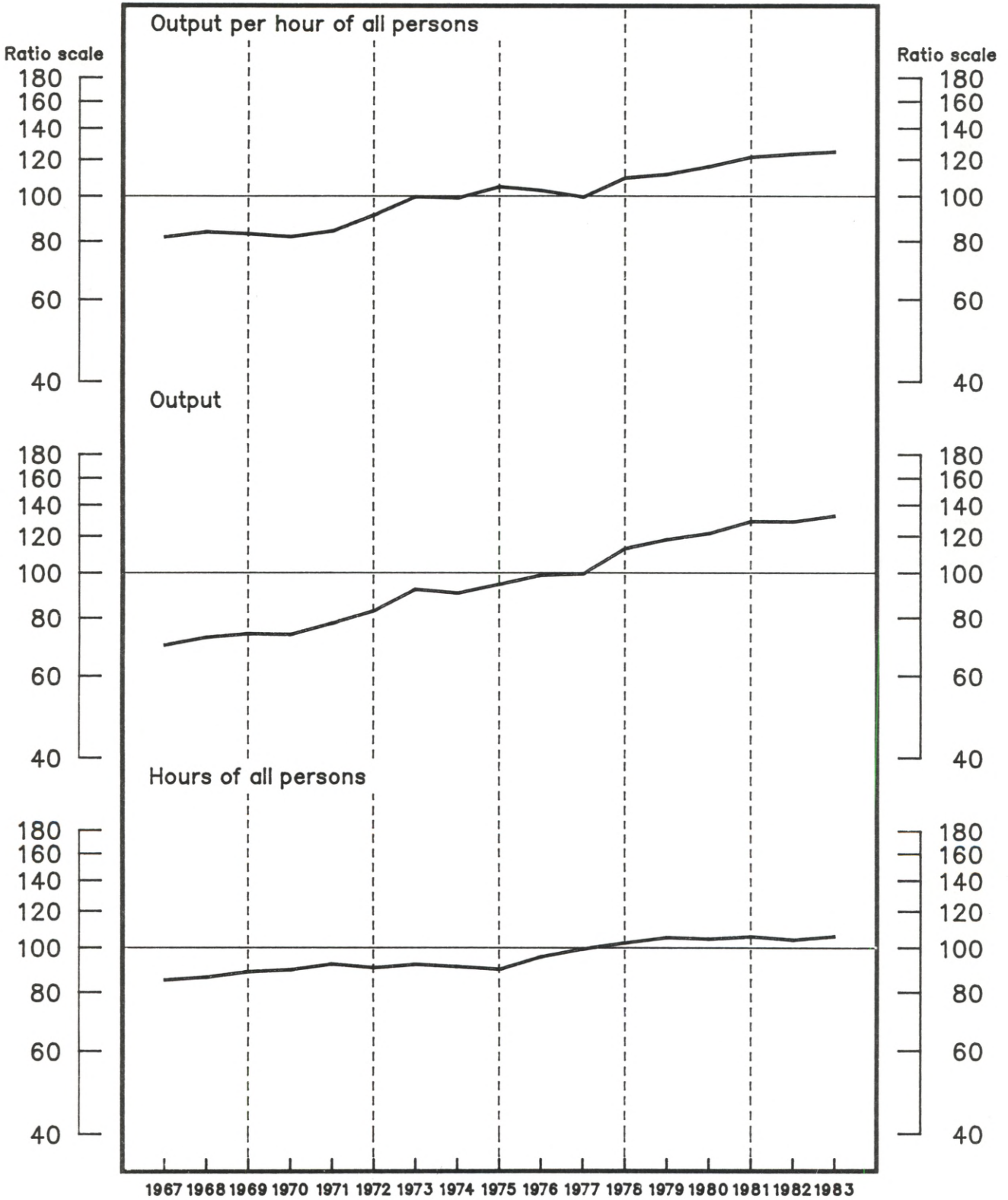
<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 125. Apparel and accessory stores (SIC 56): Output per hour and related data, 1967-83

(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 236. Apparel and accessory stores (SIC 56): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1967-83**  
(1977 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1967 .....	82.1	87.7	70.2	85.5	80.0
1968 .....	84.2	88.0	73.0	86.7	83.0
1969 .....	83.4	86.9	74.3	89.1	85.5
1970 .....	82.2	85.9	74.0	90.0	86.1
1971 .....	84.6	88.1	78.3	92.6	88.9
1972 .....	91.5	93.2	83.2	90.9	89.3
1973 .....	100.2	101.9	92.6	92.4	90.9
1974 .....	99.5	100.6	90.9	91.4	90.4
1975 .....	105.3	106.1	95.0	90.2	89.5
1976 .....	103.3	104.1	99.3	96.1	95.4
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	110.0	109.1	113.4	103.1	103.9
1979 .....	112.0	110.0	118.6	105.9	107.8
1980 .....	116.4	113.1	122.3	105.1	108.1
1981 .....	122.0	118.4	129.8	106.4	109.6
1982 <sup>2</sup> .....	123.8	119.9	129.6	104.7	108.1
1983 <sup>2</sup> .....	125.2	120.6	133.5	106.6	110.7
Average annual percent change:					
1967-83 .....	2.9	2.3	4.5	1.5	2.1
1978-83 .....	2.9	2.3	3.3	.4	1.0

<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

<sup>2</sup> Preliminary.

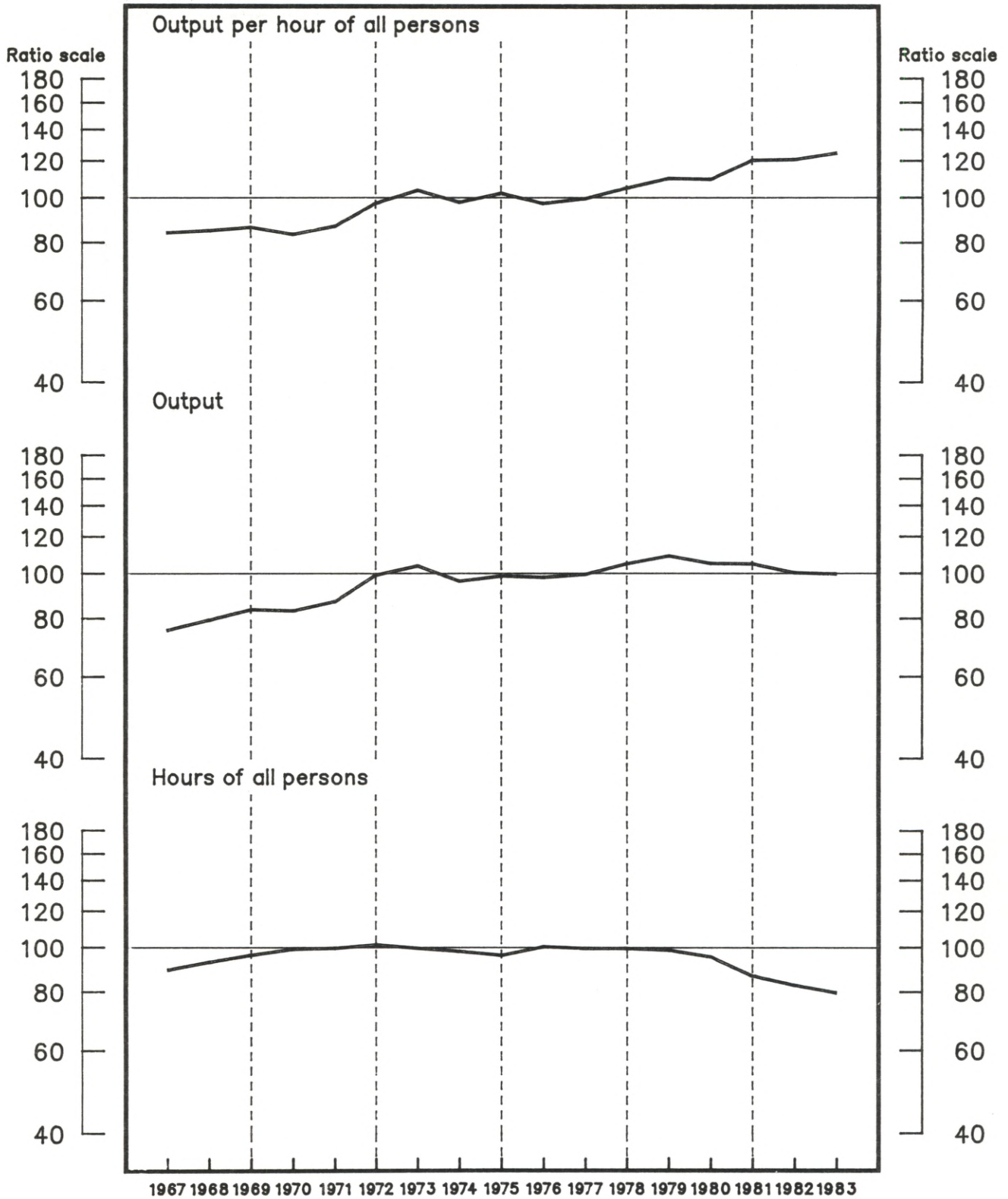
NOTE: Because of periodic revisions in source data, the measures in this table

