

Productivity Indexes for Selected Industries, 1979 Edition



U.S. Department of Labor
Bureau of Labor Statistics
1979

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Bulletin 2054

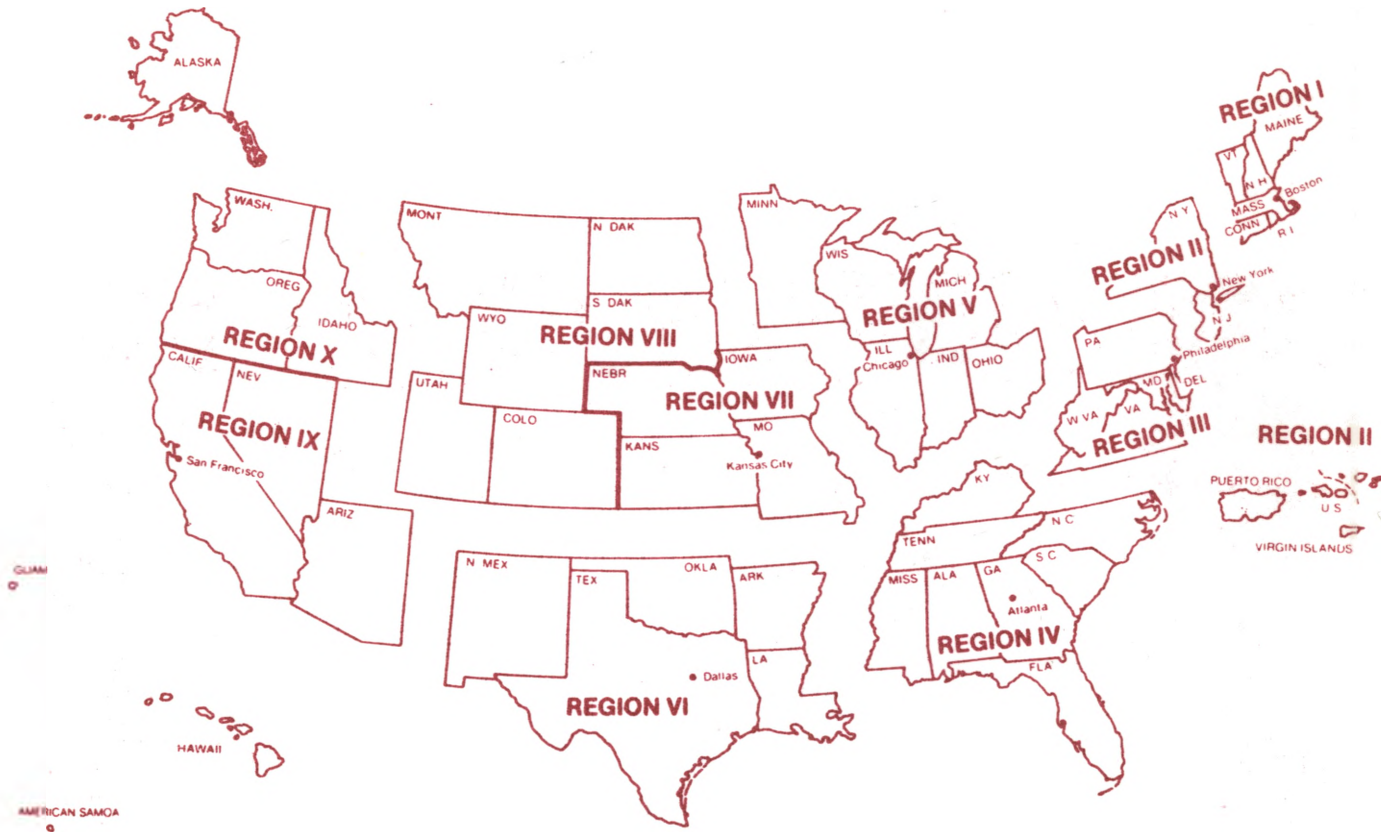
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Productivity Indexes for Selected Industries, 1979 Edition



U.S. Department of Labor
Ray Marshall, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner
December 1979

Bulletin 2054

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Preface

This bulletin updates through 1978 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: Fluid milk; folding paperboard boxes; and soaps and detergents. An article providing information about the fluid milk industry appeared in the July 1979 issue of the *Monthly Labor Review*. Articles covering the other industries will appear in forthcoming issues. Indexes for components of previously published measures are presented for the first time for the following industries: Canned fruits, vegetables, jams, and jellies; raw and refined cane sugar; beet sugar; brick and structural clay tile; ceramic wall and floor tile; household cooking equipment; household refrigerators and freezers; household laundry equipment; household appliances not elsewhere classified; and primary smelting and refining of copper.

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 press 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 inter-related 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 that is based on hours paid and some use a labor input series that is based on hours at the plant.

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Highlights of Trends in Output per Employee Hour

Current developments

Between 1977 and 1978, output per employee hour increased in about two-thirds of the industries for which data are presented in this report. In contrast, between 1976 and 1977, productivity increased in nearly three-quarters of the industries. This general slowdown in productivity was consistent with the performance of the nonfarm business sector as a whole, where productivity grew 0.5 percent in 1978 compared to 1.6 percent in 1977.

Among the more significant manufacturing industries, the steel industry recorded an above-average productivity gain of 4.4 percent. This increase was based on a substantial increase in output of 7.4 percent coupled with a 2.9-percent growth in employee hours. Solid increases in shipments to construction markets, machinery and equipment industries, and steel service centers contributed to the strong advance in output.

On the other hand, the motor vehicle manufacturing industry recorded a dropoff in productivity of 1.6 percent. Industry output rose 2.7 percent while employee hours increased 4.4 percent. Productivity was adversely affected by the substantial shift to smaller cars in 1978. This shift in demand resulted in production cutbacks and slower assembly line speeds in plants producing large cars, as well as additional hiring and capacity strains in plants producing smaller cars.

Noteworthy gains in productivity were recorded in only a few manufacturing industries in 1978. The largest increase was in the household cooking equipment industry, which posted a 9.3-percent growth in output per employee hour. While output in this industry grew 14.4 percent, paced by rapid gains in sales of microwave ovens, employee hours increased 4.7 percent. A significant advance was also registered by the malt beverage industry, which recorded an 8.4-percent gain in productivity. Industry output increased 5.6 percent as employee hours declined 2.5 percent. The continuing trend toward large, more efficient breweries has contributed to the large gain in productivity. Other manufacturing industries with comparatively large increases in productivity included household appliances not elsewhere classified¹ (7.0 percent); cigarettes, chewing, and smoking tobacco (5.5 percent); bottled and canned soft drinks (5.1 percent); fluid milk (4.5

percent); hosiery (4.3 percent); and both bakery products and corrugated and solid fiber boxes (4.2 percent). On the other hand, several manufacturing industries experienced significant declines in productivity. These included the primary copper, lead, and zinc industry (-6.6 percent) and a component industry, primary smelting and refining of copper (-5.1 percent). The household laundry equipment industry also recorded a falloff in productivity (-5.4 percent).

The mining industries, except for nonmetallic minerals, recorded substantial increases in productivity in 1978. The coal mining industry had an 8.7-percent increase in productivity during 1978, in sharp contrast to the declines recorded in almost every year over the past decade. Productivity in this industry was affected by a major strike in 1978, with output down 5.1 percent. Production worker hours fell even more sharply (-12.6 percent), resulting in the productivity gain. The copper mining industry (recoverable metal) posted a substantial gain in productivity (8.3 percent). Output in this industry was down 0.5 percent while production worker hours dropped more sharply (-8.1 percent), resulting in the productivity gain. In iron mining (usable ore) productivity was up 4.7 percent as the industry recovered from a strike in 1977. Output in this industry increased by 45.4 percent while production worker hours were up 38.8 percent. In contrast, the nonmetallic minerals industry recorded a productivity decline of 0.3 percent. Although output in this industry was up by 3.3 percent, production worker hours rose even more (3.6 percent).

Among the transportation industries, railroads (revenue traffic) displayed a large (12.2 percent) advance in productivity. This industry's output growth of 3.3 percent in 1978 was influenced by an expanding economy, the rebuilding of coal stocks after a strike, and the movement of both stored and newly harvested grain. On the other hand, industry hours (down 7.9 percent) were affected by a rail strike which brought most systems to a standstill for 4 days. Also showing substantial growth in productivity was the air transportation

¹This industry manufactures water heaters, dishwashers, food waste disposers, trash compactors, and floor waxing, polishing, and scrubbing machines.

industry, with an increase of 9.3 percent. This industry's output jumped by 13.9 percent while the number of employees grew by 4.2 percent. In contrast, the intercity trucking industry recorded a falloff in productivity of 0.2 percent. Although output grew 7.0 percent, the number of employees increased even more, 7.2 percent. Fuel shortages and shorter runs adversely affected this industry's performance.

In other nonmanufacturing industries, telephone communications displayed a 6.6-percent increase in productivity. Also posting increases were hotels and motels (4.3 percent), gasoline service stations (4.0 percent), and laundry and cleaning services (1.0 percent). Declines in productivity, however, were recorded by eating and drinking places (-4.2 percent), retail food stores (-3.9 percent), franchised new car dealers (-2.0 percent), and gas and electric utilities (-1.6 percent).

Long-term trends

All the industries presented in this report have recorded productivity growth over the long term. Among these, the petroleum pipelines industry posted the highest rate, 7.8 percent between 1958 and 1977, because of a large gain in the volume of petroleum products shipped and the utilization of highly automatic equipment. The air transportation industry experienced the second highest rate of productivity growth—7.0 percent annually from 1947 to 1978. Significantly, this industry had the highest rate of growth in output (12.3 percent per year) over this time period. On the other hand, eating and drinking places recorded the lowest rate of growth in productivity, only 0.7 percent per year from 1958 to 1978. Although large, multiestablishment companies, such as fast-food chains, have made significant technological and organizational improvements, the large number of small, marginal enterprises has held productivity growth down.

Although productivity change varied widely in the 1973–78 period (see chart 1), three-fourths of the industries recorded lower average annual gains in output per employee hour than in 1947–73. This experience matches the productivity record of the nonfarm business sector of the economy as a whole. From 1947 to 1973, productivity in this sector grew 2.4 percent per year, while from 1973 to 1978 the annual growth rate was only 1.3 percent. This slower growth in industry productivity was associated with less rapid output growth—more than 80 percent of the industries recorded lower output growth rates than in the earlier period.

There were a few notable exceptions to the falloff in productivity growth. The wet corn milling industry, with an 11.2-percent average annual gain, posted the highest growth in productivity. This rapid growth was

aided by a sharp gain in output for one of the industry's products, high fructose corn syrup, a sugar substitute. In addition, a number of new plants, utilizing the latest computerized controls, came on line during this period. Other industries with high rates of productivity growth included the hosiery and telephone communications industries, which both recorded an 8.1-percent rate of gain during the 1973–78 period compared to rates of 5.6 and 6.3 percent, respectively, in the earlier period. In the hosiery industry, recent advances in hosiery knitting machine speeds, automated dyeing techniques, and new packaging equipment contributed to this advance in output per employee hour. In the telephone communications industry, the accelerated introduction of electronic switching in long-distance service contributed to the growth in productivity. Another industry with an accelerated rate of productivity advance was malt beverages, growing at a rate of 7.5 percent from 1973 to 1978 compared to 5.2 percent per year from 1947 to 1973. The introduction of large, automated breweries and the decline of small, inefficient establishments aided productivity growth in the more current period. Other industries with high rates of increase included copper mining (recoverable metal), 7.0 percent; synthetic fibers, 6.4 percent; prepared feeds for animals and fowls, 6.2 percent; and bottled and canned soft drinks, 6.2 percent (see table 1).

Among the industries that experienced productivity declines during the 1973–78 period, coal mining dropped the most, down 3.5 percent per year. Iron mining also experienced a decline, dropping 1.3 percent annually.

Other industries in which productivity declined during 1973–78 were: Blended and prepared flour (-1.9 percent), primary aluminum (-1.5 percent), eating and drinking places (-1.5 percent), ready-mixed concrete (-0.9 percent), steel (-0.7 percent), motors and generators (-0.7 percent), wood household furniture (-0.6 percent), soaps and detergents (-0.6 percent), steel foundries (-0.6 percent), retail food stores (-0.2 percent), and folding paperboard boxes (-0.1 percent).

New measures

Fluid milk (SIC 2026). From 1958 to 1978, productivity in the fluid milk industry increased at an average annual rate of 4.1 percent, substantially above the 2.7-percent average rate for all manufacturing industries. This increase was associated with an average annual output increase of 0.4 percent coupled with an average annual decline in employee hours of 3.6 percent. Milk industry productivity growth over the 20-year period reflected relatively stable industry output and sharply reduced employee hours. Productivity was influenced by two major factors—a rapid trend toward fewer and larger plants, and changes in technology that

Chart 1. Growth in output per employee hour in selected industries, 1973-78

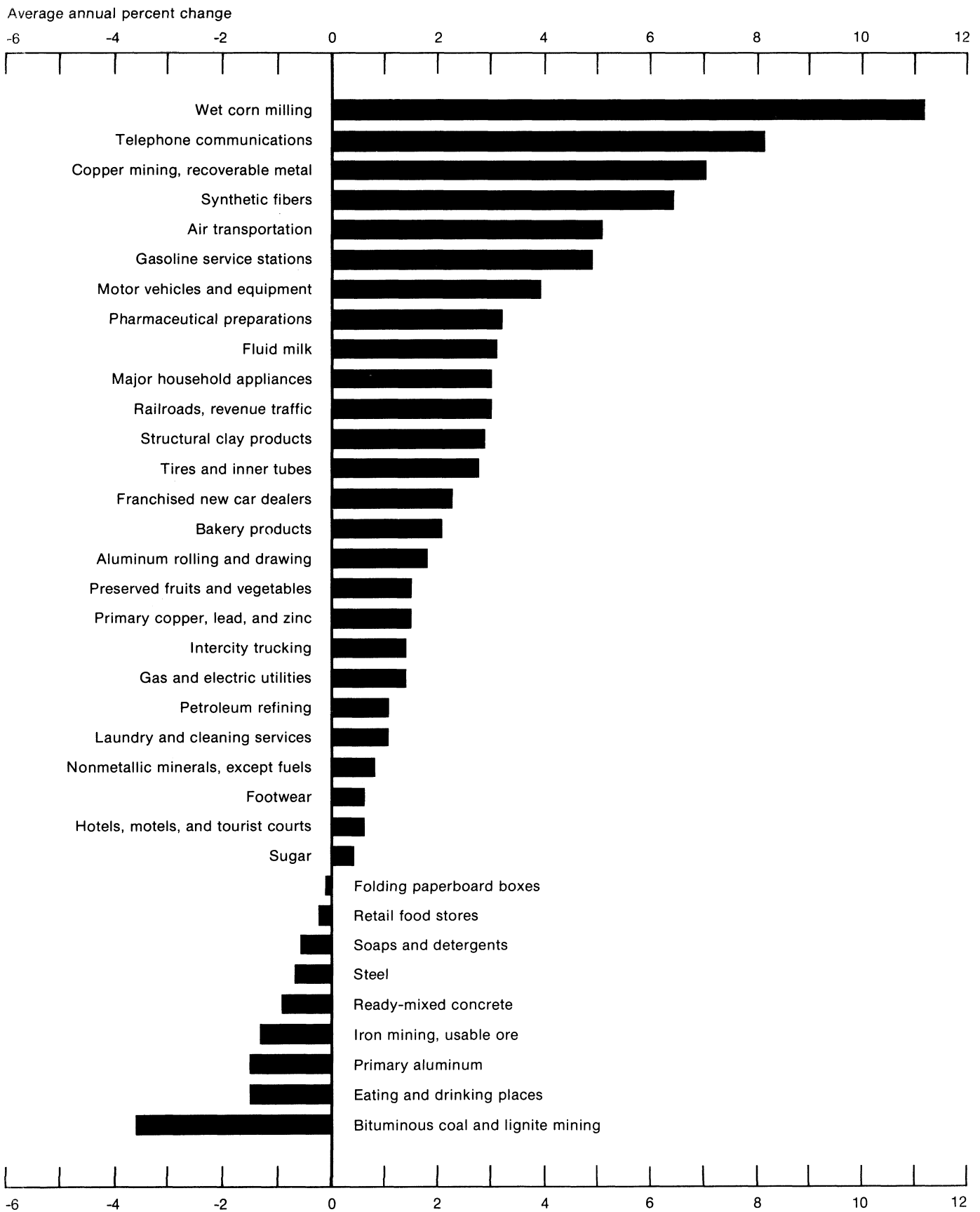


Table 1. Selected industries: Employment, 1978, and average annual rates of change in output per employee hour, 1973-78

SIC code	Industry	Employment, 1978 (thousands)			Output per employee hour: Average annual rate of change, 1973-78 (percent) ¹		
		All employees	Production workers	Non-production workers	All employees	Production workers	Non-production workers ²
Mining							
1011	Iron mining, crude ore	24	20	4	(3)	0.6	(3)
1011	Iron mining, usable ore	24	20	4	(3)	-1.3	(3)
1021	Copper mining, crude ore	30	23	7	(3)	7.0	(3)
1021	Copper mining, recoverable metal	30	23	7	(3)	7.0	(3)
111,121	Coal mining	208	172	36	(3)	-3.5	(3)
121	Bituminous coal and lignite mining	205	170	35	(3)	-3.6	(3)
14	Nonmetallic minerals, except fuels	119	94	25	(3)	.8	(3)
142	Crushed and broken stone	39	33	6	(3)	1.6	(3)
Manufacturing							
2026	Fluid milk	118	(3)	(3)	3.1	(3)	(3)
203	Preserved fruits and vegetables	252	205	47	⁴ 1.5	⁴ 1.7	⁴ 0.6
2033	Canned fruits and vegetables	96	78	18	⁴ 1.7	⁴ 1.9	⁴ -1.4
204	Grain mill products	145	98	47	⁴ 4.9	⁴ 5.5	⁴ 3.3
2041	Flour and other grain mill products	26	16	10	3.7	4.9	-1
2043	Cereal breakfast foods	17	13	4	⁴ 1.8	⁴ 1.9	⁴ 1
2044	Rice milling	5	4	1	⁴ 3.8	⁴ 1.7	⁴ 13.2
2045	Blended and prepared flour	8	6	2	⁴ -1.9	⁴ 1.4	⁴ -8.1
2046	Wet corn milling	13	9	4	⁴ 11.2	⁴ 10.5	⁴ 13.1
2047,48	Prepared feeds for animals and fowls	76	50	26	⁴ 6.2	⁴ 7.3	⁴ 3.9
205	Bakery products	235	137	98	2.1	2.5	1.4
2061,62,63	Sugar	33	24	9	.4	1.5	-3.3
2061,62	Raw and refined cane sugar	20	14	6	⁴ 1.3	⁴ 1.9	⁴ -5
2063	Beet sugar	13	10	3	⁴ 1.5	⁴ 1.4	⁴ -5.8
2065	Candy and confectionery products	58	46	12	.2	-.7	3.9
2082	Malt beverages	51	34	17	7.5	7.0	8.8
2086	Bottled and canned soft drinks	136	48	88	6.2	6.9	5.8
2111,21,31	All tobacco products	49	41	8	3.2	4.2	-2.5
2111,31	Cigarettes, chewing and smoking tobacco	41	34	7	3.4	4.5	-2.5
2121	Cigars	8	7	1	3.6	3.3	7.5
2251,52	Hosiery	63	57	6	8.1	7.4	14.2
2421	Sawmills and planing mills, general	190	171	19	1.4	1.5	.4
2435,36	Veneer and plywood	77	68	9	2.7	2.6	3.7
251	Household furniture	330	281	49	1.1	1.4	-1.2
2511,17	Wood household furniture	156	138	18	⁴ -6	⁴ 1.5	⁴ -11.0
2512	Upholstered household furniture	102	84	18	⁴ 2.5	⁴ 2.6	⁴ 2.3
2514	Metal household furniture	32	26	6	⁴ 1.5	⁴ 1.6	⁴ 1.1
2515	Mattresses and bedsprings	33	26	7	⁴ 3.8	⁴ 4.3	⁴ 2.0
2611,21,31,61	Paper, paperboard, and pulp mills	267	204	63	2.1	2.7	-2
2651	Folding paperboard boxes	46	36	10	-.1	-.1	.1
2653	Corrugated and solid fiber boxes	107	79	28	2.6	3.1	1.1
2823,24	Synthetic fibers	89	70	19	6.4	6.5	6.2
2834	Pharmaceutical preparations	149	69	80	3.2	3.8	(3)
2841	Soaps and detergents	40	25	15	⁴ -6	⁴ -2	⁴ -1.5
2851	Paints and allied products	69	36	33	3.9	4.4	3.3
2911	Petroleum refining	165	104	61	1.1	1.1	1.3
3011	Tires and inner tubes	127	92	35	2.8	2.9	2.7
314	Footwear	158	138	20	.6	.5	1.1
3221	Glass containers	77	68	9	2.0	2.2	.8
3241	Hydraulic cement	32	26	6	1.2	1.3	.8
325	Structural clay products	51	40	11	2.9	3.5	(3)
3251,53,59	Clay construction products	38	31	7	3.4	3.7	1.4
3251	Brick and structural clay tile	23	19	4	3.1	3.5	1.1
3253	Ceramic wall and floor tile	9	7	2	⁴ 3.0	⁴ 3.1	⁴ 2.3
3255	Clay refractories	13	9	4	1.4	2.7	-3.2
3271,72	Concrete products	80	59	21	⁴ 1.8	⁴ 1.4	⁴ -1.1
3273	Ready-mixed concrete	86	(3)	(3)	⁴ -9	(3)	(3)
331	Steel	560	441	119	-.7	-.2	-2.5
3321	Gray iron foundries	150	125	25	.8	1.2	-1.7
3324,25	Steel foundries	64	50	14	-.6	.2	-4.1
3331,32,33	Primary copper, lead, and zinc	22	18	4	1.5	1.6	.9
3331	Primary copper	14	12	2	3.0	3.0	2.9
3334	Primary aluminum	35	29	6	-1.5	-1.6	-1.2
3351	Copper rolling and drawing	32	25	7	1.5	1.5	1.5
3353,54,55	Aluminum rolling and drawing	62	50	12	1.8	1.7	1.9
3411	Metal cans	65	55	10	2.3	2.4	1.8
3621	Motors and generators	136	102	34	⁴ -7	⁴ -1	⁴ -2.5
3631,32,33,39	Major household appliances	100	81	19	3.0	2.9	3.2
3631	Household cooking equipment	27	20	7	4.1	4.7	1.9
3632	Household refrigerators and freezers	37	31	6	1.2	.9	2.8

See footnotes at end of table.

**Table 1. Selected industries: Employment, 1978, and average annual rates of change in output per employee hour, 1973-78—
Continued**

SIC code	Industry	Employment, 1978 (thousands)			Output per employee hour: Average annual rate of change, 1973-78 (percent) ¹		
		All employees	Production workers	Non production workers	All employees	Production workers	Non production workers ²
3633	Household laundry equipment	20	17	3	2.2	1.7	4.1
3639	Household appliances not elsewhere classified	16	12	4	5.9	5.7	7.0
3641	Electric lamps	38	33	5	3.1	3.3	1.4
3645,46,47,48	Lighting fixtures	73	55	18	⁴ 1.0	⁴ 1.7	⁴ -1.0
3651	Radio and television receiving sets	92	67	25	⁴ 2.1	⁴ 3.8	⁴ -3.7
371	Motor vehicles and equipment	997	776	221	3.9	3.5	5.2
	Other						
401 Class I	Railroad transportation, revenue traffic	473	413	60	3.0	3.1	2.0
401 Class I	Railroad transportation, car miles	473	413	60	.9	1.1	-.1
4213 part	Intercity trucking	770	(³)	(³)	⁶ 1.4	(³)	(³)
4213 part	Intercity trucking (general freight)	475	(³)	(³)	⁶ 1.9	(³)	(³)
4511	Air transportation	322	(³)	(³)	⁶ 5.1	(³)	(³)
4612,13	Petroleum pipelines	19	14	5	4.5	⁷ 2.1	(³)
4811	Telephone communications	993	(³)	(³)	8.1	(³)	(³)
491,92,93	Gas and electric utilities	711	⁷ 579	⁸ 132	1.4	⁷ 2.1	(³)
54	Retail food stores ⁹	2,474	(³)	(³)	-2	(³)	(³)
5511	Franchised new car dealers	849	(³)	(³)	2.3	(³)	(³)
5541	Gasoline service stations ⁹	788	(³)	(³)	4.9	(³)	(³)
58	Eating and drinking places ⁹	4,609	(³)	(³)	-1.5	(³)	(³)
7011	Hotels, motels, and tourist courts ⁹	1,025	(³)	(³)	.6	(³)	(³)
721	Laundry and cleaning services ⁹	410	(³)	(³)	1.1	(³)	(³)

¹ Based on the linear least squares trends of the logarithms of the index numbers.

² Rates of change for nonproduction workers are subject to a wider margin of error than other rates shown.

³ Not available.

⁴ 1973-77.

⁵ Less than 0.05 percent.

⁶ Output per employee.

⁷ Nonsupervisory personnel.

⁸ Supervisory personnel and force account construction workers.

⁹ Data relate to all persons.

improved milk processing operations. Altered distribution systems, such as volume-efficient, self-service supermarkets rather than home delivery, contributed to the substantial reduction in industry employment.

The industry's productivity rose each year from 1958 to 1978. Increases ranged from 0.1 percent to 7.7 percent. Output increased in all but 7 years while employee hours declined in every year.

Population growth and changing consumer preferences have affected the market for fluid milk products. The sharp decline in the birth rate in the 1960's, accompanied by a drop in the number of young children in the population, has lessened the demand for whole milk. Whole-milk consumption has also been affected by publicity on the adverse effects of cholesterol and by the growth in popularity of soft drinks. Other industry products, however, have grown in popularity and have offset the declining sales of whole milk.

The trend toward larger, more highly automated plants is likely to continue, and this should help keep productivity growing at a high rate over the long term. The increasing use of computers in the industry also should be a factor in future productivity gains.

Folding paperboard boxes (SIC 2651). Productivity in the folding paperboard box industry increased at an

average annual rate of 2.0 percent from 1963 to 1978, slightly below the average for all manufacturing. During this period, output increased at an average annual rate of 0.3 percent and employee hours declined at an average annual rate of 1.7 percent. Productivity gains have been achieved through advances in printing technology, widespread adoption of power equipment for finishing operations, and faster gluing machinery.

Productivity changes have fluctuated greatly from year to year. Annual increases in productivity ranged from 0.7 percent to 9.5 percent over the period measured, with decreases occurring in 6 years. The folding cartons produced by the industry are used to package a wide variety of products. Changes in the level of economic activity have caused sharp swings in industry output, with resulting adjustments in employee hours. Despite the short-term fluctuations in output per employee hour, the introduction and spread of improved production equipment have resulted in long-term productivity increases.

In the short term, productivity will continue to be affected by changes in demand. Over the long term, however, productivity should continue to improve as more plants adopt the latest production equipment. Advances in printing technology should be a factor in future productivity improvements. Demand for industry output will continue to fluctuate in line with overall economic activity.

Soaps and detergents (SIC 2841). Productivity increased 2.9 percent from 1958 to 1977. This growth was associated with average annual increases of 4.1 percent in output and 1.2 percent in employee hours. Since 1958, the annual output of the soaps and detergents industry has doubled while employee hours have increased only about 28 percent. Productivity gains have resulted primarily from a strong demand for soap and detergent products combined with sustained high levels of capital investment for new machinery and equipment and improvements in production and packaging operations.

The growth in productivity has not been steady dur-

ing the period of this study. Annual increases in productivity have ranged from 1.0 to 10.6 percent, with declines occurring in 4 years. The greatest falloff—7.1 percent—occurred in 1975, a recession year.

Productivity over the short term will continue to be affected by changes in demand. Over the long term, high levels of capital investment should continue to help productivity growth. However, more stringent legislation restricting phosphate levels in detergents may act to reduce gains in productivity. Demand should remain substantial for virtually all of the industry's products.

Methods and Data

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 unit labor weights at the product-class level.

Although the weights relate to fixed periods, they are updated periodically, usually in conjunction with economic censuses. Thus, most indexes for 1947–58 are based on 1947 weights; for 1958–63, 1958 weights; for 1963–67, 1963 weights; for 1967–72, 1967 weights; and for 1972–78, 1972 weights. 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 1972 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.² 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. Because of the method of construction, indexes for the mining industries have been revised back to 1967. In other industries, the indexes have been revised back to 1972.

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.³ 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. Since 1968, 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*.

²Indexes for the railroad transportation industry are based on data from the Interstate Commerce Commission and are related primarily to hours at work.

³The 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 "nonproduction workers."

For five service industries—retail food stores; gasoline service stations; eating and drinking places; hotels, motels, and tourist courts; and laundry and cleaning services—measures of the hours of partners, proprietors, and supervisory (nonproduction) 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. The data were compiled for the BLS by the Bureau of the Census. Average weekly hours worked by supervisory employees were obtained from the 1960 and 1970 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 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 errors in these estimates, however, 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 1978 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 using the Bureau of the Census as the primary source of employment and employee hours, the 1978 indexes were developed by linking employment and employee hour data from BLS, since 1978 Census data are not yet available. Therefore, all 1978 output per employee hour measures are considered preliminary and are subject to revision.

The indexes refer to the standard reference base 1967=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 1910 (1976), chapter 31, 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. The handbook is for sale by the Superintendent of Documents, Washington, D.C. 20402, or at the Bureau of Labor Statistics regional offices listed on the inside back cover of this bulletin.

Industry Indexes

Charts and Tables

Indexes of output per employee hour and related data

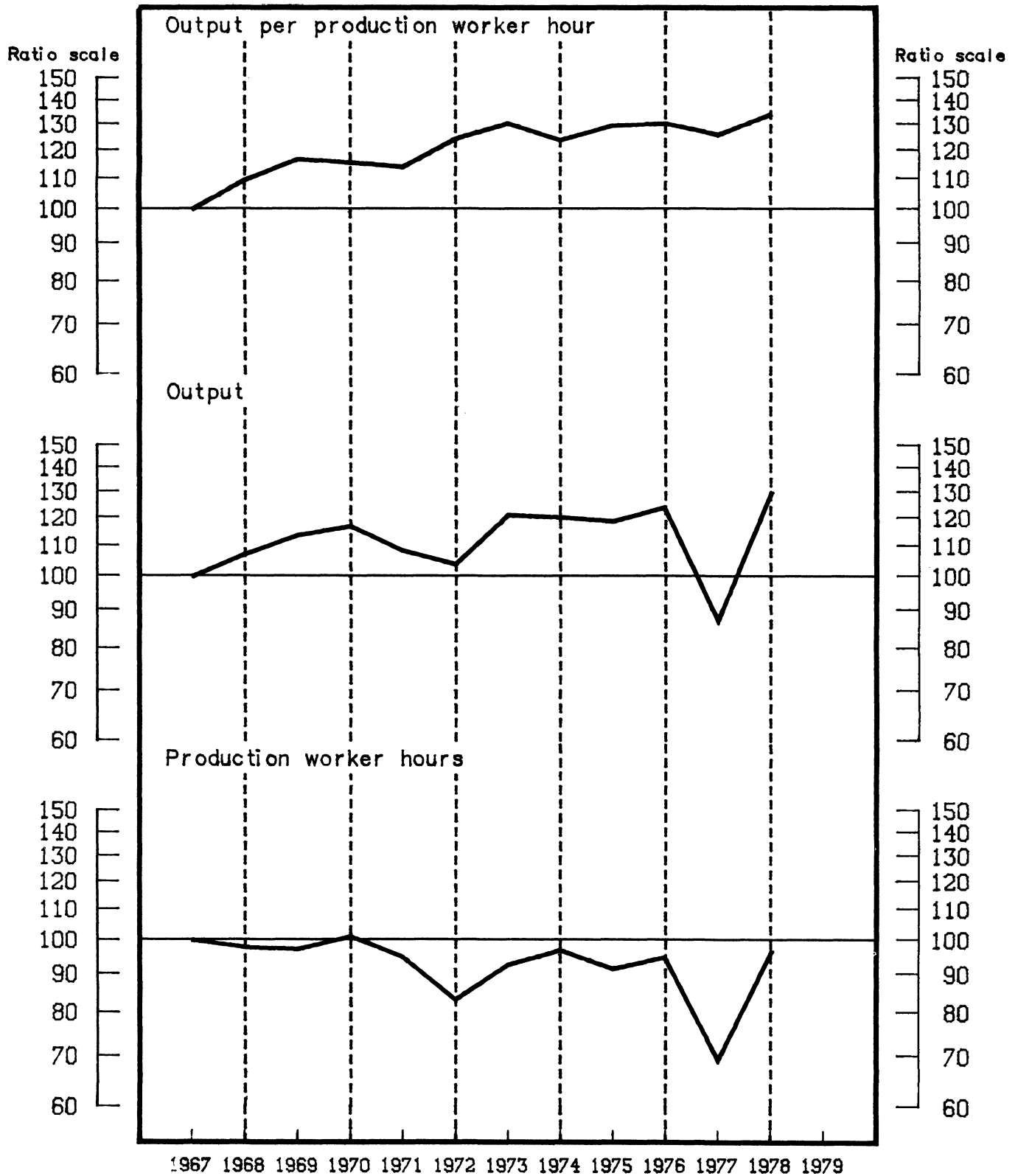
SIC code	Industry	Chart	Page	Table	Page
Mining					
1011	Iron mining, crude ore	2	12	2,3	13
1011	Iron mining, usable ore	3	14	4,5	15
1021	Copper mining, crude ore	4	16	6,7	17
1021	Copper mining, recoverable metal.	5	18	8,9	19
111,121	Coal mining.	6	20	10,11	21
121	Bituminous coal and lignite mining	7	22	12,13	23
14	Nonmetallic minerals, except fuels	8	24	14,15	25
142	Crushed and broken stone	9	26	16,17	27
Manufacturing					
2026	Fluid milk	10	28	18	29
203	Preserved fruits and vegetables	11	30	19,20	31
2033	Canned fruits and vegetables	12	32	21,22	33
204	Grain mill products	13	34	23,24	35
2041	Flour and other grain mill products	14	36	25,26	37
2043	Cereal breakfast foods	15	38	27,28	39
2044	Rice milling	16	40	29,30	41
2045	Blended and prepared flour	17	42	31,32	43
2046	Wet corn milling.	18	44	33,34	45
2047,48	Prepared feeds for animals and fowls	19	46	35,36	47
205	Bakery products	20	48	37,38	49
2061,62,63	Sugar	21	50	39,40	51
2061,62	Raw and refined cane sugar	22	52	41,42	53
2063	Beet sugar	23	54	43,44	55
2065	Candy and confectionery products	24	56	45,46	57
2082	Malt beverages	25	58	47,48	59
2086	Bottled and canned soft drinks.	26	60	49,50	61
2111,21,31	All tobacco products	27	62	51,52	63
2111,31	Cigarettes, chewing and smoking tobacco.	28	64	53,54	65
2121	Cigars.	29	66	55,56	67
2251,52	Hosiery	30	68	57,58	69
2421	Sawmills and planing mills, general	31	70	59,60	71
2435,2436	Veneer and plywood	32	72	61,62	73
251	Household furniture	33	74	63,64	75
2511,2517	Wood household furniture	34	76	65,66	77
2512	Upholstered household furniture.	35	78	67,68	79
2514	Metal household furniture	36	80	69,70	81
2515	Mattresses and bedsprings	37	82	71,72	83
2611,21,31,61	Paper, paperboard, and pulp mills.	38	84	73,74	85
2651	Folding paperboard boxes	39	86	75,76	87
2653	Corrugated and solid fiber boxes.	40	88	77,78	89
2823,24	Synthetic fibers	41	90	79,80	91

Indexes of output per employee hour and related data—Continued

SIC code	Industry	Chart	Page	Table	Page
2834	Pharmaceutical preparations	42	92	81,82	93
2841	Soaps and detergents	43	94	83,84	95
2851	Paints and allied products	44	96	85,86	97
2911	Petroleum refining	45	98	87,88	99
3011	Tires and inner tubes	46	100	89,90	101
314	Footwear	47	102	91,92	103
3221	Glass containers	48	104	93,94	105
3241	Hydraulic cement	49	106	95,96	107
325	Structural clay products	50	108	97,98	109
3251,53,59	Clay construction products	51	110	99,100	111
3251	Brick and structural clay tile	52	112	101,102	113
3253	Ceramic wall and floor tile	53	114	103,104	115
3255	Clay refractories	54	116	105,106	117
3271,72	Concrete products	55	118	107,108	119
3273	Ready-mixed concrete	56	120	109	121
331	Steel	57	122	110,111	123
3321	Gray iron foundries	58	124	112,113	125
3324,25	Steel foundries	59	126	114,115	127
3331,32,33	Primary copper, lead, and zinc	60	128	116,117	129
3331	Primary copper	61	130	118,119	131
3334	Primary aluminum	62	132	120,121	133
3351	Copper rolling and drawing	63	134	122,123	135
3353,54,55	Aluminum rolling and drawing	64	136	124,125	137
341	Metal cans	65	138	126,127	139
3621	Motors and generators	66	140	128,129	141
3631,32,33,39	Major household appliances	67	142	130,131	143
3631	Household cooking equipment	68	144	132,133	145
3632	Household refrigerators and freezers	69	146	134,135	147
3633	Household laundry equipment	70	148	136,137	149
3639	Household appliances not elsewhere classified	71	150	138,139	151
3641	Electric lamps	72	152	140,141	153
3645,46,47,48	Lighting fixtures	73	154	142,143	155
3651	Radio and television receiving sets	74	156	144,145	157
371	Motor vehicles and equipment	75	158	146,147	159
Other					
401 Class I	Railroad transportation, revenue traffic	76	160	148,149	161
401 Class I	Railroad transportation, car miles	77	162	150,151	163
4213 part	Intercity trucking	78	164	152	165
4213 part	Intercity trucking (general freight)	79	166	153	167
4511	Air transportation	80	168	154	169
4612,13	Petroleum pipelines	81	170	155,156	171
4811	Telephone communications	82	172	157	173
491,92,93	Gas and electric utilities	83	174	158,159	175
54	Retail food stores	84	176	160	177
5511	Franchised new car dealers	85	178	161	179
5541	Gasoline service stations	86	180	162	181
58	Eating and drinking places	87	182	163	183
7011	Hotels, motels, and tourist courts	88	184	164	185
72	Laundry and cleaning services	89	186	165	187

Chart 2. Iron mining, crude ore (SIC 1011): Output per hour and related data, 1967-78

(1967=100)



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

Table 2. Iron mining, crude ore (SIC 1011): Indexes of output per hour of production workers and output per employee, 1954-78
(1967 = 100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1954	41.0	39.6	38.3	46.0
1955	52.9	53.6	52.5	58.0
1956	55.5	53.9	54.2	52.8
1957	56.2	53.3	54.2	50.2
1958	55.1	45.4	48.4	36.6
1959	57.1	48.7	52.3	38.2
1960	64.9	61.3	62.6	56.3
1961	75.2	66.9	70.3	56.2
1962	81.0	74.9	78.1	64.4
1963	90.0	83.5	84.7	78.4
1964	97.6	94.3	94.3	94.3
1965	94.5	93.3	92.6	96.1
1966	95.8	96.6	96.2	97.8
1967	100.0	100.0	100.0	100.0
1968	109.6	108.2	109.1	104.9
1969	116.9	113.7	115.7	106.8
1970	115.6	113.8	116.2	105.4
1971	114.1	108.8	110.8	101.8
1972	124.4	119.2	122.2	108.6
1973	130.6	129.7	131.3	123.8
1974	124.0	127.7	128.1	125.7
1975	129.7	127.9	130.4	118.8
1976	130.6	128.1	130.6	119.0
1977	126.0	114.6	125.3	85.8
1978 ²	134.4	134.5	137.5	124.4
Average annual percent change:				
1947-78	4.9	4.4	4.8	2.5
1973-78 .....	.6	-.4	.5	-3.1

¹ The output measures underlying the output per hour of production workers 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.

² Preliminary.

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 3. Iron mining, crude ore (SIC 1011): Indexes of output, hours of production workers, and employees, 1954-78
(1967 = 100)

Year	Output	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1954	60.0	146.5	151.4	156.7	130.5
1955	78.2	147.7	146.0	148.9	134.9
1956	80.4	144.9	149.2	148.4	152.2
1957	88.5	157.4	165.9	163.4	176.2
1958	60.5	109.8	133.2	125.0	165.3
1959	56.6	99.1	116.3	108.3	148.0
1960	85.7	132.1	139.9	136.8	152.2
1961	75.8	100.8	113.3	107.8	134.9
1962	79.8	98.5	106.6	102.2	124.0
1963	85.3	94.8	102.2	100.7	108.8
1964	96.4	98.8	102.2	102.2	102.2
1965	98.2	103.9	105.3	106.1	102.2
1966	100.0	104.4	103.5	103.9	102.2
1967	100.0	100.0	100.0	100.0	100.0
1968	107.2	97.8	99.1	98.3	102.2
1969	113.7	97.3	100.0	98.3	106.5
1970	116.9	101.1	102.7	100.6	110.9
1971	108.4	95.0	99.6	97.8	106.5
1972	103.9	83.5	87.2	85.0	95.7
1973	121.1	92.7	93.4	92.2	97.8
1974	120.3	97.0	94.2	93.9	95.7
1975	118.8	91.6	92.9	91.1	100.0
1976	124.1	95.0	96.9	95.0	104.3
1977	87.7	69.6	76.5	70.0	102.2
1978 ¹	129.8	96.6	96.5	94.4	104.3
Average annual percent change:					
1947-78	2.2	-2.6	-2.2	-2.6	-.4
1973-78	-1.6	-2.1	-1.2	-2.0	1.6

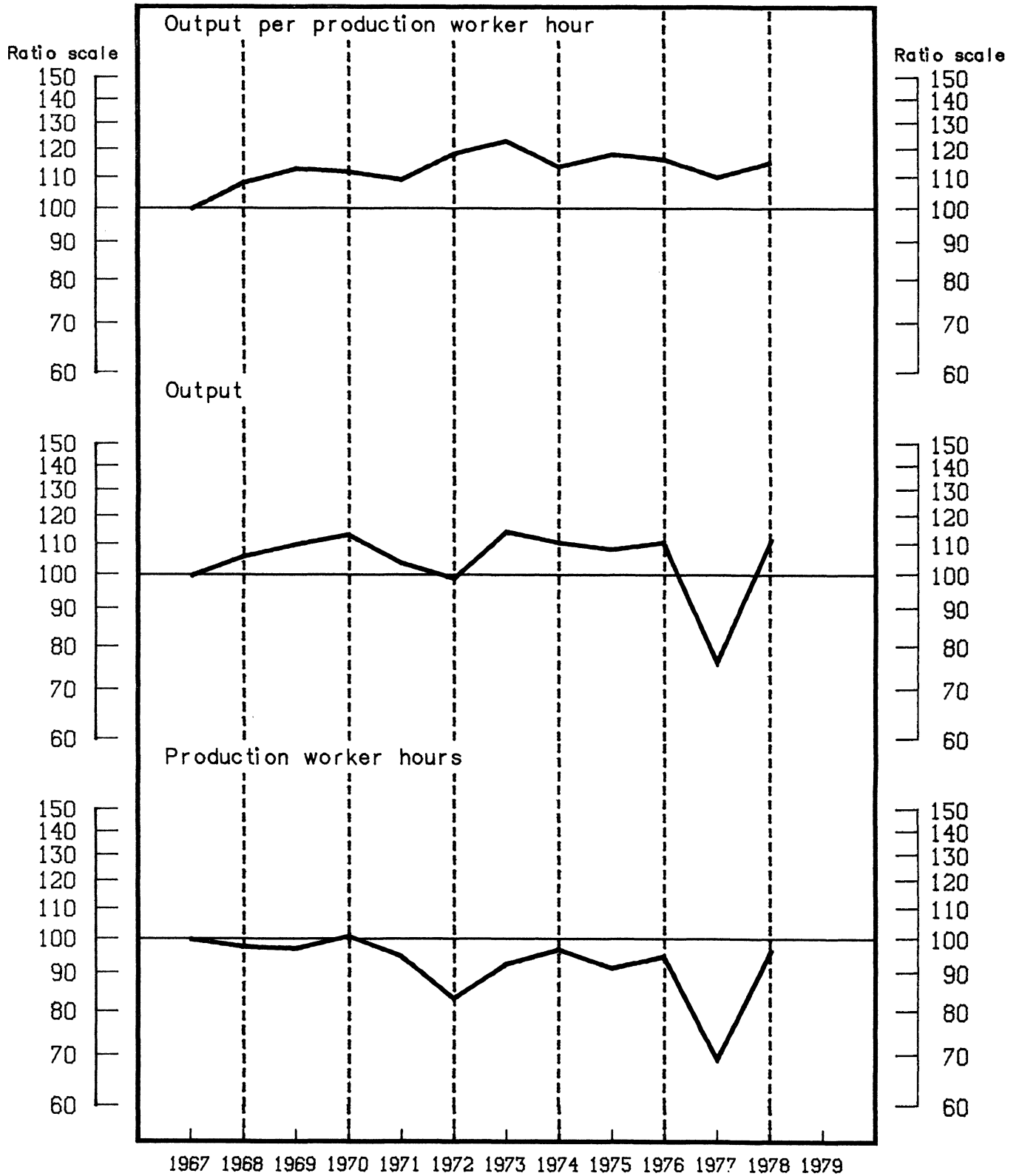
¹ Preliminary.

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 3. Iron mining, usable ore (SIC 1011): Output per hour and related data, 1967-78

(1967=100)



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

Table 4. Iron mining, usable ore (SIC 1011): Indexes of output per hour of production workers and output per employee, 1954-78

(1967 = 100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1954	48.3	46.7	45.1	54.2
1955	63.4	64.2	62.9	69.5
1956	63.4	61.5	61.9	60.3
1957	64.0	60.8	61.7	57.2
1958	60.1	49.5	52.8	39.9
1959	59.9	51.1	54.8	40.1
1960	66.8	63.1	64.5	58.0
1961	71.6	63.7	67.0	53.5
1962	75.5	69.8	72.8	60.0
1963	82.9	76.9	78.1	72.2
1964	91.8	88.7	88.7	88.7
1965	92.2	91.0	90.3	93.7
1966	97.5	98.4	98.0	99.6
1967	100.0	100.0	100.0	100.0
1968	108.6	107.2	108.0	103.9
1969	113.3	110.2	112.1	103.5
1970	112.3	110.5	112.8	102.3
1971	109.6	104.5	106.4	97.7
1972	118.8	113.8	116.7	103.7
1973	123.6	122.7	124.3	117.2
1974	114.2	117.6	118.0	115.8
1975	118.6	116.9	119.2	108.6
1976	116.8	114.6	116.8	106.4
1977	110.5	100.5	109.9	75.2
1978 ²	115.7	115.9	118.4	107.2
Average annual percent change:				
1947-78	3.6	3.1	3.5	1.3
1973-78	-1.3	-2.2	-1.4	-4.9

¹ The output measures underlying the output per hour of production workers 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.

² Preliminary.

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 5. Iron mining, usable ore (SIC 1011): Indexes of output, hours of production workers, and employees, 1954-78

(1967 = 100)

Year	Output	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1954	70.7	146.5	151.4	156.7	130.5
1955	93.7	147.7	146.0	148.9	134.9
1956	91.8	144.9	149.2	148.4	152.2
1957	100.8	157.4	165.9	163.4	176.2
1958	66.0	109.8	133.2	125.0	165.3
1959	59.4	99.1	116.3	108.3	148.0
1960	88.3	132.1	139.9	136.8	152.2
1961	72.2	100.8	113.3	107.8	134.9
1962	74.4	98.5	106.6	102.2	124.0
1963	78.6	94.8	102.2	100.7	108.8
1964	90.7	98.8	102.2	102.2	102.2
1965	95.8	103.9	105.3	106.1	102.2
1966	101.8	104.4	103.5	103.9	102.2
1967	100.0	100.0	100.0	100.0	100.0
1968	106.2	97.8	99.1	98.3	102.2
1969	110.2	97.3	100.0	98.3	106.5
1970	113.5	101.1	102.7	100.6	110.9
1971	104.1	95.0	99.6	97.8	106.5
1972	99.2	83.5	87.2	85.0	95.7
1973	114.6	92.7	93.4	92.2	97.8
1974	110.8	97.0	94.2	93.9	95.7
1975	108.6	91.6	92.9	91.1	100.0
1976	111.0	95.0	96.9	95.0	104.3
1977	76.9	69.6	76.5	70.0	102.2
1978 ¹	111.8	96.6	96.5	94.4	104.3
Average annual percent change:					
1947-78 .....	.9	-2.6	-2.2	-2.6	-4
1973-78	-3.4	-2.1	-1.2	-2.0	1.6

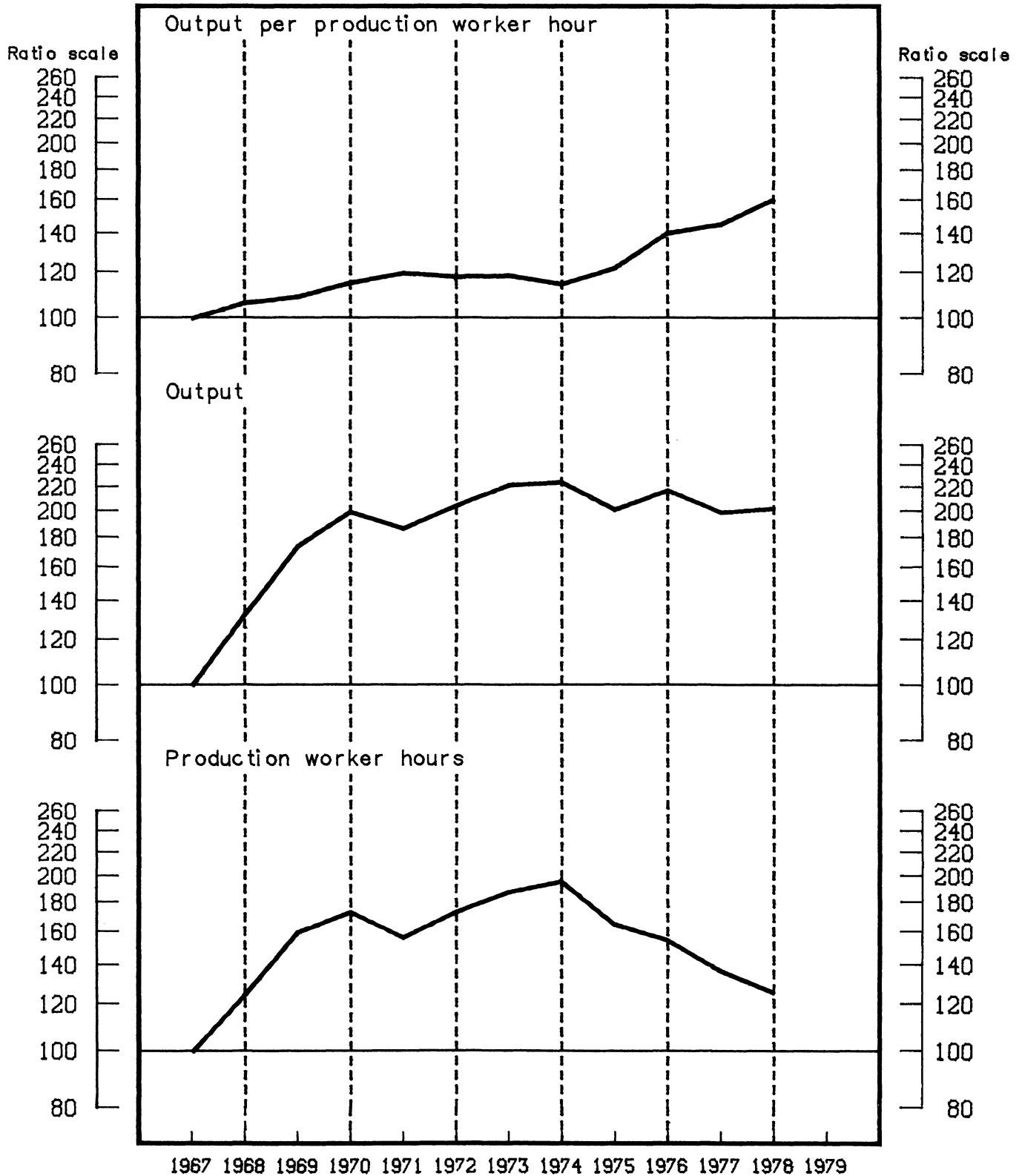
¹ Preliminary.

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 4. Copper mining, crude ore (SIC 1021): Output per hour and related data, 1967-78

(1967=100)



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

Table 6. Copper mining, crude ore (SIC 1021): Indexes of output per hour of production workers and output per employee, 1954-78
(1967 = 100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1954	49.9	56.5	53.8	64.7
1955	56.4	65.6	62.7	75.5
1956	57.5	66.7	63.0	80.0
1957	63.1	67.8	64.8	77.7
1958	69.8	70.0	68.1	76.0
1959	71.5	75.6	75.2	76.8
1960	73.3	82.2	80.2	88.7
1961	75.2	86.0	80.5	106.7
1962	82.3	93.1	86.1	120.5
1963	82.0	94.5	86.2	129.6
1964	93.5	105.3	96.6	140.5
1965	96.2	109.3	99.4	151.2
1966	101.9	114.1	104.3	154.7
1967	100.0	100.0	100.0	100.0
1968	106.5	117.7	117.3	118.8
1969	109.0	125.8	119.1	148.7
1970	115.3	128.9	123.1	148.6
1971	119.8	126.3	125.3	129.3
1972	118.1	123.7	119.3	138.1
1973	118.6	124.9	119.8	141.9
1974	114.7	116.6	112.9	128.0
1975	122.2	116.9	116.8	117.1
1976	140.5	134.2	134.7	133.0
1977	145.4	134.3	135.3	131.5
1978 ²	160.5	154.0	154.6	152.4
Average annual percent change:				
1947-78	4.5	3.6	3.9	2.5
1973-78	7.0	4.7	5.8	1.6

¹ The output measures underlying the output per hour of production workers 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.

² Preliminary.

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 7. Copper mining, crude ore (SIC 1021): Indexes of output, hours of production workers, and employees, 1954-78
(1967 = 100)

Year	Output ¹	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1954	71.4	143.0	126.4	132.7	110.3
1955	85.9	152.3	130.9	137.0	113.8
1956	100.7	175.2	150.9	159.9	125.9
1957	99.2	157.1	146.4	153.1	127.6
1958	87.8	125.7	125.5	129.0	115.5
1959	79.4	111.0	105.0	105.6	103.4
1960	103.9	141.7	126.4	129.6	117.2
1961	110.3	146.6	128.2	137.0	103.4
1962	116.4	141.5	125.0	135.2	96.6
1963	113.9	138.9	120.5	132.1	87.9
1964	121.1	129.5	115.0	125.3	86.2
1965	135.6	141.0	124.1	136.4	89.7
1966	146.7	144.0	128.6	140.7	94.8
1967	100.0	100.0	100.0	100.0	100.0
1968	133.2	125.1	113.2	113.6	112.1
1969	174.3	159.9	138.6	146.3	117.2
1970	199.8	173.3	155.0	162.3	134.5
1971	187.2	156.3	148.2	149.4	144.8
1972	204.8	173.4	165.5	171.6	148.3
1973	222.6	187.7	178.2	185.8	156.9
1974	225.2	196.3	193.2	199.4	175.9
1975	201.8	165.2	172.7	172.8	172.4
1976	217.8	155.0	162.3	161.7	163.8
1977	199.5	137.2	148.6	147.5	151.7
1978 ²	202.4	126.1	131.4	130.9	132.8
Average annual percent change:					
1947-78	4.6	.1	.9	.6	2.0
1973-78	-2.2	-8.5	-6.6	-7.5	-3.7

¹ Represents output in terms of copper ore sold or treated.

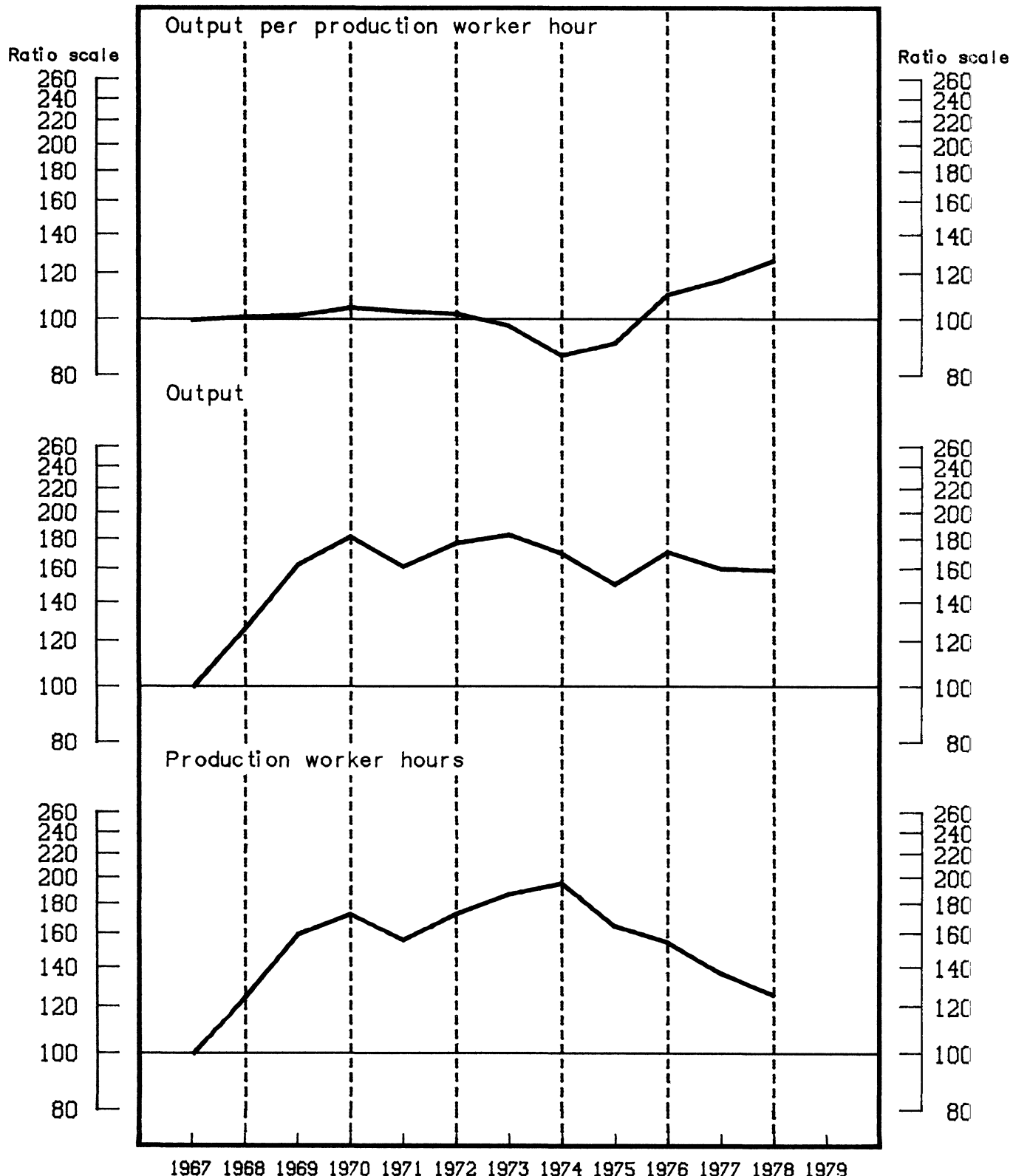
² Preliminary.

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 5. Copper mining, recoverable metal (SIC 1021): Output per hour and related data, 1967-78

(1967=100)



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

Table 8. Copper mining, recoverable metal (SIC 1021): Indexes of output per hour of production workers and output per employee, 1954-78
(1967=100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1954	60.5	68.4	65.2	78.4
1955	68.2	79.3	75.8	91.2
1956	65.6	76.1	71.9	91.3
1957	71.8	77.0	73.7	88.4
1958	81.1	81.3	79.1	88.3
1959	77.2	81.6	81.2	82.9
1960	79.4	89.0	86.8	96.0
1961	82.9	94.8	88.7	117.5
1962	90.4	102.3	94.6	132.4
1963	90.9	104.8	95.6	143.7
1964	100.3	113.0	103.7	150.7
1965	100.1	113.8	103.5	157.4
1966	103.8	116.3	106.3	157.7
1967	100.0	100.0	100.0	100.0
1968	101.3	111.9	111.5	113.0
1969	102.0	117.7	111.5	139.2
1970	105.2	117.6	112.3	135.5
1971	103.6	109.3	108.4	111.9
1972	102.5	107.4	103.6	119.9
1973	97.8	103.0	98.8	117.0
1974	86.9	88.3	85.5	96.9
1975	91.3	87.4	87.3	87.5
1976	110.6	105.7	106.1	104.7
1977	117.1	108.1	108.9	105.9
1978 ²	126.7	121.6	122.1	120.3
Average annual percent change:				
1947-78	2.5	1.6	1.9	.6
1973-78	7.0	4.8	5.8	1.7

¹ The output measures underlying the output per hour of production workers 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.
² Preliminary.

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 9. Copper mining, recoverable metal (SIC 1021): Indexes of output, hours of production workers, and employees, 1954-78
(1967=100)

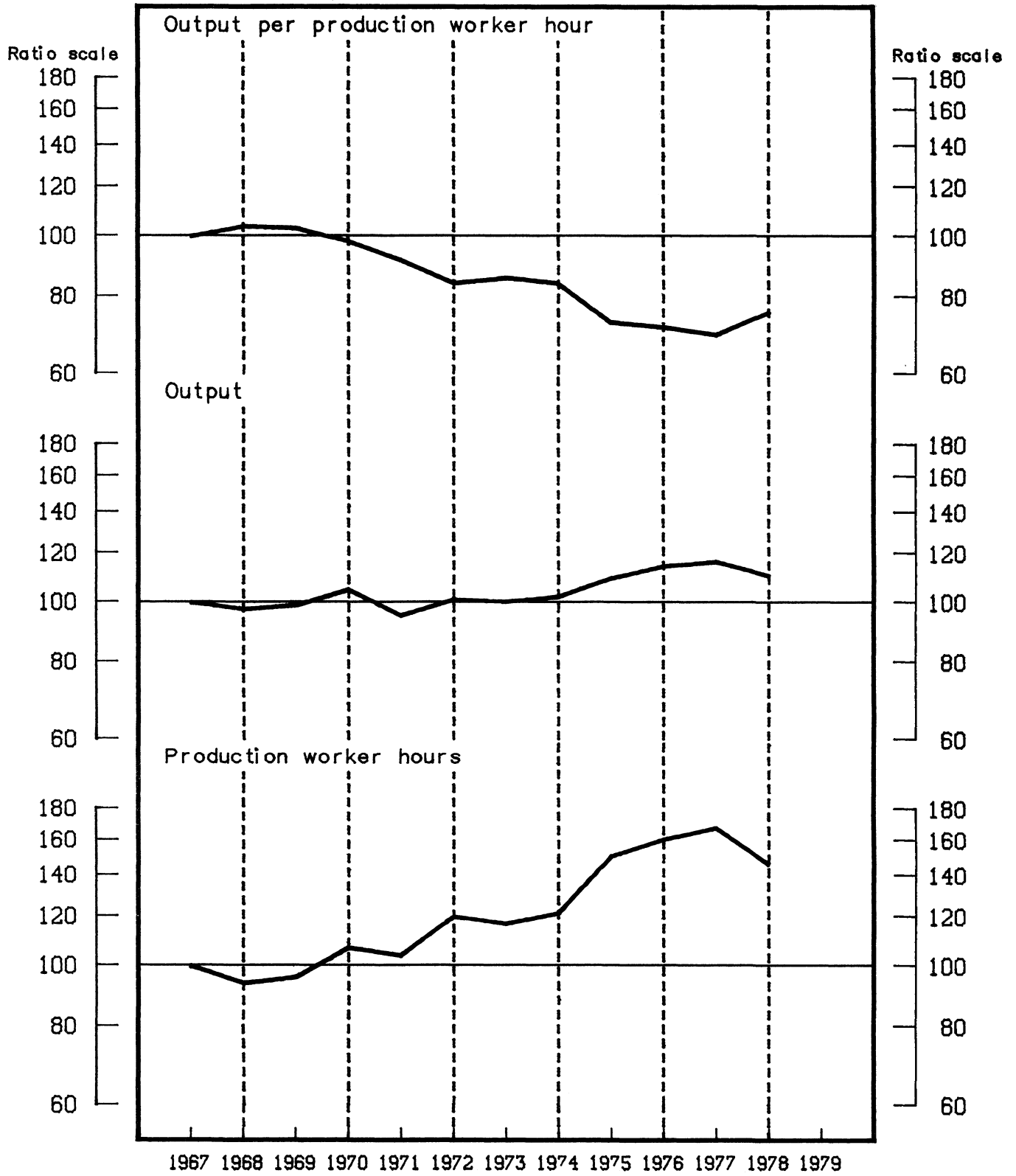
Year	Output ¹	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1954	86.5	143.0	126.4	132.7	110.3
1955	103.8	152.3	130.9	137.0	113.8
1956	114.9	175.2	150.9	159.9	125.9
1957	112.8	157.1	146.4	153.1	127.6
1958	102.0	125.7	125.5	129.0	115.5
1959	85.7	111.0	105.0	105.6	103.4
1960	112.5	141.7	126.4	129.6	117.2
1961	121.5	146.6	128.2	137.0	103.4
1962	127.9	141.5	125.0	135.2	96.6
1963	126.3	138.9	120.5	132.1	87.9
1964	129.9	129.5	115.0	125.3	86.2
1965	141.2	141.0	124.1	136.4	89.7
1966	149.5	144.0	128.6	140.7	94.8
1967	100.0	100.0	100.0	100.0	100.0
1968	126.7	125.1	113.2	113.6	112.1
1969	163.1	159.9	138.6	146.3	117.2
1970	182.3	173.3	155.0	162.3	134.5
1971	162.0	156.3	148.2	149.4	144.8
1972	177.8	173.4	165.5	171.6	148.3
1973	183.5	187.7	178.2	185.8	156.9
1974	170.5	196.3	193.2	199.4	175.9
1975	150.9	165.2	172.7	172.8	172.4
1976	171.5	155.0	162.3	161.7	163.8
1977	160.6	137.2	148.6	147.5	151.7
1978 ²	159.8	126.1	131.4	130.9	132.8
Average annual percent change:					
1947-78	2.6	.1	.9	.6	2.0
1973-78	-2.1	-8.5	-6.6	-7.5	-3.7

¹ Represents output in terms of copper recovered from copper ore, old tailings, and precipitates.
² Preliminary.

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 6. Coal mining (SIC 111, 121): Output per hour and related data, 1967-78

(1967=100)



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

Table 10. Coal mining (SIC 111, 121): Indexes of output per hour of production workers and output per employee, 1954-78
(1967=100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1954	47.7	40.7	39.3	55.5
1955	51.2	50.1	48.3	68.4
1956	54.1	52.6	50.9	68.2
1957	54.8	50.8	49.7	60.9
1958	61.2	50.8	51.0	49.7
1959	62.7	55.2	55.7	52.0
1960	66.8	58.6	59.2	54.9
1961	74.0	65.2	65.7	62.3
1962	79.2	72.0	71.9	73.4
1963	83.1	79.2	78.4	86.2
1964	87.8	84.5	83.6	91.3
1965	93.1	91.4	91.0	94.7
1966	98.0	97.6	97.6	97.9
1967	100.0	100.0	100.0	100.0
1968	103.8	101.3	102.6	93.7
1969	103.1	99.6	101.0	90.7
1970	98.1	97.7	98.5	92.2
1971	91.6	87.4	91.4	67.2
1972	84.2	83.3	85.4	71.6
1973	85.8	82.3	84.9	67.9
1974	84.1	75.7	78.3	61.4
1975	72.7	68.5	71.1	54.5
1976	71.4	67.7	70.6	52.5
1977	69.5	68.7	71.6	53.4
1978 ²	75.5	70.5	75.9	47.2
Average annual percent change:				
1947-78	3.4	3.6	4.0	.3
1973-78	-3.5	-3.0	-2.4	-6.3

¹ The output measures underlying the output per hour of production workers 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.

² Preliminary.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy; 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 11. Coal mining (SIC 111, 121): Indexes of output, hours of production workers, and employees, 1954-78
(1967=100)

Year	Output	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1954	79.4	166.6	195.0	202.2	143.0
1955	91.6	178.9	182.7	189.6	133.9
1956	99.7	184.4	189.7	195.8	146.1
1957	97.1	177.3	191.0	195.5	159.4
1958	81.3	132.9	160.1	159.4	163.7
1959	81.2	129.6	147.2	145.9	156.3
1960	80.8	120.9	138.0	136.6	147.2
1961	77.8	105.1	119.4	118.5	124.8
1962	80.9	102.2	112.3	112.5	110.2
1963	87.8	105.6	110.8	112.0	101.8
1964	91.8	104.5	108.7	109.8	100.6
1965	94.7	101.7	103.6	104.1	100.0
1966	97.3	99.3	99.7	99.7	99.4
1967	100.0	100.0	100.0	100.0	100.0
1968	97.6	94.0	96.3	95.1	104.2
1969	99.0	96.0	99.4	98.0	109.1
1970	105.0	107.0	107.5	106.6	113.9
1971	95.3	104.0	109.0	104.3	141.8
1972	101.1	120.0	121.3	118.4	141.2
1973	100.4	117.0	122.0	118.2	147.9
1974	102.3	121.6	135.2	130.7	166.7
1975	109.6	150.8	160.0	154.1	201.2
1976	114.6	160.6	169.4	162.4	218.2
1977	116.5	167.7	169.5	162.6	218.2
1978 ¹	110.6	146.5	156.9	145.8	234.5
Average annual percent change:					
1947-78 .....	.2	-3.1	-3.3	-3.7	-.1
1973-78	2.7	6.3	5.9	5.1	9.6

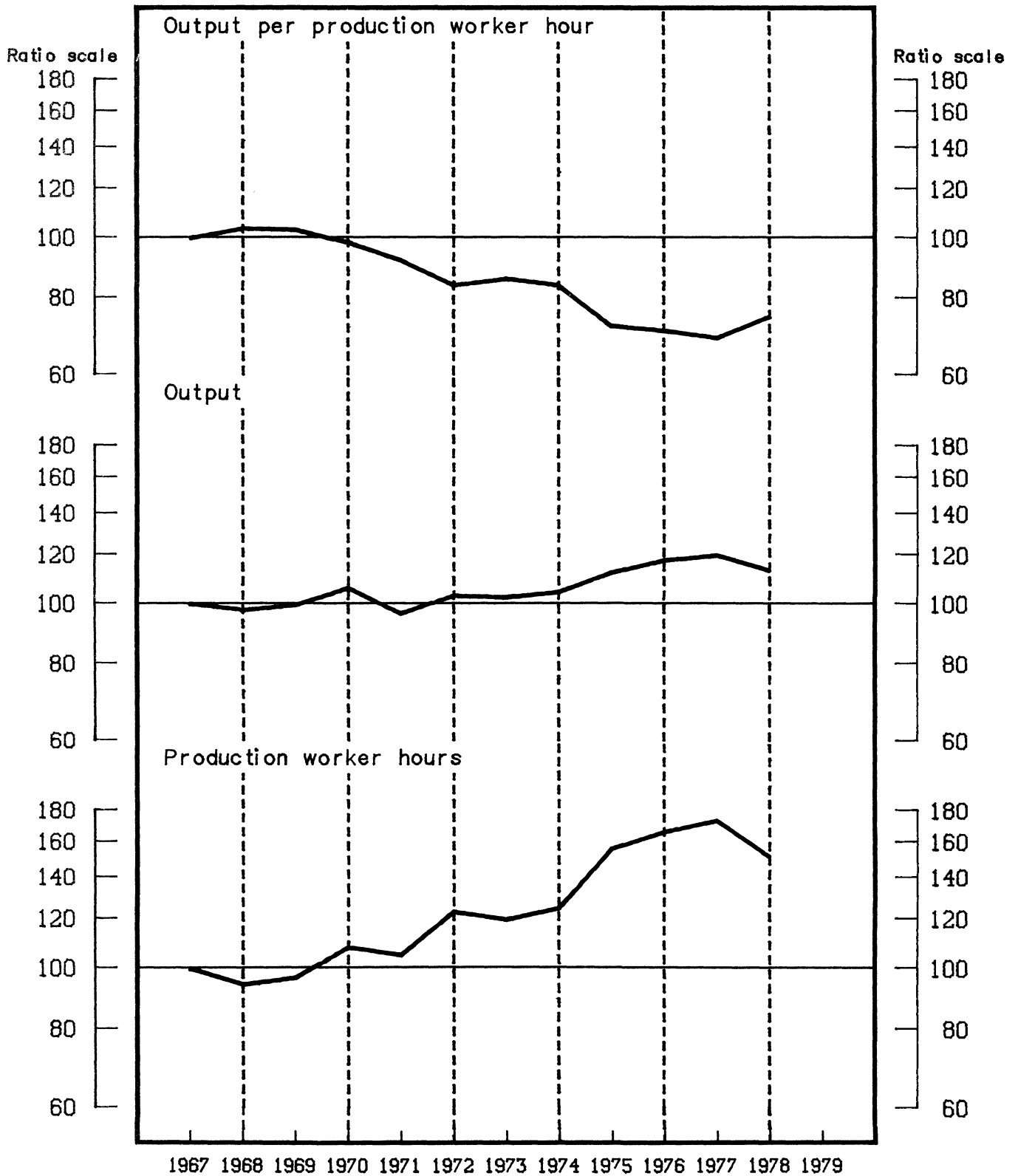
¹ Preliminary.

SOURCE: Output based on data from the Energy Information Administration, U.S. Department of Energy, 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 7. Bituminous coal and lignite mining (SIC 121): Output per hour and related data, 1967-78

(1967=100)



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

Table 12. Bituminous coal and lignite mining (SIC 121): Indexes of output per hour of production workers and output per employee, 1954-78
(1967=100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1954	46.4	40.4	38.7	57.6
1955	50.3	50.1	48.1	69.8
1956	52.4	51.6	50.0	66.9
1957	53.9	50.6	49.5	59.2
1958	60.2	50.1	50.4	48.5
1959	61.6	54.4	55.0	50.3
1960	66.2	58.0	58.6	54.1
1961	73.8	64.3	64.9	60.7
1962	78.5	70.8	70.7	71.0
1963	82.3	78.2	77.2	85.1
1964	87.9	84.4	83.4	91.4
1965	93.5	92.0	91.6	95.1
1966	98.4	97.9	98.1	96.9
1967	100.0	100.0	100.0	100.0
1968	103.6	101.1	102.5	92.4
1969	103.1	99.6	101.2	89.8
1970	98.3	97.7	98.6	92.0
1971	92.0	87.4	91.5	66.9
1972	83.9	82.8	84.8	70.8
1973	85.9	81.8	84.4	67.1
1974	83.9	74.9	77.6	60.0
1975	72.1	67.7	70.3	53.6
1976	70.8	66.9	69.8	51.8
1977	69.0	68.0	71.1	52.3
1978 ²	74.7	69.5	74.9	46.1
Average annual percent change:				
1947-78	3.5	3.6	4.0	.3
1973-78	-3.6	-3.1	-2.4	-6.4

¹ The output measures underlying the output per hour of production workers 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.

² Preliminary.

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 13. Bituminous coal and lignite mining (SIC 121): Indexes of output, hours of production workers, and employees, 1954-78
(1967=100)

Year	Output	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1954	71.0	153.1	175.9	183.5	123.3
1955	84.7	168.3	169.2	176.0	121.4
1956	91.6	174.8	177.5	183.2	136.9
1957	90.5	168.0	179.0	182.7	153.0
1958	75.7	125.7	151.0	150.2	156.2
1959	75.9	123.2	139.6	138.0	151.0
1960	76.4	115.4	131.8	130.3	141.3
1961	74.0	100.3	115.0	114.0	122.0
1962	77.5	98.7	109.4	109.6	109.1
1963	84.1	102.2	107.6	108.9	98.8
1964	89.0	101.3	105.5	106.7	97.4
1965	93.3	99.8	101.4	101.9	98.1
1966	96.9	98.5	99.0	98.8	100.0
1967	100.0	100.0	100.0	100.0	100.0
1968	97.8	94.4	96.7	95.4	105.8
1969	99.7	96.7	100.1	98.5	111.0
1970	106.3	108.1	108.8	107.8	115.5
1971	96.6	105.0	110.5	105.6	144.5
1972	103.2	123.0	124.7	121.7	145.8
1973	102.6	119.5	125.4	121.5	152.9
1974	104.6	124.7	139.7	134.8	174.2
1975	112.4	156.0	166.1	159.9	209.7
1976	117.6	166.2	175.7	168.4	227.1
1977	119.8	173.5	176.1	168.6	229.0
1978 ¹	113.3	151.6	163.0	151.2	245.8
Average annual percent change:					
1947-78 .....	.8	-2.6	-2.7	-3.1	.5
1973-78	2.7	6.6	6.1	5.3	9.8

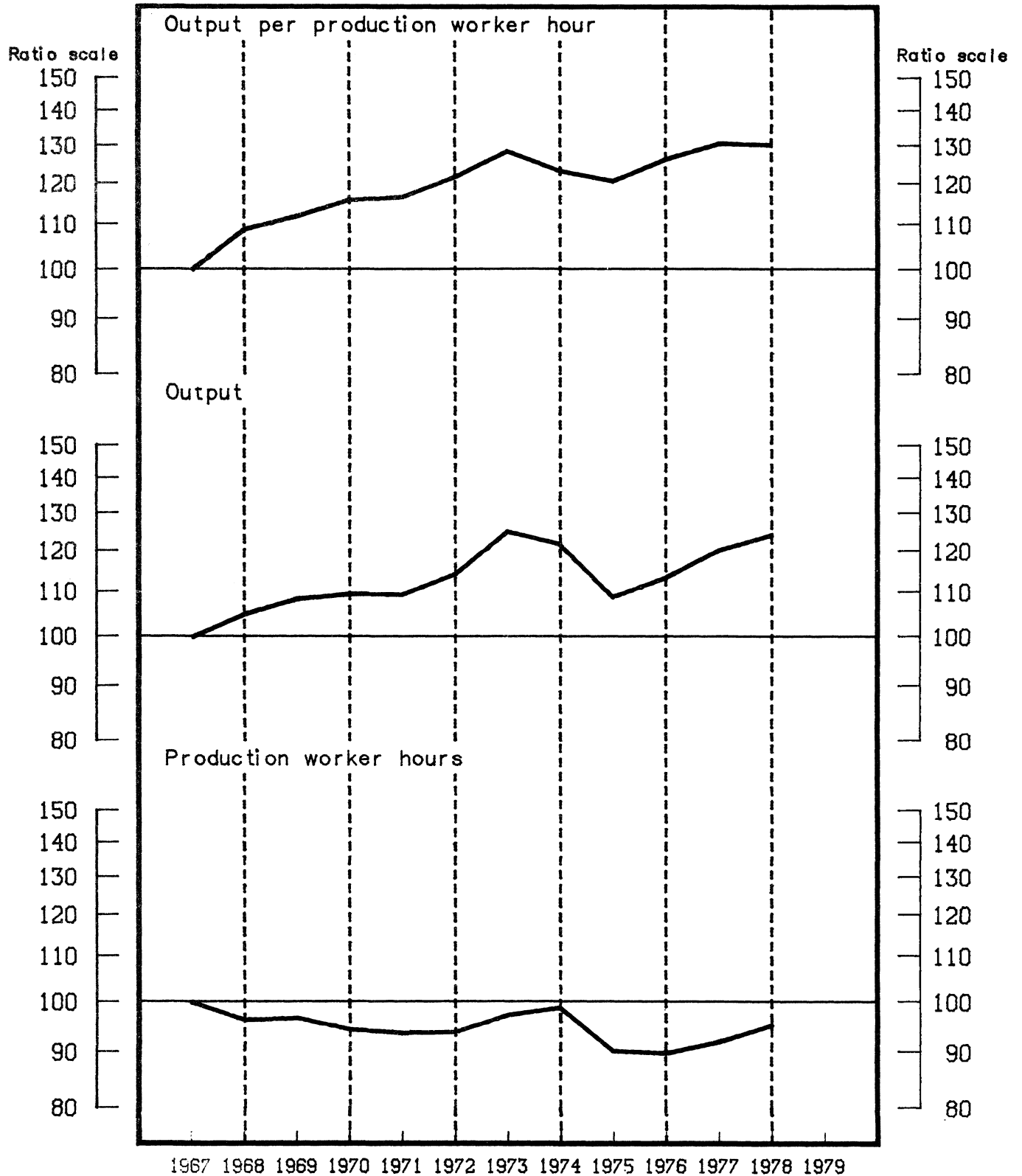
¹ Preliminary.

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 8. Nonmetallic minerals, except fuels (SIC 14): Output per hour and related data, 1967-78

(1967=100)



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

Table 14. Nonmetallic minerals, except fuels (SIC 14): Indexes of output per hour of production workers and output per employee, 1954-78
(1967 = 100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1954	58.4	63.5	58.9	91.4
1955	62.8	68.0	63.5	94.0
1956	65.5	70.0	65.9	92.1
1957	70.5	72.2	69.2	87.3
1958	73.0	72.4	70.4	81.2
1959	74.4	75.9	73.5	86.7
1960	74.7	74.5	72.6	83.1
1961	78.1	77.9	76.0	85.7
1962	81.9	82.5	80.3	92.0
1963	85.7	86.5	84.5	94.8
1964	91.1	92.5	90.8	99.0
1965	93.7	96.3	94.5	103.9
1966	98.9	101.4	100.1	106.1
1967	100.0	100.0	100.0	100.0
1968	108.9	108.6	108.5	108.9
1969	112.1	113.9	113.4	115.5
1970	116.0	115.7	115.5	116.7
1971	116.7	115.9	116.7	112.7
1972	121.7	120.2	121.4	115.3
1973	128.5	128.8	130.4	122.7
1974	123.3	122.1	123.9	115.8
1975	120.7	113.9	117.3	102.7
1976	126.4	121.0	124.6	108.7
1977	130.7	126.7	130.2	115.2
1978 ²	130.4	127.5	130.4	117.2
Average annual percent change:				
1954-78	3.5	3.1	3.5	1.4
1973-78 .....	.8	.3	.6	-.5

¹ The output measures underlying the output per hour of production workers 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.

² Preliminary.

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 15. Nonmetallic minerals, except fuels (SIC 14): Indexes of output, hours of production workers, and employees, 1954-78
(1967 = 100)

Year	Output	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1954	60.3	103.3	94.9	102.4	66.0
1955	65.8	104.8	96.7	103.6	70.0
1956	71.2	108.7	101.7	108.0	77.3
1957	72.1	102.2	99.8	104.2	82.6
1958	71.7	98.2	99.1	101.9	88.3
1959	78.6	105.7	103.6	106.9	90.7
1960	79.0	105.7	106.0	108.8	95.1
1961	80.5	103.1	103.4	105.9	93.9
1962	84.2	102.8	102.1	104.8	91.5
1963	87.5	102.1	101.2	103.6	92.3
1964	92.2	101.2	99.7	101.5	93.1
1965	98.0	104.6	101.8	103.7	94.3
1966	103.6	104.7	102.2	103.5	97.6
1967	100.0	100.0	100.0	100.0	100.0
1968	105.0	96.4	96.7	96.8	96.4
1969	108.5	96.8	95.3	95.7	93.9
1970	109.6	94.5	94.7	94.9	93.9
1971	109.5	93.8	94.5	93.8	97.2
1972	114.4	94.0	95.2	94.2	99.2
1973	125.2	97.4	97.2	96.0	102.0
1974	121.9	98.9	99.8	98.4	105.3
1975	109.0	90.3	95.7	92.9	106.1
1976	113.6	89.9	93.9	91.2	104.5
1977	120.4	92.1	95.0	92.5	104.5
1978 ¹	124.4	95.4	97.6	95.4	106.1
Average annual percent change:					
1954-78	2.9	-.6	-.2	-.6	1.4
1973-78	-.1	-.9	-.4	-.7	.5

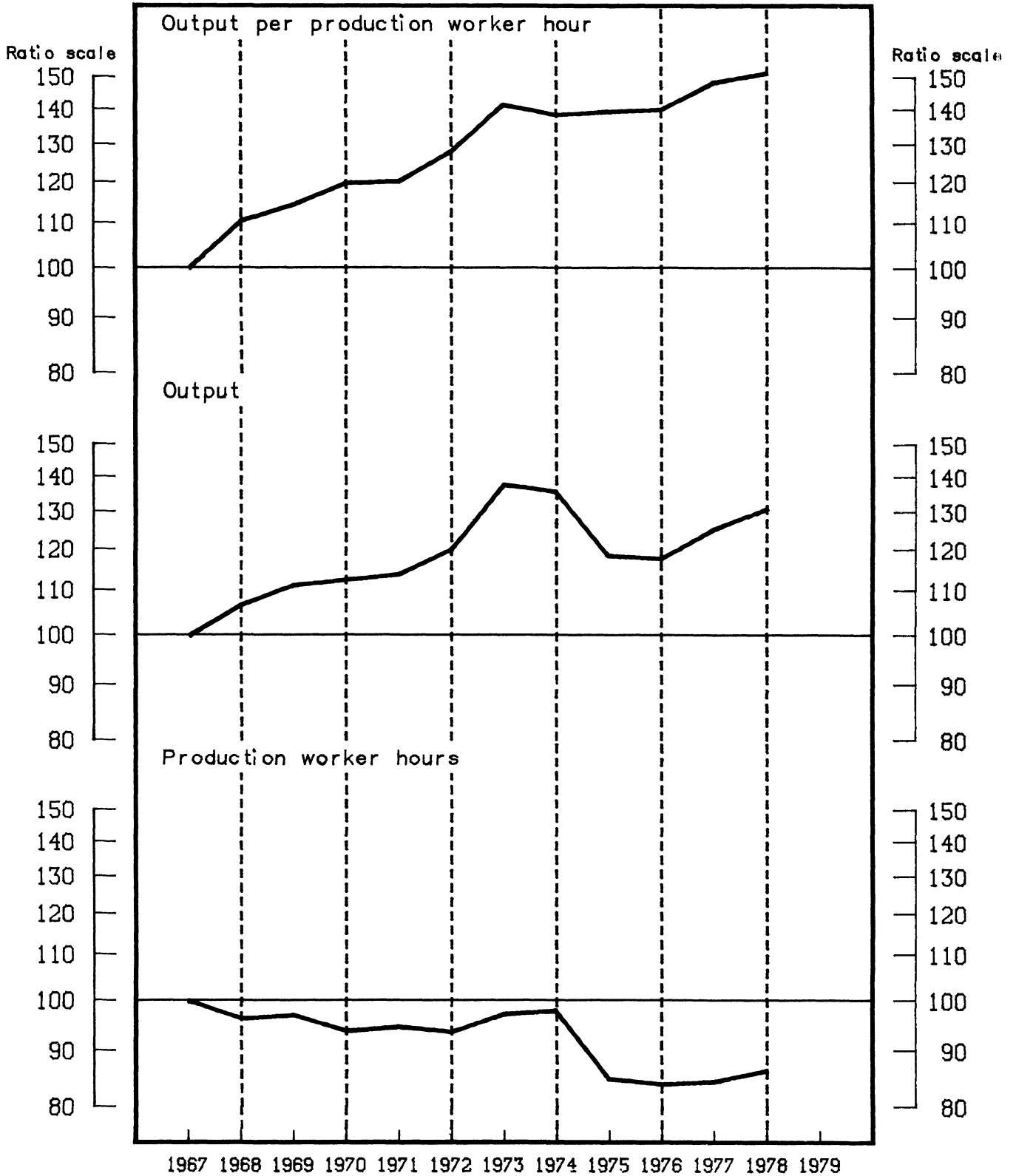
¹ Preliminary.

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 9. Crushed and broken stone (SIC 142): Output per hour and related data, 1967-78

(1967=100)



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

Table 16. Crushed and broken stone (SIC 142): Indexes of output per hour of production workers and output per employee, 1958-78
(1967 = 100)

Year	Output per hour of production workers ¹	Output per employee ¹		
		All employees	Production workers	Nonproduction workers
Index:				
1958	73.9	71.8	71.0	75.9
1959	75.9	75.5	74.9	79.2
1960	76.7	74.1	73.6	76.7
1961	78.2	76.4	75.8	79.5
1962	81.4	80.9	79.8	86.4
1963	84.7	84.2	83.7	87.0
1964	91.5	90.5	90.2	92.5
1965	94.4	96.7	95.8	102.2
1966	99.8	101.8	101.0	105.6
1967	100.0	100.0	100.0	100.0
1968	110.7	110.3	110.5	109.8
1969	114.6	116.4	116.5	116.2
1970	119.9	117.3	119.7	106.6
1971	120.3	117.4	121.3	101.2
1972	128.2	124.5	127.6	110.9
1973	141.6	140.5	144.3	124.0
1974	138.6	135.8	140.6	116.4
1975	139.6	128.0	133.9	105.3
1976	140.2	132.2	137.0	113.1
1977	148.5	141.6	145.4	125.5
1978 ²	151.6	148.0	150.9	134.9
Average annual percent change:				
1958-78	4.0	3.9	4.1	2.5
1973-78	1.6	1.2	1.0	2.1

¹ The output measures underlying the output per hour of production workers 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.

² Preliminary.

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 17. Crushed and broken stone (SIC 142): Indexes of output, hours of production workers, and employees, 1958-78
(1967 = 100)

Year	Output	Hours of production workers	Employees		
			All employees	Production workers	Nonproduction workers
Index:					
1958	69.6	94.2	97.0	98.0	91.7
1959	75.9	100.0	100.5	101.4	95.8
1960	78.8	102.8	106.3	107.0	102.8
1961	77.3	98.9	101.2	102.0	97.2
1962	81.6	100.3	100.9	102.2	94.4
1963	84.6	99.9	100.5	101.1	97.2
1964	89.9	98.3	99.3	99.7	97.2
1965	97.9	103.7	101.2	102.2	95.8
1966	104.1	104.3	102.3	103.1	98.6
1967	100.0	100.0	100.0	100.0	100.0
1968	106.7	96.4	96.7	96.6	97.2
1969	111.3	97.1	95.6	95.5	95.8
1970	112.6	93.9	96.0	94.1	105.6
1971	113.9	94.7	97.0	93.9	112.5
1972	120.1	93.7	96.5	94.1	108.3
1973	137.8	97.3	98.1	95.5	111.1
1974	135.8	98.0	100.0	96.6	116.7
1975	118.5	84.9	92.6	88.5	112.5
1976	117.8	84.0	89.1	86.0	104.2
1977	125.5	84.5	88.6	86.3	100.0
1978 ¹	131.1	86.5	88.6	86.9	97.2
Average annual percent change:					
1958-78	3.2	-8	-6	-9	.7
1973-78	-1.4	-2.9	-2.6	-2.4	-3.4

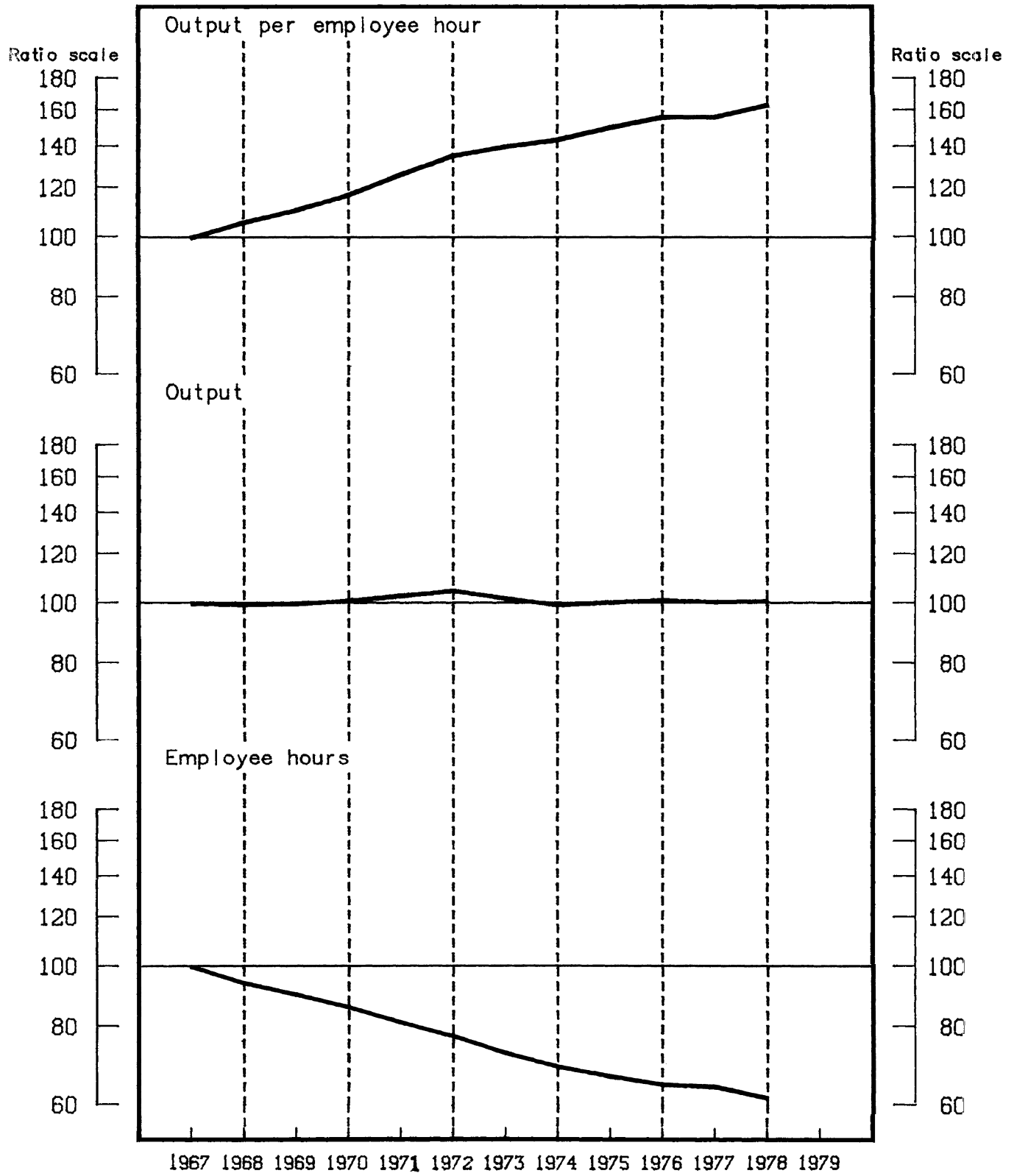
¹ Preliminary.