may differ from those previously published.

SOURCE: Output, persons, and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 126. Men's and boys' clothing stores (SIC 5611): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 237. Men's and boys' clothing stores (SIC 5611): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1967-83**  
(1977 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1967 .....	84.5	88.4	75.9	89.8	85.9
1968 .....	85.4	88.5	79.8	93.4	90.2
1969 .....	86.8	89.3	84.0	96.8	94.1
1970 .....	83.8	85.8	83.5	99.7	97.3
1971 .....	87.2	88.6	87.4	100.2	98.7
1972 .....	97.8	99.5	99.7	101.9	100.2
1973 .....	104.2	105.6	104.3	100.1	98.8
1974 .....	98.2	98.6	96.7	98.5	98.1
1975 .....	102.7	103.8	99.2	96.6	95.6
1976 .....	97.6	98.0	98.5	100.9	100.5
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	105.4	104.7	105.4	100.0	100.7
1979 .....	110.5	109.4	109.6	99.2	100.2
1980 .....	110.0	109.2	105.5	95.9	96.6
1981 .....	120.9	117.9	105.3	87.1	89.3
1982 <sup>2</sup> .....	121.3	117.5	100.8	83.1	85.8
1983 <sup>2</sup> .....	125.2	120.1	100.2	80.0	83.4
Average annual percent change:					
1967-83 .....	2.5	2.0	1.8	-6	-2
1978-83 .....	3.6	2.8	-1.4	-4.9	-4.2

<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

<sup>2</sup> Preliminary.

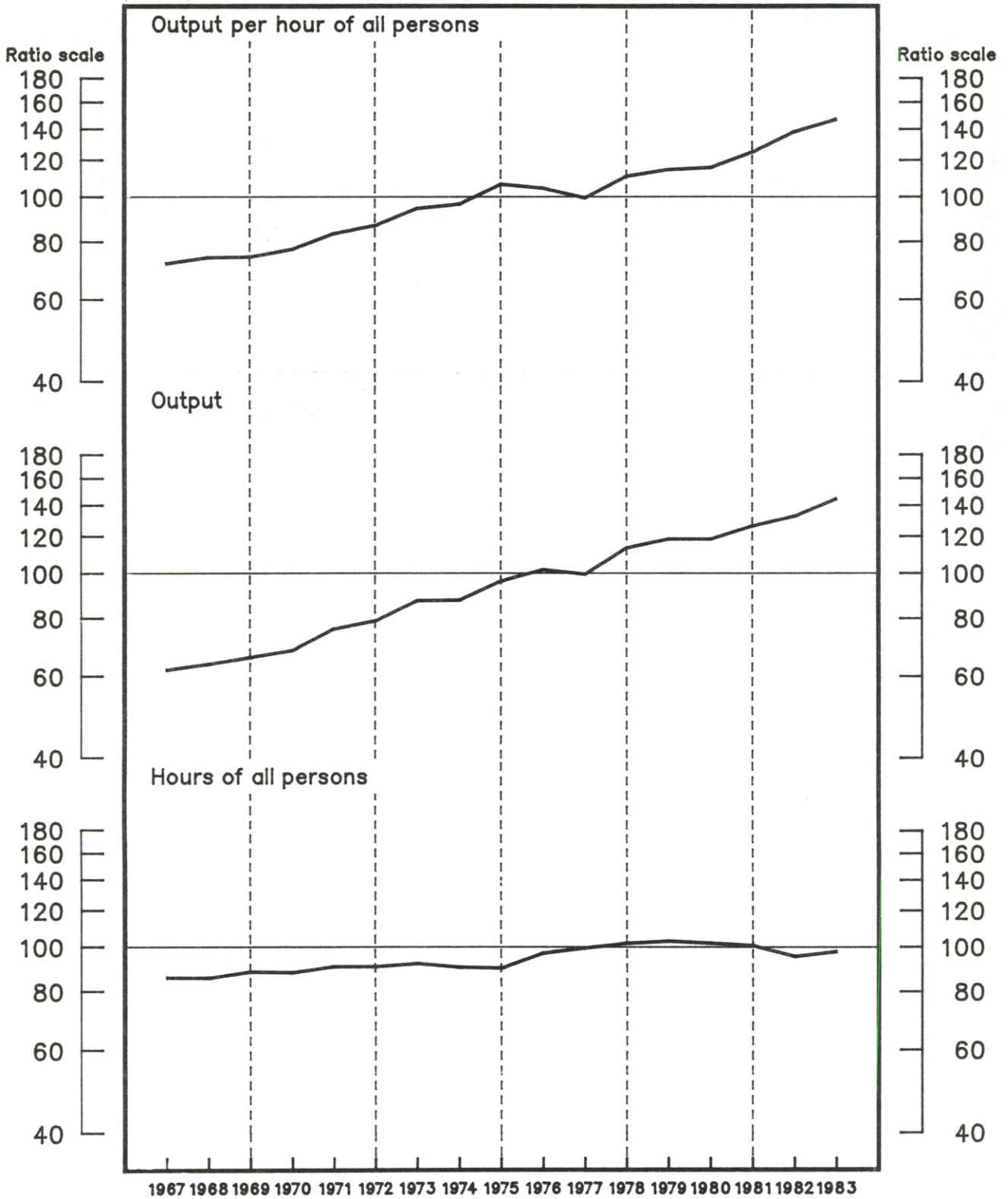
NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.