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 10. Fluid milk (SIC 2026): Output per hour and related data, 1967-78

(1967=100)



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

Table 18. Fluid milk (SIC 2026): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-78
(1967 = 100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958	77.2	77.7	91.5	118.6	117.7
1959	79.1	79.9	93.7	118.5	117.3
1960	81.0	81.6	95.1	117.4	116.5
1961	82.5	83.3	95.5	115.8	114.6
1962	86.2	86.4	97.1	112.7	112.4
1963	91.3	91.3	100.5	110.1	110.1
1964	93.1	93.1	101.9	109.4	109.4
1965	94.3	94.3	101.7	107.8	107.8
1966	97.0	96.9	100.4	103.5	103.6
1967	100.0	100.0	100.0	100.0	100.0
1968	105.7	103.5	99.6	94.2	96.2
1969	110.6	108.2	99.9	90.3	92.3
1970	117.1	114.6	101.1	86.3	88.2
1971	128.2	124.2	103.0	81.6	82.9
1972	135.4	134.7	104.9	77.5	77.9
1973	140.1	139.7	102.0	72.8	73.0
1974	143.6	143.2	99.5	69.3	69.5
1975	150.3	150.3	100.4	66.8	66.8
1976	156.1	155.8	101.3	64.9	65.0
1977	156.2	158.7	100.6	64.4	63.4
1978 ¹	163.3	163.8	100.9	61.8	61.6
Average annual percent change:					
1958-78	4.1	4.1	.4	-3.6	-3.6
1973-78	3.1	3.3	(²)	-3.0	-3.2

¹ Preliminary.

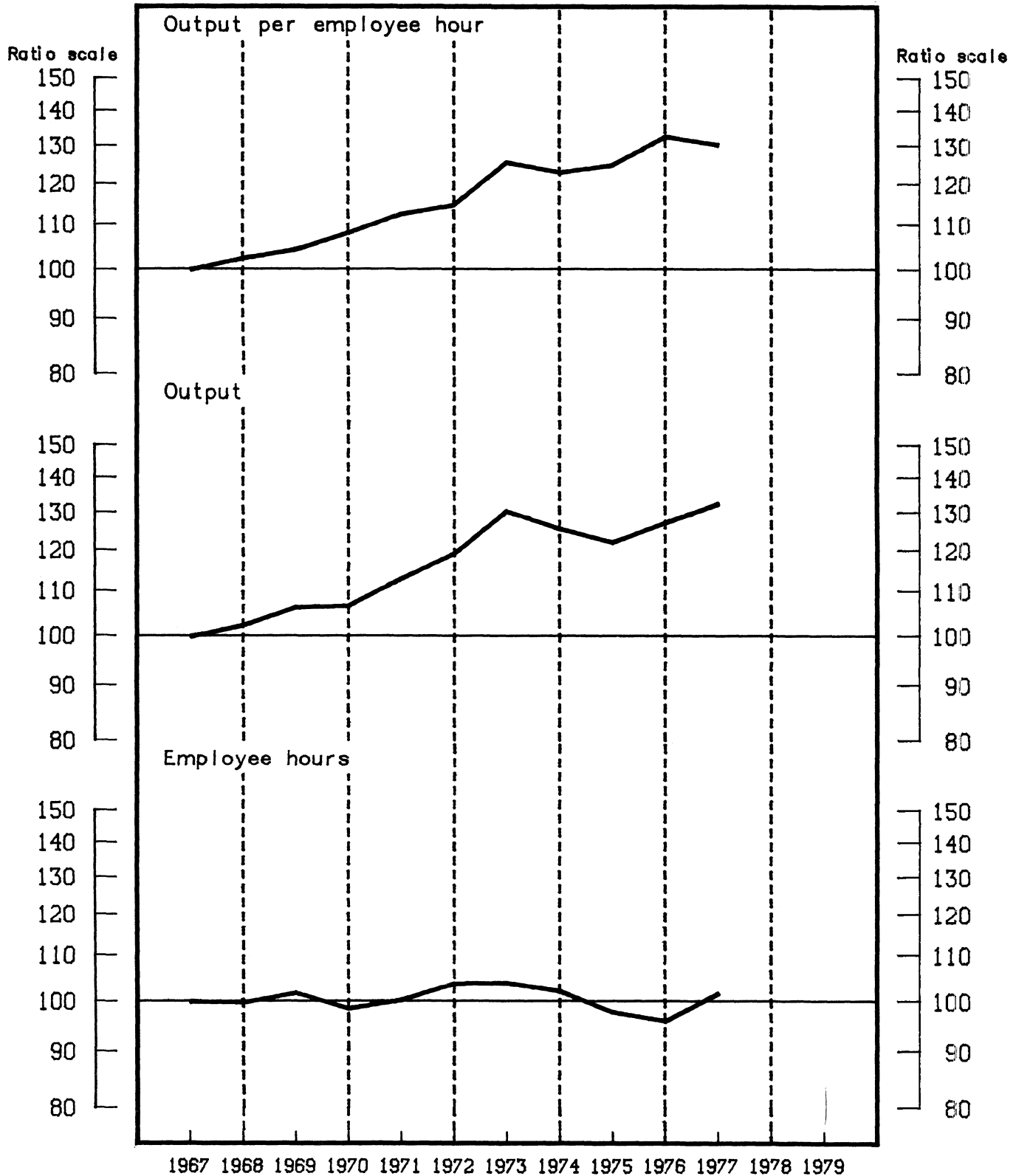
² Less than .05 percent.

SOURCE: Output based on data from the Economics, Statistics, and Cooperatives

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 11. Preserved fruits and vegetables (SIC 203): Output per hour and related data, 1967-77

(1967=100)



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

Table 19. Preserved fruits and vegetables (SIC 203): Indexes of output per employee hour and output per employee, 1954-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	71.8	71.4	74.4	70.7	69.8	77.4
1955	73.5	73.2	75.1	70.7	69.8	77.8
1956	79.2	79.1	79.4	77.6	76.9	82.5
1957	74.9	78.9	55.3	73.9	77.3	57.4
1958	74.1	75.1	67.5	73.2	73.7	69.9
1959	74.2	75.0	69.3	74.5	74.9	71.8
1960	79.5	80.0	76.4	80.4	80.8	78.2
1961	81.9	82.1	80.2	81.7	81.8	81.0
1962	85.8	86.0	84.5	86.7	86.9	84.9
1963	89.3	90.0	84.1	87.4	87.8	84.3
1964	92.1	93.3	84.7	91.2	92.2	85.3
1965	95.4	96.5	88.2	94.7	95.7	88.6
1966	94.9	96.0	88.3	93.9	94.7	88.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.5	102.6	101.6	99.4	99.8	96.9
1969	104.4	104.7	101.9	102.1	102.7	98.4
1970	108.2	109.9	97.6	105.4	107.1	95.5
1971	112.6	115.1	98.4	111.1	113.2	98.0
1972	114.8	117.2	100.4	113.1	115.0	101.5
1973	125.6	129.3	104.5	123.4	126.4	106.2
1974	123.0	124.9	110.4	121.3	122.6	112.4
1975	124.9	127.1	111.2	121.9	123.3	113.1
1976	132.7	135.6	114.3	127.4	129.0	116.9
1977 ²	130.4	134.7	106.0	128.1	131.8	107.5
Average annual percent change:						
1947-77	2.9	3.0	2.2	2.9	3.0	2.0
1973-77	1.5	1.7	.6	1.2	1.3	.6

¹ 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.

² Preliminary.

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 20. Preserved fruits and vegetables (SIC 203): Indexes of output, employee hours, and employees, 1954-77
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	59.7	83.1	83.6	80.2	84.4	85.5	77.1
1955	62.4	84.9	85.2	83.1	88.2	89.4	80.2
1956	69.8	88.1	88.2	87.9	90.0	90.8	84.6
1957	66.8	89.2	84.7	120.7	90.4	86.4	116.3
1958	65.9	88.9	87.7	97.7	90.0	89.4	94.3
1959	67.1	90.4	89.5	96.8	90.1	89.6	93.4
1960	74.0	93.1	92.5	96.9	92.0	91.6	94.6
1961	75.9	92.7	92.4	94.6	92.9	92.8	93.7
1962	79.3	92.4	92.2	93.8	91.5	91.3	93.4
1963	82.3	92.2	91.4	97.9	94.2	93.7	97.6
1964	86.3	93.7	92.5	101.9	94.6	93.6	101.2
1965	91.5	95.9	94.8	103.7	96.6	95.6	103.3
1966	93.6	98.6	97.5	106.0	99.7	98.8	106.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.4	99.9	99.8	100.8	103.0	102.6	105.7
1969	106.4	101.9	101.6	104.4	104.2	103.6	108.1
1970	106.7	98.6	97.1	109.3	101.2	99.6	111.7
1971	113.1	100.4	98.3	114.9	101.8	99.9	115.4
1972	119.3	103.9	101.8	118.8	105.5	103.7	117.5
1973	130.6	104.0	101.0	125.0	105.8	103.3	123.0
1974	125.8	102.3	100.7	114.0	103.7	102.6	111.9
1975	122.3	97.9	96.2	110.0	100.3	99.2	108.1
1976	127.5	96.1	94.0	111.5	100.1	98.8	109.1
1977 ¹	132.7	101.8	98.5	125.2	103.6	100.7	123.4
Average annual percent change:							
1947-77	3.7	.8	.7	1.4	.7	.6	1.6
1973-77 .....	.5	-1.0	-1.2	-2	-.8	-.9	-.2

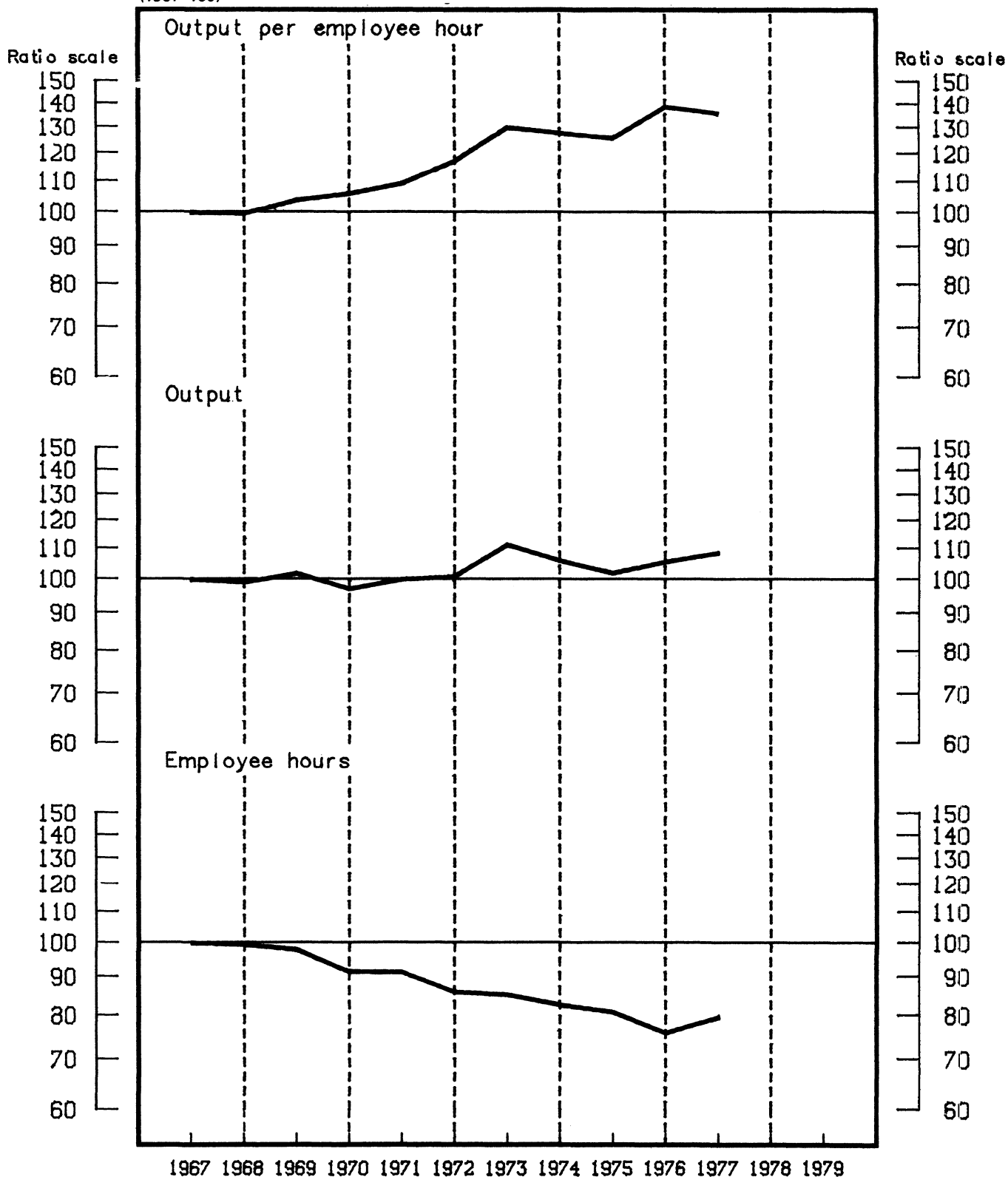
¹ Preliminary.

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 12. Canned fruits and vegetables (SIC 2033): Output per hour and related data, 1967-77

(1967=100)



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

Table 21. Canned fruits and vegetables (SIC 2033): Indexes of output per employee hour and output per employee, 1958-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	74.4	75.3	67.0	72.1	72.4	69.4
1959	73.3	73.3	73.3	72.3	71.9	75.9
1960	80.2	79.8	83.3	80.2	79.6	85.4
1961	80.5	79.9	85.5	79.0	78.2	86.4
1962	83.0	82.2	90.5	83.6	82.7	91.0
1963	92.3	93.1	85.8	88.0	88.2	86.1
1964	94.5	96.1	82.9	91.3	92.4	83.6
1965	95.3	97.0	82.6	92.1	93.4	83.0
1966	97.1	98.9	84.6	94.4	95.8	84.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	99.7	99.5	101.2	95.5	95.4	96.6
1969	104.0	103.7	106.6	100.5	100.2	102.8
1970	106.1	107.3	97.6	101.0	101.8	95.5
1971	109.4	110.6	99.5	106.4	107.3	99.2
1972	117.3	119.5	101.6	112.6	114.0	102.9
1973	130.3	132.3	115.6	125.8	126.9	117.7
1974	128.1	127.2	137.3	124.4	122.7	139.8
1975	126.0	125.6	129.1	122.3	121.1	131.4
1976	138.9	140.0	130.0	128.7	128.1	133.0
1977 ²	136.1	138.9	116.3	130.8	132.6	118.0
Average annual percent change:						
1958-77	3.4	3.4	3.1	3.2	3.2	3.0
1973-77	1.7	1.9	-4	1.1	1.3	-4

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 22. Canned fruits and vegetables (SIC 2033): Indexes of output, employee hours, and employees, 1958-77
(1967=100)

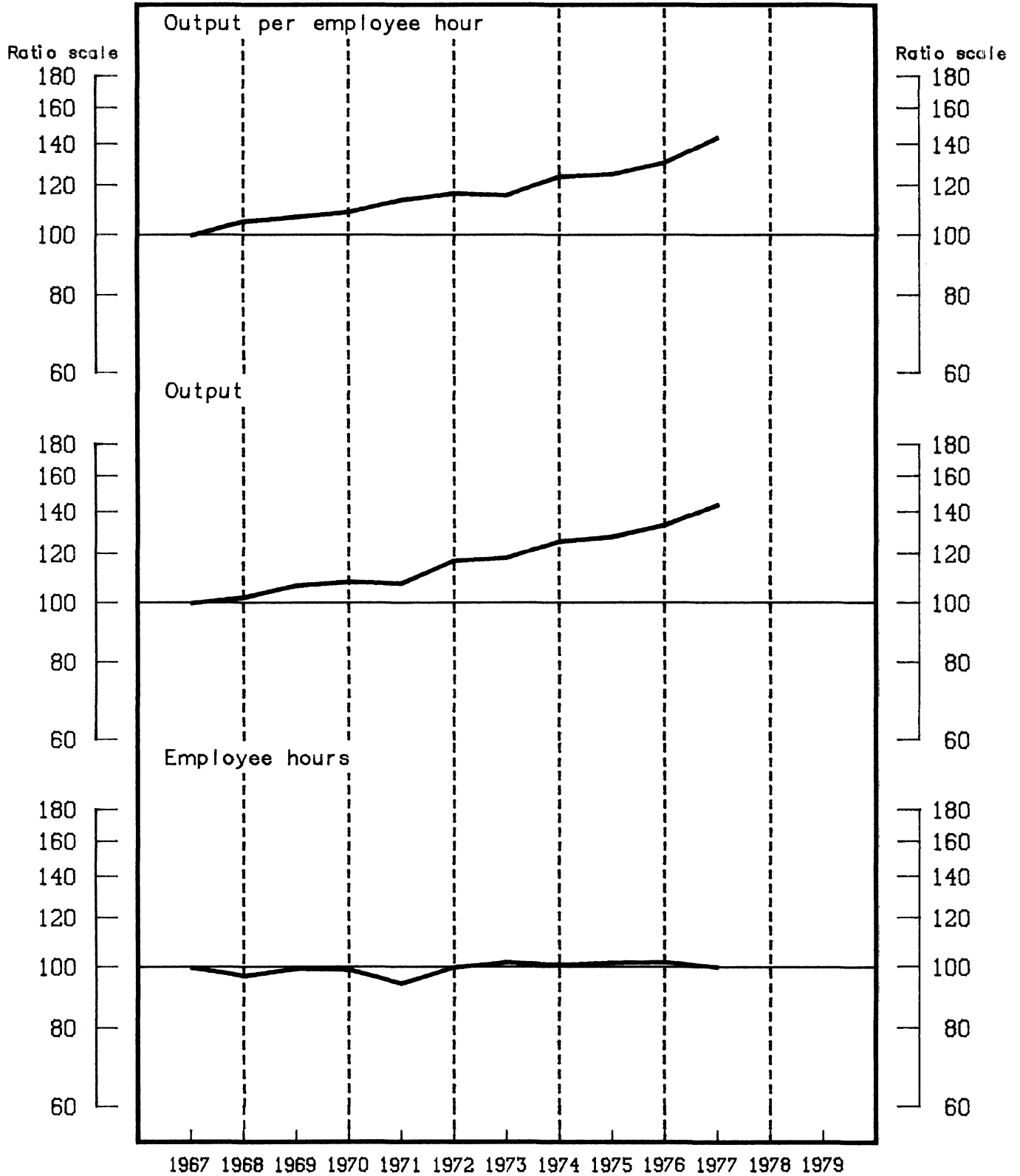
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	78.1	105.0	103.7	116.6	108.3	107.8	112.5
1959	77.3	105.5	105.5	105.4	106.9	107.5	101.8
1960	83.1	103.6	104.1	99.8	103.6	104.4	97.3
1961	84.1	104.5	105.3	98.4	106.5	107.6	97.3
1962	86.9	104.7	105.7	96.0	104.0	105.1	95.5
1963	90.0	97.5	96.7	104.9	102.3	102.0	104.5
1964	93.3	98.7	97.1	112.6	102.2	101.0	111.6
1965	92.6	97.2	95.5	112.1	100.5	99.1	111.6
1966	95.2	98.0	96.3	112.5	100.9	99.4	112.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	99.2	99.5	99.7	98.0	103.9	104.0	102.7
1969	101.9	98.0	98.3	95.6	101.4	101.7	99.1
1970	97.2	91.6	90.6	99.6	96.2	95.5	101.8
1971	100.1	91.5	90.5	100.6	94.1	93.3	100.9
1972	101.0	86.1	84.5	99.4	89.7	88.6	98.2
1973	111.3	85.4	84.1	96.3	88.5	87.7	94.6
1974	106.1	82.8	83.4	77.3	85.3	86.5	75.9
1975	102.1	81.0	81.3	79.1	83.5	84.3	77.7
1976	105.7	76.1	75.5	81.3	82.1	82.5	79.5
1977 ¹	108.6	79.8	78.2	93.4	83.0	81.9	92.0
Average annual percent change:							
1958-77	1.7	-1.6	-1.7	-1.3	-1.4	-1.5	-1.3
1973-77	-5	-2.2	-2.4	-1	-1.7	-1.8	-1

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 13. Grain mill products (SIC 204): Output per hour and related data, 1967-77

(1967=100)



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

Table 23. Grain mill products (SIC 204): Indexes of output per employee hour and output per employee, 1963-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963	83.4	83.3	83.5	84.5	85.0	83.5
1964	88.0	88.2	87.3	89.5	90.1	87.9
1965	90.3	90.6	89.3	91.8	92.9	89.6
1966	94.2	95.0	92.0	95.4	96.9	91.9
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.4	104.2	108.6	103.9	104.1	103.4
1969	107.2	106.5	109.3	106.5	106.9	105.3
1970	109.2	108.3	111.4	107.2	106.6	108.7
1971	114.1	113.4	116.1	111.6	110.0	115.6
1972	116.9	115.9	119.2	117.6	116.5	120.3
1973	116.1	114.1	121.4	120.0	118.4	123.5
1974	124.4	124.2	124.8	123.5	122.0	126.9
1975	125.5	124.7	127.6	125.4	123.6	129.8
1976	131.0	131.5	129.4	130.6	129.9	132.1
1977 ²	143.7	145.0	140.6	141.6	141.1	142.4
Average annual percent change:						
1963-77	3.5	3.5	3.6	3.4	3.2	3.8
1973-77	4.9	5.5	3.3	3.9	4.2	3.3

¹ 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.

² Preliminary.

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 24. Grain mill products (SIC 204): Indexes of output, employee hours, and employees, 1963-77
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963	85.5	102.5	102.6	102.4	101.2	100.6	102.4
1964	88.4	100.5	100.2	101.3	98.8	98.1	100.6
1965	88.8	98.3	98.0	99.4	96.7	95.6	99.1
1966	92.5	98.2	97.4	100.5	97.0	95.5	100.6
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.2	97.0	98.1	94.1	98.4	98.2	98.8
1969	106.9	99.7	100.4	97.8	100.4	100.0	101.5
1970	108.4	99.3	100.1	97.3	101.1	101.7	99.7
1971	107.7	94.4	95.0	92.8	96.5	97.9	93.2
1972	117.1	100.2	101.0	98.2	99.6	100.5	97.3
1973	118.4	102.0	103.8	97.5	98.7	100.0	95.9
1974	125.8	101.1	101.3	100.8	101.9	103.1	99.1
1975	127.9	101.9	102.6	100.2	102.0	103.5	98.5
1976	133.7	102.1	101.7	103.3	102.4	102.9	101.2
1977 ¹	144.1	100.3	99.4	102.5	101.8	102.1	101.2
Average annual percent change:							
1963-77	3.6	.1	.1	(²)	.2	.4	-.1
1973-77	4.6	-.2	-.8	1.3	.7	.4	1.3

¹ Preliminary.

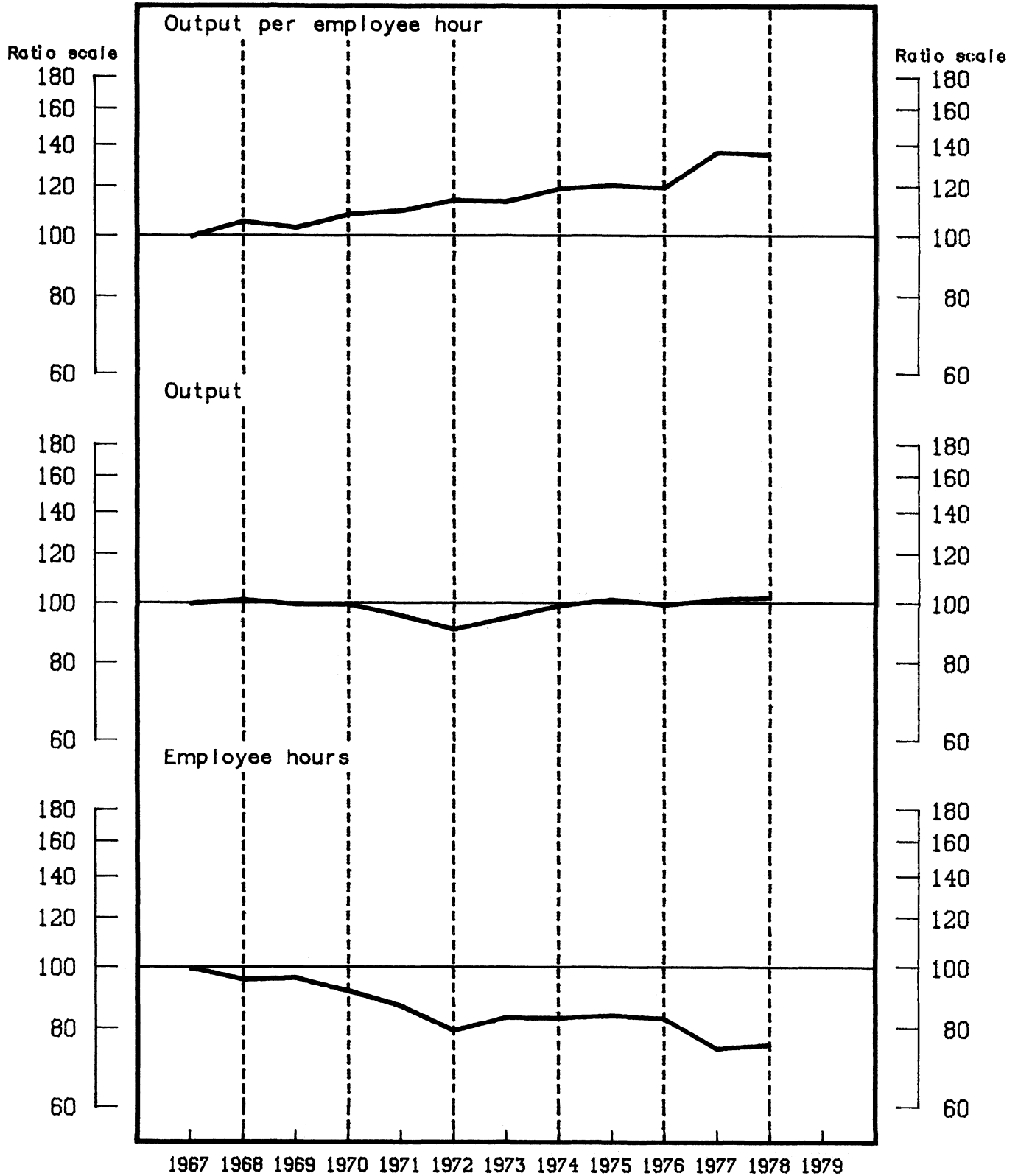
² Less than .05 percent.

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 14. Flour and other grain mill products (SIC 2041): Output per hour and related data, 1967-78

(1967=100)



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

Table 25. Flour and other grain mill products (SIC 2041): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	56.9	56.3	59.1	57.5	56.1	61.6
1955	59.3	59.1	60.0	59.3	58.3	62.1
1956	62.3	62.1	63.5	62.2	60.8	66.0
1957	67.7	67.5	68.4	67.4	66.2	71.0
1958	69.0	70.0	66.3	67.5	67.0	68.8
1959	66.7	66.7	66.7	67.2	66.4	69.1
1960	70.0	70.4	68.8	71.6	72.0	70.5
1961	72.8	72.1	75.4	74.4	73.7	76.3
1962	74.9	73.4	80.6	77.2	75.8	80.9
1963	84.2	82.5	90.7	87.3	85.9	91.1
1964	88.7	87.5	92.8	91.1	90.1	93.6
1965	91.3	90.7	93.7	92.3	91.7	94.1
1966	96.9	95.6	101.7	98.0	96.8	101.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.7	103.9	112.2	105.0	104.2	107.1
1969	103.3	102.2	107.0	102.2	101.7	103.3
1970	108.5	108.1	109.6	107.6	107.7	107.2
1971	110.0	108.7	114.1	109.0	107.3	113.7
1972	114.3	112.2	121.8	115.8	113.1	123.3
1973	113.7	110.9	123.3	114.4	110.5	125.7
1974	119.2	117.3	126.0	116.8	113.0	128.5
1975	120.8	121.7	118.3	117.6	116.4	120.5
1976	119.7	122.8	110.8	116.5	117.8	113.5
1977	136.4	137.7	132.6	134.4	134.2	134.7
1978 ²	135.3	140.9	120.5	130.3	133.9	121.5
Average annual percent change:						
1947-78	3.8	3.9	3.2	3.6	3.8	3.1
1973-78	3.7	4.9	-1	3.1	4.3	-3

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 26. Flour and other grain mill products (SIC 2041): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

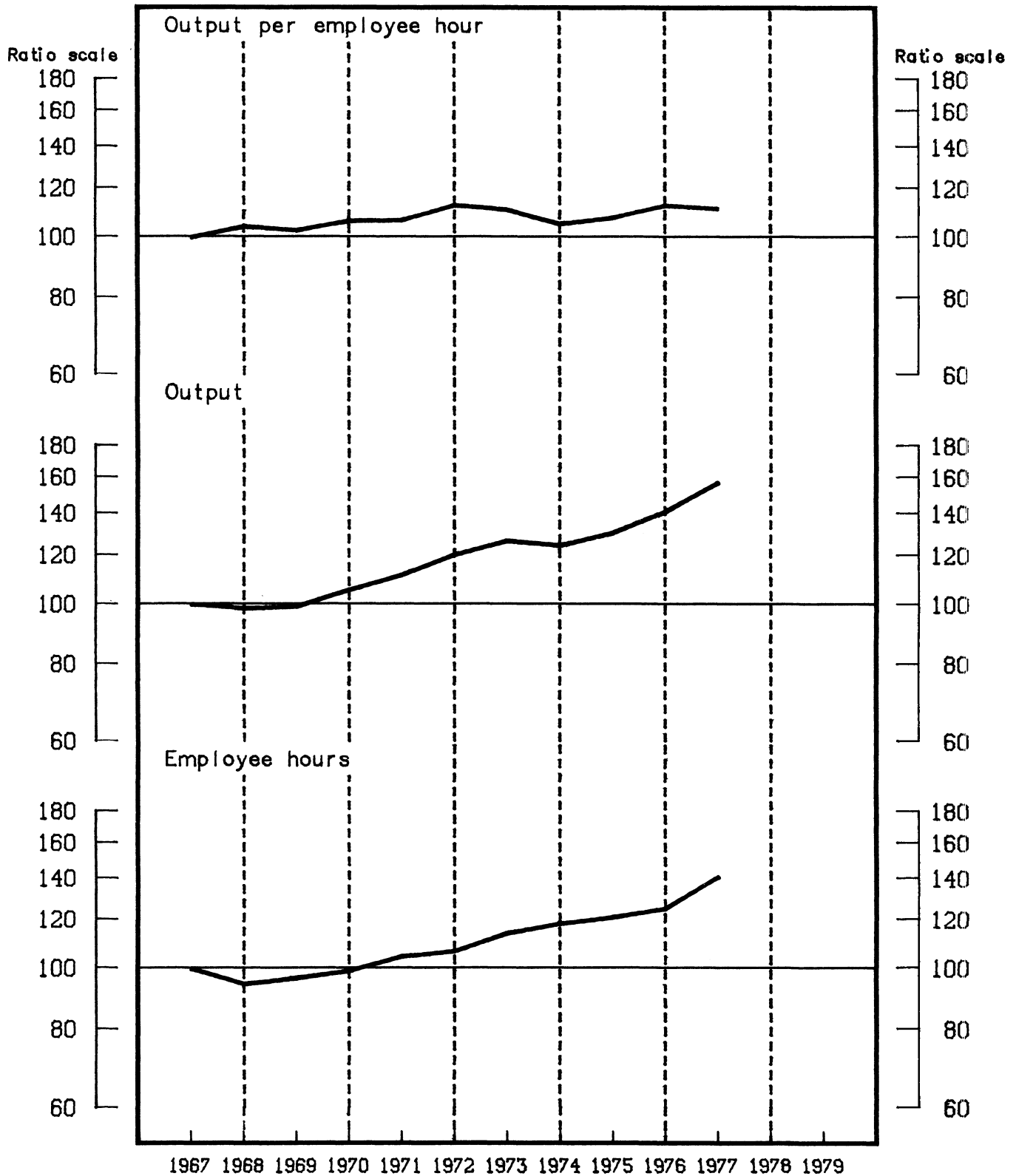
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	81.2	142.7	144.3	137.5	141.3	144.8	131.9
1955	83.4	140.7	141.2	139.0	140.6	143.0	134.2
1956	84.9	136.2	136.8	133.7	136.5	139.6	128.6
1957	89.1	131.7	132.0	130.2	132.2	134.6	125.5
1958	92.9	134.7	132.8	140.1	137.6	138.6	135.1
1959	93.4	140.1	140.1	140.1	139.0	140.6	135.2
1960	95.1	135.9	135.0	138.3	132.8	132.0	134.8
1961	96.4	132.4	133.7	127.8	129.6	130.8	126.4
1962	96.7	129.1	131.8	120.0	125.3	127.6	119.5
1963	95.4	113.3	115.7	105.2	109.3	111.0	104.7
1964	97.2	109.6	111.1	104.7	106.7	107.9	103.8
1965	93.4	102.3	103.0	99.7	101.2	101.9	99.3
1966	98.0	99.1	100.4	94.4	98.0	99.2	94.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	101.4	95.9	97.6	90.4	96.6	97.3	94.7
1969	99.7	96.5	97.6	93.2	97.6	98.0	96.5
1970	99.7	91.9	92.2	91.0	92.7	92.6	93.0
1971	95.7	87.0	88.0	83.9	87.8	89.2	84.2
1972	90.9	79.5	81.0	74.6	78.5	80.4	73.7
1973	94.8	83.4	85.5	76.9	82.9	85.8	75.4
1974	99.2	83.2	84.6	78.7	84.9	87.8	77.2
1975	101.5	84.0	83.4	85.8	86.3	87.2	84.2
1976	99.5	83.1	81.0	89.8	85.4	84.5	87.7
1977	101.6	74.5	73.8	76.6	75.6	75.7	75.4
1978 ¹	102.3	75.6	72.6	84.9	78.5	76.4	84.2
Average annual percent change:							
1947-78	.5	-3.1	-3.2	-2.6	-2.9	-3.1	-2.4
1973-78	1.2	-2.4	-3.5	1.3	-1.8	-3.0	1.5

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 15. Cereal breakfast foods (SIC 2043): Output per hour and related data, 1967-77

(1967=100)



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

Table 27. Cereal breakfast foods (SIC 2043): Indexes of output per employee hour and output per employee, 1963-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963	91.5	91.8	90.1	91.5	91.8	89.8
1964	93.5	92.9	96.6	94.6	93.9	98.6
1965	95.7	95.2	98.3	95.7	95.2	98.0
1966	97.2	96.5	100.6	98.8	98.5	100.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.1	104.1	103.8	105.5	106.9	98.5
1969	102.6	102.8	101.8	105.2	106.6	99.2
1970	106.4	106.0	108.3	107.2	107.7	105.5
1971	106.7	106.8	106.2	108.9	109.4	106.5
1972	112.8	112.4	114.4	113.7	113.5	114.7
1973	111.0	108.9	123.5	118.0	116.3	126.7
1974	105.3	104.0	113.0	109.4	108.4	113.8
1975	107.7	105.8	118.3	114.6	113.6	119.2
1976	112.8	111.5	119.8	114.9	113.2	123.6
1977 ²	111.4	109.9	120.6	116.3	115.1	122.2
Average annual percent change:						
1963-77	1.4	1.3	2.0	1.7	1.6	2.2
1973-77 .....	.8	.9	.1	.2	.2	.1

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 28. Cereal breakfast foods (SIC 2043): Indexes of output, employee hours, and employees, 1963-77
(1967 = 100)

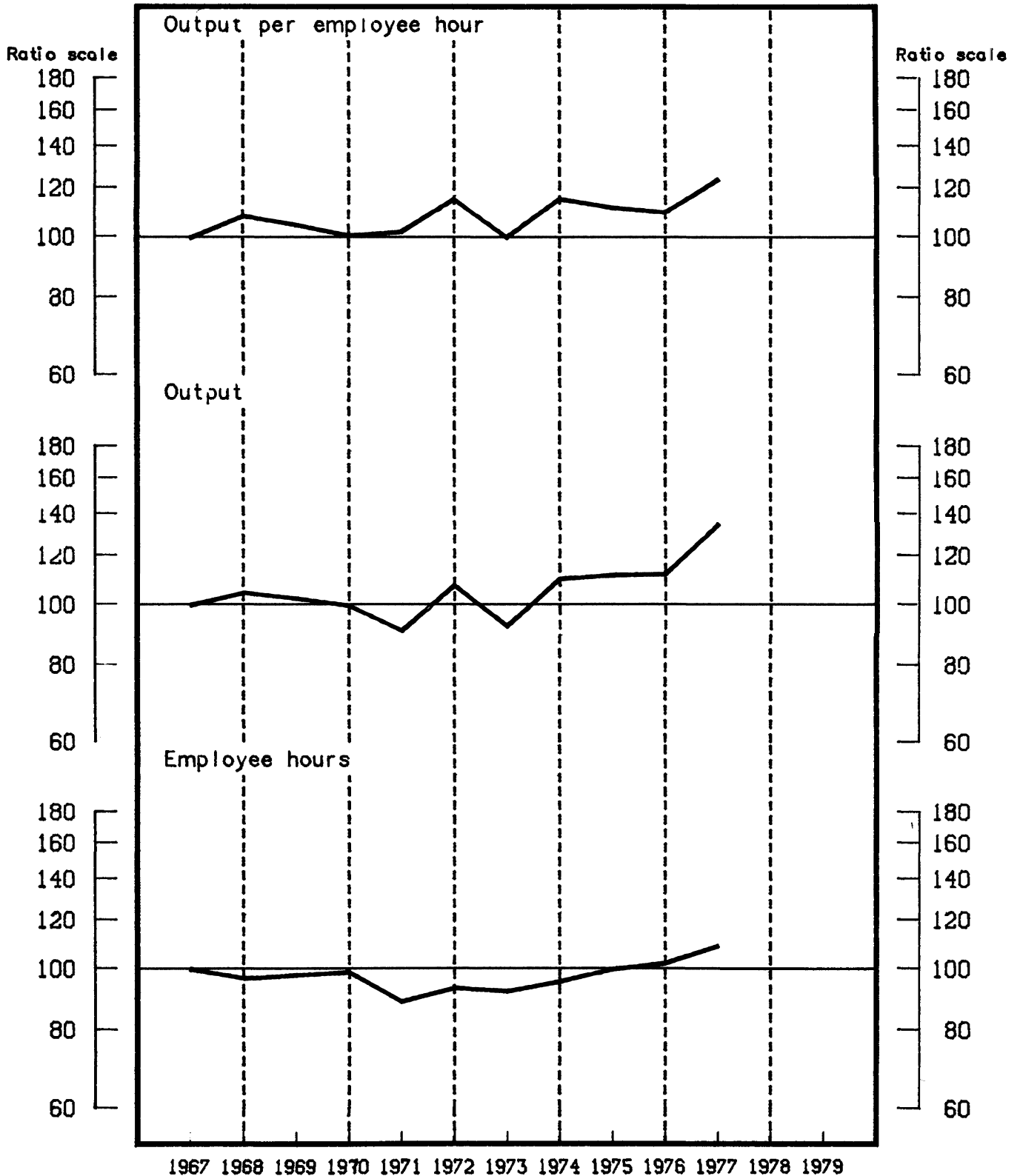
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963	85.5	93.4	93.1	94.9	93.4	93.1	95.2
1964	89.2	95.4	96.0	92.3	94.3	95.0	90.5
1965	93.3	97.5	98.0	94.9	97.5	98.0	95.2
1966	95.5	98.3	99.0	94.9	96.7	97.0	95.2
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	98.5	94.6	94.6	94.9	93.4	92.1	100.0
1969	99.2	96.7	96.5	97.4	94.3	93.1	100.0
1970	105.5	99.2	99.5	97.4	98.4	98.0	100.0
1971	111.6	104.6	104.5	105.1	102.5	102.0	104.8
1972	120.2	106.6	106.9	105.1	105.7	105.9	104.8
1973	126.7	114.1	116.3	102.6	107.4	108.9	100.0
1974	124.6	118.3	119.8	110.3	113.9	114.9	109.5
1975	130.5	121.2	123.3	110.3	113.9	114.9	109.5
1976	141.3	125.3	126.7	117.9	123.0	124.8	114.3
1977 ¹	157.2	141.1	143.1	130.3	135.2	136.6	128.6
Average annual percent change:							
1963-77	4.0	2.6	2.7	1.9	2.2	2.3	1.8
1973-77	5.7	4.9	4.8	5.6	5.5	5.5	5.6

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 16. Rice milling (SIC 2044): Output per hour and related data, 1967-77

(1967=100)



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

Table 29. Rice milling (SIC 2044): Indexes of output per employee hour and output per employee, 1963-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963	75.3	75.9	73.1	75.2	77.0	70.0
1964	85.9	85.6	86.8	86.8	86.8	86.8
1965	90.3	89.5	93.3	93.3	93.3	93.3
1966	97.3	98.2	94.1	98.8	100.3	94.1
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.2	107.6	110.5	104.6	104.6	104.6
1969	104.7	103.9	108.1	102.4	102.4	102.4
1970	100.8	105.6	86.1	99.7	106.3	83.1
1971	102.2	104.0	96.1	100.6	104.0	91.0
1972	115.3	117.4	107.7	113.1	114.8	107.7
1973	100.3	102.5	92.6	99.7	102.2	92.6
1974	115.2	113.3	123.0	105.1	100.6	122.3
1975	111.7	108.7	124.8	106.6	102.1	124.1
1976	109.7	106.2	125.3	100.2	94.4	124.6
1977 ²	123.8	115.4	170.7	117.8	107.8	168.4
Average annual percent change:						
1963-77	2.5	2.2	3.7	1.8	1.3	3.8
1973-77	3.8	1.7	13.2	2.9	.4	12.9

¹ 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.

² Preliminary.

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. Rice milling (SIC 2044): Indexes of output, employee hours, and employees, 1963-77
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963	77.0	102.2	101.4	105.3	102.4	100.0	110.0
1964	86.8	101.1	101.4	100.0	100.0	100.0	100.0
1965	93.3	103.3	104.2	100.0	100.0	100.0	100.0
1966	94.1	96.7	95.8	100.0	95.2	93.8	100.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.6	96.7	97.2	94.7	100.0	100.0	100.0
1969	102.4	97.8	98.6	94.7	100.0	100.0	100.0
1970	99.7	98.9	94.4	115.8	100.0	93.8	120.0
1971	91.0	89.0	87.5	94.7	90.5	87.5	100.0
1972	107.7	93.4	91.7	100.0	95.2	93.8	100.0
1973	92.6	92.3	90.3	100.0	92.9	90.6	100.0
1974	110.1	95.6	97.2	89.5	104.8	109.4	90.0
1975	111.7	100.0	102.8	89.5	104.8	109.4	90.0
1976	112.1	102.2	105.6	89.5	111.9	118.8	90.0
1977 ¹	134.7	108.8	116.7	78.9	114.3	125.0	80.0
Average annual percent change:							
1963-77	2.4	(²)	.2	-1.3	.6	1.1	-1.4
1973-77	8.0	4.0	6.1	-4.6	4.9	7.5	-4.4

¹ Preliminary.