Chart 127. Women's ready-to-wear stores (SIC 5621): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 238. Women's ready-to-wear stores (SIC 5621): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1967-83**  
(1977=100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1967 .....	72.2	78.9	62.2	86.1	78.8
1968 .....	74.4	78.8	64.0	86.0	81.2
1969 .....	74.6	79.0	66.2	88.7	83.8
1970 .....	77.5	81.3	68.5	88.4	84.3
1971 .....	83.8	87.3	76.3	91.1	87.4
1972 .....	87.2	89.5	79.4	91.1	88.7
1973 .....	94.9	96.8	87.8	92.5	90.7
1974 .....	96.9	97.9	88.0	90.8	89.9
1975 .....	107.0	107.9	96.7	90.4	89.6
1976 .....	104.9	106.3	102.3	97.5	96.2
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	111.3	109.5	114.0	102.4	104.1
1979 .....	115.0	111.6	119.0	103.5	106.6
1980 .....	116.2	111.6	119.0	102.4	106.6
1981 .....	125.5	120.2	127.0	101.2	105.7
1982 <sup>2</sup> .....	139.0	132.2	133.3	95.9	100.8
1983 <sup>2</sup> .....	147.8	141.8	145.3	98.3	102.5
Average annual percent change:					
1967-83 .....	4.4	3.5	5.5	1.1	1.9
1978-83 .....	6.1	5.5	4.7	-1.3	-7

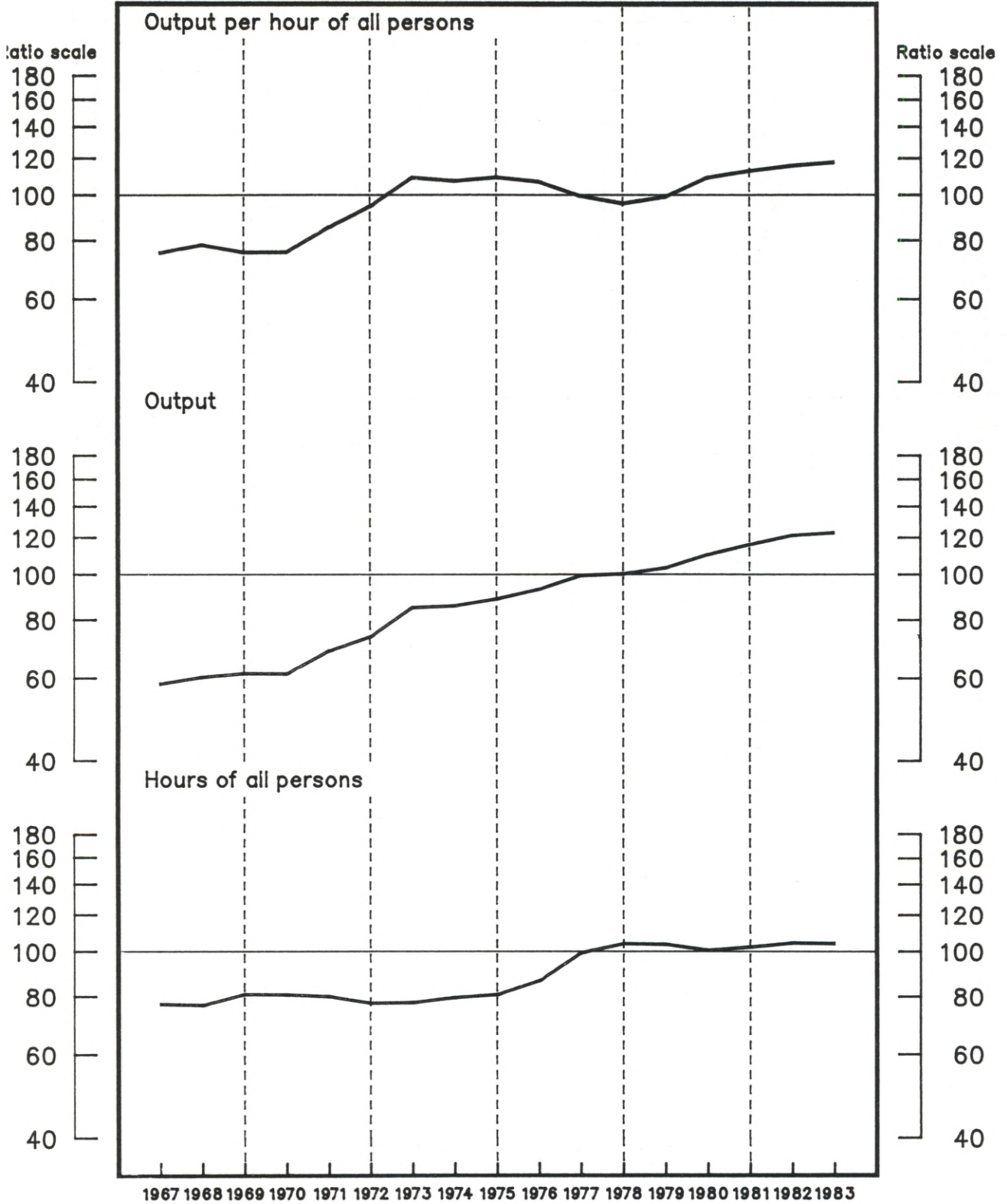
<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 128. Family clothing stores (SIC 5651): Output per hour and related data, 1967-83  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor



**Table 239. Family clothing stores (SIC 5651): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1967-83 (1977=100)**

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1967 .....	75.7	81.3	58.6	77.4	72.1
1968 .....	78.7	83.6	60.6	77.0	72.5
1969 .....	75.9	81.9	61.7	81.3	75.3
1970 .....	76.0	82.6	61.6	81.1	74.6
1971 .....	85.8	90.4	69.0	80.4	76.3
1972 .....	95.1	96.9	74.0	77.8	76.4
1973 .....	109.6	109.8	85.5	78.0	77.9
1974 .....	107.7	107.7	86.2	80.0	80.0
1975 .....	109.7	109.5	89.1	81.2	81.4
1976 .....	107.4	106.6	93.4	87.0	87.6
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	96.4	96.3	100.8	104.6	104.7
1979 .....	99.6	96.6	103.8	104.2	107.5
1980 .....	109.6	103.4	110.9	101.2	107.3
1981 .....	113.3	107.9	116.6	102.9	108.1
1982 <sup>2</sup> .....	116.2	111.7	122.0	105.0	109.2
1983 <sup>2</sup> .....	118.1	111.8	123.7	104.7	110.6
Average annual percent change:					
1967-83 .....	2.7	1.8	5.2	2.4	3.3
1978-83 .....	4.4	3.6	4.6	.1	.9

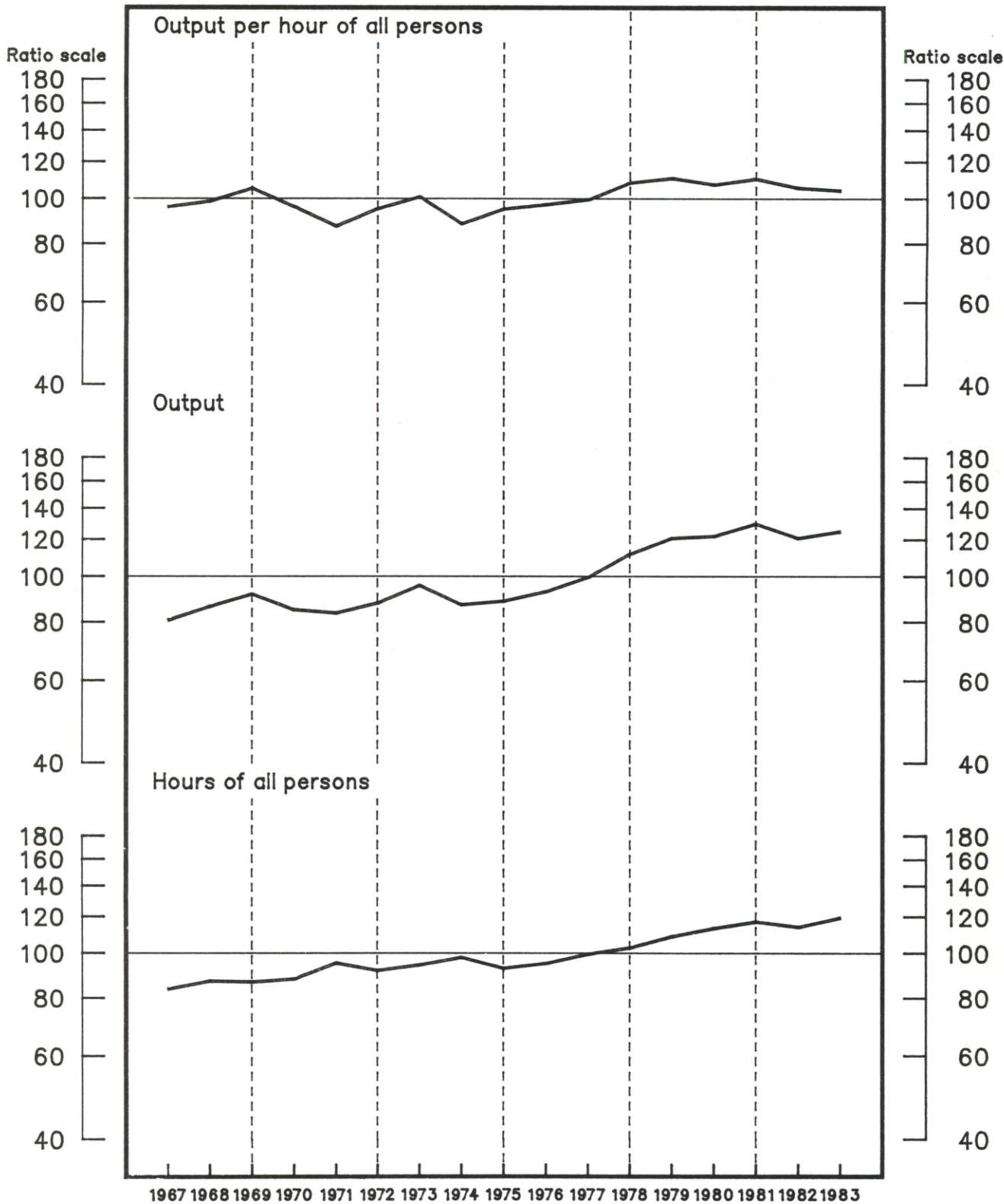
<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 129. Shoe stores (SIC 5661): Output per hour and related data, 1967-83  
(1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 240. Shoe stores (SIC 5661): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1967-83**  
(1977 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1967 .....	96.4	101.1	81.1	84.1	80.2
1968 .....	99.1	101.4	86.7	87.5	85.5
1969 .....	105.7	105.3	92.1	87.1	87.5
1970 .....	96.5	98.6	85.3	88.4	86.5
1971 .....	87.7	90.3	83.9	95.7	92.9
1972 .....	95.6	95.4	88.1	92.2	92.3
1973 .....	101.4	102.5	96.1	94.8	93.8
1974 .....	88.8	90.6	87.4	98.4	96.5
1975 .....	95.5	95.3	89.0	93.2	93.4
1976 .....	97.6	97.6	93.2	95.5	95.5
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	108.7	108.1	112.3	103.3	103.9
1979 .....	111.2	109.9	121.5	109.3	110.6
1980 .....	107.7	106.1	122.7	113.9	115.7
1981 .....	110.8	108.8	130.4	117.7	119.8
1982 <sup>2</sup> .....	106.0	102.8	121.5	114.6	118.2
1983 <sup>2</sup> .....	104.6	101.5	125.6	120.1	123.7
Average annual percent change:					
1967-83 .....	.8	.5	3.0	2.2	2.5
1978-83 .....	-.9	-1.4	1.8	2.7	3.2

<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

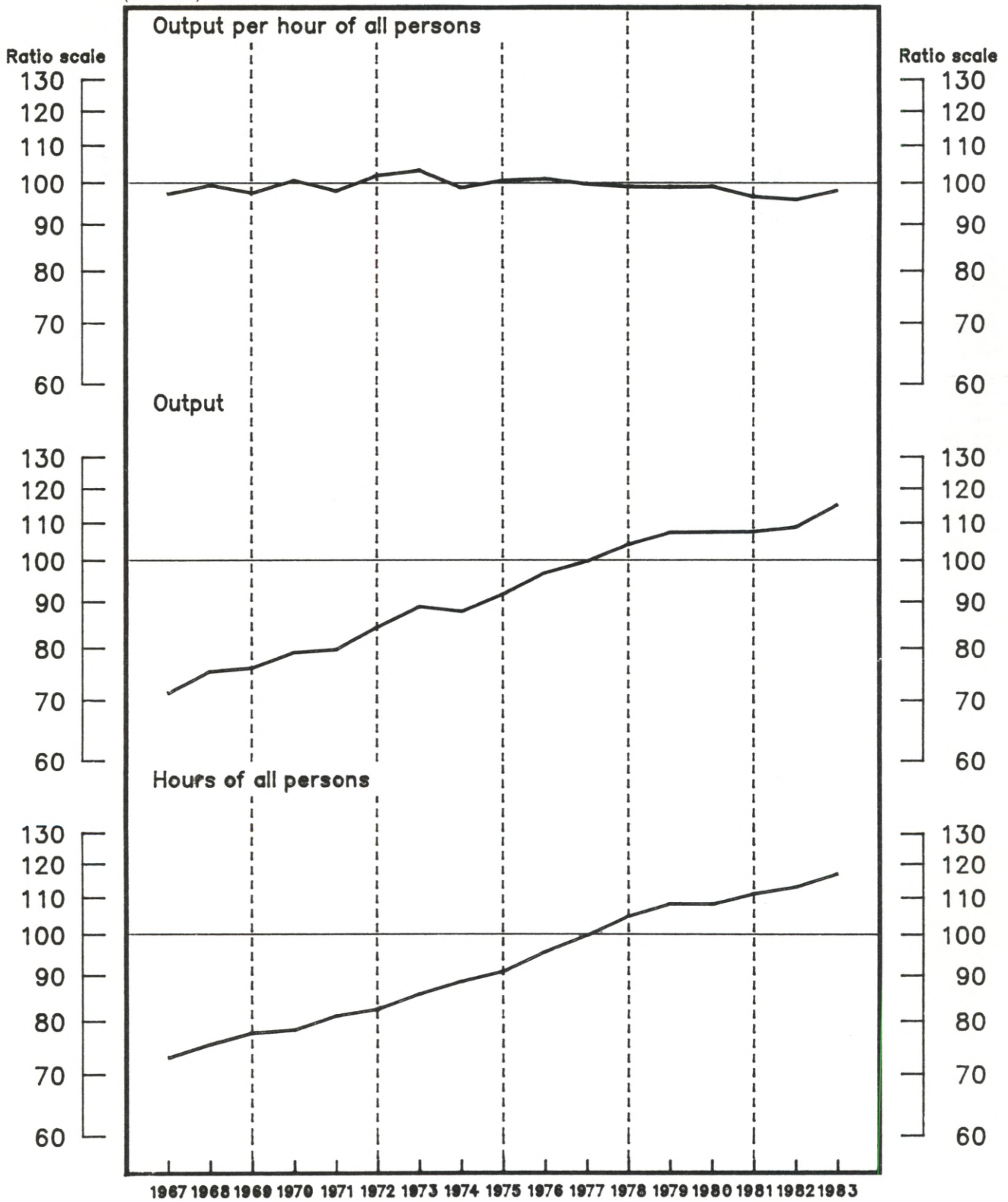
<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of Labor Statistics and the Bureau of the Census. Persons and hours based on data from the Bureau of Labor Statistics; the Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.