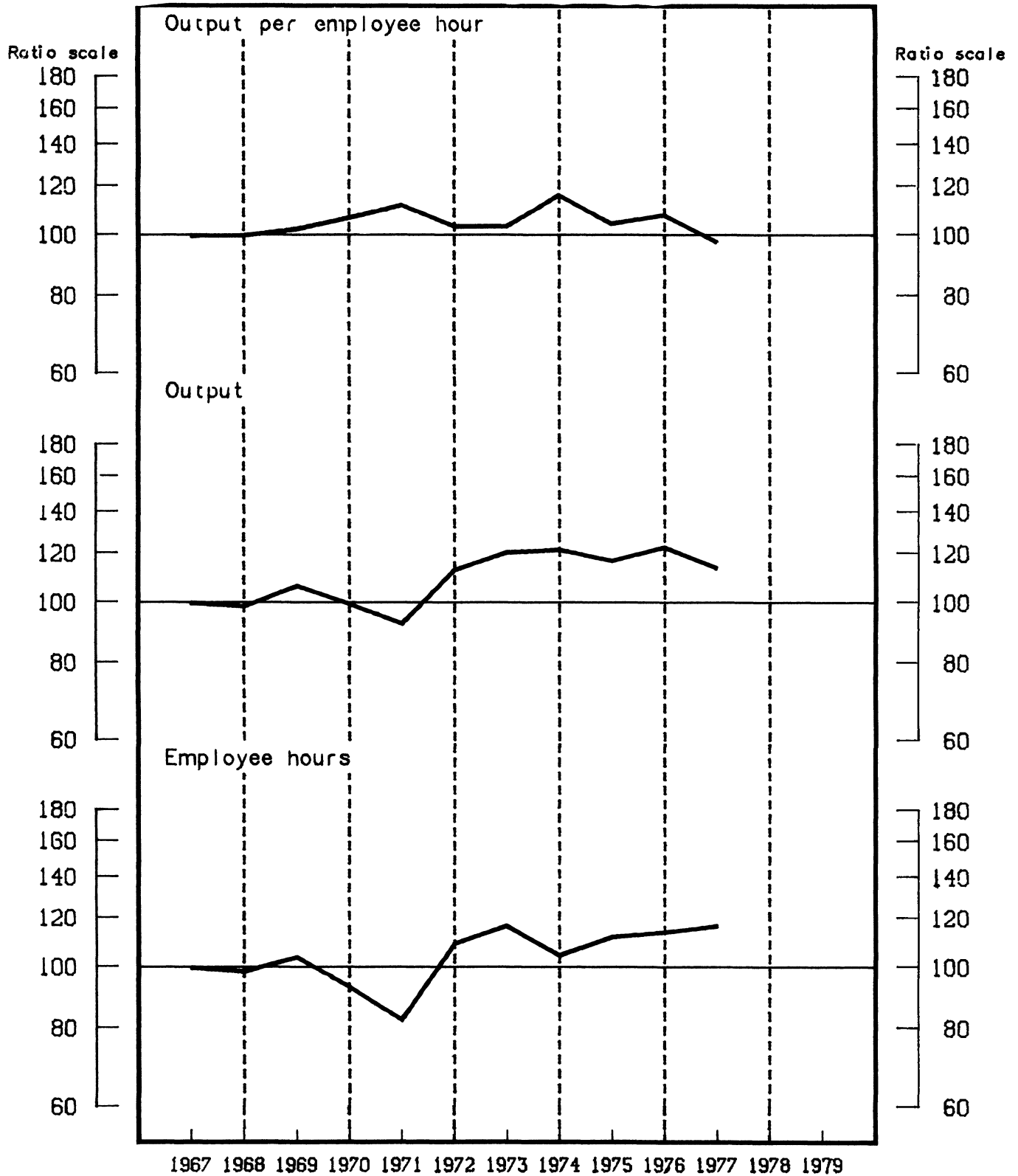
² Less than .05 percent.

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. Blended and prepared flour (SIC 2045): Output per hour and related data, 1967-77

(1967=100)



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

Table 31. Blended and prepared flour (SIC 2045): Indexes of output per employee hour and output per employee, 1963-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963	81.3	83.5	75.0	82.4	85.3	75.3
1964	89.2	99.8	67.4	89.8	102.1	67.4
1965	91.3	96.0	79.7	92.0	97.1	80.3
1966	93.9	98.7	81.9	93.3	98.0	82.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	100.1	98.8	104.4	100.1	100.6	98.8
1969	102.5	102.1	103.8	103.8	104.7	101.5
1970	106.9	108.4	102.5	103.9	105.5	99.7
1971	112.1	111.4	114.3	110.4	108.4	115.9
1972	103.6	104.0	102.2	107.5	109.3	102.9
1973	103.5	101.1	111.7	111.9	110.7	115.0
1974	116.4	115.8	118.7	117.2	115.5	121.9
1975	104.6	105.0	103.2	107.1	107.3	106.5
1976	108.0	114.0	93.0	112.6	120.9	94.7
1977 ²	97.7	103.9	82.7	99.4	106.2	84.4
Average annual percent change:						
1963-77	1.5	1.3	2.1	1.8	1.5	2.3
1973-77	-1.9	.4	-8.1	-2.7	-.4	-8.3

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 32. Blended and prepared flour (SIC 2045): Indexes of output, employee hours, and employees, 1963-77
(1967=100)

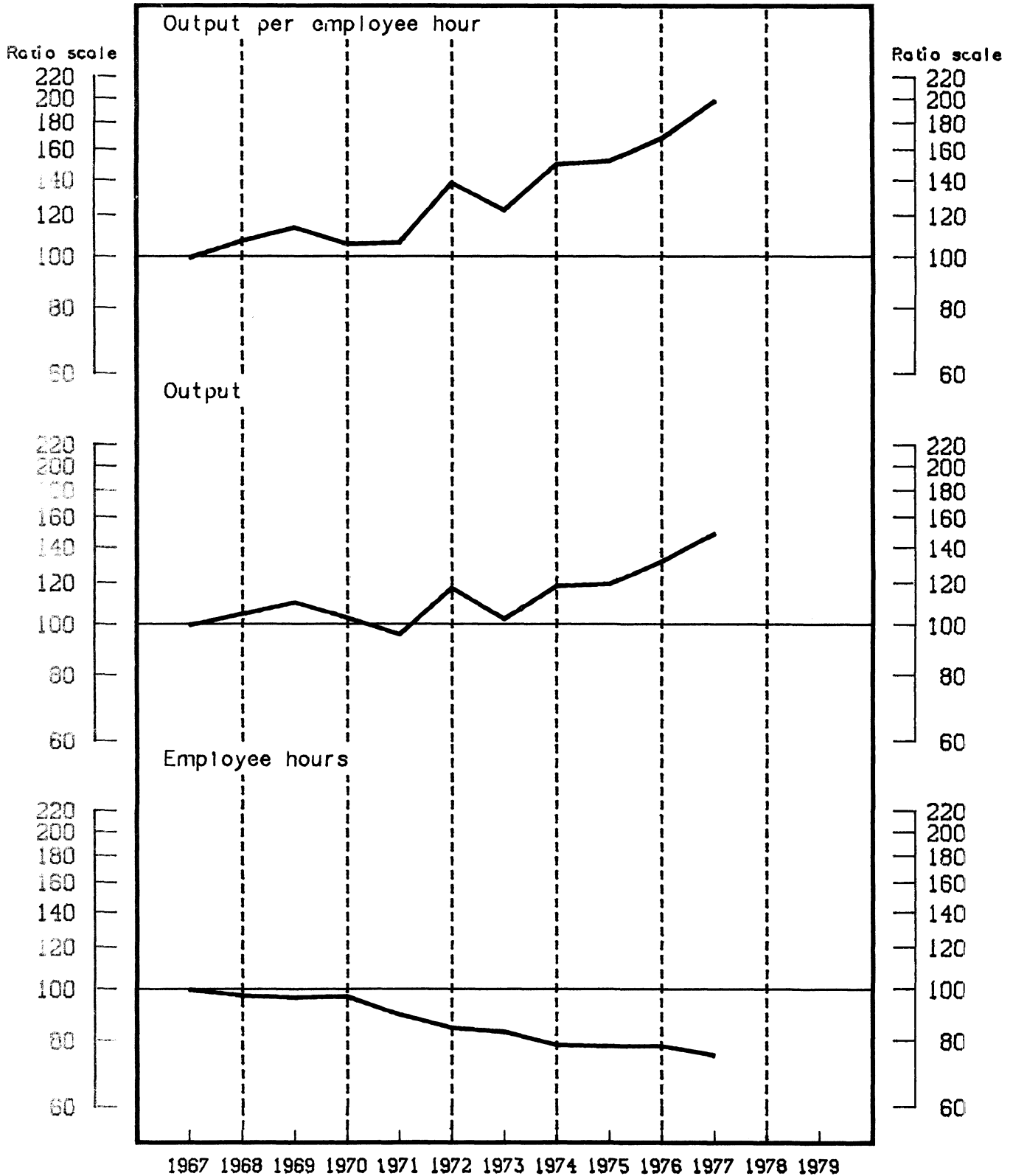
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963	79.1	97.3	94.7	105.4	96.0	92.7	105.0
1964	91.0	102.0	91.2	135.1	101.3	89.1	135.0
1965	88.3	96.7	92.0	110.8	96.0	90.9	110.0
1966	90.8	96.7	92.0	110.8	97.3	92.7	110.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	98.8	98.7	100.0	94.6	98.7	98.2	100.0
1969	106.6	104.0	104.4	102.7	102.7	101.8	105.0
1970	99.7	93.3	92.0	97.3	96.0	94.5	100.0
1971	92.7	82.7	83.2	81.1	84.0	85.5	80.0
1972	113.2	109.3	108.8	110.8	105.3	103.6	110.0
1973	120.8	116.7	119.5	108.1	108.0	109.1	105.0
1974	121.9	104.7	105.3	102.7	104.0	105.5	100.0
1975	117.1	112.0	111.5	113.5	109.3	109.1	110.0
1976	123.1	114.0	108.0	132.4	109.3	101.8	130.0
1977 ¹	114.0	116.7	109.7	137.8	114.7	107.3	135.0
Average annual percent change:							
1963-77	2.8	1.2	1.4	.7	1.0	1.2	.4
1973-77	-1.1	.9	-1.4	7.7	1.7	-.7	8.0

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 18. Wet corn milling (SIC 2046): Output per hour and related data, 1967-77

(1967=100)



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

Table 33. Wet corn milling (SIC 2046): Indexes of output per employee hour and output per employee, 1963-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963	87.0	81.2	106.1	89.3	83.6	105.7
1964	93.0	87.7	109.8	95.9	90.6	111.0
1965	92.1	87.8	105.3	96.4	92.9	105.4
1966	93.5	90.8	101.5	95.2	93.0	101.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.7	105.5	113.5	105.0	104.0	107.5
1969	114.0	111.5	121.1	115.4	115.1	115.8
1970	106.2	105.3	108.6	107.8	108.7	105.6
1971	106.9	108.2	103.8	104.1	104.6	103.2
1972	138.9	139.9	136.7	137.3	137.5	137.0
1973	123.3	122.8	124.6	123.9	122.8	126.3
1974	150.6	151.6	148.4	150.8	151.0	150.1
1975	152.7	147.2	168.1	154.9	148.5	171.5
1976	168.7	162.7	185.8	169.6	162.1	189.5
1977 ²	198.4	195.5	206.1	195.0	190.1	207.2
Average annual percent change:						
1963-77	5.4	5.7	4.6	5.2	5.4	4.8
1973-77	11.2	10.5	13.1	10.8	9.9	13.0

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

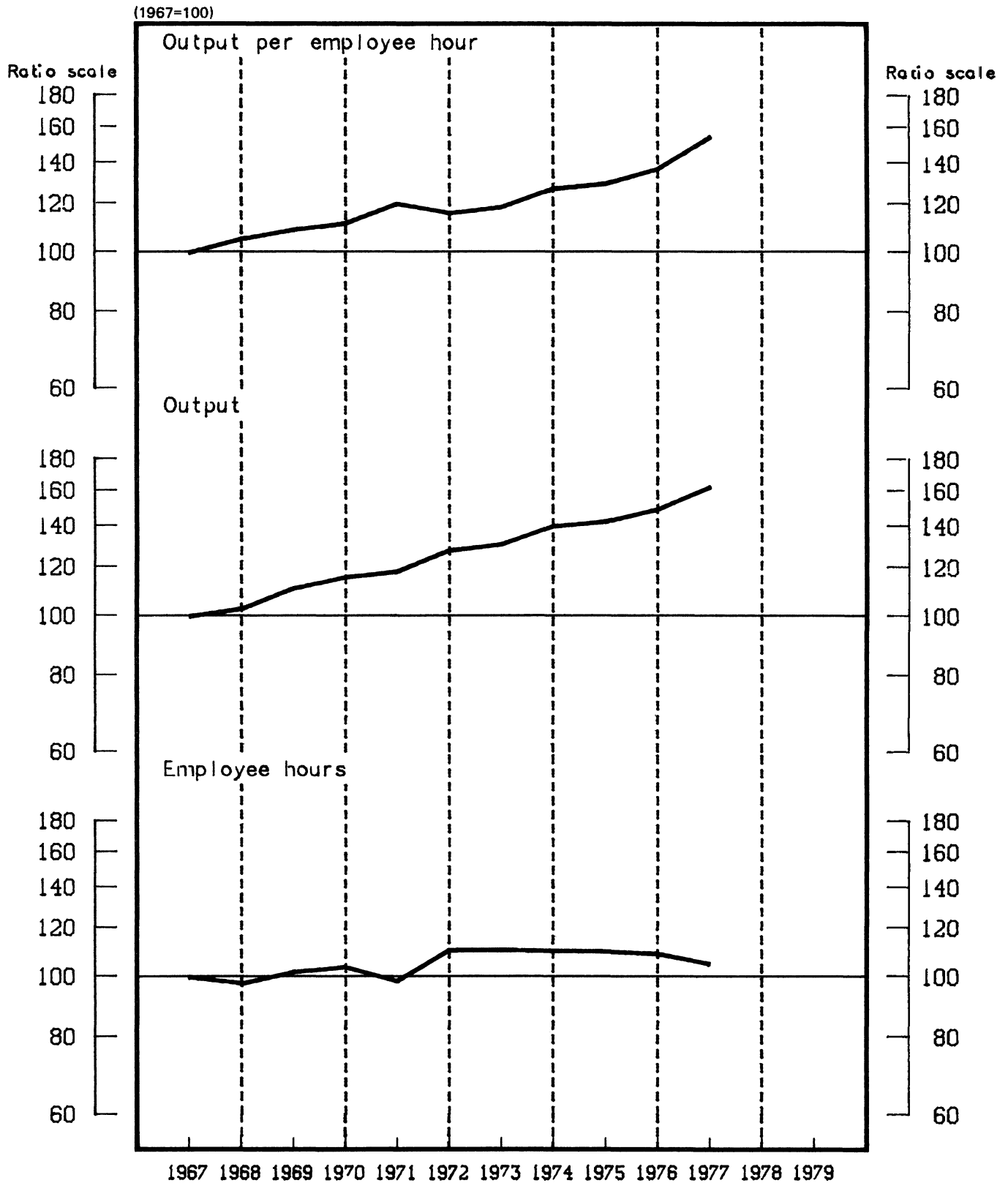
Table 34. Wet corn milling (SIC 2046): Indexes of output, employee hours, and employees, 1963-77
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963	83.6	96.1	103.0	78.8	93.6	100.0	79.1
1964	85.1	91.5	97.0	77.5	88.7	93.9	76.7
1965	88.2	95.8	100.5	83.8	91.5	94.9	83.7
1966	93.9	100.4	103.4	92.5	98.6	101.0	93.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.0	97.5	99.5	92.5	100.0	101.0	97.7
1969	110.4	96.8	99.0	91.2	95.7	95.9	95.3
1970	103.2	97.2	98.0	95.0	95.7	94.9	97.7
1971	96.0	89.8	88.7	92.5	92.2	91.8	93.0
1972	117.8	84.8	84.2	86.2	85.8	85.7	86.0
1973	102.8	83.4	83.7	82.5	83.0	83.7	81.4
1974	118.7	78.8	78.3	80.0	78.7	78.6	79.1
1975	119.7	78.4	81.3	71.2	77.3	80.6	69.8
1976	132.3	78.4	81.3	71.2	78.0	81.6	69.8
1977 ¹	149.4	75.3	76.4	72.5	76.6	78.6	72.1
Average annual percent change:							
1963-77	3.4	-1.9	-2.2	-1.1	-1.7	-1.9	-1.3
1973-77	8.9	-2.1	-1.4	-3.7	-1.7	-9	-3.6

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 19. Prepared feeds for animals and fowls (SIC 2047, 2048): Output per hour and related data, 1967-77



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

Table 35. Prepared feeds for animals and fowls (SIC 2047, 2048): Indexes of output per employee hour and output per employee, 1963-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963	81.7	83.4	78.2	81.8	83.8	78.3
1964	85.3	86.6	82.6	86.3	88.1	83.3
1965	88.2	90.3	83.9	89.6	92.8	84.3
1966	92.4	95.1	87.1	93.7	97.6	87.1
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.2	104.0	107.8	103.2	103.4	102.8
1969	108.8	108.2	110.2	106.7	106.8	106.3
1970	111.5	109.0	117.1	108.0	104.8	114.4
1971	119.9	118.2	123.8	115.9	112.3	123.4
1972	115.9	113.9	120.6	117.0	114.5	122.1
1973	118.5	116.1	124.1	123.3	121.8	126.2
1974	127.1	127.8	125.7	125.9	125.0	127.8
1975	129.5	129.5	129.4	129.0	127.5	131.9
1976	136.9	137.6	135.1	137.1	136.6	138.1
1977 ²	154.3	159.0	145.1	150.0	151.7	147.2
Average annual percent change:						
1963-77	4.1	4.0	4.3	4.0	3.7	4.5
1973-77	6.2	7.3	3.9	4.9	5.4	3.9

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 36. Prepared feeds for animals and fowls (SIC 2047, 2048): Indexes of output, employee hours, and employees, 1963-77
(1967 = 100)

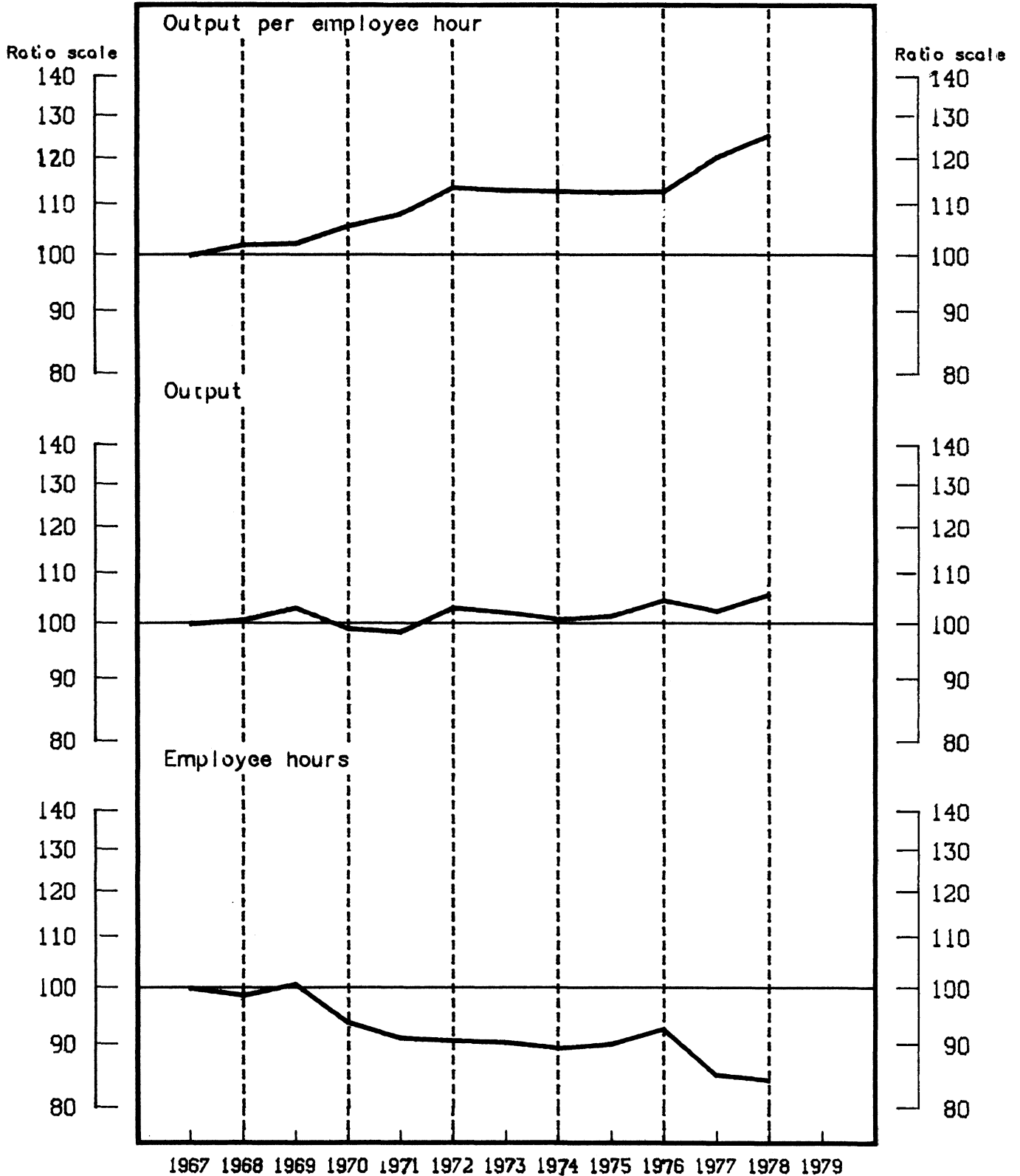
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963	83.8	102.6	100.5	107.2	102.4	100.0	107.0
1964	85.5	100.2	98.7	103.5	99.1	97.1	102.7
1965	86.1	97.6	95.4	102.6	96.1	92.8	102.1
1966	90.3	97.7	95.0	103.7	96.4	92.5	103.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.8	97.7	98.8	95.4	99.6	99.4	100.0
1969	110.9	101.9	102.5	100.6	103.9	103.8	104.3
1970	115.7	103.8	106.1	98.8	107.1	110.4	101.1
1971	118.1	98.5	99.9	95.4	101.9	105.2	95.7
1972	128.0	110.4	112.4	106.1	109.4	111.8	104.8
1973	130.9	110.5	112.7	105.5	106.2	107.5	103.7
1974	140.1	110.2	109.6	111.5	111.3	112.1	109.6
1975	142.5	110.0	110.0	110.1	110.5	111.8	108.0
1976	149.2	109.0	108.4	110.4	108.8	109.2	108.0
1977 ¹	162.2	105.1	102.0	111.8	108.1	106.9	110.2
Average annual percent change:							
1963-77	5.0	.8	.9	.6	.9	1.2	.4
1973-77	5.0	-1.1	-2.1	1.1	.1	-4	1.1

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 20. Bakery products (SIC 205): Output per hour and related data, 1967-78

(1967=100)



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

Table 37. Bakery products (SIC 205): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	70.5	70.0	71.1	72.0	70.7	74.1
1955	71.1	71.0	71.3	72.6	71.7	73.9
1956	72.5	73.1	71.4	73.3	72.8	74.3
1957	74.7	77.3	70.7	75.4	76.6	73.5
1958	77.3	79.0	74.6	78.9	79.9	77.4
1959	77.2	79.5	73.8	78.8	80.4	76.5
1960	77.7	79.8	74.3	79.8	82.3	76.3
1961	79.0	81.0	75.7	80.6	83.4	76.6
1962	81.1	84.1	76.7	82.7	86.9	77.1
1963	87.3	89.3	84.0	88.4	91.1	84.6
1964	90.1	91.8	87.4	93.1	96.6	88.1
1965	93.5	95.1	90.8	94.3	96.4	91.2
1966	94.6	95.6	92.7	96.0	98.1	92.9
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.0	101.2	103.5	103.3	102.7	104.0
1969	102.3	101.9	103.0	102.9	101.6	104.9
1970	105.7	105.1	106.7	106.8	104.6	110.0
1971	108.1	109.9	105.0	109.8	109.4	110.4
1972	113.7	116.0	109.9	116.1	115.3	117.3
1973	113.1	115.1	109.7	115.7	114.4	117.9
1974	112.9	119.4	103.1	113.2	115.1	110.8
1975	112.7	119.6	102.3	113.3	115.6	110.0
1976	112.8	118.5	104.3	114.3	115.5	112.6
1977	120.4	127.0	110.6	122.2	124.8	118.4
1978 ²	125.5	132.1	115.6	126.7	128.6	123.7
Average annual percent change:						
1947-78	2.3	2.7	1.7	2.2	2.4	1.8
1973-78	2.1	2.5	1.4	2.0	2.4	1.3

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 38. Bakery products (SIC 205): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

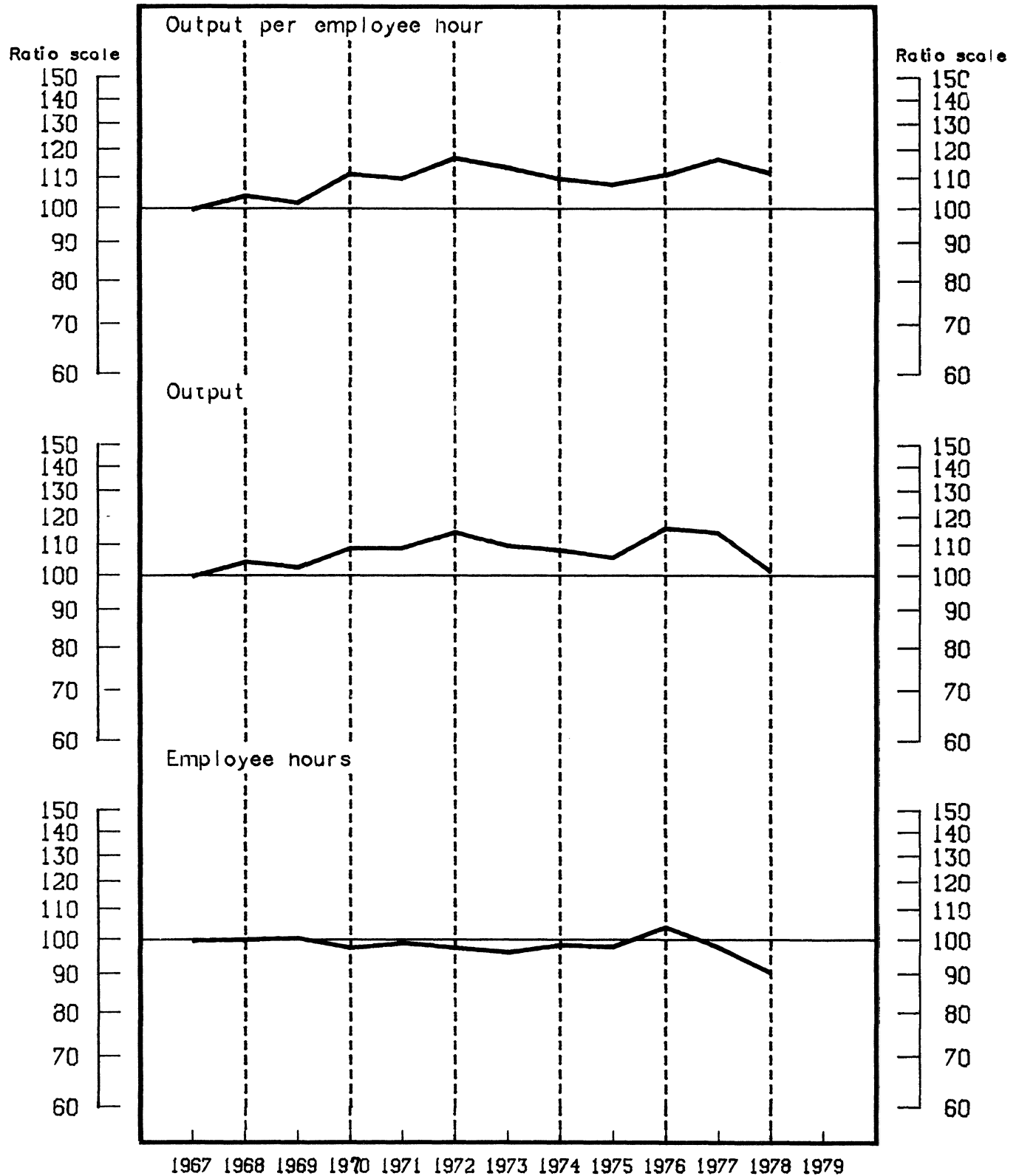
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	79.7	113.1	113.9	112.1	110.7	112.8	107.5
1955	81.5	114.6	114.8	114.3	112.3	113.7	110.3
1956	84.7	116.8	115.9	118.7	115.5	116.4	114.0
1957	87.0	116.4	112.5	123.0	115.4	113.6	118.4
1958	90.3	116.8	114.3	121.1	114.4	113.0	116.6
1959	90.9	117.7	114.4	123.1	115.3	113.1	118.8
1960	91.8	118.1	115.0	123.5	115.0	111.6	120.3
1961	91.0	115.2	112.3	120.2	112.9	109.1	118.8
1962	92.9	114.5	110.5	121.2	112.3	106.9	120.5
1963	93.7	107.3	104.9	111.5	106.0	102.8	110.8
1964	97.4	108.1	106.1	111.5	104.6	100.8	110.5
1965	99.1	106.0	104.2	109.2	105.1	102.8	108.7
1966	99.7	105.4	104.3	107.5	103.9	101.6	107.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	100.7	98.7	99.5	97.3	97.5	98.1	96.8
1969	103.1	100.8	101.2	100.1	100.2	101.5	98.3
1970	99.1	93.8	94.3	92.9	92.8	94.7	90.1
1971	98.5	91.1	89.6	93.8	89.7	90.0	89.2
1972	103.1	90.7	88.9	93.8	88.8	89.4	87.9
1973	102.2	90.4	88.8	93.2	88.3	89.3	86.7
1974	100.9	89.4	84.5	97.9	89.1	87.7	91.1
1975	101.5	90.1	84.9	99.2	89.6	87.8	92.3
1976	104.6	92.7	88.3	100.3	91.5	90.6	92.9
1977	102.5	85.1	80.7	92.7	83.9	82.1	86.6
1978 ¹	105.8	84.3	80.1	91.5	83.5	82.3	85.5
Average annual percent change:							
1947-78	1.1	-1.2	-1.5	-6	-1.1	-1.3	-7
1973-78	.7	-1.3	-1.7	-7	-1.2	-1.6	-6

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 21. Sugar (SIC 2061, 2062, 2063): Output per hour and related data, 1967-78

(1967=100)



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

Table 39. Sugar (SIC 2061, 2062, 2063): Indexes of output per employee hour and output per employee ¹, 1954-78
(1967=100)

Year	Output per hour ²			Output per employee ²		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	60.4	60.3	60.7	60.5	60.0	63.3
1955	62.8	62.5	64.4	62.6	61.8	66.7
1956	66.2	65.4	70.2	68.4	67.4	73.0
1957	65.3	64.3	70.5	66.7	65.5	73.2
1958	67.2	67.3	66.2	69.9	70.3	66.7
1959	70.8	70.6	72.0	72.1	71.5	74.7
1960	74.6	74.4	75.8	76.8	76.7	77.7
1961	79.7	79.6	80.3	81.5	81.5	81.3
1962	87.7	86.9	91.5	89.6	89.0	91.9
1963	88.2	87.9	89.4	89.9	89.8	89.9
1964	92.7	92.5	93.7	95.1	95.3	94.5
1965	96.5	95.6	101.0	95.6	94.2	101.6
1966	100.1	100.5	96.7	98.5	100.1	96.8
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.3	103.5	108.3	104.9	104.2	108.3
1969	102.1	101.7	103.9	100.5	100.0	102.8
1970	111.6	110.3	117.6	109.8	108.7	115.0
1971	110.1	109.6	112.0	114.3	114.2	115.1
1972	117.4	119.1	110.8	120.2	120.6	118.8
1973	114.0	114.2	112.5	118.0	117.5	120.2
1974	110.0	112.1	102.0	113.3	114.5	108.5
1975	108.1	111.0	96.5	106.6	107.7	102.5
1976	111.4	114.0	101.0	114.4	116.2	107.1
1977	116.9	122.6	104.5	120.0	123.0	109.0
1978 ³	112.0	119.6	87.1	112.3	118.8	90.9
Average annual percent change:						
1947-78	3.4	3.6	2.3	3.3	3.5	2.3
1973-78	.4	1.5	-3.3	(⁴)	1.0	-3.8

¹ Series revised from 1947-66 to reflect the summation of the component industries.

² 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.

³ Preliminary.

⁴ Less than .05 percent.

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 40. Sugar (SIC 2061, 2062, 2063): Indexes of output, employee hours, and employees ¹, 1954-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	68.0	112.6	112.8	112.0	112.4	113.4	107.4
1955	67.7	107.8	108.4	105.2	108.1	109.5	101.5
1956	71.0	107.3	108.5	101.1	103.8	105.3	97.2
1957	70.3	107.7	109.3	99.7	105.4	107.4	96.0
1958	74.4	110.7	110.5	112.4	106.4	105.9	108.3
1959	78.1	110.3	110.7	108.4	108.3	109.2	104.6
1960	80.3	107.6	108.0	106.0	104.5	104.7	103.3
1961	84.9	106.5	106.7	105.7	104.2	104.2	104.4
1962	88.8	101.3	102.2	97.1	99.1	99.8	96.6
1963	93.1	105.6	105.9	104.1	103.6	103.7	103.6
1964	100.5	108.4	108.7	107.3	105.7	105.5	106.4
1965	97.4	100.9	101.9	96.4	101.9	103.4	95.9
1966	98.2	98.1	97.7	101.5	99.7	98.1	101.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.6	100.3	101.1	96.6	99.7	100.4	96.6
1969	102.8	100.7	101.1	98.9	102.3	102.8	100.0
1970	109.1	97.8	98.9	92.8	99.4	100.4	94.9
1971	109.2	99.2	99.6	97.5	95.5	95.6	94.9
1972	114.8	97.8	96.4	103.6	95.5	95.2	96.6
1973	110.0	96.5	96.3	97.8	93.2	93.6	91.5
1974	108.5	98.6	96.8	106.4	95.8	94.8	100.0
1975	106.0	98.1	95.5	109.9	99.4	98.4	103.4
1976	116.2	104.3	101.9	115.0	101.6	100.0	108.5
1977	114.6	98.0	93.5	109.7	95.5	93.2	105.1
1978 ²	101.7	90.8	85.0	116.7	90.6	85.6	111.9
Average annual percent change:							
1947-78	2.4	-1.0	-1.2	.1	-9	-1.1	.1
1973-78	-4	-7	-1.9	3.0	-4	-1.4	3.5

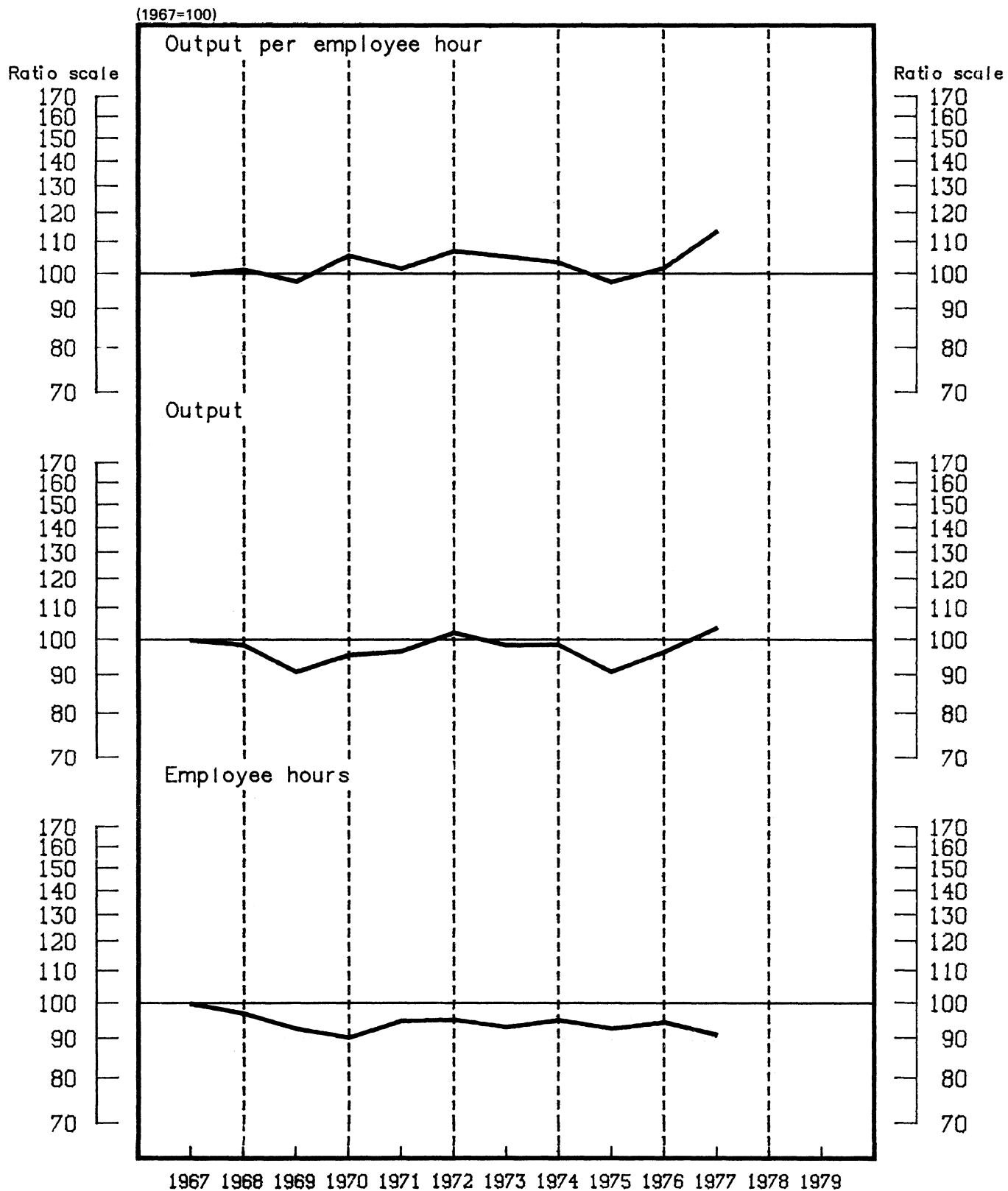
¹ Series revised from 1947-66 to reflect the summation of the component industries.

² Preliminary.

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 22. Raw and refined cane sugar (SIC 2061, 2062): Output per hour and related data, 1967-77



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

Table 41. Raw and refined cane sugar (SIC 2061, 2062): Indexes of output per employee hour and output per employee, 1958-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	63.8	63.1	67.0	62.3	61.9	63.8
1959	68.3	66.7	74.9	65.4	63.8	71.4
1960	70.3	69.0	75.7	68.0	67.1	71.3
1961	79.2	78.1	84.2	77.1	76.7	78.3
1962	87.5	85.5	95.3	85.6	85.0	88.1
1963	85.8	84.8	89.8	84.5	85.0	82.8
1964	85.7	85.3	86.6	84.0	85.1	80.3
1965	94.7	93.0	101.2	91.7	91.1	93.4
1966	99.9	98.4	105.8	97.2	97.2	97.2
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	101.5	101.1	103.2	101.9	101.4	103.2
1969	98.0	100.3	90.0	94.9	96.8	89.0
1970	105.9	108.1	98.0	103.8	106.6	95.8
1971	101.8	104.0	94.3	103.8	106.0	96.8
1972	107.3	111.6	93.4	110.3	113.9	100.2
1973	105.6	108.4	96.6	108.1	109.7	103.1
1974	103.7	108.6	88.9	107.0	111.5	94.6
1975	97.8	104.2	80.2	96.5	100.4	85.3
1976	102.0	106.9	87.3	102.4	105.8	92.5
1977 ²	113.7	120.1	95.2	111.3	115.5	99.4
Average annual percent change:						
1958-77	2.4	2.9	.9	2.7	3.0	1.7
1973-77	1.3	1.9	-.5	.1	.5	-1.0

¹ 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.

² Preliminary.

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 42. Raw and refined cane sugar (SIC 2061, 2062): Indexes of output, employee hours, and employees, 1958-77
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	72.4	113.4	114.8	108.1	116.2	117.0	113.4
1959	77.3	113.2	115.9	103.2	118.2	121.2	108.3
1960	77.2	109.8	111.9	102.0	113.5	115.1	108.2
1961	84.0	106.0	107.6	99.8	109.0	109.5	107.3
1962	87.0	99.4	101.8	91.3	101.6	102.4	98.8
1963	90.2	105.1	106.4	100.5	106.7	106.1	108.9
1964	89.0	103.9	104.3	102.8	106.0	104.6	110.8
1965	90.8	95.9	97.6	89.7	99.0	99.7	97.2
1966	95.2	95.3	96.7	90.0	97.9	97.9	97.9
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	98.7	97.2	97.6	95.6	96.9	97.3	95.6
1969	91.0	92.9	90.7	101.1	95.9	94.0	102.2
1970	95.8	90.5	88.6	97.8	92.3	89.9	100.0
1971	96.8	95.1	93.1	102.7	93.3	91.3	100.0
1972	102.4	95.4	91.6	109.6	92.8	89.9	102.2
1973	98.6	93.4	91.0	102.1	91.2	89.9	95.6
1974	98.8	95.3	91.0	111.1	92.3	88.6	104.4
1975	91.0	93.0	87.3	113.4	94.3	90.6	106.7
1976	96.6	94.7	90.4	110.7	94.3	91.3	104.4
1977 ¹	103.8	91.3	86.4	109.0	93.3	89.9	104.4
Average annual percent change:							
1958-77	1.4	-1.0	-1.5	.5	-1.3	-1.5	-.3
1973-77 .....	.8	-.5	-1.1	1.3	.7	.3	1.8

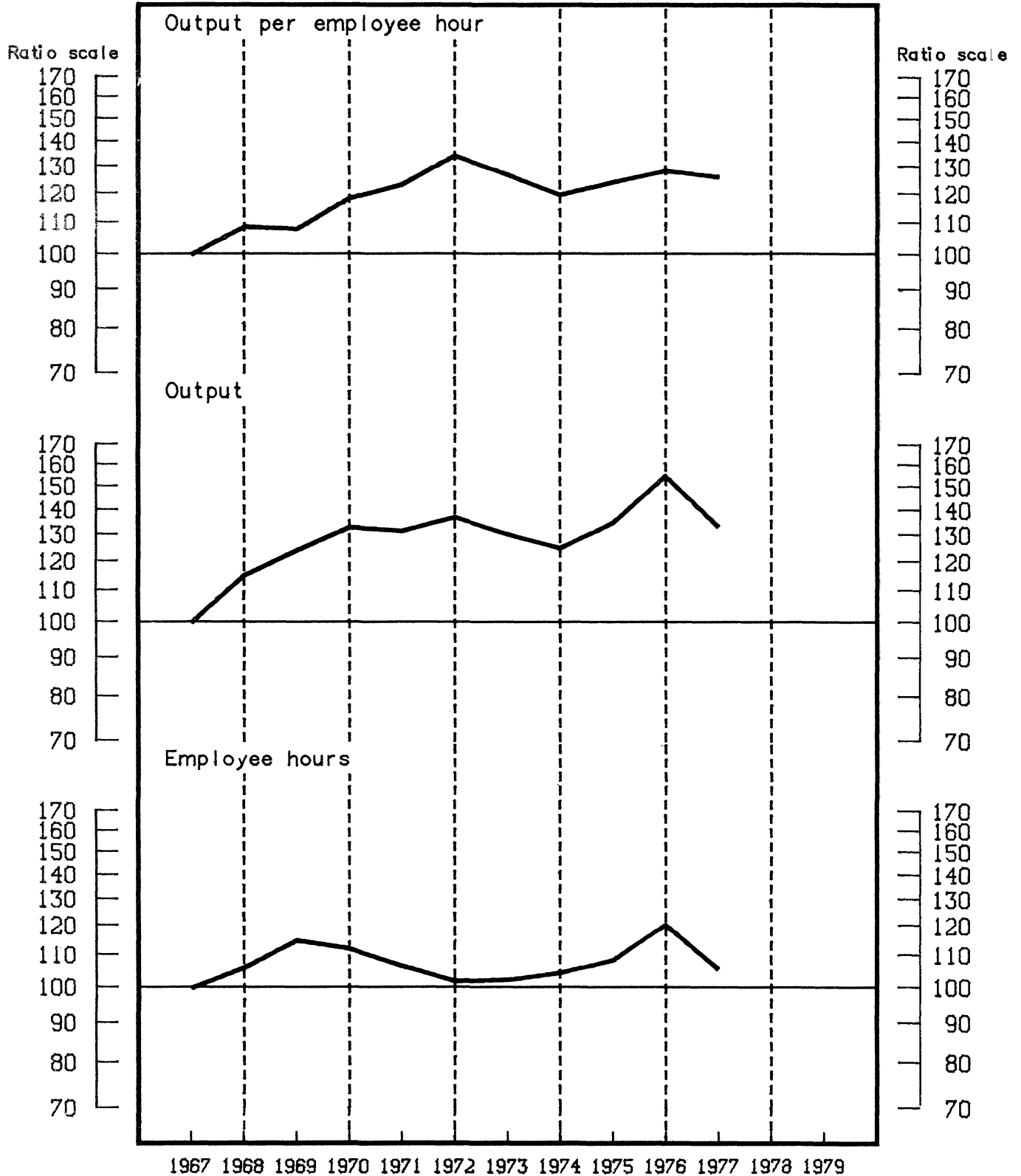
¹ Preliminary.

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 23. Beet sugar (SIC 2063): Output per hour and related data, 1967-77

(1967=100)



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

Table 43. Beet sugar (SIC 2063): Indexes of output per employee hour and output per employee, 1958-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	77.4	76.0	89.4	87.3	87.6	85.2
1959	79.3	78.0	90.4	86.9	87.1	86.1
1960	87.6	85.6	105.6	97.5	97.3	99.5
1961	84.0	82.3	98.1	89.9	89.8	91.1
1962	92.1	89.9	111.9	97.2	96.4	103.2
1963	97.0	94.0	124.2	100.8	99.1	114.6
1964	110.3	107.0	142.2	118.3	116.6	131.9
1965	104.7	102.2	127.7	104.0	102.4	117.8
1966	104.5	105.0	100.7	101.7	103.1	92.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.7	107.9	115.3	110.5	109.8	115.3
1969	108.0	105.1	135.3	109.9	107.3	133.7
1970	118.5	115.4	146.6	118.6	115.8	143.3
1971	123.4	119.4	163.2	132.9	129.1	167.6
1972	134.5	131.4	162.9	137.2	133.2	174.6
1973	127.2	124.2	155.1	135.0	131.6	165.8
1974	119.7	117.6	137.3	123.0	120.3	146.0
1975	124.3	124.0	127.0	125.2	124.0	135.0
1976	128.6	128.6	128.2	137.3	137.5	135.8
1977 ²	126.2	127.3	119.4	134.7	136.2	124.6
Average annual percent change:						
1958-77	2.7	2.8	2.1	2.4	2.4	2.9
1973-77 .....	.5	1.4	-5.8	1.1	2.0	-6.2

¹ 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.

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.

² Preliminary.