Chart 130. Eating and drinking places (SIC 58): Output per hour and related data, 1967-83  
 (1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor

**Table 241. Eating and drinking places (SIC 58): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1958-83**  
(1977 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958 .....	39.5	120.6	56.3	62.9	46.7
1959 .....	88.4	119.6	57.9	65.5	48.4
1960 .....	88.1	118.3	58.3	66.2	49.3
1961 .....	88.7	118.1	58.2	65.6	49.3
1962 .....	89.3	118.1	60.0	67.2	50.8
1963 .....	91.8	120.1	61.5	67.0	51.2
1964 .....	90.9	119.8	64.2	70.6	53.6
1965 .....	93.7	121.0	68.0	72.6	56.2
1966 .....	94.6	118.4	70.2	74.2	59.3
1967 .....	97.5	118.6	71.4	73.2	60.2
1968 .....	99.7	119.5	75.5	75.7	63.2
1969 .....	97.8	114.1	76.2	77.9	66.8
1970 .....	101.0	114.6	79.3	78.5	69.2
1971 .....	98.3	110.7	79.9	81.3	72.2
1972 .....	102.3	112.2	84.6	82.7	75.4
1973 .....	103.6	111.7	89.1	86.0	79.8
1974 .....	99.1	104.9	88.0	88.8	83.9
1975 .....	101.0	105.5	92.0	91.1	87.2
1976 .....	101.4	104.0	97.1	95.8	93.4
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	99.3	97.5	104.4	105.1	107.1
1979 .....	99.2	95.2	107.6	108.5	113.0
1980 .....	99.4	93.6	107.7	108.4	115.1
1981 .....	96.8	91.4	107.8	111.4	117.9
1982 <sup>2</sup> .....	96.1	91.0	109.0	113.4	119.8
1983 <sup>2</sup> .....	98.4	93.4	115.4	117.3	123.6
Average annual percent change:					
1958-83 .....	.5	-1.2	3.1	2.6	4.4
1978-83 .....	-.5	-1.1	1.6	2.0	2.7

<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

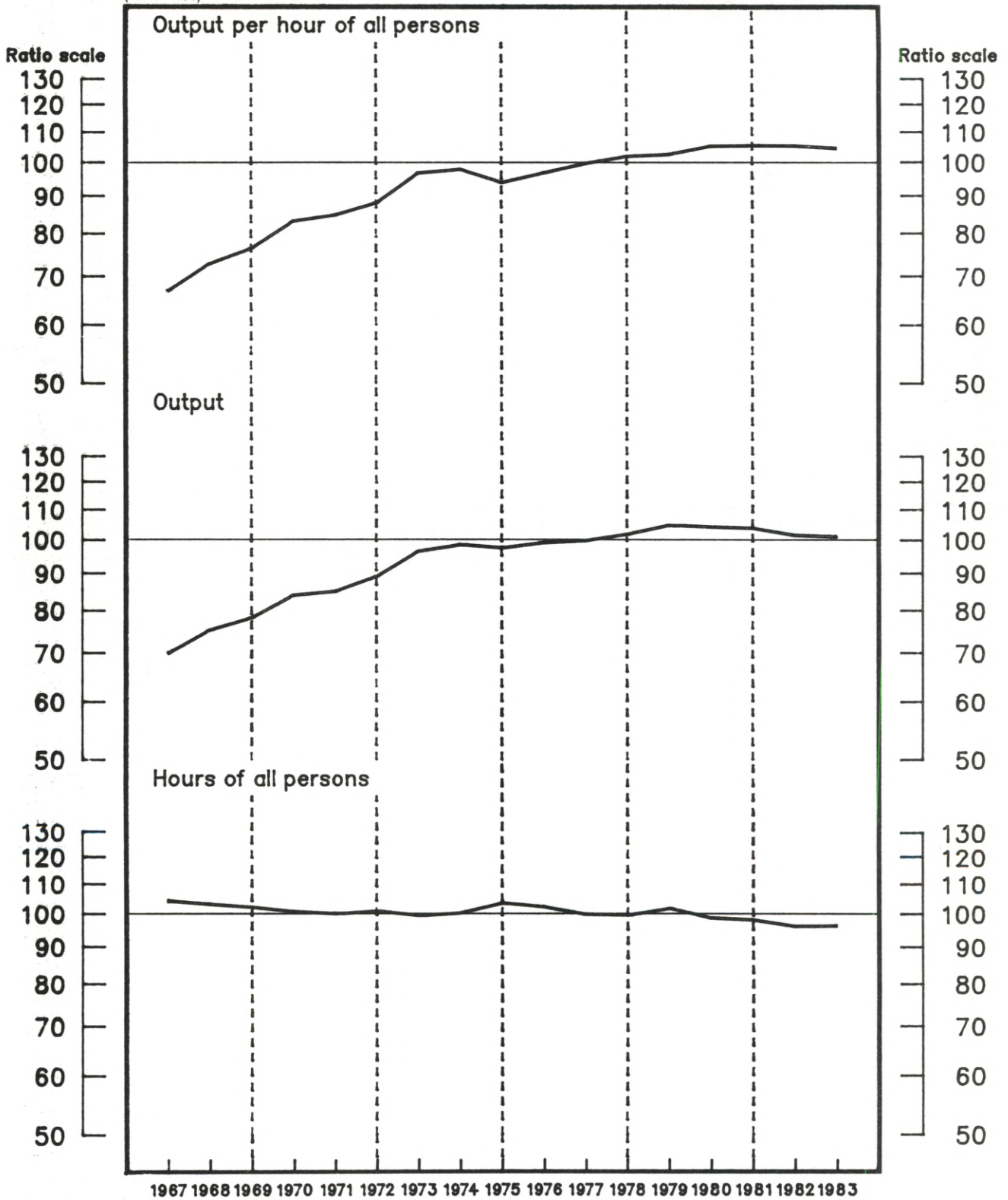
<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Economic Analysis, U.S. Department of Commerce; and the Bureau of Labor Statistics. Persons and hours based on data from the Bureau of Labor Statistics, Bureau of the Census, and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 131. Drug and proprietary stores (SIC 5912): Output per hour and related data, 1967-83