Table 44. Beet sugar (SIC 2063): Indexes of output, employee hours, and employees, 1958-77
(1967=100)

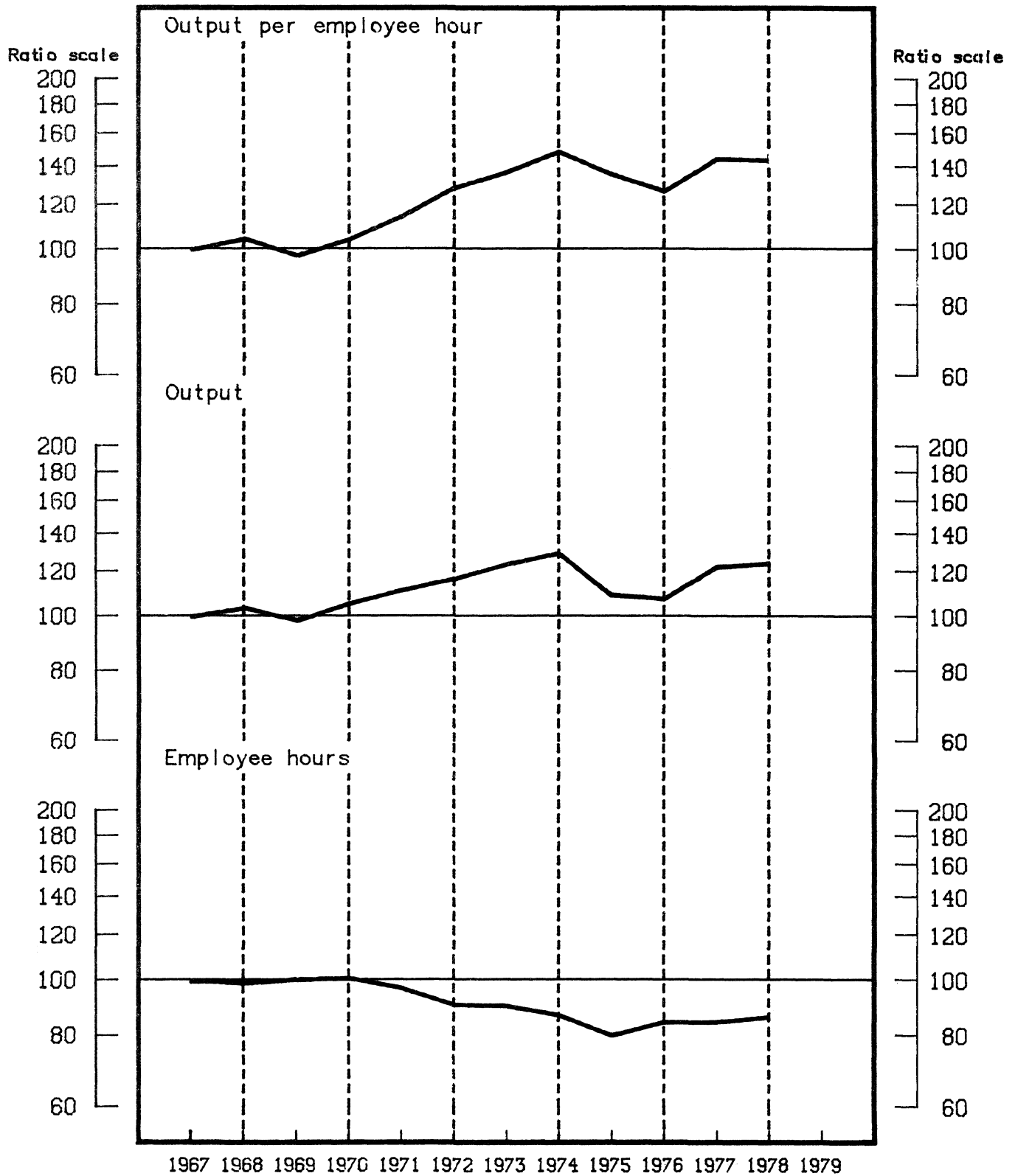
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	78.4	101.3	103.2	87.7	89.8	89.5	92.0
1959	79.7	100.5	102.2	88.2	91.7	91.5	92.6
1960	86.9	99.2	101.5	82.3	89.1	89.3	87.3
1961	86.5	103.0	105.1	88.2	96.2	96.3	94.9
1962	92.4	100.3	102.8	82.6	95.1	95.9	89.5
1963	99.0	102.1	105.3	79.7	98.2	99.9	86.4
1964	124.1	112.5	116.0	87.3	104.9	106.4	94.1
1965	111.2	106.2	108.8	87.1	106.9	108.6	94.4
1966	104.3	99.8	99.3	103.6	102.6	101.2	112.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	115.3	106.1	106.9	100.0	104.3	105.0	100.0
1969	124.2	115.0	118.2	91.8	113.0	115.8	92.9
1970	133.1	112.3	115.3	90.8	112.2	114.9	92.9
1971	131.7	106.7	110.3	80.7	99.1	102.0	78.6
1972	137.2	102.0	104.4	84.2	100.0	103.0	78.6
1973	130.3	102.4	104.9	84.0	96.5	99.0	78.6
1974	125.1	104.5	106.4	91.1	101.7	104.0	85.7
1975	135.0	108.6	108.9	106.3	107.8	108.9	100.0
1976	155.2	120.7	120.7	121.1	113.0	112.9	114.3
1977 ¹	133.5	105.8	104.9	111.8	99.1	98.0	107.1
Average annual percent change:							
1958-77	3.2	.5	.4	1.1	.7	.8	.2
1973-77	2.7	2.1	1.3	8.9	1.6	.6	9.5

¹ Preliminary.
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 24. Candy and other confectionery products (SIC 2065): Output per hour and related data, 1967-78

(1967=100)



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

Table 45. Candy and other confectionery products (SIC 2065): Indexes of output per employee hour and output per employee, 1954-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	61.9	63.1	55.9	63.4	64.5	59.3
1955	63.8	66.8	51.4	65.0	67.9	53.4
1956	64.5	66.6	48.7	66.5	70.6	59.7
1957	70.0	74.3	53.4	71.3	75.4	55.6
1958	73.2	75.7	62.0	74.2	76.4	64.5
1959	74.9	77.8	62.1	77.4	80.5	64.5
1960	78.3	81.5	64.3	80.8	84.4	66.0
1961	78.1	80.9	66.0	80.7	84.0	65.8
1962	79.6	82.5	67.0	82.3	86.0	67.4
1963	88.0	89.1	82.3	89.0	90.5	82.8
1964	89.7	90.8	84.4	90.5	91.6	85.1
1965	93.4	93.7	92.1	94.7	95.1	92.6
1966	97.2	97.9	93.7	97.2	97.8	93.7
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.6	105.1	102.7	104.5	106.0	97.3
1969	97.6	98.4	93.7	98.3	100.1	89.8
1970	104.4	107.0	92.2	104.2	107.4	89.6
1971	114.6	119.0	95.6	118.0	123.9	94.6
1972	128.7	133.1	109.1	130.5	135.4	109.6
1973	137.3	148.5	97.6	138.7	150.3	98.5
1974	149.0	158.8	111.5	144.5	152.7	112.9
1975	136.0	147.2	96.2	129.3	137.8	97.4
1976	126.9	134.9	96.1	123.7	130.3	97.5
1977	144.7	150.6	119.4	143.7	149.3	120.3
1978 ²	143.8	148.6	122.6	143.8	148.6	123.3
Average annual percent change:						
1947-78	3.6	3.7	3.3	3.4	3.5	3.1
1973-78	.2	-.7	3.9	.3	-.5	3.8

¹ 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.

² Preliminary.

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

Table 46. Candy and other confectionery products (SIC 2065): Indexes of output, employee hours, and employees, 1954-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	62.8	101.5	99.5	112.4	99.0	97.3	107.8
1955	65.7	103.0	98.4	127.7	101.0	96.7	123.0
1956	67.9	105.3	99.0	139.5	102.1	96.2	133.9
1957	70.7	101.0	95.2	132.3	99.1	93.8	127.2
1958	72.7	99.3	96.0	117.2	98.0	95.1	112.8
1959	73.8	98.5	94.8	118.8	95.3	91.7	114.4
1960	76.8	98.1	94.2	119.5	95.0	91.0	116.3
1961	77.8	98.6	96.2	117.9	96.4	92.6	116.4
1962	79.7	100.1	96.6	118.9	96.8	92.7	118.2
1963	83.5	94.9	93.7	101.5	93.8	92.3	101.1
1964	87.4	97.4	96.3	103.6	96.6	95.4	102.7
1965	91.0	97.4	97.1	98.8	96.1	95.7	98.3
1966	95.4	98.1	97.4	101.8	98.1	97.5	101.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.6	99.0	98.6	100.9	99.1	97.7	106.5
1969	96.2	100.6	99.8	104.8	99.9	98.1	109.3
1970	105.4	101.0	98.5	114.3	101.2	98.1	117.6
1971	111.3	97.1	93.5	116.4	94.3	89.8	117.6
1972	116.7	90.7	87.7	107.0	89.4	86.2	106.5
1973	124.0	90.3	83.5	127.1	89.4	82.5	125.9
1974	129.6	87.0	81.6	116.2	89.7	84.9	114.8
1975	109.1	80.2	74.1	113.4	84.4	79.2	112.0
1976	107.5	84.7	79.7	111.9	86.9	82.5	110.2
1977	122.6	84.7	81.4	102.7	85.3	82.1	101.9
1978 ¹	124.4	86.5	83.7	101.5	86.5	83.7	100.9
Average annual percent change:							
1947-78	2.6	-.9	-1.0	-.6	-.7	-.8	-.4
1973-78	-.5	-.7	.2	-4.2	-.8	(²)	-4.1

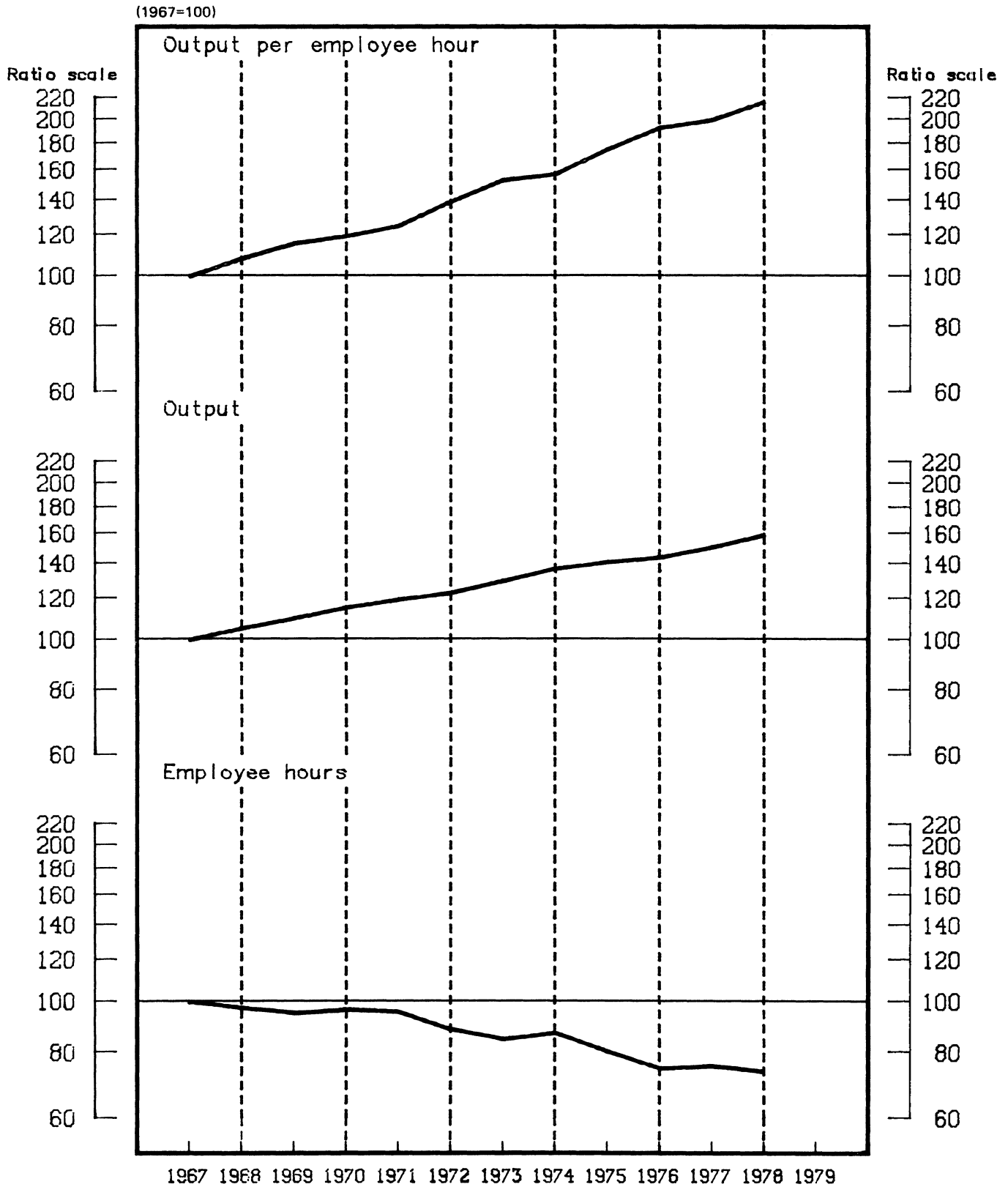
¹ Preliminary.

² Less than .05 percent.

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

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

Chart 25. Malt beverages (SIC 2082): Output per hour and related data, 1967-78



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

Table 47. Malt beverages (SIC 2082): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	49.4	50.5	47.3	51.0	51.9	49.2
1955	51.4	51.9	50.3	52.8	53.0	52.1
1956	52.4	53.3	50.5	53.9	54.5	52.4
1957	54.1	55.4	51.4	55.1	55.9	53.4
1958	59.9	60.8	57.8	60.3	60.4	60.0
1959	62.7	62.9	62.0	63.3	62.8	64.3
1960	65.2	64.9	65.5	65.0	63.8	67.2
1961	68.3	68.2	68.5	68.0	67.2	69.3
1962	71.8	71.1	73.1	71.9	71.1	73.5
1963	78.9	77.9	81.1	79.0	77.7	81.4
1964	84.6	83.9	86.0	84.9	83.7	86.8
1965	89.0	88.7	89.3	89.6	89.6	89.6
1966	93.7	93.9	92.8	94.6	95.3	92.8
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.3	105.8	113.9	107.0	106.2	108.8
1969	115.7	114.0	119.5	114.6	114.1	115.4
1970	119.6	119.4	119.9	120.2	121.6	117.3
1971	125.1	128.3	118.8	125.1	128.6	118.4
1972	139.3	141.6	134.9	142.7	145.9	136.5
1973	153.2	148.6	163.4	157.6	153.7	166.3
1974	157.2	151.7	170.1	163.0	158.5	173.3
1975	175.3	169.4	189.7	178.6	172.1	193.3
1976	192.9	186.7	207.6	201.3	196.1	212.2
1977	199.6	189.3	225.6	204.2	193.7	229.0
1978 ²	216.3	205.2	243.8	216.6	204.1	247.6
Average annual percent change:						
1947-78	5.7	5.6	5.8	5.5	5.4	5.6
1973-78	7.5	7.0	8.8	7.0	6.3	8.7

¹ 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.

² Preliminary.

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 48. Malt beverages (SIC 2082): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

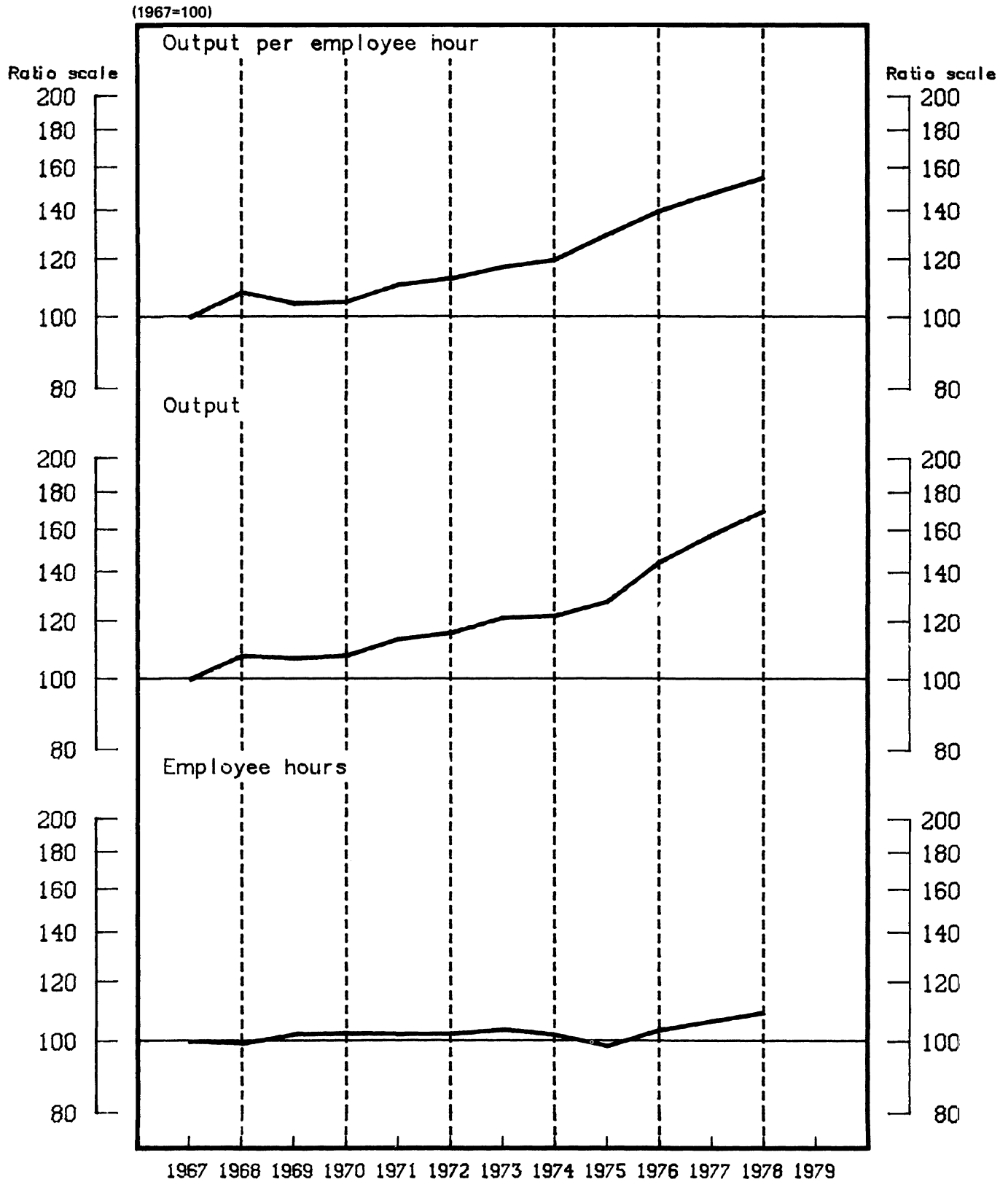
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	69.8	141.3	138.3	147.7	136.8	134.6	141.9
1955	71.4	138.8	137.5	142.0	135.3	134.6	137.0
1956	72.0	137.4	135.0	142.7	133.6	132.1	137.3
1957	71.8	132.7	129.5	139.7	130.2	128.4	134.5
1958	72.6	121.3	119.4	125.5	120.3	120.1	121.1
1959	75.3	120.1	119.7	121.4	119.0	120.0	117.1
1960	76.1	116.8	117.2	116.1	117.1	119.3	113.2
1961	77.7	113.7	114.0	113.5	114.3	115.6	112.2
1962	79.6	110.8	111.9	108.9	110.7	112.0	108.3
1963	83.0	105.2	106.6	102.4	105.0	106.8	102.0
1964	88.1	104.1	105.0	102.4	103.8	105.2	101.5
1965	90.9	102.1	102.5	101.8	101.4	101.5	101.4
1966	96.0	102.5	102.2	103.4	101.5	100.7	103.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.4	97.3	99.6	92.5	98.5	99.2	96.9
1969	110.1	95.2	96.6	92.1	96.1	96.5	95.4
1970	115.5	96.6	96.7	96.3	96.1	95.0	98.5
1971	119.6	95.6	93.2	100.7	95.6	93.0	101.0
1972	123.3	88.5	87.1	91.4	86.4	84.5	90.3
1973	129.9	84.8	87.4	79.5	82.4	84.5	78.1
1974	137.1	87.2	90.4	80.6	84.1	86.5	79.1
1975	141.1	80.5	83.3	74.4	79.0	82.0	73.0
1976	144.1	74.7	77.2	69.4	71.6	73.5	67.9
1977	150.7	75.5	79.6	66.8	73.8	77.8	65.8
1978 ¹	159.2	73.6	77.6	65.3	73.5	78.0	64.3
Average annual percent change:							
1947-78	3.0	-2.4	-2.3	-2.6	-2.3	-2.2	-2.4
1973-78	3.8	-3.4	-3.0	-4.5	-3.0	-2.3	-4.5

¹ Preliminary.

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 26. Bottled and canned soft drinks (SIC 2086): Output per hour and related data, 1967-78



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

Table 49. Bottled and canned soft drinks (SIC 2086): Indexes of output per employee hour and output per employee¹, 1958-78
(1967 = 100)

Year	Output per hour ²			Output per employee ²		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	86.6	86.1	87.0	88.6	86.3	90.1
1959	90.7	90.7	90.8	93.9	93.8	94.1
1960	87.6	88.3	87.2	89.6	90.2	89.3
1961	91.2	92.5	90.4	92.2	93.3	91.5
1962	97.6	99.9	96.3	97.7	100.0	96.3
1963	100.7	101.2	100.6	101.8	103.6	100.6
1964	101.0	102.7	100.0	101.7	104.4	100.0
1965	101.8	104.1	100.3	102.3	105.6	100.3
1966	102.4	101.4	103.2	103.3	103.3	103.2
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.3	109.8	107.4	107.4	107.4	107.4
1969	104.6	109.2	101.7	104.2	105.7	103.4
1970	105.2	113.0	100.3	105.8	109.4	103.6
1971	111.0	122.8	104.0	112.9	119.0	109.4
1972	113.2	124.2	106.5	116.7	120.6	114.4
1973	117.3	130.3	109.5	121.0	126.0	118.2
1974	119.9	133.5	111.9	123.3	127.0	121.1
1975	129.6	146.1	120.2	133.3	138.5	130.1
1976	139.7	158.0	129.2	144.0	151.5	139.8
1977	147.7	168.8	135.9	152.3	161.7	147.1
1978 ³	155.3	178.4	142.4	160.7	172.8	154.0
Average annual percent change:						
1958-78	2.5	3.3	2.0	2.6	2.9	2.4
1973-78	6.2	6.9	5.8	6.3	7.1	5.8

¹ Series revised to incorporate new information on output by container type and size.

² 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.

³ Preliminary.

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 50. Bottled and canned soft drinks (SIC 2086): Indexes of output, employee hours, and employees¹, 1958-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	68.5	79.1	79.6	78.7	77.3	79.4	76.0
1959	74.3	81.9	81.9	81.8	79.1	79.2	79.0
1960	73.3	83.7	83.0	84.1	81.8	81.3	82.1
1961	75.7	83.0	81.8	83.7	82.1	81.1	82.7
1962	81.7	83.7	81.8	84.8	83.6	81.7	84.8
1963	87.1	86.5	86.1	86.6	85.6	84.1	86.6
1964	90.9	90.0	88.5	90.9	89.4	87.1	90.9
1965	94.4	92.7	90.7	94.1	92.3	89.4	94.1
1966	100.6	98.2	99.2	97.5	97.4	97.4	97.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.8	99.5	98.2	100.4	100.4	100.4	100.4
1969	107.0	102.3	98.0	105.2	102.7	101.2	103.5
1970	107.9	102.6	95.5	107.6	102.0	98.6	104.2
1971	113.6	102.3	92.5	109.2	100.6	95.5	103.8
1972	115.9	102.4	93.3	108.8	99.3	96.1	101.3
1973	121.6	103.7	93.3	111.1	100.5	96.5	102.9
1974	122.3	102.0	91.6	109.3	99.2	96.3	101.0
1975	127.8	98.6	87.5	106.3	95.9	92.3	98.2
1976	144.7	103.6	91.6	112.0	100.5	95.5	103.5
1977	157.5	106.6	93.3	115.9	103.4	97.4	107.1
1978 ²	170.0	109.5	95.3	119.4	105.8	98.4	110.4
Average annual percent change:							
1958-78	4.1	1.5	.7	2.0	1.4	1.1	1.6
1973-78	7.6	1.3	.6	1.7	1.2	.5	1.7

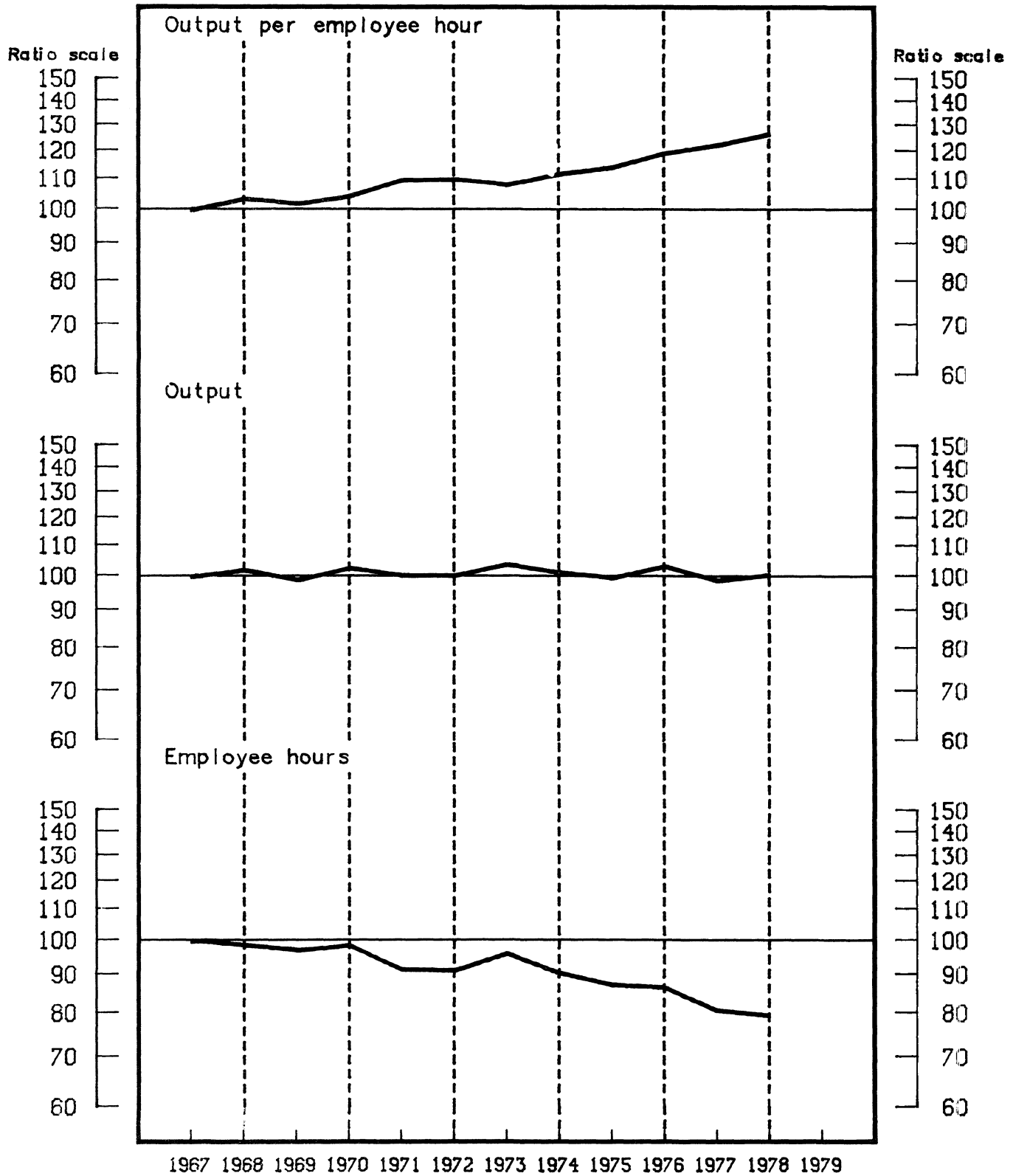
¹ Series revised to incorporate new information on output by container type and size.

² Preliminary.

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 27. All tobacco products (SIC 2111, 2121, 2131): Output per hour and related data, 1967-78

(1967=100)



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

Table 51. All tobacco products (SIC 2111, 2121, 2131): Indexes of output per employee hour and output per employee, 1954-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	62.6	60.3	89.2	62.0	59.8	89.2
1955	62.4	60.1	89.2	62.2	60.0	88.9
1956	66.3	64.1	94.1	65.9	63.6	93.9
1957	69.4	67.1	96.5	69.1	66.9	96.3
1958	74.6	72.8	93.9	75.1	73.4	93.6
1959	78.4	77.0	91.1	79.3	78.1	90.7
1960	83.7	82.4	96.2	84.3	83.2	96.0
1961	86.6	85.9	93.0	87.9	87.4	92.8
1962	89.3	89.1	90.6	90.8	90.8	91.0
1963	94.1	93.5	99.9	95.7	95.1	100.3
1964	96.4	94.8	111.3	99.7	98.4	112.3
1965	100.2	99.5	106.4	99.4	98.7	106.8
1966	99.9	99.2	106.0	100.3	99.6	106.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.5	103.4	104.1	100.7	100.6	102.1
1969	101.9	102.5	96.9	99.9	100.6	94.6
1970	104.3	104.4	103.6	104.7	105.1	101.2
1971	109.7	110.5	104.5	108.9	109.7	101.9
1972	110.0	111.6	98.6	108.2	109.9	95.9
1973	108.1	110.2	93.5	107.1	109.5	91.3
1974	111.9	114.7	93.4	107.9	110.7	89.0
1975	114.2	119.0	86.1	110.9	115.9	82.1
1976	119.3	124.3	90.0	117.1	122.5	86.2
1977	122.4	129.3	85.6	117.3	124.1	81.4
1978 ²	126.7	135.7	82.0	121.9	130.9	77.9
Average annual percent change:						
1947-78	2.9	3.2	.4	2.9	3.2	.2
1973-78	3.2	4.2	-2.5	2.8	3.8	-2.8

¹ 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.
² Preliminary.

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 52. All tobacco products (SIC 2111, 2121, 2131): Indexes of output, employee hours, and employees, 1954-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	79.7	127.3	132.1	89.3	128.5	133.2	89.3
1955	80.4	128.9	133.7	90.1	129.2	133.9	90.4
1956	81.0	122.1	126.4	86.1	122.9	127.4	86.3
1957	83.5	120.3	124.5	86.5	120.9	124.9	86.7
1958	88.3	118.3	121.3	94.0	117.5	120.3	94.3
1959	93.5	119.3	121.4	102.6	117.9	119.7	103.1
1960	95.8	114.4	116.3	99.6	113.7	115.2	99.8
1961	95.3	110.0	110.9	102.5	108.4	109.1	102.7
1962	95.5	107.0	107.2	105.4	105.2	105.2	104.9
1963	97.6	103.7	104.4	97.7	102.0	102.6	97.3
1964	106.0	110.0	111.8	95.2	106.3	107.7	94.4
1965	103.2	103.0	103.7	97.0	103.8	104.6	96.6
1966	100.5	100.6	101.3	94.8	100.2	100.9	94.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.1	98.6	98.7	98.1	101.4	101.5	100.0
1969	98.9	97.1	96.5	102.1	99.0	98.3	104.6
1970	102.7	98.5	98.4	99.1	98.1	97.7	101.5
1971	100.4	91.5	90.9	96.1	92.2	91.5	98.5
1972	100.3	91.2	89.9	101.7	92.7	91.3	104.6
1973	103.9	96.1	94.3	111.1	97.0	94.9	113.8
1974	101.3	90.5	88.3	108.5	93.9	91.5	113.8
1975	99.7	87.3	83.8	115.8	89.9	86.0	121.5
1976	103.4	86.7	83.2	114.9	88.3	84.4	120.0
1977	98.9	80.8	76.5	115.5	84.3	79.7	121.5
1978 ¹	100.7	79.5	74.2	122.8	82.6	76.9	129.2
Average annual percent change:							
1947-78	1.1	-1.7	-2.0	.8	-1.7	-2.0	.9
1973-78	-5	-3.6	-4.6	2.0	-3.2	-4.2	2.4

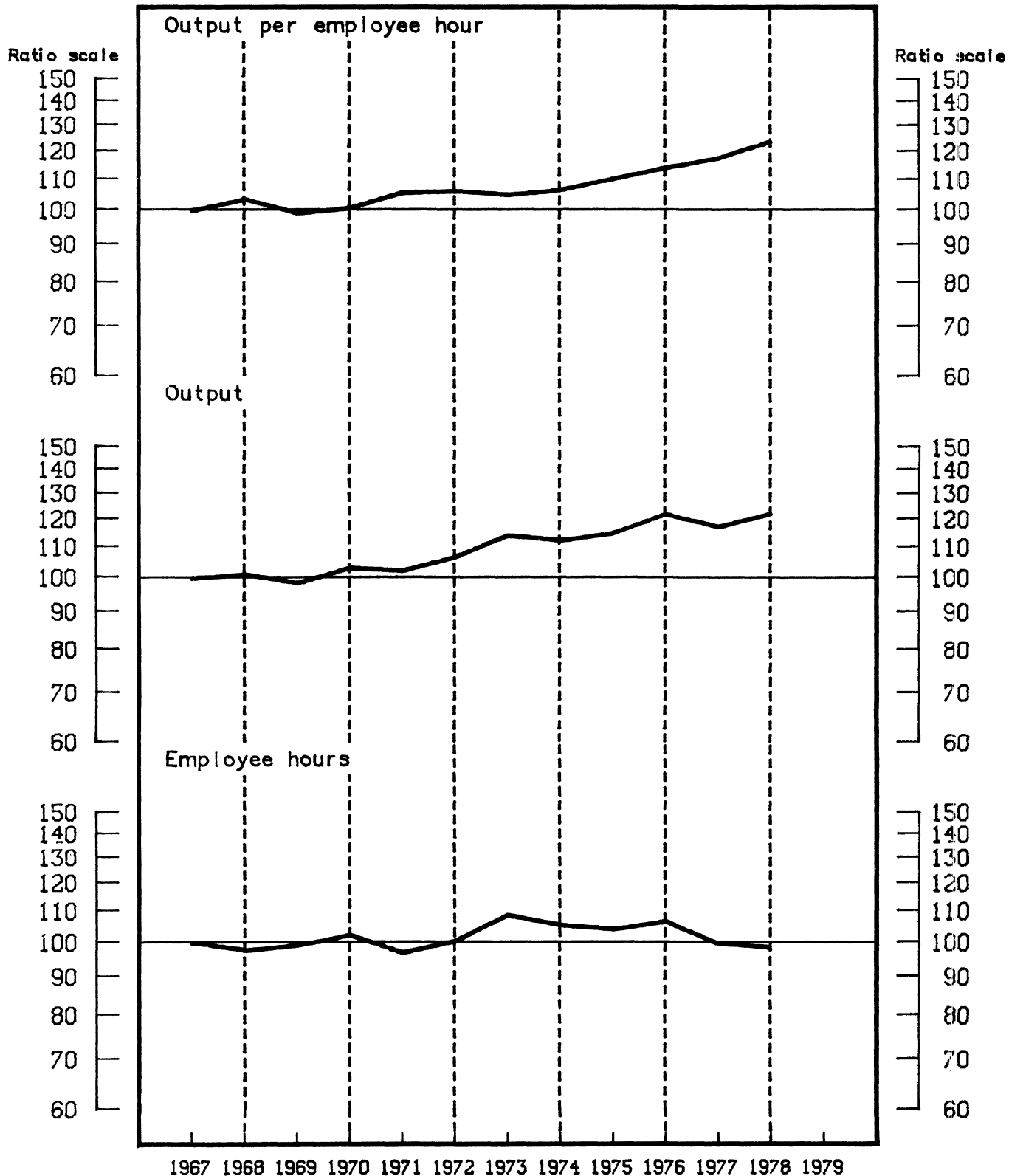
¹ Preliminary.

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 28. Cigarette, chewing and smoking tobacco (SIC 2111, 2131): Output per hour and related data, 1967-78

(1967=100)



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

Table 53. Cigarettes, chewing and smoking tobacco (SIC 2111, 2131): Indexes of output per employee hour and output per employee, 1954-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	78.7	76.3	101.7	79.2	76.9	102.6
1955	77.8	75.3	104.3	79.7	77.2	104.7
1956	80.1	77.3	109.2	81.8	79.0	110.1
1957	82.3	79.6	110.0	83.8	81.1	110.8
1958	83.5	81.3	103.8	85.0	82.9	104.3
1959	85.4	84.2	96.3	87.2	86.0	96.9
1960	89.2	88.0	98.4	90.4	89.3	98.9
1961	91.1	90.4	96.8	92.7	92.2	96.9
1962	91.5	91.5	90.7	94.0	94.4	91.2
1963	95.5	95.0	99.1	98.0	97.7	99.5
1964	94.1	93.5	98.0	96.4	96.0	98.8
1965	98.4	98.1	99.9	96.9	96.4	100.4
1966	98.5	98.6	97.5	99.2	99.3	97.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.5	103.6	102.6	99.1	98.8	101.1
1969	99.2	100.1	92.7	96.1	96.9	90.8
1970	100.8	101.0	99.0	100.7	101.2	97.0
1971	105.6	106.9	96.2	103.9	105.2	94.3
1972	106.1	107.7	95.1	103.5	105.1	92.8
1973	104.9	107.4	88.2	103.3	105.9	86.4
1974	106.5	110.2	84.9	102.8	106.5	81.2
1975	110.3	115.5	81.8	106.3	111.7	78.2
1976	114.1	119.4	85.0	111.4	117.1	81.7
1977	117.5	125.1	80.2	111.5	118.8	76.4
1978 ²	123.9	135.0	76.1	118.4	129.2	72.6
Average annual percent change:						
1947-78	1.5	1.8	-6	1.3	1.6	-.8
1973-78	3.4	4.5	-2.5	2.8	4.0	-2.8

¹ 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.

² Preliminary.

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 54. Cigarettes, chewing and smoking tobacco (SIC 2111, 2131): Indexes of output, employee hours, and employees, 1954-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	73.9	93.9	96.8	72.7	93.3	96.1	72.0
1955	75.8	97.4	100.6	72.7	95.1	98.2	72.4
1956	77.1	96.3	99.7	70.6	94.3	97.6	70.0
1957	80.1	97.3	100.6	72.8	95.6	98.8	72.3
1958	84.9	101.7	104.4	81.8	99.9	102.4	81.4
1959	89.7	105.0	106.5	93.1	102.9	104.3	92.6
1960	92.0	103.1	104.5	93.5	101.8	103.0	93.0
1961	94.0	103.2	104.0	97.1	101.4	101.9	97.0
1962	93.7	102.4	102.4	103.3	99.7	99.3	102.7
1963	96.5	101.0	101.6	97.4	98.5	98.8	97.0
1964	95.6	101.6	102.3	97.6	99.2	99.6	96.8
1965	97.3	98.9	99.2	97.4	100.4	100.9	96.9
1966	98.5	100.0	99.9	101.0	99.3	99.2	100.9
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	101.1	97.7	97.6	98.5	102.0	102.3	100.0
1969	98.5	99.3	98.4	106.3	102.5	101.7	108.5
1970	103.2	102.4	102.2	104.2	102.5	102.0	106.4
1971	102.3	96.9	95.7	106.3	98.5	97.2	108.5
1972	106.6	100.5	99.0	112.1	103.0	101.4	114.9
1973	114.0	108.7	106.1	129.2	110.4	107.6	131.9
1974	112.3	105.4	101.9	132.2	109.2	105.4	138.3
1975	114.8	104.1	99.4	140.4	108.0	102.8	146.8
1976	121.7	106.7	101.9	143.1	109.2	103.9	148.9
1977	117.1	99.7	93.6	146.1	105.0	98.6	153.2
1978 ¹	122.0	98.5	90.4	160.4	103.0	94.4	168.1
Average annual percent change:							
1947-78	1.8	.3	(²)	2.4	.5	.2	2.6
1973-78	1.5	-1.8	-2.9	4.1	-1.3	-2.4	4.5

¹ Preliminary.

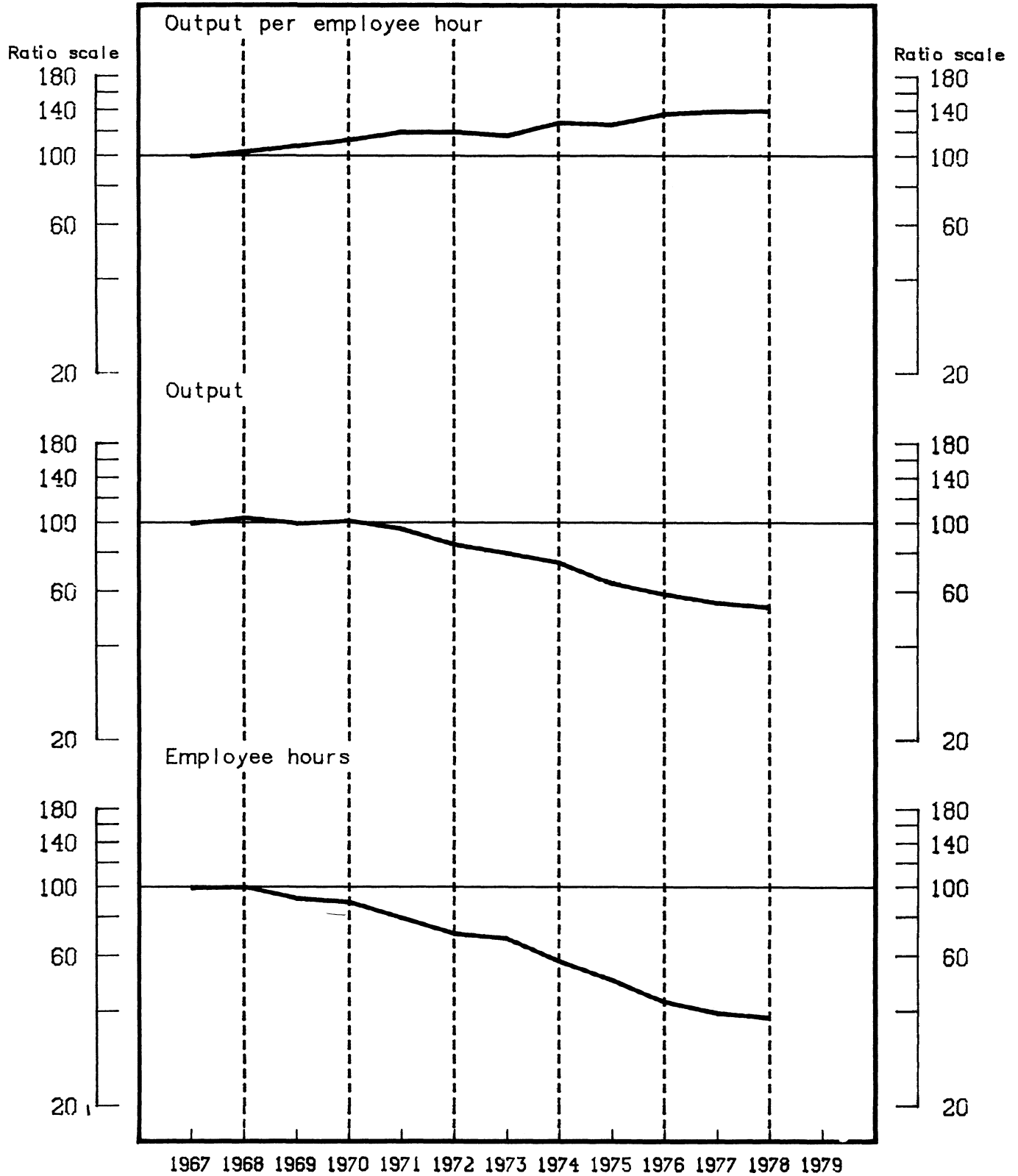
² Less than .05 percent.

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 29. Cigars (SIC 2121): Output per hour and related data, 1967-78

(1967=100)



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

Table 55. Cigars (SIC 2121): Indexes of output per employee hour and output per employee, 1958-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	45.4	43.8	69.4	44.8	43.3	67.6
1955	45.8	44.2	67.8	44.8	43.4	65.6
1956	50.5	48.9	71.8	49.0	47.6	69.8
1957	54.0	52.3	76.2	52.8	51.2	74.0
1958	62.6	61.2	77.7	62.4	61.3	75.4
1959	67.9	66.7	81.0	68.4	67.5	78.5
1960	75.1	73.7	90.5	75.3	74.1	88.8
1961	79.5	78.9	85.3	80.4	79.9	84.3
1962	85.2	84.6	89.8	85.4	85.0	90.3
1963	91.7	90.5	102.1	91.8	90.9	102.5
1964	101.3	97.9	145.8	107.0	104.1	147.2
1965	104.4	102.8	121.1	105.2	103.6	121.6
1966	103.2	100.8	133.4	103.0	100.6	133.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.6	103.2	107.7	104.1	104.1	104.1
1969	108.1	108.0	109.8	109.0	109.3	105.7
1970	113.3	112.7	118.9	114.4	114.3	114.4
1971	120.1	118.4	137.7	121.3	120.1	132.5
1972	120.1	120.7	114.3	120.0	121.3	109.6
1973	116.8	115.9	125.0	117.1	116.8	120.1
1974	128.6	126.0	158.9	121.3	118.9	149.4
1975	126.5	126.7	122.6	124.0	125.0	115.1
1976	137.1	136.8	140.7	133.7	133.7	133.1
1977	139.8	138.4	152.5	137.0	136.4	142.7
1978 ²	140.2	135.6	206.5	135.9	131.9	193.2
Average annual percent change:						
1947-78	5.1	5.2	3.4	5.1	5.2	3.3
1973-78	3.6	3.3	7.5	3.5	3.2	7.0

¹ 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.

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.

² Preliminary.

Table 56. Cigars (SIC 2121): Indexes of output, employee hours, and employees, 1954-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	90.8	199.8	207.5	130.8	202.5	209.8	134.3
1955	90.2	197.0	204.1	133.1	201.3	208.0	137.5
1956	89.8	177.8	183.8	125.1	183.1	188.8	128.7
1957	91.8	170.1	175.5	120.5	173.9	179.2	124.1
1958	96.4	154.1	157.5	124.1	154.5	157.2	127.9
1959	102.2	150.5	153.2	126.2	149.4	151.4	130.2
1960	104.3	138.9	141.5	115.2	138.5	140.8	117.5
1961	99.0	124.5	125.4	116.1	123.2	123.9	117.5
1962	99.6	116.9	117.7	110.9	116.6	117.2	110.3
1963	100.2	109.3	110.7	98.1	109.1	110.2	97.8
1964	129.5	127.8	132.3	88.8	121.0	124.4	88.0
1965	116.5	111.6	113.3	96.2	110.7	112.4	95.8
1966	105.0	101.7	104.2	78.7	101.9	104.4	78.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.1	100.5	100.9	96.7	100.0	100.0	100.0
1969	99.8	92.3	92.4	90.9	91.6	91.3	94.4
1970	101.7	89.8	90.2	85.5	88.9	89.0	88.9
1971	95.7	79.7	80.8	69.5	78.9	79.7	72.2
1972	85.3	71.0	70.7	74.6	71.1	70.3	77.8
1973	80.1	68.6	69.1	64.1	68.4	68.6	66.7
1974	74.7	58.1	59.3	47.0	61.6	62.8	50.0
1975	64.0	50.6	50.5	52.2	51.6	51.2	55.6
1976	59.1	43.1	43.2	42.0	44.2	44.2	44.4
1977	55.5	39.7	40.1	36.4	40.5	40.7	38.9
1978 ¹	53.7	38.3	39.6	26.0	39.5	40.7	27.8
Average annual percent change:							
1947-78	-8	-5.6	-5.7	-4.1	-5.6	-5.7	-3.9
1973-78	-8.1	-11.4	-11.1	-14.5	-11.2	-10.9	-14.2

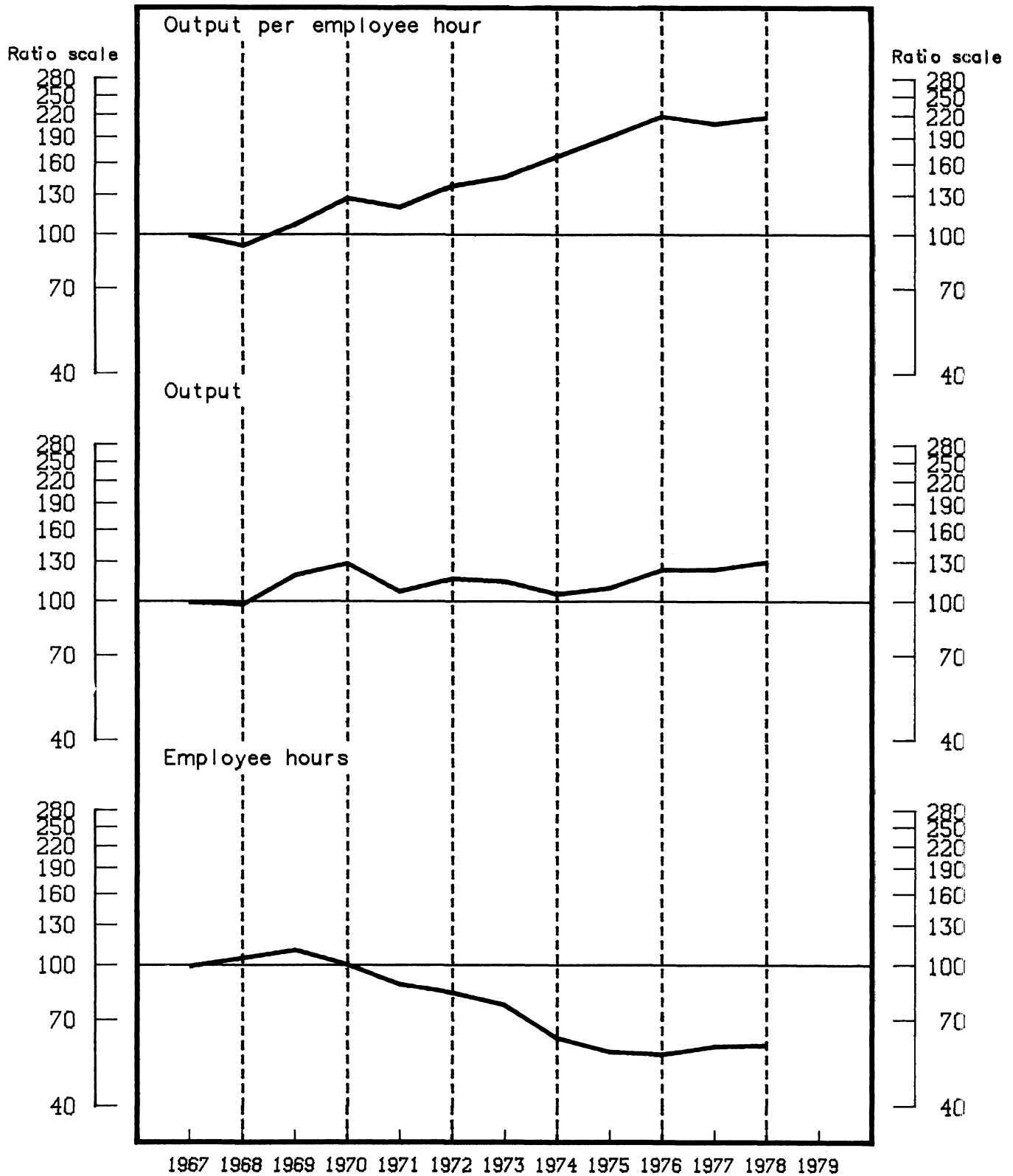
¹ Preliminary.

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 30. Hosiery (SIC 2251, 2252): Output per hour and related data, 1967-78

(1967=100)



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

Table 57. Hosiery (SIC 2251, 2252): Indexes of output per employee hour and output per employee, 1954-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	46.8	45.9	57.2	45.8	44.8	57.5
1955	46.1	45.4	54.0	45.3	44.5	54.2
1956	47.0	46.3	54.2	46.0	45.3	54.5
1957	49.2	48.7	54.1	48.1	47.5	54.3
1958	58.1	57.9	60.2	56.2	55.8	60.4
1959	57.8	57.2	63.6	57.5	57.0	63.8
1960	59.3	58.6	66.0	58.7	58.0	66.4
1961	64.8	64.5	67.5	64.5	64.2	67.5
1962	67.1	66.9	69.4	66.9	66.5	69.5
1963	75.8	75.2	82.7	74.7	73.9	82.9
1964	81.1	80.2	90.0	81.8	81.0	90.7
1965	80.9	80.1	89.9	81.2	80.4	90.0
1966	89.1	88.4	95.0	90.4	89.9	94.8
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	93.5	94.1	89.0	94.0	94.3	92.2
1969	107.9	108.5	102.0	108.5	109.0	103.1
1970	128.1	129.8	113.6	122.0	123.0	112.5
1971	120.9	124.6	94.0	115.8	118.7	93.6
1972	139.2	143.1	109.7	138.0	141.7	109.4
1973	147.7	152.5	114.1	140.2	143.9	111.0
1974	168.5	173.7	130.0	158.4	163.0	122.7
1975	191.6	197.5	148.0	178.0	182.7	140.7
1976	219.5	223.8	183.2	212.3	217.2	173.9
1977	208.9	210.7	193.9	205.1	207.5	183.3
1978 ²	217.9	217.9	217.9	212.2	212.9	206.5
Average annual percent change:						
1947-78	6.3	6.4	4.9	6.2	6.3	4.6
1973-78	8.1	7.4	14.2	9.0	8.5	13.8

¹ 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.

² Preliminary.

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.

Table 58. Hosiery (SIC 2251, 2252): Indexes of output, employee hours, and employees, 1954-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	58.3	124.7	127.0	102.0	127.4	130.1	101.4
1955	59.1	128.3	130.3	109.4	130.6	132.8	109.1
1956	57.7	122.8	124.6	106.4	125.3	127.4	105.9
1957	57.7	117.3	118.5	106.6	119.9	121.4	106.2
1958	59.8	103.0	103.3	99.4	106.5	107.2	99.0
1959	63.0	109.0	110.1	99.1	109.5	110.6	98.8
1960	62.8	105.9	107.1	95.2	106.9	108.3	94.6
1961	68.8	106.1	106.6	101.9	106.6	107.2	101.9
1962	70.6	105.2	105.5	101.8	105.6	106.1	101.6
1963	73.1	96.4	97.2	88.4	97.9	98.9	88.2
1964	77.7	95.8	96.9	86.3	95.0	95.9	85.7
1965	81.8	101.1	102.1	91.0	100.7	101.7	90.9
1966	90.3	101.4	102.1	95.1	99.9	100.5	95.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	98.6	105.4	104.8	110.8	104.9	104.6	106.9
1969	119.7	110.9	110.3	117.4	110.3	109.8	116.1
1970	129.3	100.9	99.6	113.8	106.0	105.1	114.9
1971	107.5	88.9	86.3	114.4	92.8	90.6	114.9
1972	116.9	84.0	81.7	106.6	84.7	82.5	106.9
1973	114.8	77.7	75.3	100.6	81.9	79.8	103.4
1974	105.8	62.8	60.9	81.4	66.8	64.9	86.2
1975	110.0	57.4	55.7	74.3	61.8	60.2	78.2
1976	124.0	56.5	55.4	67.7	58.4	57.1	71.3
1977	124.3	59.5	59.0	64.1	60.6	59.9	67.8
1978 ¹	130.5	59.9	59.9	59.9	61.5	61.3	63.2
Average annual percent change:							
1947-78	3.3	-2.7	-2.9	-1.4	-2.6	-2.8	-1.2
1973-78	3.6	-4.1	-3.5	-9.3	-5.0	-4.5	-8.9

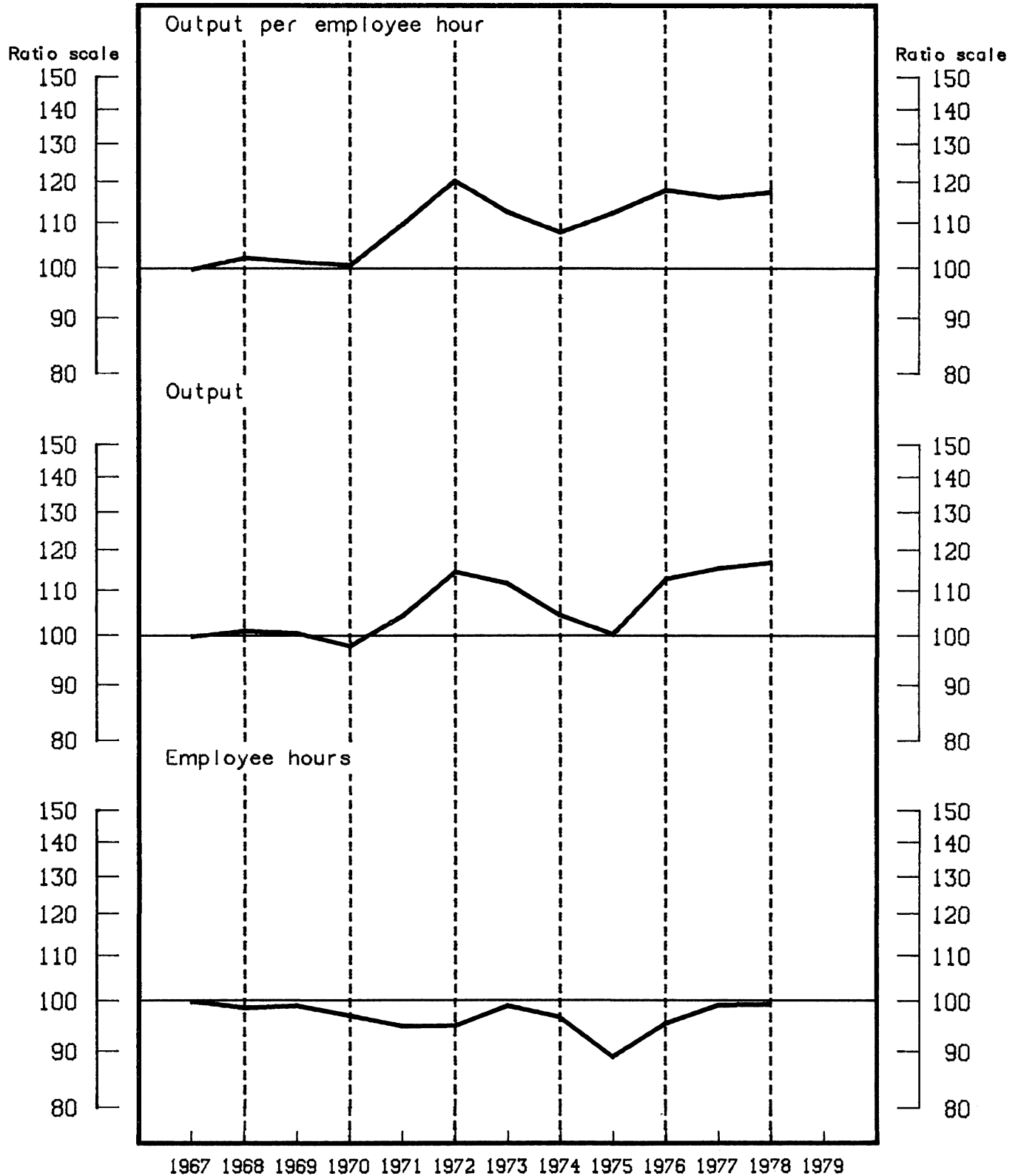
¹ Preliminary.

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 31. Sawmills and planing mills, general (SIC 2421): Output per hour and related data, 1967-78

(1967=100)



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

Table 59. Sawmills and planing mills, general (SIC 2421): Indexes of output per employee hour and output per employee, 1958-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	73.1	76.5	49.7	70.9	73.6	50.8
1959	75.7	75.4	78.8	73.9	73.4	80.4
1960	75.2	75.0	77.4	75.4	75.1	78.6
1961	82.0	81.6	85.4	81.1	80.7	86.0
1962	85.6	84.9	93.9	85.6	84.9	94.1
1963	89.3	90.6	77.4	89.0	90.3	77.7
1964	94.9	96.7	78.6	96.4	98.3	79.1
1965	91.7	92.8	80.8	92.4	93.6	81.1
1966	92.6	93.6	83.7	93.1	94.0	83.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.5	103.3	95.5	103.9	104.5	97.5
1969	101.6	102.7	91.5	102.3	103.2	93.6
1970	100.9	103.4	80.3	101.8	104.0	82.8
1971	110.0	111.6	94.7	111.2	112.6	97.7
1972	120.6	122.5	102.7	124.3	126.3	106.0
1973	112.9	114.9	95.9	116.3	118.4	98.2
1974	108.2	111.3	83.2	108.9	112.1	84.4
1975	112.7	115.4	90.0	113.6	116.3	91.3
1976	118.2	120.9	95.2	120.6	123.5	97.0
1977	116.4	119.8	89.1	120.9	125.1	90.0
1978 ²	117.7	120.6	93.3	121.9	125.4	94.3
Average annual percent change:						
1958-78	2.5	2.6	1.5	2.7	2.8	1.5
1973-78	1.4	1.5	.4	1.7	2.0	.1

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 60. Sawmills and planing mills, general (SIC 2421): Indexes of output, employee hours, and employees, 1958-78
(1967=100)

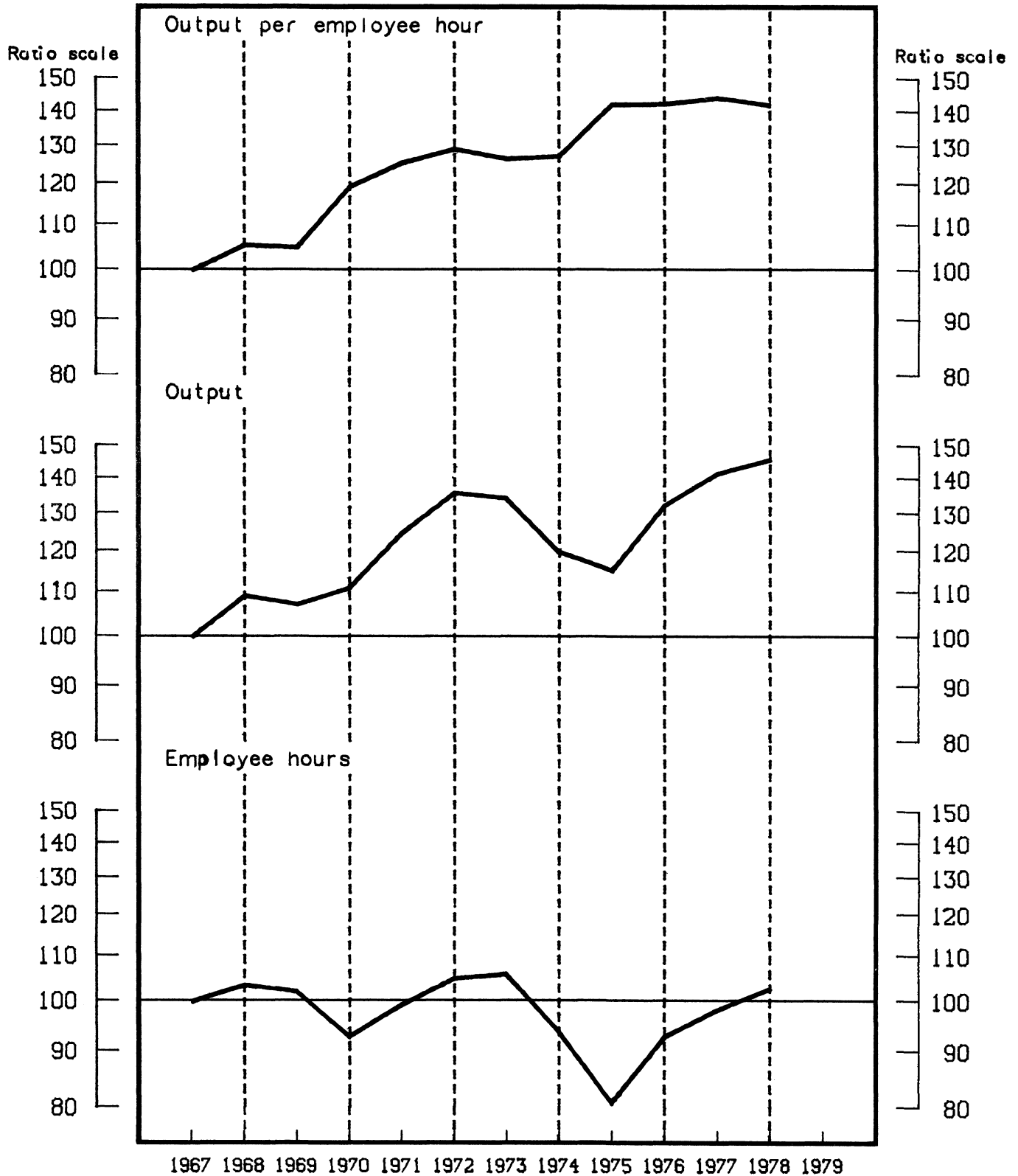
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	96.5	132.0	126.2	194.0	136.2	131.1	189.9
1959	103.3	136.5	137.0	131.1	139.7	140.8	128.5
1960	100.5	133.7	134.0	129.8	133.3	133.8	127.8
1961	96.3	117.5	118.0	112.7	118.7	119.4	112.0
1962	99.5	116.2	117.2	106.0	116.2	117.2	105.7
1963	102.3	114.5	112.9	132.1	114.9	113.3	131.6
1964	106.2	111.9	109.8	135.1	110.2	108.0	134.2
1965	103.2	112.6	111.2	127.8	111.7	110.2	127.2
1966	100.5	108.5	107.4	120.1	108.0	106.9	120.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	101.2	98.7	98.0	106.0	97.4	96.8	103.8
1969	100.7	99.1	98.1	110.0	98.4	97.6	107.6
1970	98.0	97.1	94.8	122.1	96.3	94.2	118.4
1971	104.5	95.0	93.6	110.4	94.0	92.8	107.0
1972	114.7	95.1	93.6	111.7	92.3	90.8	108.2
1973	111.9	99.1	97.4	116.7	96.2	94.5	113.9
1974	104.7	96.8	94.1	125.8	96.1	93.4	124.1
1975	100.5	89.2	87.1	111.7	88.5	86.4	110.1
1976	113.0	95.6	93.5	118.7	93.7	91.5	116.5
1977	115.6	99.3	96.5	129.8	95.6	92.4	128.5
1978 ¹	117.0	99.4	97.0	125.4	96.0	93.3	124.1
Average annual percent change:							
1958-78 .....	.7	-1.7	-1.8	-8	-2.0	-2.1	-8
1973-78	1.8	.5	.4	1.5	.1	-.1	1.7

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census

and the Bureau of Labor Statistics.

Chart 32. Veneer and plywood (SIC 2435, 2436): Output per hour and related data, 1967-78

(1967=100)



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

Table 61. Veneer and plywood (SIC 2435, 2436): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	58.8	58.1	65.7	58.0	57.1	67.0
1959	65.9	64.7	82.0	67.0	65.6	83.6
1960	69.4	68.4	80.5	67.6	66.4	81.7
1961	75.9	74.8	88.2	75.1	73.9	88.8
1962	82.1	80.5	102.4	82.6	80.9	102.4
1963	85.3	83.6	107.6	86.2	84.4	107.6
1964	89.1	87.6	107.2	90.7	89.3	107.0
1965	91.8	90.8	103.8	94.2	93.4	103.8
1966	91.5	90.7	100.3	93.1	92.5	100.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.5	105.0	110.6	107.3	107.3	107.7
1969	105.0	105.1	104.6	105.1	105.3	102.8
1970	119.4	121.4	101.6	117.3	119.4	100.8
1971	125.6	127.5	110.1	125.7	127.8	108.9
1972	129.3	130.3	120.1	133.3	135.0	118.6
1973	126.7	129.3	105.7	127.1	130.0	104.1
1974	127.4	131.2	98.9	124.0	127.6	97.2
1975	142.2	147.9	102.4	136.5	141.7	100.6
1976	142.4	145.2	119.2	141.0	144.1	117.2
1977	144.2	146.7	122.8	143.0	145.8	120.7
1978 ²	142.0	145.3	116.5	140.5	143.8	114.5
Average annual percent change:						
1958-78	4.5	4.7	1.8	4.4	4.7	1.6
1973-78	2.7	2.6	3.7	2.8	2.7	3.7

¹ 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.

² Preliminary.
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 62. Veneer and plywood (SIC 2435, 2436): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

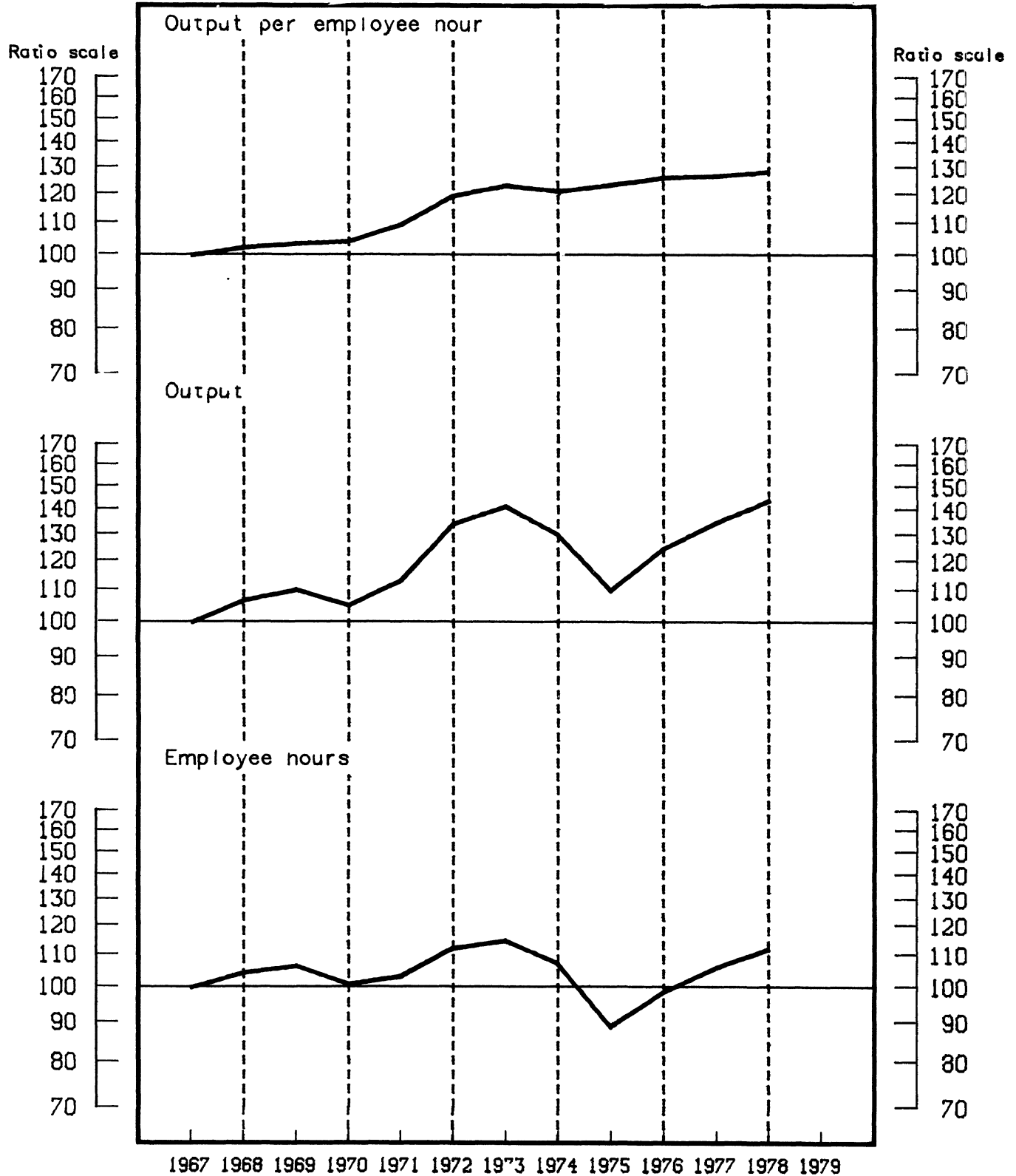
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	47.6	81.0	81.9	72.4	82.1	83.3	71.0
1959	60.6	91.9	93.7	73.9	90.5	92.4	72.5
1960	59.2	85.3	86.5	73.5	87.6	89.1	72.5
1961	64.4	84.9	86.1	73.0	85.8	87.2	72.5
1962	75.7	92.2	94.0	73.9	91.7	93.6	73.9
1963	78.0	91.4	93.3	72.5	90.5	92.4	72.5
1964	86.9	97.5	99.2	81.1	95.8	97.3	81.2
1965	96.3	104.9	106.1	92.8	102.2	103.1	92.8
1966	101.7	111.1	112.1	101.4	109.2	110.0	101.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	109.2	103.5	104.0	98.7	101.8	101.8	101.4
1969	107.2	102.1	102.0	102.5	102.0	101.8	104.3
1970	111.0	93.0	91.4	109.3	94.6	93.0	110.1
1971	124.7	99.3	97.8	113.3	99.2	97.6	114.5
1972	135.8	105.0	104.2	113.1	101.9	100.6	114.5
1973	134.3	106.0	103.9	127.0	105.7	103.3	129.0
1974	119.8	94.0	91.3	121.1	96.6	93.9	123.2
1975	115.2	81.0	77.9	112.5	84.4	81.3	114.5
1976	132.4	93.0	91.2	111.1	93.9	91.9	113.0
1977	141.7	98.3	96.6	115.4	99.1	97.2	117.4
1978 ¹	146.0	102.8	100.5	125.3	103.9	101.5	127.5
Average annual percent change:							
1958-78	5.0	.5	.3	3.1	.6	.3	3.3
1973-78	3.1	.3	.5	-6	.3	.4	-6

¹ Preliminary.
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 33. Household furniture (SIC 251): Output per hour and related data, 1967-78

(1967=100)



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

Table 63. Household furniture (SIC 251): Indexes of output per employee hour and output per employee, 1958-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	83.6	85.7	71.5	82.6	84.5	72.3
1959	85.9	86.4	83.2	87.7	88.2	84.0
1960	85.1	85.9	79.7	85.8	86.7	80.4
1961	85.8	86.6	80.5	86.0	86.9	80.8
1962	88.5	88.8	86.1	90.4	91.1	86.5
1963	92.7	93.3	89.1	94.1	94.9	89.3
1964	94.6	95.3	89.8	96.6	97.6	90.6
1965	97.9	97.9	97.7	99.7	99.9	98.2
1966	99.7	99.7	99.9	101.5	101.8	100.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.3	103.3	96.6	103.9	103.9	104.0
1969	103.5	104.5	97.2	104.4	104.6	103.3
1970	104.2	106.4	91.6	103.8	105.1	96.4
1971	109.6	111.6	97.7	109.3	110.9	100.4
1972	119.5	121.2	108.5	117.7	119.3	108.2
1973	123.3	122.5	130.3	120.6	119.5	128.8
1974	121.2	124.0	105.1	116.1	118.5	102.7
1975	123.6	127.3	103.3	115.2	117.9	100.6
1976	126.4	129.3	109.1	120.0	122.4	106.8
1977	127.0	129.6	112.0	121.7	123.9	108.7
1978 ²	128.6	131.2	114.0	124.3	126.7	110.7
Average annual percent change:						
1958-78	2.4	2.5	2.0	2.1	2.1	1.8
1973-78	1.1	1.4	-1.2	1.0	1.3	-1.5

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 64. Household furniture (SIC 251): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

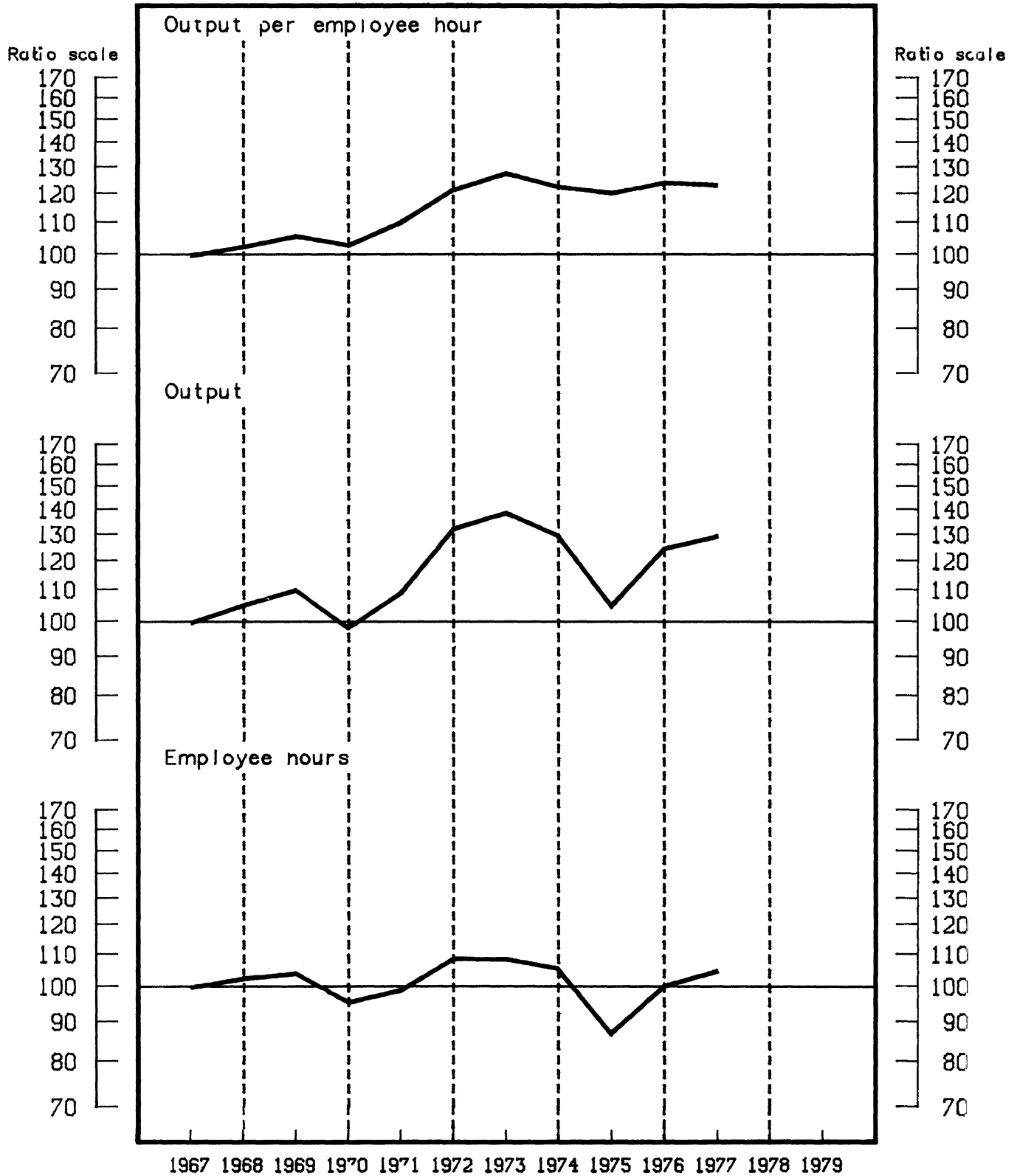
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	69.6	83.3	81.2	97.4	84.3	82.4	96.3
1959	79.5	92.5	92.0	95.5	90.7	90.1	94.6
1960	75.8	89.1	88.2	95.1	88.3	87.4	94.3
1961	73.0	85.1	84.3	90.7	84.9	84.0	90.4
1962	80.3	90.7	90.4	93.3	88.8	88.1	92.8
1963	85.4	92.1	91.5	95.9	90.8	90.0	95.6
1964	91.2	96.4	95.7	101.6	94.4	93.4	100.7
1965	98.4	100.5	100.5	100.7	98.7	98.5	100.2
1966	104.4	104.7	104.7	104.5	102.9	102.6	104.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.8	104.4	103.4	110.6	102.8	102.8	102.7
1969	110.2	106.5	105.5	113.4	105.6	105.4	106.7
1970	105.2	101.0	98.9	114.8	101.3	100.1	109.1
1971	113.2	103.3	101.4	115.9	103.6	102.1	112.8
1972	134.2	112.3	110.7	123.7	114.0	112.5	124.0
1973	141.6	114.8	115.6	108.7	117.4	118.5	109.9
1974	130.1	107.3	104.9	123.8	112.1	109.8	126.7
1975	110.1	89.1	86.5	106.6	95.6	93.4	109.4
1976	124.8	98.7	96.5	114.4	104.0	102.0	116.8
1977	134.8	106.1	104.0	120.4	110.8	108.8	124.0
1978 ¹	144.2	112.1	109.9	126.5	116.0	113.8	130.3
Average annual percent change:							
1958-78	3.5	1.1	1.0	1.5	1.4	1.4	1.6
1973-78 .....	.9	-1	-5	2.2	(²)	-4	2.5

¹ Preliminary.
² Less than .05 percent.

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

Chart 34. Wood household furniture (SIC 2511, 2517): Output per hour and related data, 1967-77

(1967=100)



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

Table 65. Wood household furniture (SIC 2511, 2517): Indexes of output per employee hour, and output per employee, 1958-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	81.8	83.6	69.0	80.5	82.1	69.7
1959	84.4	84.7	82.0	85.8	86.2	82.9
1960	83.7	84.2	80.1	84.3	84.8	80.8
1961	84.1	84.7	78.4	83.8	84.5	78.5
1962	87.0	87.2	85.6	89.3	89.9	85.9
1963	92.2	92.4	91.2	94.2	94.5	91.6
1964	94.1	94.6	90.4	97.8	98.8	91.1
1965	97.4	97.0	100.8	100.2	100.1	101.2
1966	99.9	99.6	101.9	102.7	102.8	101.8
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.6	103.4	96.3	104.8	104.9	103.5
1969	105.9	107.1	96.8	107.0	107.6	102.7
1970	103.0	105.3	86.3	102.5	104.1	90.8
1971	110.3	112.8	92.3	109.0	111.1	94.7
1972	121.8	124.3	104.0	119.9	122.4	103.7
1973	127.9	124.7	179.0	125.0	121.5	176.9
1974	122.8	126.9	94.9	117.1	120.8	92.6
1975	120.5	125.7	87.3	109.7	113.6	85.0
1976	124.4	128.8	95.3	116.5	120.1	93.1
1977 ²	123.5	126.8	99.7	118.3	121.5	96.6
Average annual percent change:						
1958-77	2.5	2.7	1.7	2.1	2.2	1.5
1973-77	-6	.5	-11.0	-1.2	-.1	-11.4

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 66. Wood household furniture (SIC 2511, 2517): Indexes of output, employee hours, and employees, 1958-77
(1967=100)

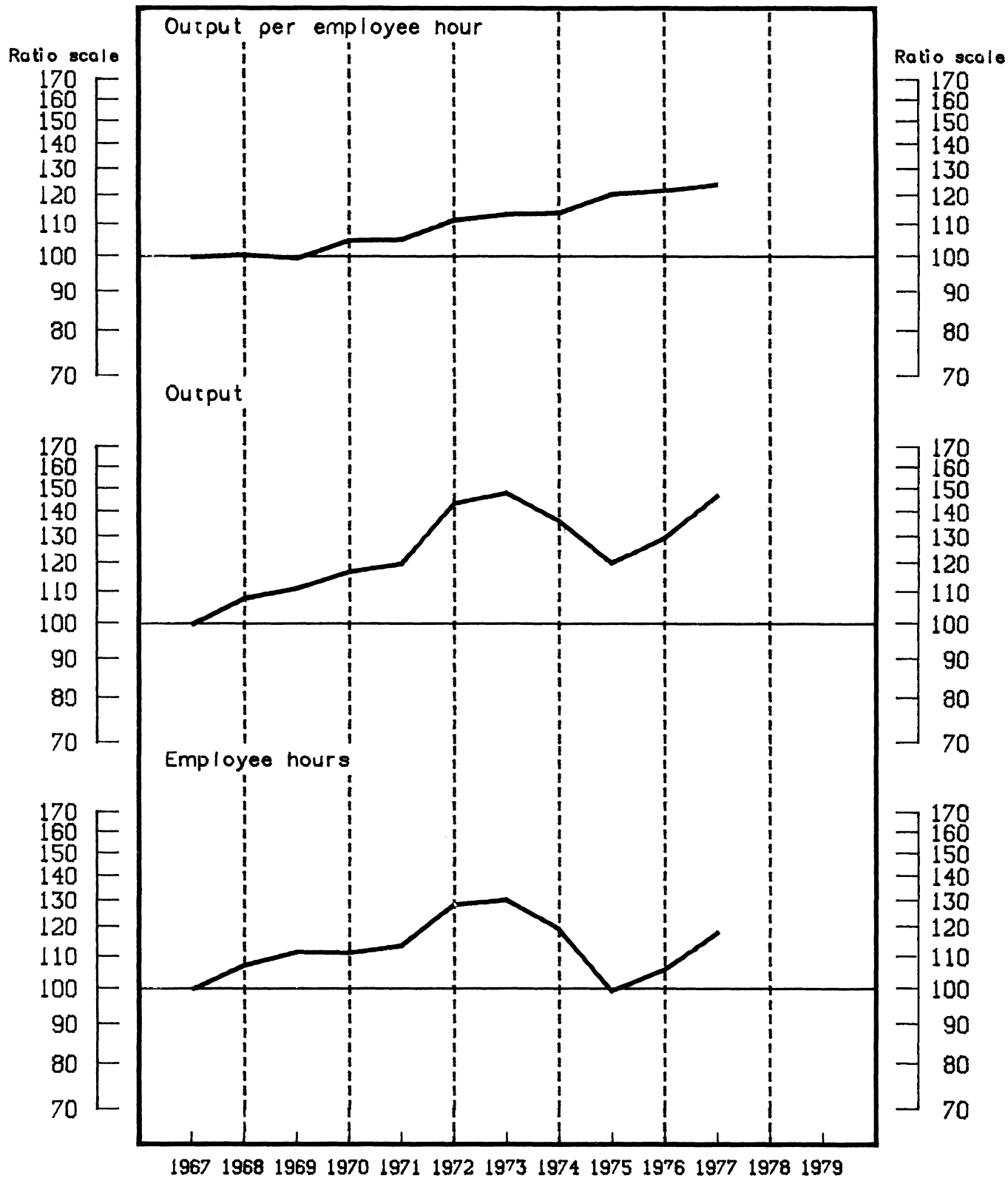
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	64.2	78.5	76.8	93.1	79.8	78.2	92.1
1959	74.9	88.7	88.4	91.3	87.3	86.9	90.4
1960	71.2	85.1	84.6	88.9	84.5	84.0	88.1
1961	68.3	81.2	80.6	87.1	81.5	80.8	87.0
1962	77.1	88.6	88.4	90.1	86.3	85.8	89.8
1963	84.4	91.5	91.3	92.5	89.6	89.3	92.1
1964	90.1	95.7	95.2	99.7	92.1	91.2	98.9
1965	97.2	99.8	100.2	96.4	97.0	97.1	96.0
1966	104.7	104.8	105.1	102.7	101.9	101.8	102.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.3	102.6	101.8	109.3	100.5	100.4	101.7
1969	110.2	104.1	102.9	113.8	103.0	102.4	107.3
1970	98.5	95.6	93.5	114.1	96.1	94.6	108.5
1971	109.2	99.0	96.8	118.3	100.2	98.3	115.3
1972	132.4	108.7	106.5	127.3	110.4	108.2	127.7
1973	138.9	108.6	111.4	77.6	111.1	114.3	78.5
1974	129.7	105.6	102.2	136.6	110.8	107.4	140.0
1975	105.2	87.3	83.7	120.5	95.9	92.6	123.7
1976	124.9	100.4	97.0	131.1	107.2	104.0	134.1
1977 ¹	129.5	104.9	102.1	129.9	109.5	106.6	134.1
Average annual percent change:							
1958-77	3.7	1.2	1.0	2.0	1.6	1.5	2.2
1973-77	-1.8	-1.2	-2.2	10.4	-6	-1.7	10.8

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 35. Upholstered household furniture (SIC 2512): Output per hour and related data, 1967-77

(1967=100)



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

Table 67. Upholstered household furniture (SIC 2512): Indexes of output per employee hour and output per employee, 1958-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	89.3	91.6	77.2	88.7	90.6	78.0
1959	92.0	92.6	88.7	94.6	95.5	89.7
1960	90.4	91.7	82.6	91.7	93.3	83.3
1961	92.1	92.0	93.1	93.0	92.9	93.5
1962	93.2	93.0	94.6	96.0	96.1	95.5
1963	95.0	95.9	89.9	95.6	96.4	90.5
1964	97.4	98.2	92.2	96.6	97.2	93.1
1965	99.9	100.1	98.4	100.2	100.4	98.9
1966	101.9	102.1	100.9	101.4	101.4	101.2
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	100.7	100.8	100.5	101.3	100.3	108.2
1969	99.7	100.4	96.1	100.4	100.0	102.5
1970	105.1	106.0	99.7	105.2	105.2	105.0
1971	105.4	105.8	102.6	107.0	107.1	105.6
1972	111.8	112.8	105.5	110.4	111.3	105.4
1973	113.7	115.3	104.1	110.5	111.6	103.1
1974	114.2	115.5	106.1	108.9	109.7	103.5
1975	120.8	122.3	112.0	114.1	114.8	109.4
1976	122.2	123.5	114.5	115.6	116.1	111.8
1977 ²	124.5	126.5	112.5	117.4	118.7	109.1
Average annual percent change:						
1958-77	1.7	1.7	1.6	1.4	1.3	1.4
1973-77	2.5	2.6	2.3	1.8	1.8	1.9

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 68. Upholstered household furniture (SIC 2512): Indexes of output, employee hours and employees, 1958-77
(1967 = 100)

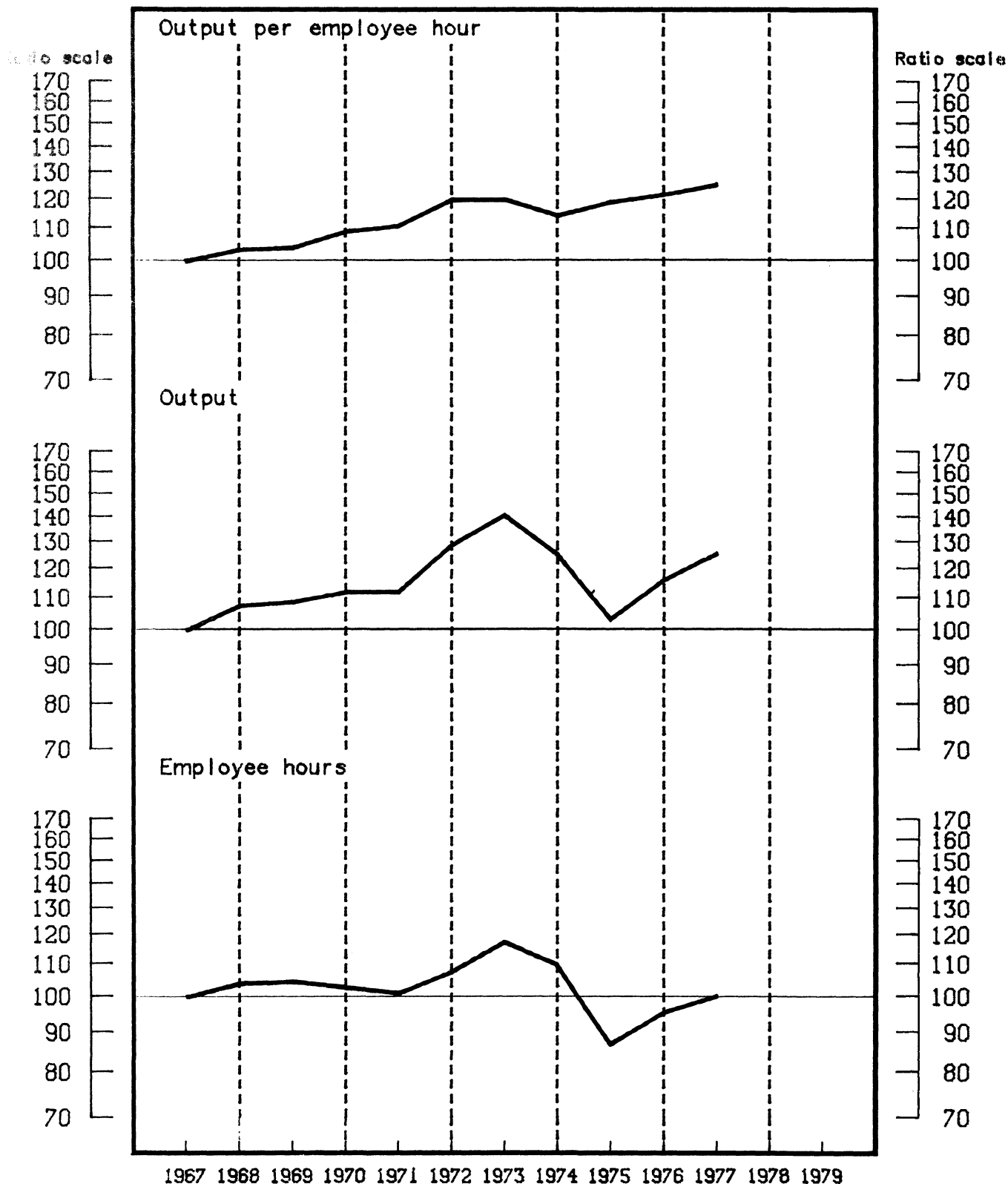
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	72.0	80.6	78.6	93.3	81.2	79.5	92.3
1959	82.8	90.0	89.4	93.3	87.5	86.7	92.3
1960	80.9	89.5	88.2	97.9	88.2	86.7	97.1
1961	78.3	85.0	85.1	84.1	84.2	84.3	83.7
1962	85.4	91.6	91.8	90.3	89.0	88.9	89.4
1963	86.2	90.7	89.9	95.9	90.2	89.4	95.2
1964	93.1	95.6	94.8	101.0	96.4	95.8	100.0
1965	99.9	100.0	99.8	101.5	99.7	99.5	101.0
1966	105.0	103.0	102.8	104.1	103.6	103.5	103.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.2	107.4	107.3	107.7	106.8	107.9	100.0
1969	111.4	111.7	111.0	115.9	111.0	111.4	108.7
1970	117.1	111.4	110.5	117.4	111.3	111.3	111.5
1971	119.9	113.8	113.3	116.9	112.1	111.9	113.5
1972	143.9	128.7	127.6	136.4	130.3	129.3	136.5
1973	148.5	130.6	128.8	142.6	134.4	133.1	144.0
1974	136.6	119.6	118.3	128.7	125.4	124.5	132.0
1975	120.3	99.6	98.4	107.4	105.4	104.8	110.0
1976	129.7	106.1	105.0	113.3	112.2	111.7	116.0
1977 ¹	147.3	118.3	116.4	130.9	125.5	124.1	135.0
Average annual percent change:							
1958-77	3.7	1.9	1.9	2.1	2.3	2.3	2.2
1973-77	-7	-3.1	-3.2	-2.9	-2.5	-2.5	-2.5