(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 242. Drug and proprietary stores (SIC 5912): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1958-83**  
(1977=100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958 .....	45.6	55.7	44.2	96.9	79.3
1959 .....	47.4	58.1	47.2	99.6	81.3
1960 .....	49.1	59.6	49.8	101.5	83.6
1961 .....	50.8	61.4	51.3	101.0	83.5
1962 .....	51.8	64.0	54.2	104.6	84.7
1963 .....	54.3	66.0	55.9	103.0	84.7
1964 .....	56.4	67.2	58.1	103.1	86.4
1965 .....	59.9	70.2	62.0	103.5	88.3
1966 .....	62.3	72.0	65.9	105.7	91.5
1967 .....	67.0	75.6	70.0	104.4	92.6
1968 .....	73.0	80.4	75.4	103.3	93.8
1969 .....	76.6	82.2	78.4	102.3	95.4
1970 .....	83.4	88.1	84.2	100.9	95.6
1971 .....	85.0	90.0	85.2	100.2	94.7
1972 .....	88.3	92.6	89.3	101.1	96.4
1973 .....	97.1	99.8	96.7	99.6	96.9
1974 .....	98.2	101.2	98.7	100.5	97.5
1975 .....	94.2	100.0	97.7	103.7	97.7
1976 .....	97.1	100.6	99.4	102.4	98.8
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	102.3	102.5	102.1	99.8	99.6
1979 .....	102.9	103.9	105.0	102.0	101.1
1980 .....	105.6	102.5	104.4	98.9	101.9
1981 .....	105.8	101.7	104.0	98.3	102.3
1982 <sup>2</sup> .....	105.6	100.4	101.7	96.3	101.3
1983 <sup>2</sup> .....	104.8	98.9	101.2	96.6	102.3
Average annual percent change:					
1958-83 .....	3.9	2.7	3.7	-.1	1.0
1978-83 .....	.6	-.8	-.4	-1.0	.4

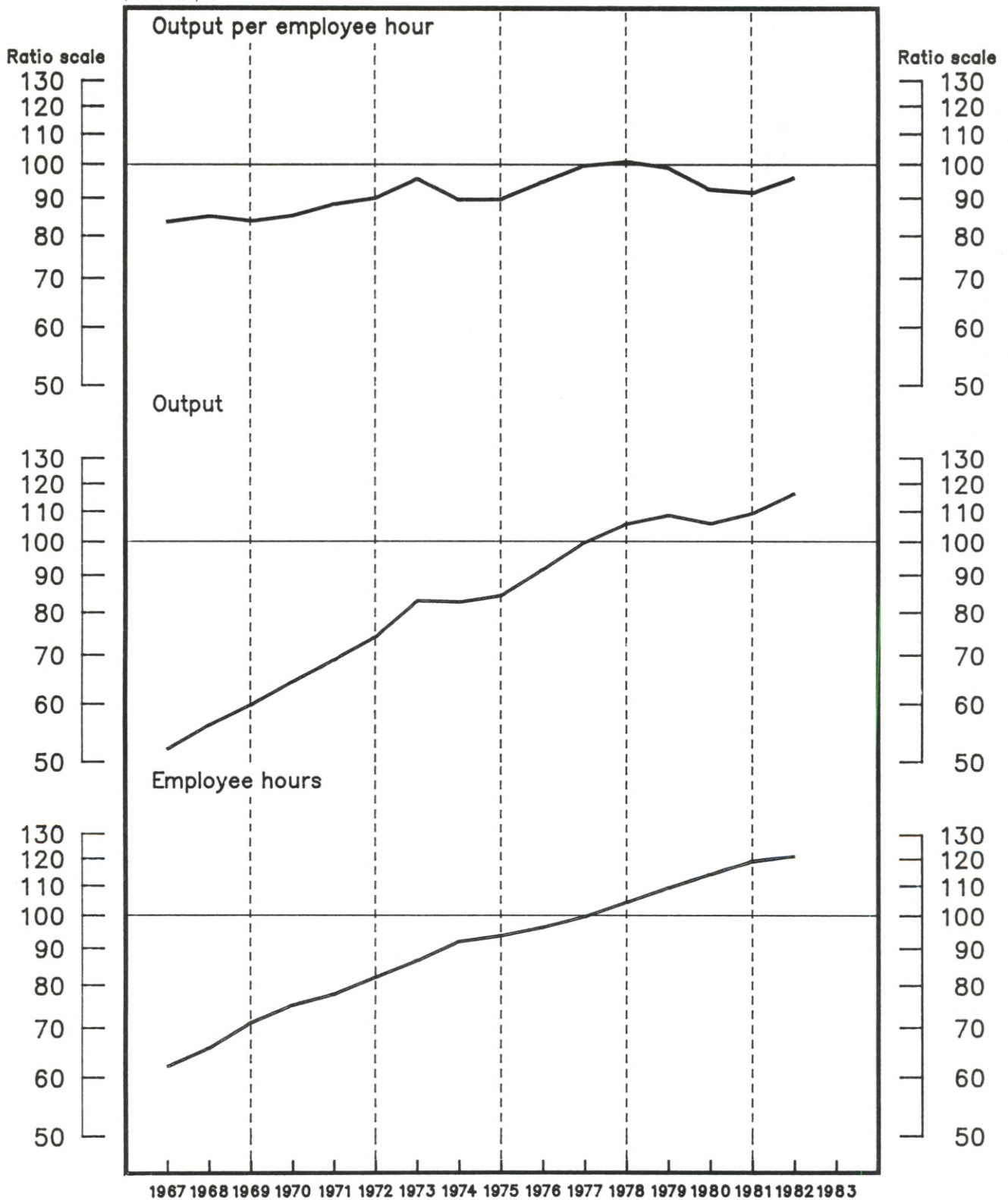
<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output based on data from the Bureau of the Census and the Bureau of Labor Statistics. All persons and hours based on data from the Bureau of the Census; the Bureau of Labor Statistics; and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 132. Commercial banking (SIC 602): Output per hour and related data, 1967-82  
 (1977 = 100)



Source - Bureau of Labor Statistics, U.S. Department of Labor

**Table 243. Commercial banking (SIC 602): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1967-82**  
(1977=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1967 .....	83.8	82.9	52.2	62.3	63.0
1968 .....	85.3	84.4	56.3	66.0	66.7
1969 .....	84.0	83.3	60.0	71.4	72.0
1970 .....	85.5	84.2	64.5	75.4	76.6
1971 .....	88.6	87.5	69.1	78.0	79.0
1972 .....	90.3	89.6	74.3	82.3	82.9
1973 .....	95.9	95.1	83.2	86.8	87.5
1974 .....	89.8	89.5	82.9	92.3	92.6
1975 .....	90.0	89.8	84.6	94.0	94.2
1976 .....	95.0	94.8	91.8	96.6	96.8
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	101.2	101.0	106.0	104.7	104.9
1979 .....	99.3	98.6	108.9	109.7	110.5
1980 .....	92.7	91.7	106.1	114.5	115.7
1981 .....	91.8	91.6	109.6	119.4	119.7
1982 <sup>1</sup> .....	96.2	95.9	116.7	121.3	121.7
Average annual percent change:					
1967-82 .....	1.0	1.1	5.5	4.5	4.4
1978-82 .....	-1.8	-1.8	2.0	3.9	3.8