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 36. Metal household furniture (SIC 2514): Output per hour and related data, 1967-77

(1967=100)



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

Table 69. Metal household furniture (SIC 2514): Indexes of output per employee hour and output per employee, 1958-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	85.0	87.2	75.8	85.5	87.6	76.2
1959	85.4	84.2	92.3	87.2	86.1	93.2
1960	82.3	81.9	85.0	83.9	83.5	85.8
1961	83.7	83.2	86.2	84.4	84.2	85.9
1962	87.8	86.9	93.1	88.7	87.8	93.4
1963	94.1	94.2	93.5	94.9	95.2	93.2
1964	94.6	94.4	95.5	96.2	96.1	96.5
1965	98.7	98.8	98.2	99.6	99.8	98.3
1966	96.6	97.3	93.2	98.8	100.2	92.7
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.4	105.6	93.2	103.9	104.7	99.8
1969	104.0	104.3	102.5	102.7	101.6	108.7
1970	109.1	111.8	97.1	107.2	108.2	102.2
1971	111.0	113.5	99.9	110.3	112.1	102.3
1972	119.9	120.7	115.9	116.1	116.2	115.6
1973	119.9	120.3	118.0	118.4	118.8	116.3
1974	114.3	117.2	101.5	109.8	112.4	98.8
1975	119.0	124.1	98.4	113.3	117.5	96.0
1976	121.7	124.7	108.5	118.1	120.9	106.0
1977 ²	125.4	126.5	120.7	121.0	121.9	116.7
Average annual percent change:						
1958-77	2.3	2.5	1.6	2.0	2.1	1.5
1973-77	1.5	1.6	1.1	1.2	1.3	.8

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 70. Metal household furniture (SIC 2514): Indexes of output, employee hours, and employees, 1958-77
(1967 = 100)

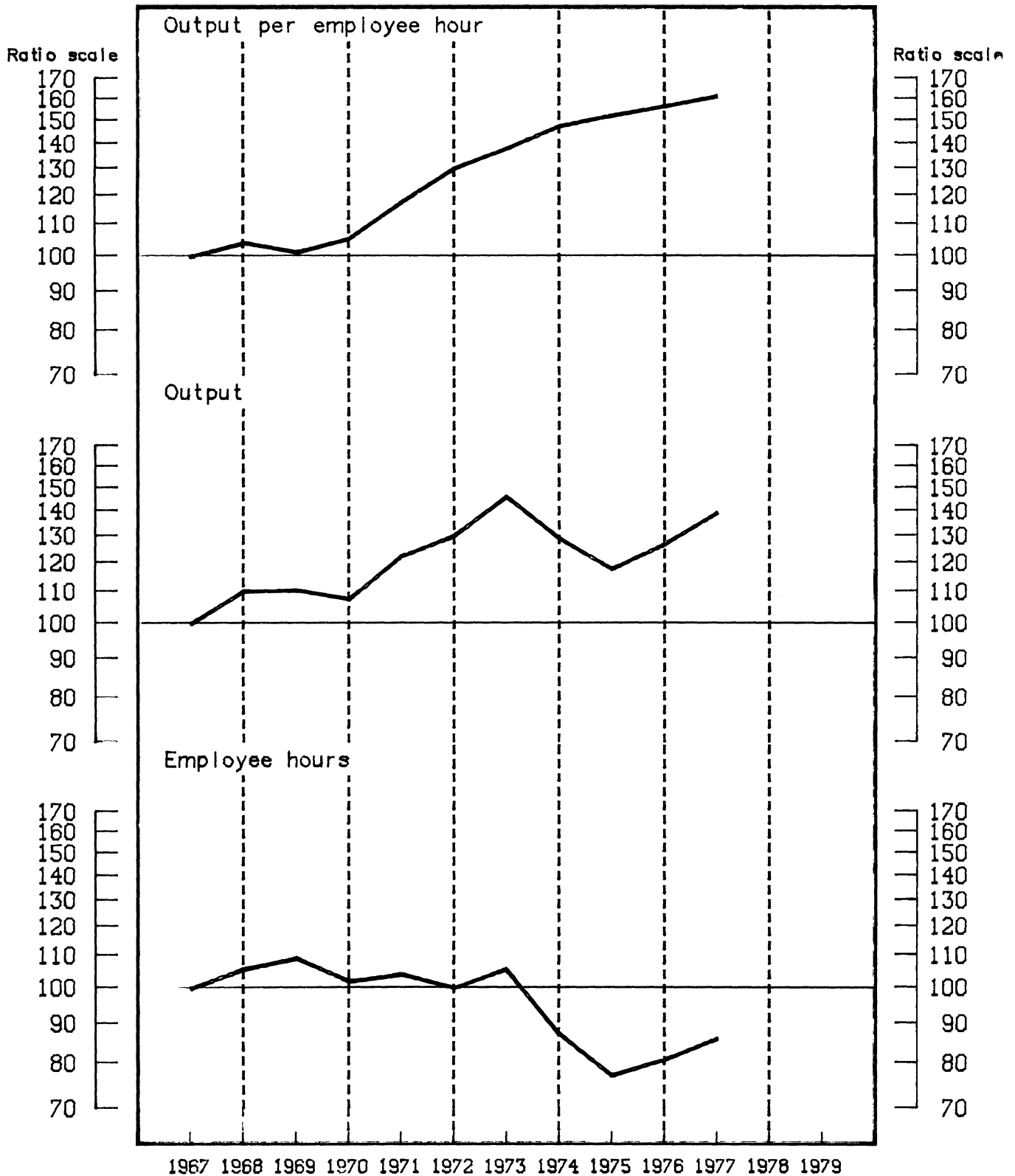
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	83.5	98.2	95.8	110.2	97.7	95.3	109.6
1959	91.4	107.0	108.5	99.0	104.8	106.2	98.1
1960	85.8	104.2	104.8	101.0	102.3	102.7	100.0
1961	80.9	96.7	97.2	93.9	95.8	96.1	94.2
1962	82.7	94.2	95.2	88.8	93.2	94.2	88.5
1963	89.7	95.3	95.2	95.9	94.5	94.2	96.2
1964	96.5	102.0	102.2	101.0	100.3	100.4	100.0
1965	100.2	101.5	101.4	102.0	100.6	100.4	101.9
1966	99.8	103.3	102.6	107.1	101.0	99.6	107.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.5	104.0	101.8	115.3	103.5	102.7	107.7
1969	108.7	104.5	104.2	106.1	105.8	107.0	100.0
1970	112.0	102.7	100.2	115.3	104.5	103.5	109.6
1971	112.1	101.0	98.8	112.2	101.6	100.0	109.6
1972	128.9	107.5	106.8	111.2	111.0	110.9	111.5
1973	140.9	117.5	117.1	119.4	119.0	118.6	121.2
1974	125.4	109.7	107.0	123.5	114.2	111.6	126.9
1975	103.4	86.9	83.3	105.1	91.3	88.0	107.7
1976	116.2	95.5	93.2	107.1	98.4	96.1	109.6
1977 ¹	125.7	100.2	99.4	104.1	103.9	103.1	107.7
Average annual percent change:							
1958-77	2.4	.1	-.1	.8	.4	.3	.9
1973-77	-3.0	-4.5	-4.6	-4.1	-4.1	-4.2	-3.8

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 37. Mattresses and bedsprings (SIC 2515): Output per hour and related data, 1967-77

(1967=100)



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

Table 71. Mattresses and bedsprings (SIC 2515): Indexes of output per employee hour and output per employee, 1958-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	79.8	80.4	77.6	79.3	79.6	78.3
1959	80.9	81.2	79.8	82.3	82.9	80.1
1960	83.0	84.7	77.3	83.3	85.0	78.1
1961	82.8	85.6	73.8	84.0	87.4	73.7
1962	86.5	89.0	78.3	87.2	89.9	78.8
1963	89.7	91.4	83.7	90.8	92.9	83.9
1964	92.1	94.5	84.1	93.1	95.8	84.5
1965	95.6	96.7	91.7	96.8	98.1	92.1
1966	97.3	97.3	97.4	98.1	98.3	96.9
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.2	106.0	98.0	107.1	107.5	105.6
1969	101.3	102.5	96.9	104.2	104.6	103.0
1970	105.5	108.0	97.0	107.6	109.3	101.6
1971	117.7	119.5	111.2	118.0	119.0	114.1
1972	130.2	132.2	123.4	129.4	131.2	122.9
1973	138.3	138.8	136.7	135.8	136.2	134.5
1974	147.8	149.3	142.7	143.0	144.0	139.6
1975	152.7	153.5	149.4	147.2	147.6	145.7
1976	157.0	159.7	147.8	153.6	156.6	144.0
1977 ²	161.8	165.6	148.5	157.4	161.8	143.5
Average annual percent change:						
1958-77	4.0	4.0	4.1	3.8	3.8	3.9
1973-77	3.8	4.3	2.0	3.7	4.4	1.6

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 72. Mattresses and bedsprings (SIC 2515): Indexes of output, employee hours, and employees, 1958-77
(1967=100)

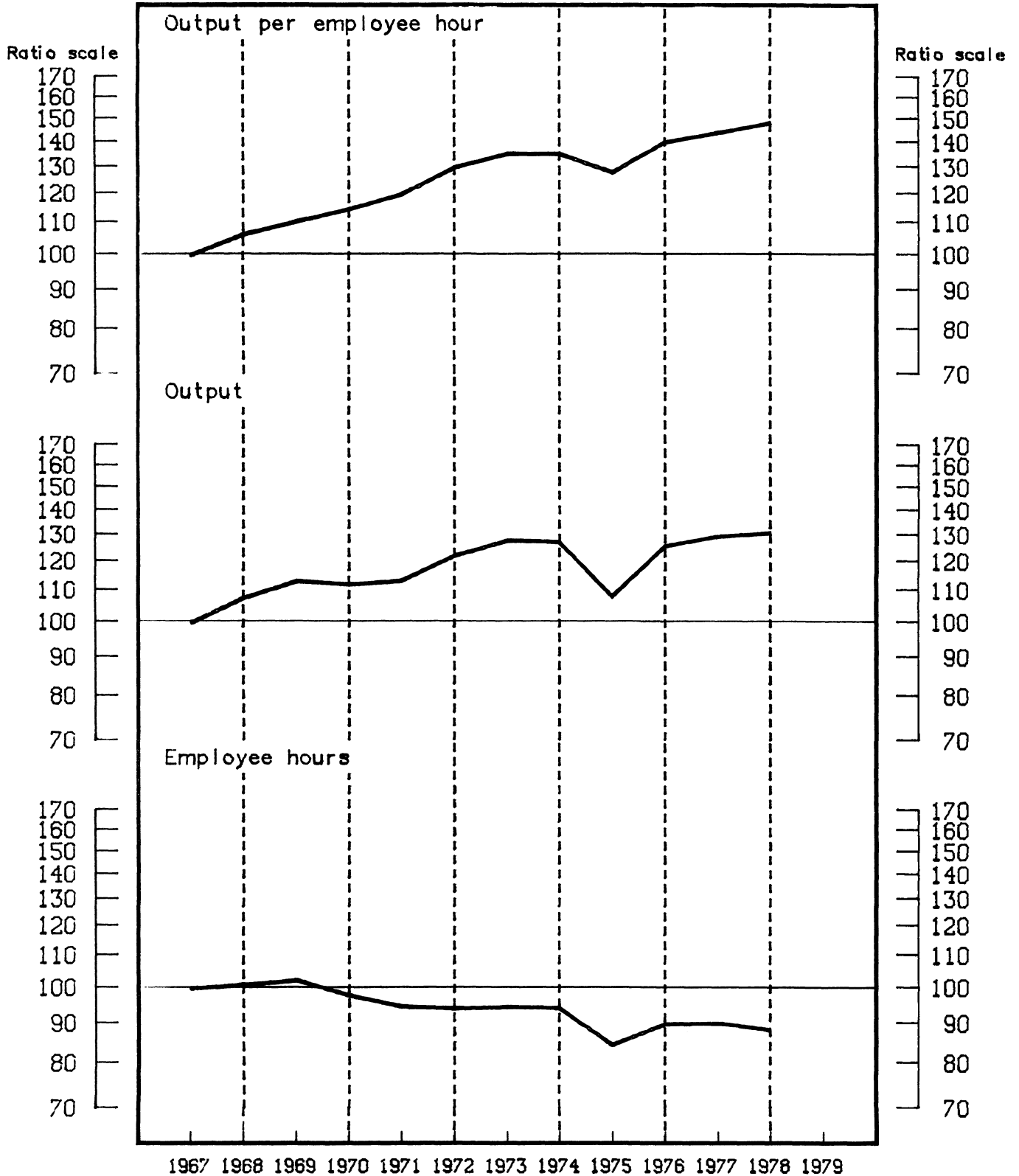
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	80.6	101.0	100.2	103.9	101.6	101.2	102.9
1959	86.0	106.3	105.9	107.8	104.5	103.7	107.4
1960	81.5	98.2	96.2	105.5	97.8	95.9	104.4
1961	81.3	98.2	95.0	110.2	96.8	93.0	110.3
1962	88.1	101.8	99.0	112.5	101.0	98.0	111.8
1963	87.6	97.7	95.8	104.7	96.5	94.3	104.4
1964	90.7	98.5	96.0	107.8	97.4	94.7	107.4
1965	98.9	103.5	102.3	107.8	102.2	100.8	107.4
1966	101.2	104.0	104.0	103.9	103.2	102.9	104.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	110.2	105.8	104.0	112.5	102.9	102.5	104.4
1969	110.6	109.2	107.9	114.1	106.1	105.7	107.4
1970	107.6	102.0	99.6	110.9	100.0	98.4	105.9
1971	122.5	104.1	102.5	110.2	103.8	102.9	107.4
1972	130.2	100.0	98.5	105.5	100.6	99.2	105.9
1973	146.3	105.8	105.4	107.0	107.7	107.4	108.8
1974	129.3	87.5	86.6	90.6	90.4	89.8	92.6
1975	117.9	77.2	76.8	78.9	80.1	79.9	80.9
1976	127.0	80.9	79.5	85.9	82.7	81.1	88.2
1977 ¹	139.3	86.1	84.1	93.6	88.5	86.1	97.1
Average annual percent change:							
1958-77	3.1	-9	-9	-9	-7	-6	-8
1973-77	-1.2	-4.8	-5.2	-3.1	-4.7	-5.3	-2.7

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 38. Paper, paperboard, and pulp mills (SIC 2611, 2621, 2631, 2661): Output per hour and related data, 1967-78

(1967=100)



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

Table 73. Paper, paperboard, and pulp mills (SIC 2611, 2621, 2631, 2661): Indexes of output per employee hour and output per employee, 1954-78 (1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	59.7	57.4	75.1	60.0	57.1	75.9
1955	63.9	61.0	83.1	65.6	62.3	83.6
1956	66.7	64.3	81.6	68.1	65.3	82.2
1957	66.6	64.9	77.0	66.4	64.1	77.6
1958	68.3	66.7	77.7	67.7	65.4	78.3
1959	72.4	70.9	81.1	73.2	71.5	81.6
1960	74.8	73.9	79.8	74.7	73.5	80.2
1961	79.7	79.0	83.1	79.4	78.5	83.3
1962	82.6	82.0	87.2	82.7	81.6	87.7
1963	87.6	86.9	91.6	87.7	86.7	92.0
1964	92.2	91.3	97.5	93.1	91.9	96.3
1965	96.9	96.4	99.5	97.4	96.7	100.0
1966	101.6	101.2	104.2	102.9	102.5	104.2
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.4	105.8	109.8	107.2	106.5	109.6
1969	110.5	109.7	114.7	111.2	110.8	112.7
1970	114.6	114.7	114.3	112.3	112.7	110.9
1971	119.9	121.3	113.6	118.2	119.6	112.6
1972	130.0	131.2	124.2	129.6	130.8	125.1
1973	135.4	136.5	131.1	134.3	134.7	132.4
1974	135.2	137.0	126.9	132.3	133.4	127.9
1975	128.0	132.8	109.0	121.4	124.5	109.8
1976	140.2	143.8	124.5	135.6	138.2	126.0
1977	144.0	148.1	126.7	138.3	141.3	127.2
1978 ²	148.4	153.9	126.3	141.0	146.9	126.8
Average annual percent change:						
1947-78	3.9	4.2	2.0	3.6	4.0	2.0
1973-78	2.1	2.7	-2	1.4	2.0	-3

¹ 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.

² Preliminary.

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 74. Paper, paperboard, and pulp mills (SIC 2611, 2621, 2631, 2661): Indexes of output, employee hours, and employees, 1954-78 (1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	54.5	91.3	95.0	72.6	90.8	95.4	71.8
1955	61.1	95.6	100.1	73.5	93.2	98.0	73.1
1956	64.8	97.2	100.8	79.4	95.2	99.2	78.8
1957	63.1	94.7	97.3	81.9	95.1	98.4	81.3
1958	63.4	92.8	95.0	81.6	93.7	96.9	81.0
1959	70.6	97.5	99.6	87.0	96.4	98.6	86.5
1960	72.2	96.5	97.7	90.5	96.6	98.2	90.0
1961	74.5	93.5	94.3	89.6	93.8	94.9	89.4
1962	78.4	94.7	95.6	89.9	94.8	96.1	89.4
1963	82.6	94.3	95.1	90.2	94.2	95.3	89.8
1964	87.9	95.3	96.3	90.2	94.4	95.6	89.4
1965	93.1	96.1	96.6	93.6	95.6	96.3	93.1
1966	100.3	98.7	99.1	96.3	97.5	97.9	96.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.6	101.1	101.7	98.0	100.4	101.0	98.2
1969	113.2	102.4	103.2	98.7	101.8	102.2	100.4
1970	112.1	97.8	97.7	98.1	99.8	99.5	101.1
1971	113.4	94.6	93.5	99.8	95.9	94.8	100.7
1972	122.3	94.1	93.2	96.5	94.4	93.5	97.8
1973	128.0	94.5	93.8	97.6	95.3	95.0	96.7
1974	127.4	94.2	93.0	100.4	96.3	95.5	99.6
1975	108.2	84.5	81.5	99.3	89.1	86.9	98.5
1976	126.0	89.9	87.6	101.2	92.9	91.2	100.0
1977	129.7	90.1	87.6	102.4	93.8	91.8	102.0
1978 ¹	131.0	88.3	85.1	103.7	92.9	89.2	103.3
Average annual percent change:							
1947-78	4.1	.2	-2	1.9	.4	(?)	2.0
1973-78	.9	-1.2	-1.7	1.1	-5	-1.1	1.2

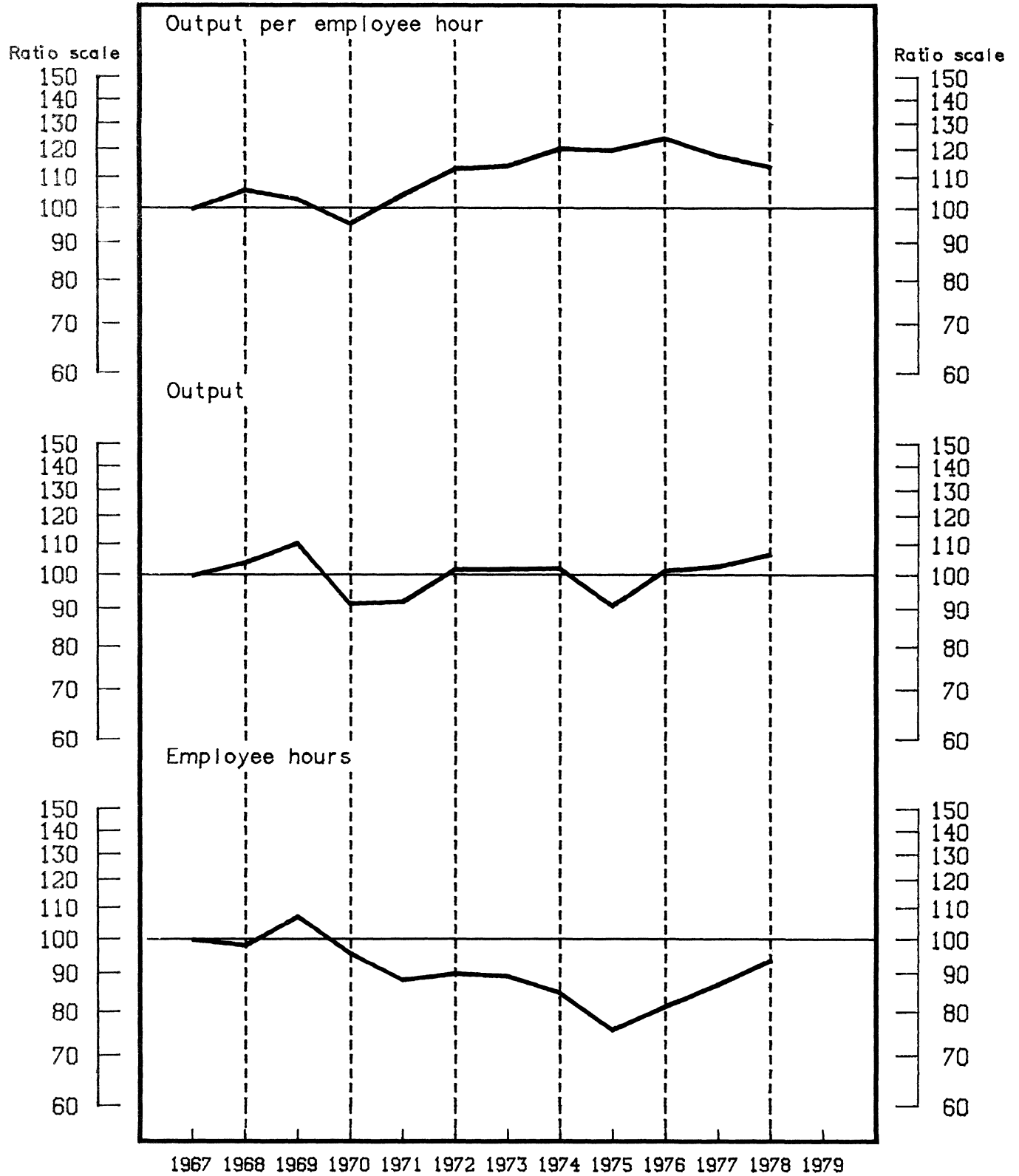
¹ Preliminary.

² Less than .05 percent.

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 39. Folding paperboard boxes (SIC 2651): Output per hour and related data, 1967-78

(1967=100)



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

Table 75. Folding paperboard boxes (SIC 2651): Indexes of output per employee hour and output per employee, 1963-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1963	93.6	93.0	96.8	93.0	92.1	96.8
1964	95.7	94.9	99.3	96.1	95.2	100.2
1965	90.7	90.1	93.4	91.2	90.7	93.6
1966	91.3	90.7	94.2	91.6	91.0	94.2
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.9	104.7	111.5	105.6	104.4	110.9
1969	103.0	101.7	109.4	101.9	100.6	107.3
1970	95.5	95.3	96.3	92.7	92.5	93.5
1971	104.3	104.9	101.7	101.2	101.4	100.4
1972	113.1	113.1	113.0	110.2	109.3	113.5
1973	114.1	114.0	114.5	111.0	110.0	114.9
1974	120.4	121.8	114.8	116.8	117.2	115.2
1975	119.9	122.8	108.2	117.2	119.6	108.8
1976	124.4	126.1	117.6	123.2	124.5	118.4
1977	118.0	119.0	114.1	115.0	115.1	114.6
1978 ²	113.8	113.8	113.7	112.2	111.7	113.8
Average annual percent change:						
1963-78	2.0	2.2	1.4	1.8	1.9	1.4
1973-78	-1	-1	.1	.2	.2	.1

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Paperboard Packaging Council, the Bureau of the Census, and the Bureau of Labor Statistics.

Table 76. Folding paperboard boxes (SIC 2651): Indexes of output, employee hours, and employees, 1963-78
(1967 = 100)

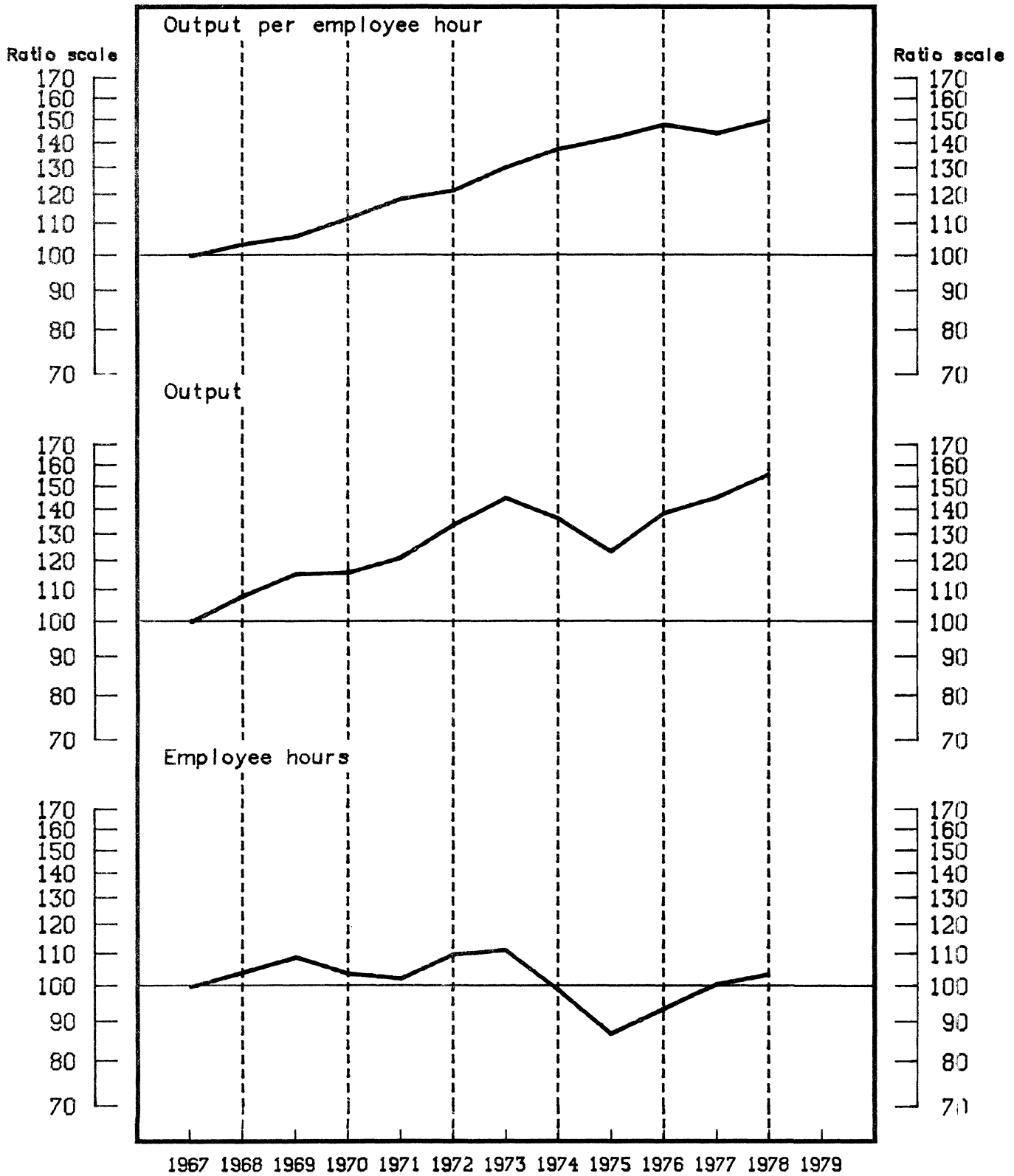
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1963	96.8	103.4	104.1	100.0	104.1	105.1	100.0
1964	97.1	101.5	102.3	97.8	101.0	102.0	96.9
1965	95.5	105.3	106.0	102.2	104.7	105.3	102.0
1966	100.9	110.5	111.2	107.1	110.1	110.9	107.1
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.1	98.3	99.4	93.4	98.6	99.7	93.9
1969	110.6	107.4	108.8	101.1	108.5	109.9	103.1
1970	91.6	95.9	96.1	95.1	98.8	99.0	98.0
1971	92.2	88.4	87.9	90.7	91.1	90.9	91.8
1972	101.9	90.1	90.1	90.2	92.5	93.2	89.8
1973	102.0	89.4	89.5	89.1	91.9	92.7	88.8
1974	102.3	85.0	84.0	89.1	87.6	87.3	88.8
1975	91.1	76.0	74.2	84.2	77.7	76.2	83.7
1976	101.5	81.6	80.5	86.3	82.4	81.5	85.7
1977	102.9	87.2	86.5	90.2	89.5	89.4	89.8
1978 ¹	106.9	93.9	93.9	94.0	95.3	95.7	93.9
Average annual percent change:							
1963-78 .....	.3	-1.7	-1.9	-1.1	-1.5	-1.6	-1.1
1973-78	1.0	1.1	1.2	.9	.9	.9	1.0

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Paperboard

Packaging Council, the Bureau of the Census, and the Bureau of Labor Statistics.

Chart 40. Corrugated and solid fiber boxes (SIC 2653): Output per hour and related data, 1967-78

(1967=100)



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

Table 77. Corrugated and solid fiber boxes (SIC 2653): Indexes on output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	76.4	76.3	76.7	75.9	75.4	77.2
1959	77.6	76.2	83.1	78.6	77.2	83.6
1960	77.2	76.5	79.5	76.5	75.5	80.1
1961	81.6	80.7	84.5	82.0	81.1	84.8
1962	82.7	81.4	88.0	83.8	82.5	88.4
1963	88.2	87.9	89.5	88.8	88.6	89.9
1964	90.0	89.8	90.8	92.6	93.0	91.7
1965	92.8	92.7	93.7	95.9	96.5	94.2
1966	96.6	94.8	103.4	98.6	97.2	103.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.6	103.1	105.8	104.2	103.8	105.5
1969	106.0	105.5	107.6	106.2	106.4	105.9
1970	111.8	112.8	108.3	107.6	108.4	105.1
1971	118.5	120.8	110.8	114.6	116.3	109.8
1972	121.6	123.0	117.4	120.4	121.2	118.1
1973	130.2	130.9	127.4	128.3	128.1	129.0
1974	137.7	143.2	121.7	128.5	130.6	122.6
1975	142.2	151.8	116.8	134.2	140.8	117.7
1976	148.0	154.9	128.7	141.8	145.9	130.4
1977	144.2	151.4	124.0	139.1	144.6	124.5
1978 ²	150.2	156.1	133.1	145.4	149.8	133.7
Average annual percent change:						
1958-78	3.8	4.1	2.7	3.5	3.7	2.7
1973-78	2.6	3.1	1.1	2.7	3.3	.9

¹ 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.

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.

² Preliminary.

Table 78. Corrugated and solid fiber boxes (SIC 2653): Indexes of output, employee hours, and employment, 1958-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	55.3	72.4	72.5	72.1	72.9	73.3	71.6
1959	63.0	81.2	82.7	75.8	80.2	81.6	75.4
1960	63.0	81.6	82.3	79.2	82.3	83.4	78.7
1961	67.3	82.5	83.4	79.6	82.1	83.0	79.4
1962	71.9	86.9	88.3	81.7	85.8	87.2	81.3
1963	76.2	86.4	86.7	85.1	85.8	86.0	84.8
1964	82.4	91.6	91.8	90.7	89.0	88.6	89.9
1965	89.5	96.4	96.6	95.5	93.3	92.7	95.0
1966	97.6	101.0	102.9	94.4	99.0	100.4	94.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.1	104.3	104.9	102.2	103.7	104.1	102.5
1969	115.5	109.0	109.5	107.3	108.8	108.6	109.1
1970	116.0	103.8	102.8	107.1	107.8	107.0	110.4
1971	121.2	102.3	100.3	109.4	105.8	104.2	110.4
1972	133.8	110.0	108.8	114.0	111.1	110.4	113.3
1973	145.0	111.4	110.8	113.8	113.0	113.2	112.4
1974	136.3	99.0	95.2	112.0	106.1	104.4	111.2
1975	123.6	86.9	81.4	105.8	92.1	87.8	105.0
1976	138.5	93.6	89.4	107.6	97.7	94.9	106.2
1977	145.2	100.7	95.9	117.1	104.4	100.4	116.6
1978 ¹	155.9	103.8	99.9	117.1	107.2	104.1	116.6
Average annual percent change:							
1958-78	5.2	1.3	1.0	2.4	1.6	1.4	2.4
1973-78	1.9	-6	-1.1	.8	-7	-1.3	1.0

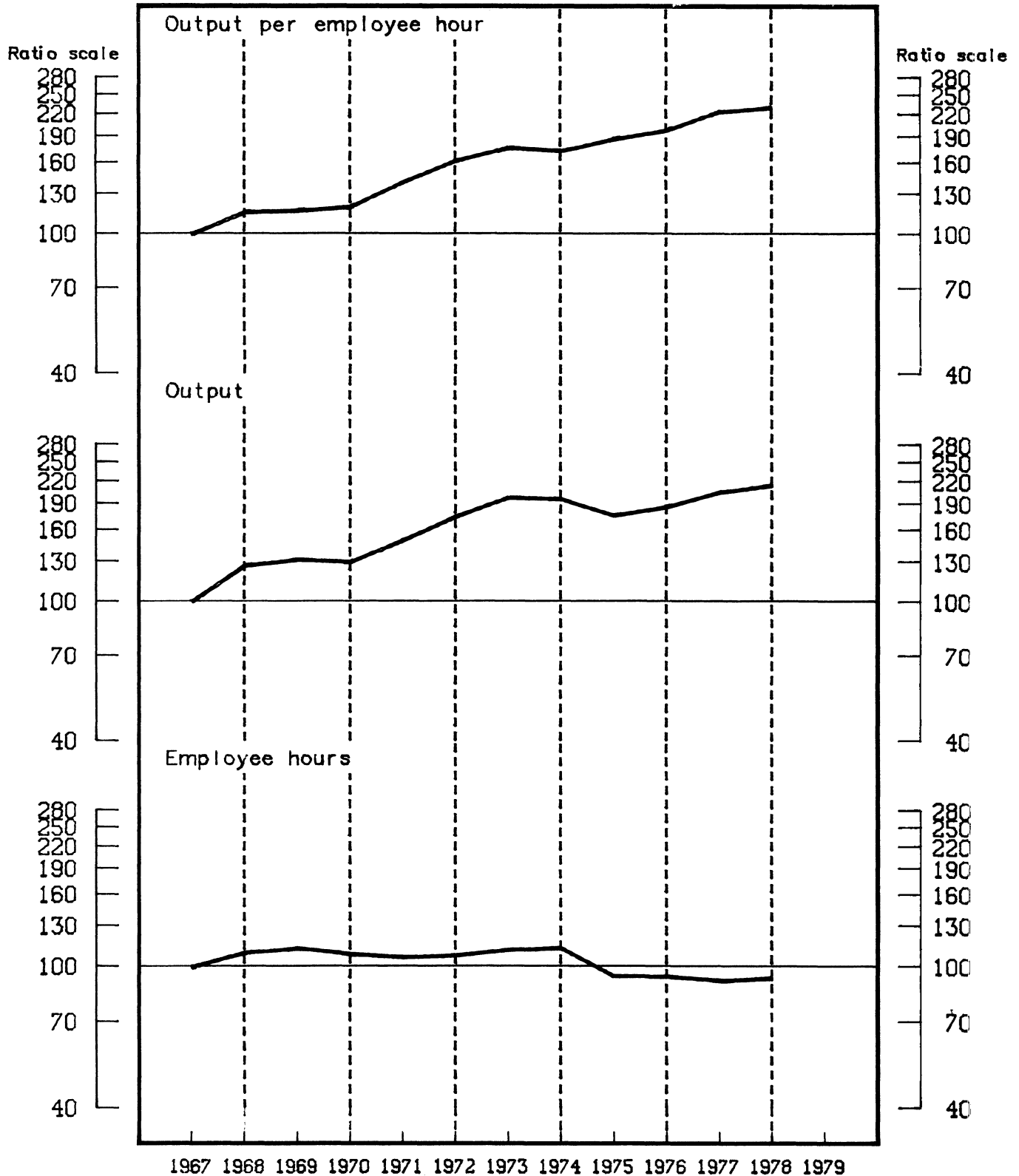
¹ Preliminary.

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 41. Synthetic fibers (SIC 2823, 2824): Output per hour and related data, 1967-78

(1967=100)



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

Table 79. Synthetic fibers (SIC 2823, 2824): Indexes of output per employee hour and output per employee, 1957-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1957	68.6	67.4	72.2	68.1	66.4	73.5
1958	65.9	67.2	62.1	66.0	67.1	63.1
1959	75.4	73.8	81.0	75.9	73.8	82.2
1960	72.1	71.9	72.8	71.3	70.4	73.6
1961	77.5	77.7	76.7	77.0	76.9	77.0
1962	85.0	83.6	89.9	85.2	83.6	90.4
1963	84.3	85.0	82.2	85.3	86.1	82.7
1964	89.8	89.8	89.6	91.7	92.0	90.5
1965	92.8	91.9	95.0	93.7	93.2	95.4
1966	93.3	94.7	89.6	93.7	95.2	89.7
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	115.7	112.9	124.9	117.5	114.8	125.9
1969	116.8	114.5	124.6	118.1	115.9	124.9
1970	119.5	119.1	121.1	118.9	118.2	120.8
1971	140.7	137.8	150.0	139.8	136.7	149.7
1972	162.2	157.0	180.9	163.5	158.6	179.6
1973	176.8	170.4	200.2	179.0	172.3	201.2
1974	173.1	170.9	180.6	172.2	168.7	183.3
1975	187.2	192.0	173.4	182.5	184.6	176.3
1976	198.4	203.6	183.4	193.3	195.3	187.2
1977	224.4	225.1	222.7	221.5	220.0	225.9
1978 ²	230.7	221.2	266.4	231.4	220.5	269.8
Average annual percent change:						
1957-78	6.4	6.3	6.5	6.3	6.2	6.5
1973-78	6.4	6.5	6.2	6.2	6.1	6.3

¹ 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.

² Preliminary.

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 80. Synthetic fibers (SIC 2823, 2824): Indexes of output, employee hours, and employees, 1957-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1957	49.7	72.4	73.7	68.8	73.0	74.9	67.6
1958	45.4	68.9	67.6	73.1	68.8	67.7	72.0
1959	54.2	71.9	73.4	66.9	71.4	73.4	65.9
1960	51.0	70.7	70.9	70.1	71.5	72.4	69.3
1961	53.6	69.2	69.0	69.9	69.6	69.7	69.6
1962	64.0	75.3	76.6	71.2	75.1	76.6	70.8
1963	68.4	81.1	80.5	83.2	80.2	79.4	82.7
1964	78.4	87.3	87.3	87.5	85.5	85.2	86.6
1965	89.9	96.9	97.8	94.6	95.9	96.5	94.2
1966	98.2	105.2	103.7	109.6	104.8	103.2	109.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	127.0	109.8	112.5	101.7	108.1	110.6	100.9
1969	131.9	112.9	115.2	105.9	111.7	113.8	105.6
1970	129.7	108.5	108.9	107.1	109.1	109.7	107.4
1971	149.7	106.4	108.6	99.8	107.1	109.5	100.0
1972	174.9	107.8	111.4	96.7	107.0	110.3	97.4
1973	197.8	111.9	116.1	98.8	110.5	114.8	98.3
1974	196.0	113.2	114.7	108.5	113.8	116.2	106.9
1975	176.3	94.2	91.8	101.7	96.6	95.5	100.0
1976	186.5	94.0	91.6	101.7	96.5	95.5	99.6
1977	205.3	91.5	91.2	92.2	92.7	93.3	90.9
1978 ¹	215.0	93.2	97.2	80.7	92.9	97.5	79.7
Average annual percent change:							
1957-78	8.5	2.0	2.0	1.9	2.1	2.1	1.9
1973-78	1.8	-4.3	-4.4	-4.2	-4.2	-4.1	-4.3

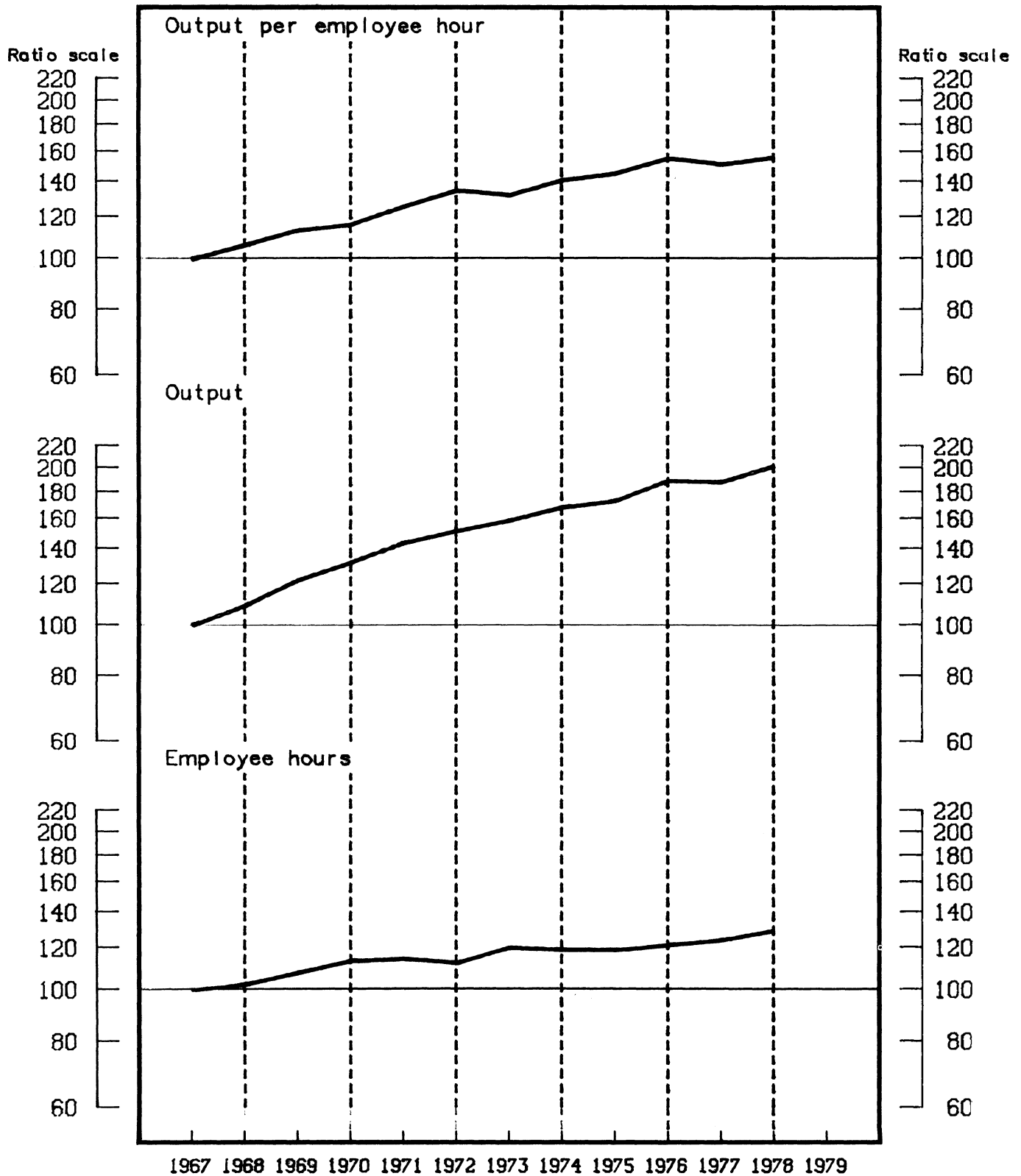
¹ Preliminary.

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 42. Pharmaceutical preparations (SIC 2834): Output per hour and related data, 1967-78

(1967=100)



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

Table 81. Pharmaceutical preparations (SIC 2834): Indexes of output per employee hour and output per employee, 1963-78
(1967=100)

Year	Output per hour ¹		Output per employee ¹		
	All employees	Production workers	All employees	Production workers	Nonproduction workers
Index:					
1963	82.1	82.5	84.5	84.7	84.1
1964	83.9	83.0	86.9	85.8	88.1
1965	90.9	90.7	93.1	92.7	93.5
1966	94.1	93.4	97.6	96.9	98.5
1967	100.0	100.0	100.0	100.0	100.0
1968	106.3	107.2	108.8	109.6	107.7
1969	113.4	112.2	115.6	114.5	116.9
1970	116.2	118.0	120.2	121.9	118.3
1971	125.7	134.8	129.1	138.3	119.7
1972	134.9	143.5	138.0	146.7	128.9
1973	132.1	143.0	133.9	144.8	122.9
1974	141.3	152.4	142.2	153.2	131.0
1975	145.4	160.5	143.6	158.5	129.2
1976	155.4	168.0	155.4	168.0	142.9
1977	151.3	164.0	152.1	165.0	139.4
1978 ²	156.1	176.3	158.4	178.9	139.6
Average annual percent change:					
1963-78	4.7	5.6	4.5	5.4	3.5
1973-78	3.2	3.8	3.3	3.9	2.7

¹ 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.