<sup>1</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

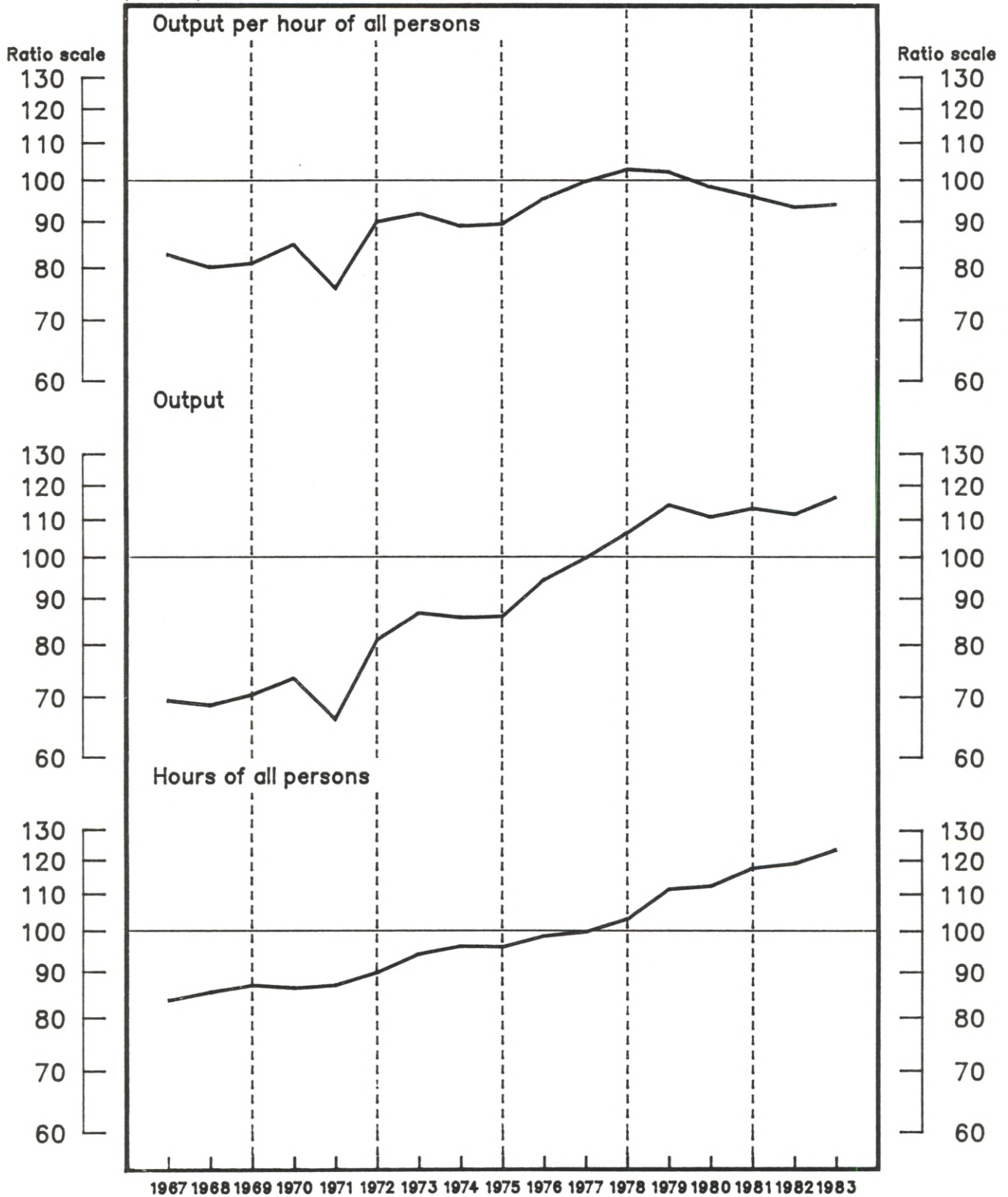
SOURCE: Output based on data from the Federal Reserve Bank of Atlanta; the Board of Governors, Federal Reserve System; the Federal Deposit Insurance

Corporation; the U.S. Department of Housing and Urban Development; the American Bankers Association; the VISA and Interbank Association; the American Council of Life Insurance; and the National Automatic Clearing House Association. Employment and hours based on data from the Bureau of Labor Statistics.



**Chart 133. Hotels, motels, and tourist courts (SIC 7011): Output per hour and related data, 1967-83**

(1977 = 100)



Source – Bureau of Labor Statistics, U.S. Department of Labor

**Table 244. Hotels, motels, and tourist courts (SIC 7011): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1958-83**  
(1977=100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
<b>Index:</b>					
1958 .....	63.7	80.1	47.8	75.0	59.7
1959 .....	64.5	81.0	49.5	76.8	61.1
1960 .....	66.0	82.6	51.7	78.3	62.6
1961 .....	63.9	79.1	50.0	78.2	63.2
1962 .....	68.3	83.5	53.6	78.5	64.2
1963 .....	71.5	87.0	56.2	78.6	64.6
1964 .....	71.7	86.3	57.9	80.7	67.1
1965 .....	77.1	91.8	63.4	82.2	69.1
1966 .....	77.3	90.3	64.6	83.6	71.5
1967 .....	82.9	95.3	69.5	83.8	72.9
1968 .....	80.3	90.9	68.7	85.6	75.6
1969 .....	81.1	90.7	70.6	87.1	77.8
1970 .....	85.1	93.3	73.6	86.5	78.9
1971 .....	76.2	81.7	66.4	87.1	81.3
1972 .....	90.2	95.4	81.2	90.0	85.1
1973 .....	92.1	97.9	86.9	94.4	88.8
1974 .....	89.2	93.5	85.9	96.3	91.9
1975 .....	89.7	91.7	86.2	96.1	94.0
1976 .....	95.7	97.6	94.6	98.9	96.9
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	103.1	103.2	106.6	103.4	103.3
1979 .....	102.4	102.7	114.4	111.7	111.4
1980 .....	98.6	98.1	111.0	112.6	113.2
1981 .....	96.2	95.9	113.4	117.9	118.2
1982 <sup>2</sup> .....	93.6	92.9	111.7	119.4	120.3
1983 <sup>2</sup> .....	94.3	94.0	116.7	123.7	124.2
<b>Average annual percent change:</b>					
1958-83 .....	1.9	.8	3.9	1.9	3.1
1978-83 .....	-2.1	-2.2	1.2	3.3	3.5

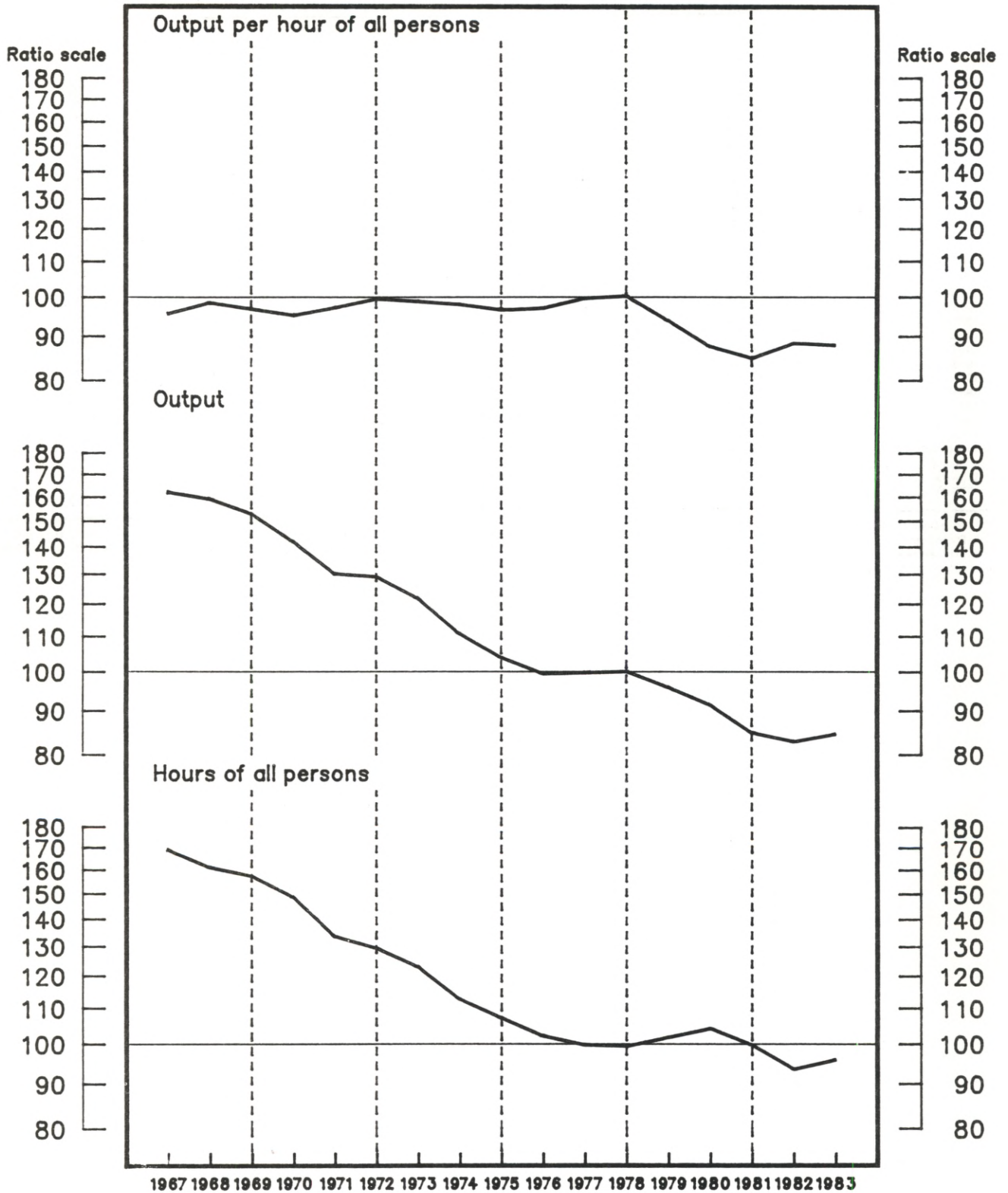
<sup>1</sup> All persons include paid employees, and the self-employed.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, persons, and hours based on data from the Bureau of Labor Statistics; Bureau of the Census; and the Internal Revenue Service, U.S. Department of the Treasury.

Chart 134. Laundry and cleaning services (SIC 721): Output per hour and related data, 1967-83  
(1977 = 100)



Source — Bureau of Labor Statistics, U.S. Department of Labor



**Table 245. Laundry and cleaning services (SIC 721): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons,<sup>1</sup> 1958-83**  
(1977 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958 .....	80.5	91.3	139.8	173.6	153.1
1959 .....	83.5	95.5	145.6	174.3	152.5
1960 .....	79.3	90.6	138.1	174.1	152.5
1961 .....	83.4	94.8	143.8	172.4	151.7
1962 .....	83.4	94.5	144.3	173.1	152.7
1963 .....	83.1	95.9	150.0	180.5	156.4
1964 .....	89.0	101.2	157.5	177.0	155.7
1965 .....	83.7	95.5	151.9	181.4	159.0
1966 .....	89.0	99.1	160.1	179.9	161.6
1967 .....	95.9	103.2	162.3	169.2	157.2
1968 .....	98.8	103.2	159.4	161.4	154.4
1969 .....	97.1	101.7	153.2	157.7	150.6
1970 .....	95.5	98.4	142.2	148.9	144.5
1971 .....	97.5	98.1	130.4	133.8	132.9
1972 .....	99.8	102.2	129.4	129.6	126.6
1973 .....	99.1	103.1	122.1	123.2	118.4
1974 .....	98.3	100.5	111.0	112.9	110.5
1975 .....	96.9	98.1	104.1	107.4	106.1
1976 .....	97.4	98.0	99.7	102.4	101.7
1977 .....	100.0	100.0	100.0	100.0	100.0
1978 .....	100.6	100.8	100.3	99.7	99.5
1979 .....	94.1	94.1	96.1	102.1	102.1
1980 .....	87.8	87.8	91.7	104.5	104.4
1981 .....	85.1	84.1	85.1	100.0	101.2
1982 <sup>2</sup> .....	88.6	85.8	83.1	93.8	96.8
1983 <sup>2</sup> .....	88.1	85.8	84.8	96.2	98.8
Average annual percent change:					
1958-83 .....	.5	-.2	-2.6	-3.1	-2.4
1978-83 .....	-2.5	-3.2	-3.8	-1.4	-.6

<sup>1</sup> All persons include paid employees, unpaid family workers, and the self-employed.

<sup>2</sup> Preliminary.

NOTE: Because of periodic revisions in source data, the measures in this table may differ from those previously published.

SOURCE: Output, persons, and hours based on data from the Bureau of Labor Statistics; Bureau of the Census and the Bureau of Economic Analysis, U.S. Department of Commerce; and the Internal Revenue Service, U.S. Department of the Treasury.

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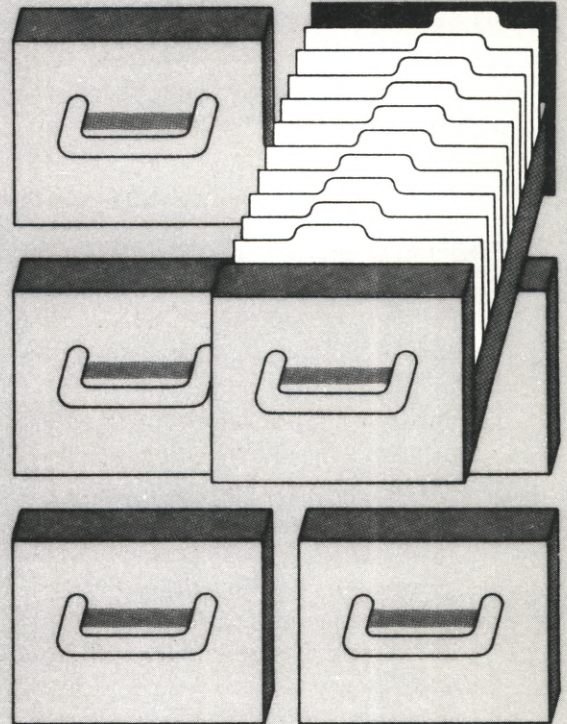
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