² Preliminary.

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 82. Pharmaceutical preparations (SIC 2834): Indexes of output, employee hours, and employees, 1963-78
(1967=100)

Year	Output	Employee hours		Employees		
		All employees	Production workers	All employees	Production workers	Nonproduction workers
Index:						
1963	70.5	85.9	85.5	83.4	83.2	83.8
1964	76.8	91.5	92.5	88.4	89.5	87.2
1965	86.3	94.9	95.2	92.7	93.1	92.3
1966	94.1	100.0	100.7	96.4	97.1	95.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	109.1	102.6	101.8	100.3	99.5	101.3
1969	122.2	107.8	108.9	105.7	106.7	104.5
1970	131.9	113.5	111.8	109.7	108.2	111.5
1971	143.8	114.4	106.7	111.4	104.0	120.1
1972	151.5	112.3	105.6	109.8	103.3	117.5
1973	158.7	120.1	111.0	118.5	109.6	129.1
1974	168.2	119.0	110.4	118.3	109.8	128.4
1975	172.9	118.9	107.7	120.4	109.1	133.8
1976	189.0	121.6	112.5	121.6	112.5	132.3
1977	187.9	124.2	114.6	123.5	113.9	134.8
1978 ¹	202.0	129.4	114.6	127.5	112.9	144.7
Average annual percent change:						
1963-78	7.3	2.5	1.6	2.7	1.8	3.6
1973-78	4.8	1.5	.9	1.5	.8	2.0

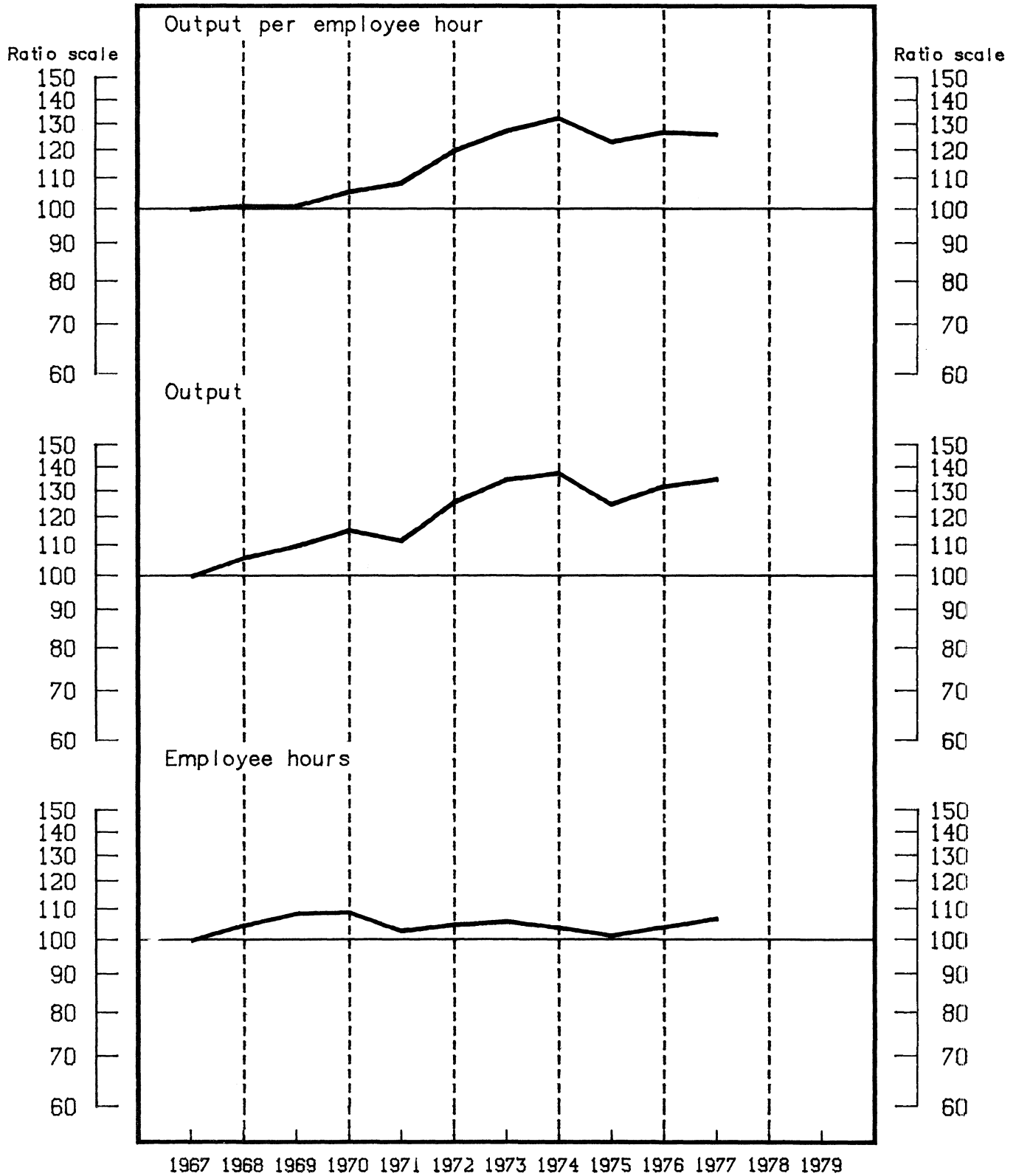
¹ Preliminary.

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 43. Soaps and detergents (SIC 2841): Output per hour and related data, 1967-77

(1967=100)



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

Table 83. Soaps and detergents (SIC 2841): Indexes of output per employee hour and output per employee, 1958-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	77.7	78.3	76.3	77.2	77.2	77.3
1959	84.4	85.4	82.2	84.2	84.6	83.3
1960	81.7	81.5	82.0	81.7	81.3	82.6
1961	82.6	81.7	84.2	83.1	82.4	84.7
1962	83.9	81.7	89.7	84.1	81.7	89.7
1963	90.7	87.5	98.8	90.4	86.9	98.8
1964	90.7	88.3	96.5	90.3	87.6	96.5
1965	88.1	87.0	90.7	88.1	86.8	90.7
1966	94.2	94.0	94.6	94.7	94.9	94.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	101.1	102.4	98.2	101.0	102.4	98.1
1969	101.1	104.1	95.0	101.4	105.1	94.5
1970	105.7	110.4	96.3	105.6	111.0	95.8
1971	108.6	114.8	96.5	107.2	113.4	96.0
1972	120.0	125.1	110.1	120.8	126.9	109.9
1973	127.5	134.4	114.2	129.0	136.7	115.4
1974	132.7	139.6	119.3	134.0	140.6	122.0
1975	123.3	129.0	112.1	125.0	130.5	114.8
1976	127.0	135.0	112.0	129.6	138.1	114.6
1977	126.2	135.6	109.1	129.1	139.5	111.6
Average annual percent change:						
1958-77	2.9	3.4	1.9	3.0	3.5	2.0
1973-77	-6	-2	-1.5	-3	.2	-1.3

¹ 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.

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.

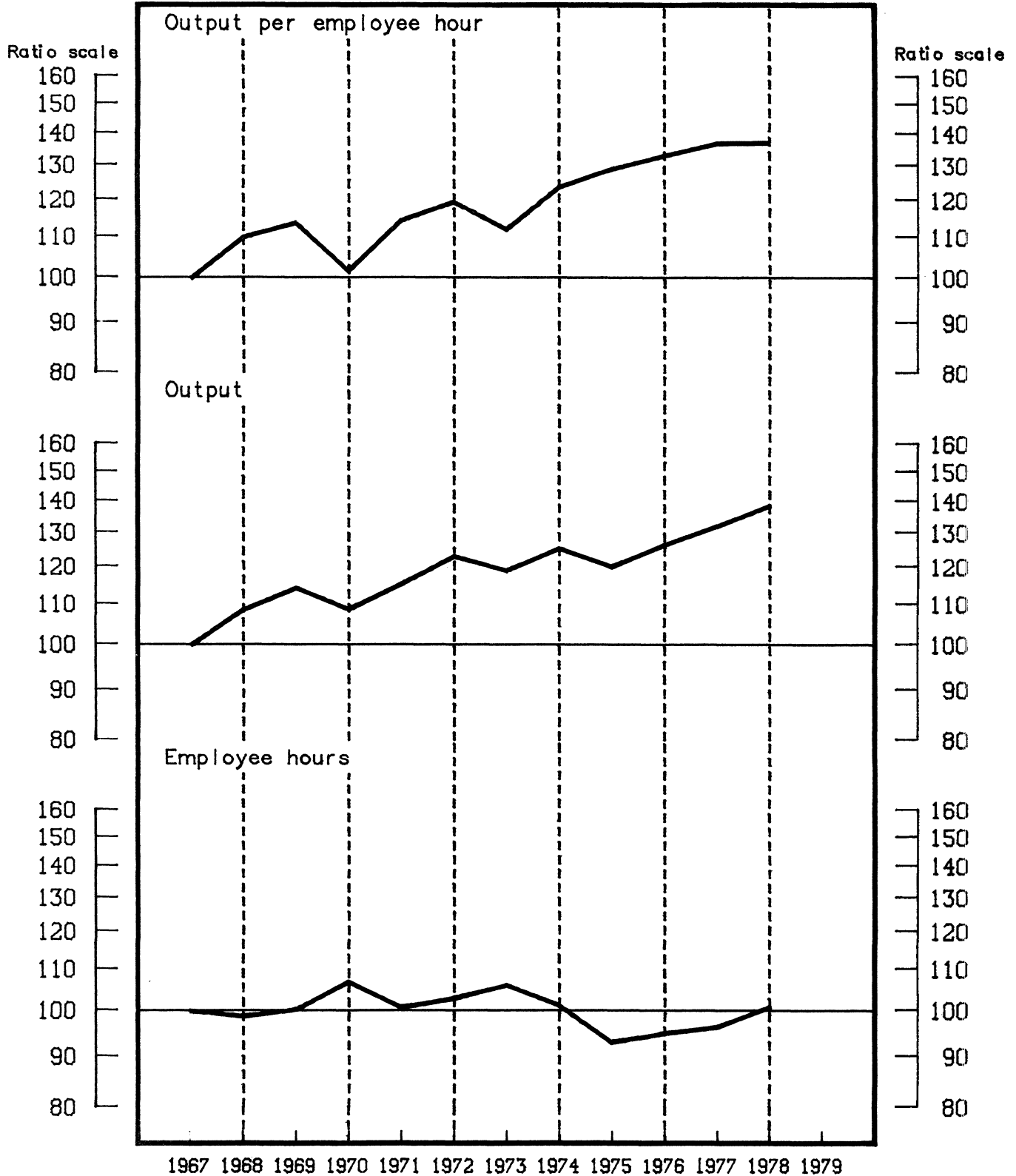
Table 84. Soaps and detergents (SIC 2841): Indexes of output, employee hours, and employees, 1958-77
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	64.7	83.3	82.6	84.8	83.8	83.8	83.7
1959	71.8	85.1	84.1	87.3	85.3	84.9	86.2
1960	71.9	88.0	88.2	87.7	88.0	88.4	87.0
1961	75.7	91.7	92.6	89.9	91.1	91.9	89.4
1962	78.8	93.9	96.5	87.8	93.7	96.5	87.8
1963	85.2	93.9	97.4	86.2	94.2	98.1	86.2
1964	88.7	97.8	100.4	91.9	98.2	101.2	91.9
1965	88.5	100.4	101.7	97.6	100.5	101.9	97.6
1966	93.8	99.6	99.8	99.2	99.0	98.8	99.2
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.0	104.8	103.5	107.9	105.0	103.5	108.1
1969	109.9	108.7	105.6	115.7	108.4	104.6	116.3
1970	115.3	109.1	104.4	119.7	109.2	103.9	120.3
1971	111.7	102.9	97.3	115.7	104.2	98.5	116.3
1972	125.9	104.9	100.6	114.3	104.2	99.2	114.6
1973	135.1	106.0	100.5	118.3	104.7	98.8	117.1
1974	137.9	103.9	98.8	115.6	102.9	98.1	113.0
1975	125.0	101.4	96.9	111.5	100.0	95.8	108.9
1976	132.3	104.2	98.0	118.1	102.1	95.8	115.4
1977	135.2	107.1	99.7	123.9	104.7	96.9	121.1
Average annual percent change:							
1958-77	4.1	1.2	.7	2.1	1.1	.6	2.1
1973-77	-4	.2	-.2	1.1	-.1	-.6	.9

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 44. Paints and allied products (SIC 2851): Output per hour and related data, 1967-78

(1967=100)



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

Table 85. Paints and allied products (SIC 2851): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	75.1	73.6	77.3	75.7	73.6	78.4
1959	82.0	80.7	83.7	82.2	80.0	84.8
1960	88.2	86.4	90.7	88.2	85.4	91.6
1961	86.0	84.6	87.8	86.0	84.1	88.3
1962	89.7	88.2	91.8	91.0	90.1	92.3
1963	92.6	91.9	93.8	93.6	93.1	94.2
1964	98.5	96.7	101.2	100.5	99.4	102.1
1965	99.6	98.8	100.7	100.5	99.9	101.1
1966	104.4	103.1	106.2	105.1	104.3	106.2
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	110.0	110.0	110.1	110.4	109.9	110.9
1969	113.8	112.3	115.8	113.3	111.2	115.8
1970	101.7	100.8	102.9	100.8	99.5	102.6
1971	114.4	115.9	112.5	112.1	112.3	112.0
1972	119.5	117.9	121.8	119.3	118.3	120.7
1973	112.1	110.8	114.2	109.8	105.9	114.9
1974	123.7	126.5	120.2	123.4	124.5	122.1
1975	129.1	137.5	119.5	128.1	134.3	121.5
1976	133.2	138.9	126.5	133.7	137.8	129.2
1977	137.0	139.8	133.6	137.5	139.2	135.5
1978 ²	137.2	140.7	132.9	138.0	141.3	134.6
Average annual percent change:						
1958-78	2.8	3.0	2.4	2.7	2.9	2.4
1973-78	3.9	4.4	3.3	4.4	5.3	3.4

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 86. Paints and allied products (SIC 2851): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

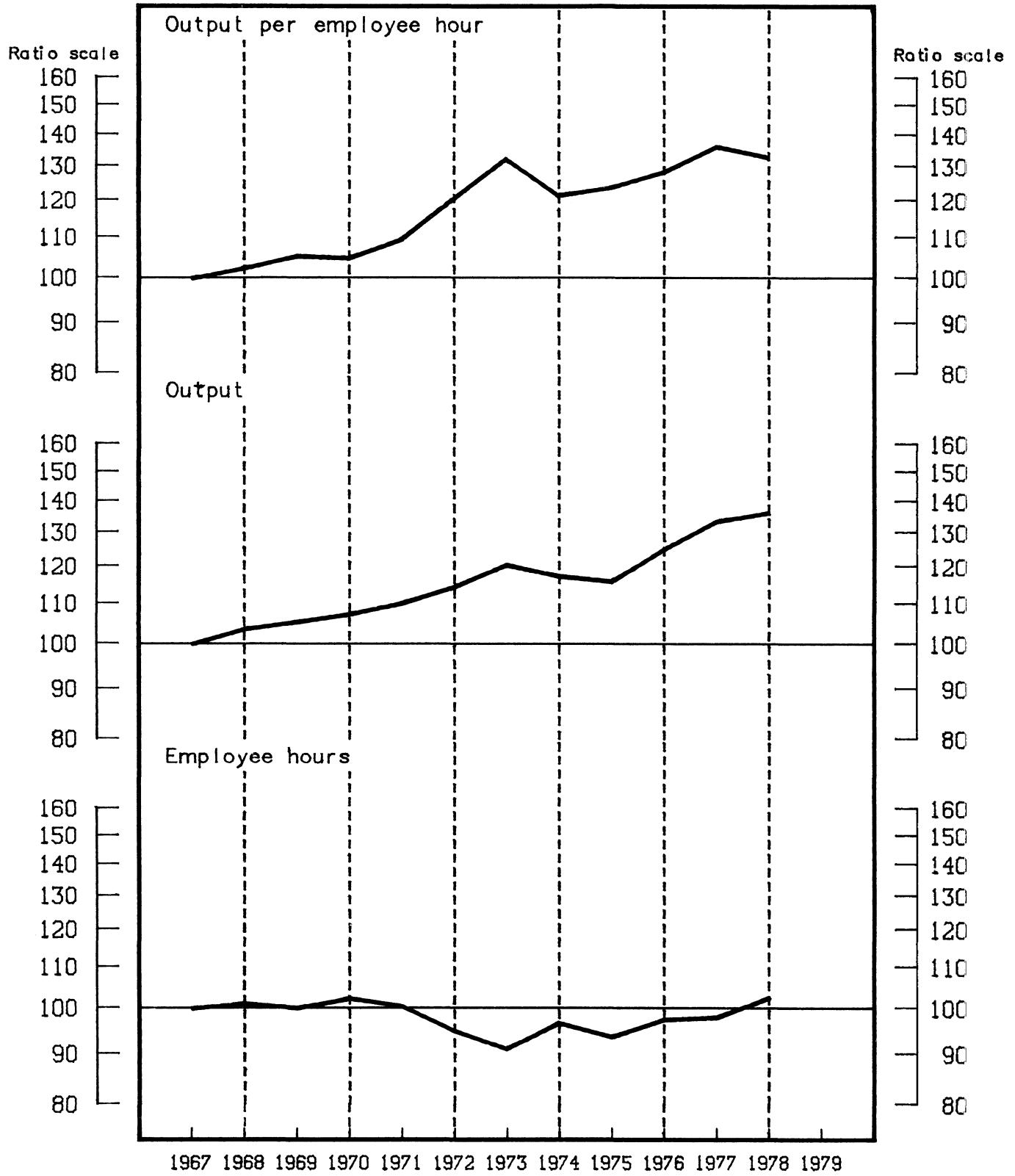
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	67.3	89.6	91.5	87.1	88.9	91.4	85.8
1959	75.5	92.1	93.6	90.2	91.9	94.4	89.0
1960	78.9	89.5	91.3	87.0	89.5	92.4	86.1
1961	75.9	88.3	89.7	86.4	88.3	90.2	86.0
1962	80.2	89.4	90.9	87.4	88.1	89.0	86.9
1963	86.8	93.7	94.5	92.5	92.7	93.2	92.1
1964	92.8	94.2	96.0	91.7	92.3	93.4	90.9
1965	99.1	99.5	100.3	98.4	98.6	99.2	98.0
1966	106.9	102.4	103.7	100.7	101.7	102.5	100.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.7	98.8	98.8	98.7	98.5	98.9	98.0
1969	114.3	100.4	101.8	98.7	100.9	102.8	98.7
1970	108.8	107.0	107.9	105.7	107.9	109.4	106.0
1971	115.4	100.9	99.6	102.6	102.9	102.8	103.0
1972	123.1	103.0	104.4	101.1	103.2	104.1	102.0
1973	119.1	106.2	107.5	104.3	108.5	112.5	103.7
1974	125.4	101.4	99.1	104.3	101.6	100.7	102.7
1975	120.2	93.1	87.4	100.6	93.8	89.5	98.9
1976	126.5	95.0	91.1	100.0	94.6	91.8	97.9
1977	132.1	96.4	94.5	98.9	96.1	94.9	97.5
1978 ¹	138.6	101.0	98.5	104.3	100.4	98.1	103.0
Average annual percent change:							
1958-78	3.3	.6	.3	.9	.6	.4	.9
1973-78	2.8	-1.1	-1.5	-5	-1.5	-2.4	-6

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census

and the Bureau of Labor Statistics.

Chart 45. Petroleum refining (SIC 2911): Output per hour and related data, 1967-78

(1967=100)



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

Table 87. Petroleum refining (SIC 2911): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	44.7	43.1	49.6	44.2	42.1	50.3
1955	48.9	47.1	54.7	48.5	46.3	55.1
1956	50.9	49.1	56.9	50.6	48.3	57.4
1957	51.0	49.9	54.6	50.7	49.2	55.0
1958	53.6	52.5	56.8	52.5	50.8	57.2
1959	60.2	59.1	63.6	59.3	57.6	64.1
1960	62.7	62.1	64.7	62.2	61.2	65.1
1961	67.5	67.1	68.9	66.8	66.0	69.0
1962	73.5	73.5	73.9	72.9	72.4	74.3
1963	79.1	78.5	80.5	77.7	76.5	81.0
1964	83.4	83.0	84.8	83.1	82.2	85.7
1965	90.5	89.9	92.1	89.5	88.4	92.7
1966	97.7	97.1	99.5	97.0	96.0	99.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.4	103.1	100.6	103.2	103.9	101.7
1969	105.3	109.1	96.4	109.2	111.7	103.7
1970	104.8	106.6	100.6	106.3	107.6	103.3
1971	109.5	112.3	102.8	110.2	112.1	105.8
1972	120.5	121.9	117.0	121.2	121.5	120.3
1973	132.4	135.7	124.3	131.4	133.0	127.6
1974	121.4	121.8	120.4	121.8	121.3	122.9
1975	123.7	126.9	115.7	123.0	125.2	118.1
1976	128.3	130.4	123.1	131.3	133.4	126.4
1977	136.2	139.5	128.4	138.3	141.7	130.5
1978 ²	132.8	134.0	129.7	136.6	138.5	132.1
Average annual percent change:						
1947-78	5.1	5.5	4.1	5.1	5.5	4.1
1973-78	1.1	1.1	1.3	1.8	2.1	1.2

¹ 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.

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.

² Preliminary.

Table 88. Petroleum refining (SIC 2911): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	63.4	141.9	147.0	127.7	143.6	150.6	126.1
1955	68.6	140.4	145.8	125.3	141.4	148.2	124.6
1956	73.0	143.4	148.8	128.3	144.3	151.1	127.1
1957	73.2	143.4	146.6	134.1	144.3	148.9	133.0
1958	71.9	134.2	136.9	126.6	136.9	141.4	125.7
1959	76.3	126.8	129.2	119.9	128.6	132.4	119.1
1960	78.7	125.5	126.8	121.6	126.5	128.6	120.8
1961	80.6	119.4	120.1	117.0	120.6	122.1	116.8
1962	84.0	114.3	114.3	113.7	115.3	116.1	113.0
1963	86.2	109.0	109.8	107.1	110.9	112.7	106.4
1964	88.7	106.3	106.9	104.6	106.7	107.9	103.5
1965	91.2	100.8	101.4	99.0	101.9	103.2	98.4
1966	95.9	98.2	98.8	96.4	98.9	99.9	96.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.6	101.2	100.5	103.0	100.4	99.7	101.9
1969	105.4	100.1	96.6	109.3	96.5	94.4	101.6
1970	107.3	102.4	100.7	106.7	100.9	99.7	103.9
1971	110.2	100.6	98.1	107.2	100.0	98.3	104.2
1972	114.5	95.0	93.9	97.9	94.5	94.2	95.2
1973	120.6	91.1	88.9	97.0	91.8	90.7	94.5
1974	117.4	96.7	96.4	97.5	96.4	96.8	95.5
1975	115.9	93.7	91.3	100.2	94.2	92.6	98.1
1976	125.1	97.5	95.9	101.6	95.3	93.8	99.0
1977	133.5	98.0	95.7	104.0	96.5	94.2	102.3
1978 ¹	136.3	102.6	101.7	105.1	99.8	98.4	103.2
Average annual percent change:							
1947-78	3.4	-1.7	-2.0	-7	-1.7	-2.0	-7
1973-78	3.1	1.9	2.0	1.8	1.2	1.0	1.9

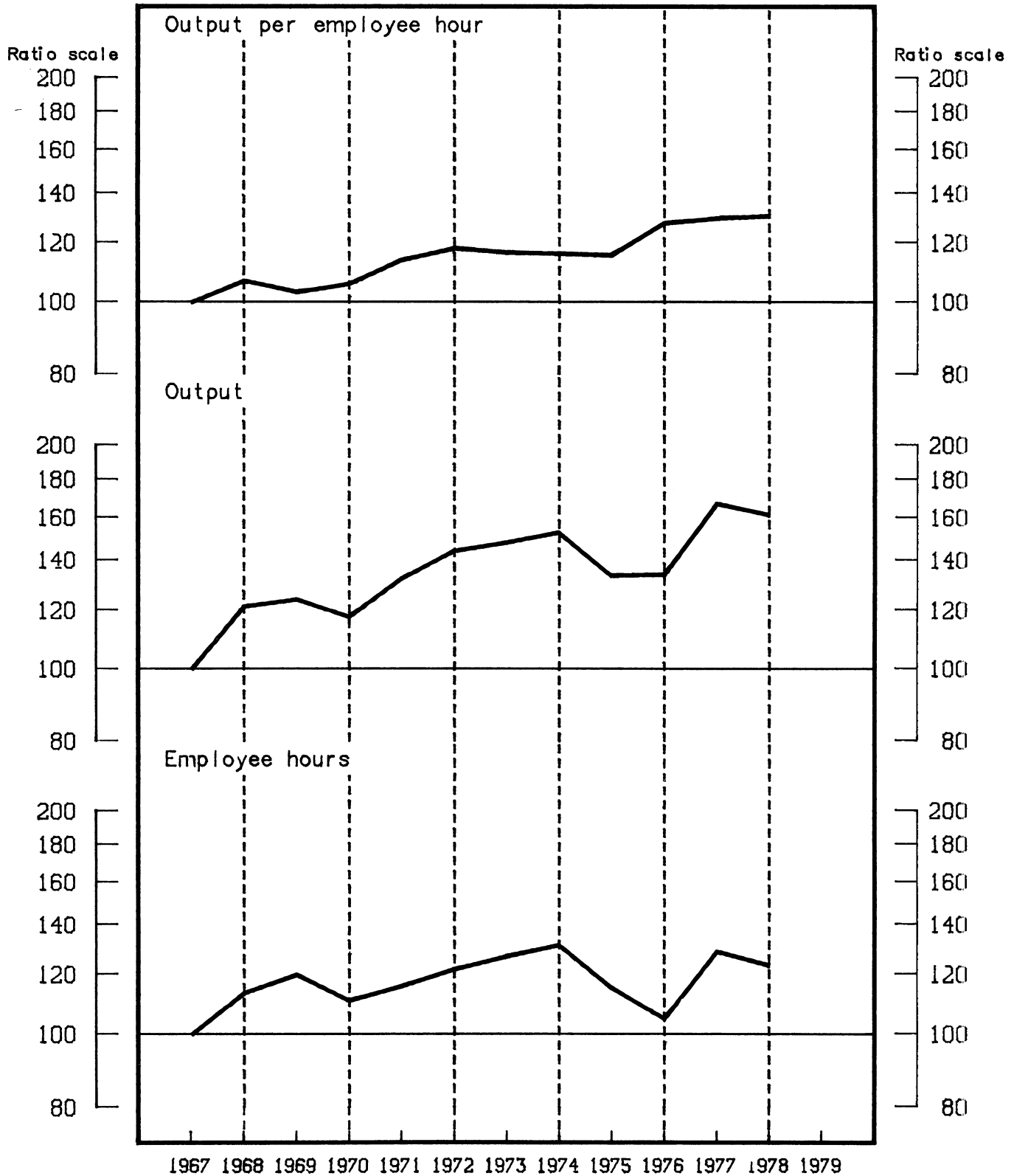
¹ Preliminary.

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 46. Tires and inner tubes (SIC 3011): Output per hour and related data, 1967-78

(1967=100)



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

Table 89. Tires and inner tubes (SIC 3011): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	54.5	53.2	59.4	53.9	52.0	81.2
1955	58.0	54.8	72.7	63.1	60.4	74.4
1956	57.9	56.3	64.1	58.6	56.7	65.9
1957	61.0	59.6	66.6	62.2	60.5	68.4
1958	63.5	62.9	65.6	63.8	62.8	67.4
1959	70.5	68.2	79.2	72.1	69.7	81.2
1960	72.2	70.9	76.8	73.4	72.1	78.2
1961	74.5	74.4	75.1	75.8	75.9	75.6
1962	82.0	79.8	90.8	86.4	84.9	91.4
1963	88.2	86.7	93.4	91.0	90.2	93.9
1964	96.2	94.4	102.6	102.1	101.6	103.5
1965	98.2	96.7	103.7	104.9	105.0	104.3
1966	100.3	98.3	107.6	107.2	107.1	107.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.9	105.7	111.4	114.8	114.5	115.6
1969	103.3	101.8	108.9	112.0	111.6	113.5
1970	105.9	107.8	100.0	108.5	109.6	104.9
1971	114.0	114.6	112.0	117.1	117.5	116.0
1972	118.2	116.7	123.5	124.5	124.1	126.0
1973	116.7	117.1	115.6	119.9	119.8	120.0
1974	116.3	117.3	112.8	120.9	121.5	118.4
1975	115.7	119.5	104.0	116.8	119.4	109.1
1976	127.6	134.6	108.1	119.6	121.5	113.8
1977	129.6	128.9	131.9	135.6	135.0	138.0
1978 ²	130.5	131.9	125.9	133.9	134.6	131.8
Average annual percent change:						
1947-78	3.7	4.0	2.7	3.7	4.0	2.7
1973-78	2.8	2.9	2.7	2.7	2.6	2.8

¹ 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.

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.

² Preliminary.

Table 90. Tires and inner tubes (SIC 3011): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	55.2	101.3	103.7	93.0	102.4	106.2	90.2
1955	68.8	118.7	125.6	94.7	109.1	114.0	92.5
1956	63.6	109.8	112.9	99.2	108.6	112.2	96.5
1957	66.6	109.1	111.7	100.0	107.0	110.0	97.3
1958	61.5	96.8	97.7	93.7	96.4	98.0	91.3
1959	73.5	104.3	107.7	92.8	102.0	105.4	90.5
1960	72.8	100.9	102.7	94.8	99.2	101.0	93.1
1961	70.5	94.6	94.8	93.9	93.0	92.9	93.3
1962	80.4	98.0	100.8	88.5	93.1	94.7	88.0
1963	83.7	94.9	96.5	89.6	92.0	92.8	89.1
1964	94.5	98.2	100.1	92.1	92.6	93.0	91.3
1965	100.3	102.1	103.7	96.7	95.6	95.5	96.2
1966	107.6	107.3	109.5	100.0	100.4	100.5	100.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	121.6	113.7	115.0	109.2	105.9	106.2	105.2
1969	124.2	120.2	122.0	114.1	110.9	111.3	109.4
1970	117.7	111.1	109.2	117.7	108.5	107.4	112.2
1971	132.4	116.1	115.5	118.2	113.1	112.7	114.1
1972	144.4	122.2	123.7	116.9	116.0	116.4	114.6
1973	148.2	127.0	126.6	128.2	123.6	123.7	123.5
1974	152.9	131.5	130.3	135.6	126.5	125.8	129.1
1975	133.7	115.6	111.9	128.5	114.5	112.0	122.5
1976	134.1	105.1	99.6	124.1	112.1	110.4	117.8
1977	167.1	128.9	129.6	126.7	123.2	123.8	121.1
1978 ¹	161.4	123.7	122.4	128.2	120.5	119.9	122.5
Average annual percent change:							
1947-78	4.1	.4	.2	1.4	.4	.2	1.4
1973-78	2.0	-.8	-.9	-.7	-.6	-.6	-.8

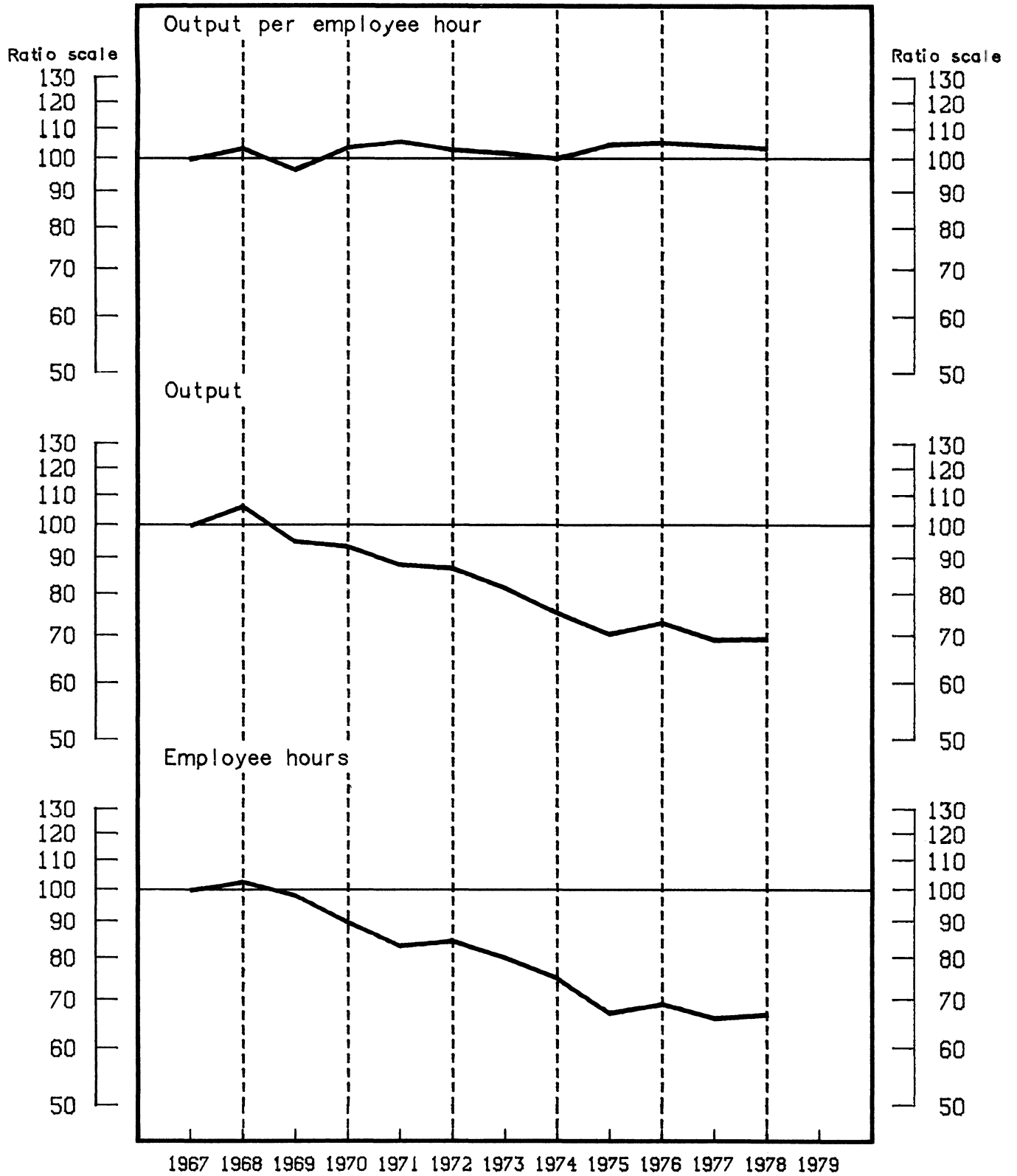
¹ Preliminary.

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 47. Footwear (SIC 314): Output per hour and related data, 1967-78

(1967=100)



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

Table 91. Footwear (SIC 314): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	84.3	84.3	83.9	81.4	80.9	85.9
1955	88.2	88.1	88.1	88.3	87.9	89.7
1956	89.8	90.0	87.1	88.6	88.5	89.1
1957	91.5	92.0	85.4	89.3	89.5	87.3
1958	93.5	94.4	85.6	90.8	91.2	87.4
1959	98.4	98.6	94.5	97.5	97.6	96.6
1960	97.2	98.0	89.1	94.9	95.3	90.5
1961	97.5	98.3	90.2	94.9	95.3	90.7
1962	98.8	99.0	96.0	97.1	97.1	96.3
1963	102.3	102.3	101.6	100.9	100.8	101.9
1964	102.0	101.7	103.7	102.6	102.4	104.5
1965	101.4	101.2	102.2	101.4	101.2	102.6
1966	102.6	102.6	101.7	103.1	103.4	101.7
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.6	103.6	104.3	104.4	104.4	104.3
1969	96.7	97.4	90.4	95.5	96.0	91.3
1970	103.9	105.3	92.3	102.9	103.8	94.4
1971	105.9	108.0	89.8	104.9	106.4	92.4
1972	103.1	104.9	88.7	104.4	106.0	91.3
1973	102.0	104.2	85.2	101.7	103.4	88.1
1974	100.3	103.4	77.7	98.3	100.7	80.3
1975	104.8	107.6	83.1	102.0	104.1	86.0
1976	105.5	108.1	85.9	103.1	104.9	89.1
1977	104.5	107.1	85.0	101.3	103.0	87.6
1978 ²	103.6	105.8	86.4	101.0	102.5	89.0
Average annual percent change:						
1947-78	1.1	1.2	.3	1.1	1.2	.3
1973-78	.6	.5	1.1	.2	.1	1.0

¹ 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.

² Preliminary.
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 92. Footwear (SIC 314): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

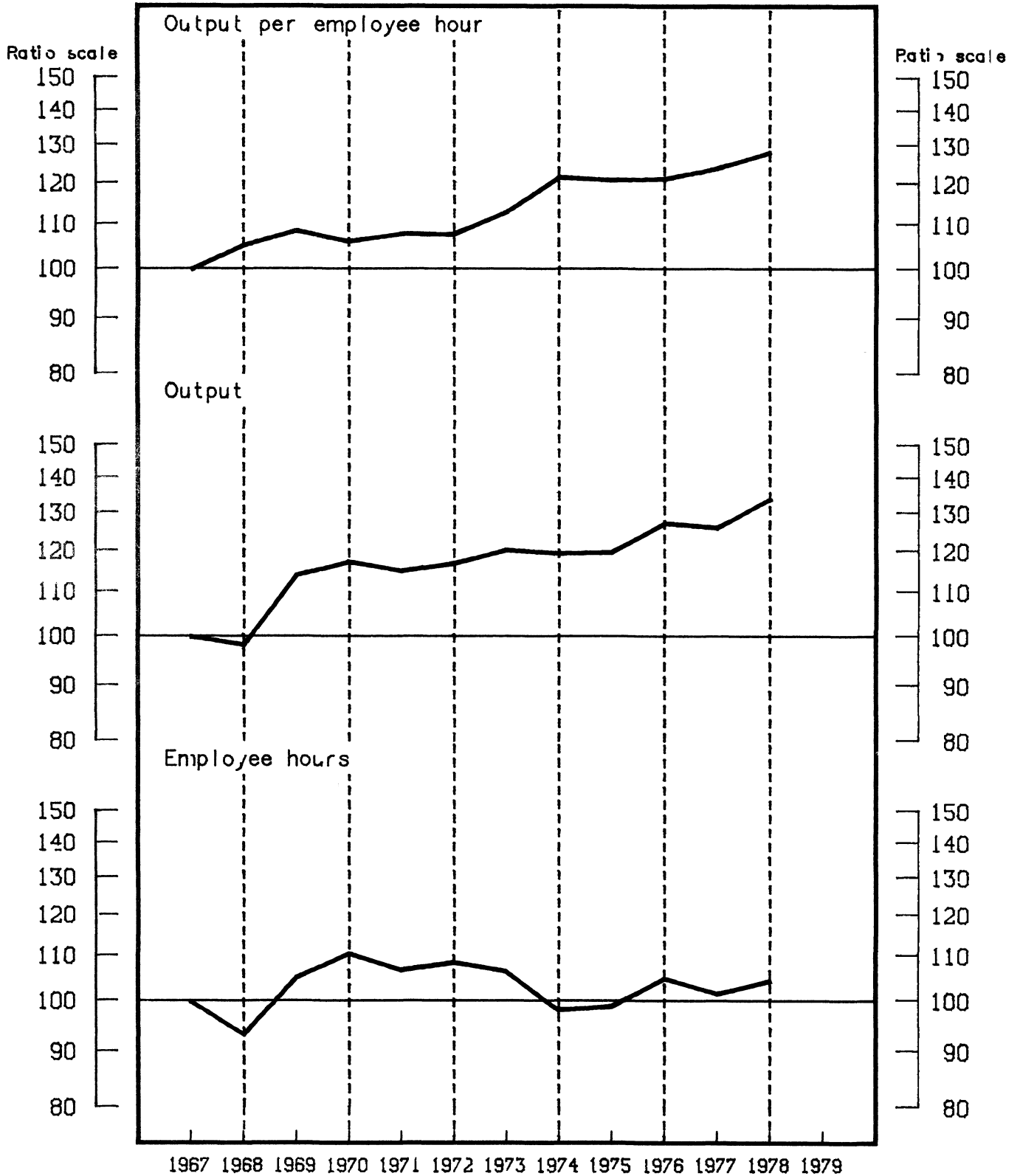
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	88.8	105.4	105.4	105.9	109.1	109.7	103.4
1955	97.7	110.8	110.9	110.9	110.7	111.1	108.9
1956	99.0	110.3	110.0	113.7	111.8	111.9	111.1
1957	99.5	108.8	108.1	116.5	111.4	111.2	114.0
1958	97.7	104.5	103.5	114.2	107.6	107.1	111.8
1959	107.4	109.2	108.9	113.7	110.1	110.0	111.2
1960	102.4	105.4	104.5	114.9	107.9	107.4	113.1
1961	102.8	105.4	104.6	114.0	108.3	107.9	113.4
1962	104.8	106.1	105.9	109.2	107.9	107.9	108.8
1963	101.8	99.5	99.5	100.2	100.9	101.0	99.9
1964	103.8	101.8	102.1	100.1	101.2	101.4	99.3
1965	104.7	103.3	103.5	102.4	103.3	103.5	102.0
1966	107.4	104.7	104.7	105.6	104.2	103.9	105.6
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.4	102.7	102.7	102.0	101.9	101.9	102.0
1969	95.0	98.2	97.5	105.1	99.5	99.0	104.0
1970	93.5	90.0	88.8	101.3	90.9	90.1	99.0
1971	88.2	83.3	81.7	98.2	84.1	82.9	95.5
1972	87.2	84.6	83.1	98.3	83.5	82.3	95.5
1973	81.9	80.3	78.6	96.1	80.5	79.2	93.0
1974	75.5	75.3	73.0	97.2	76.8	75.0	94.0
1975	70.5	67.3	65.5	84.8	69.1	67.7	82.0
1976	73.1	69.3	67.6	85.1	70.9	69.7	82.0
1977	69.2	66.2	64.6	81.4	68.3	67.2	79.0
1978 ¹	69.4	67.0	65.6	80.3	68.7	67.7	78.0
Average annual percent change:							
1947-78	-4	-1.6	-1.7	-9	-1.6	-1.7	-9
1973-78	-3.0	-3.5	-3.5	-4.0	-3.1	-3.1	-3.9

¹ Preliminary.
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 48. Glass containers (SIC 3221): Output per hour and related data, 1967-78

(1967=100)



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

Table 93. Glass containers (SIC 3221): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	78.4	78.5	77.6	77.8	77.6	78.9
1955	81.6	81.2	84.4	81.9	81.4	85.3
1956	81.8	81.5	84.3	82.9	82.5	85.4
1957	81.5	81.4	82.5	81.7	81.5	83.5
1958	78.7	79.2	74.1	78.7	79.2	75.1
1959	83.6	83.8	81.8	82.3	82.3	82.7
1960	81.6	81.8	79.4	81.5	81.7	80.2
1961	83.2	83.1	82.9	82.3	82.2	83.4
1962	86.3	86.5	84.0	86.1	86.3	84.6
1963	89.4	89.3	89.2	89.1	89.0	89.8
1964	91.8	91.9	90.9	92.4	92.5	92.0
1965	97.6	97.7	95.9	96.7	96.7	96.6
1966	97.4	97.4	97.2	97.2	97.1	97.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.2	106.7	94.2	102.6	103.6	95.7
1969	108.5	109.5	99.9	106.4	106.7	104.1
1970	106.1	106.8	100.1	105.3	105.1	107.0
1971	107.8	109.3	96.1	106.4	107.0	101.2
1972	107.7	108.9	98.1	107.0	107.6	101.6
1973	112.9	114.5	100.9	109.8	110.8	102.1
1974	121.6	122.8	112.2	118.0	118.9	110.4
1975	120.9	122.5	108.3	114.1	115.1	106.6
1976	121.2	121.9	114.7	119.1	119.9	113.4
1977	124.0	125.3	113.1	118.9	119.9	110.9
1978 ²	128.2	131.6	105.0	125.0	128.4	103.0
Average annual percent change:						
1947-78	1.9	2.0	1.2	1.8	1.8	1.2
1973-78	2.0	2.2	.8	2.1	2.3	.3

¹ 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.

² Preliminary.
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 94. Glass containers (SIC 3221): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	57.6	73.5	73.4	74.2	74.0	74.2	73.0
1955	62.7	76.8	77.2	74.3	76.6	77.0	73.5
1956	64.3	78.6	78.9	76.3	77.6	77.9	75.3
1957	66.4	81.5	81.6	80.5	81.3	81.5	79.5
1958	64.8	82.3	81.8	87.4	82.3	81.8	86.3
1959	69.4	83.0	82.8	84.8	84.3	84.3	83.9
1960	71.5	87.6	87.4	90.0	87.7	87.5	89.1
1961	74.2	89.2	89.3	89.5	90.2	90.3	89.0
1962	77.5	89.8	89.6	92.3	90.0	89.8	91.6
1963	80.1	89.6	89.7	89.8	89.9	90.0	89.2
1964	83.7	91.2	91.1	92.1	90.6	90.5	91.0
1965	89.2	91.4	91.3	93.0	92.2	92.2	92.3
1966	93.9	96.4	96.4	96.6	96.6	96.7	96.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	98.3	93.4	92.1	104.3	95.8	94.9	102.7
1969	114.1	105.2	104.2	114.2	107.2	106.9	109.6
1970	117.3	110.6	109.8	117.2	111.4	111.6	109.6
1971	115.1	106.8	105.3	119.8	108.2	107.6	113.7
1972	116.9	108.5	107.3	119.2	109.3	108.6	115.1
1973	120.3	106.6	105.1	119.2	109.6	108.6	117.8
1974	119.5	98.3	97.3	106.5	101.3	100.5	108.2
1975	119.7	99.0	97.7	110.5	104.9	104.0	112.3
1976	127.3	105.0	104.4	111.0	106.9	106.2	112.3
1977	126.1	101.7	100.6	111.5	106.1	105.2	113.7
1978 ¹	134.0	104.5	101.8	127.6	107.2	104.4	130.1
Average annual percent change:							
1947-78	3.6	1.7	1.6	2.3	1.8	1.8	2.4
1973-78	2.2	.2	(²)	1.4	.1	-1	1.9

¹ Preliminary.

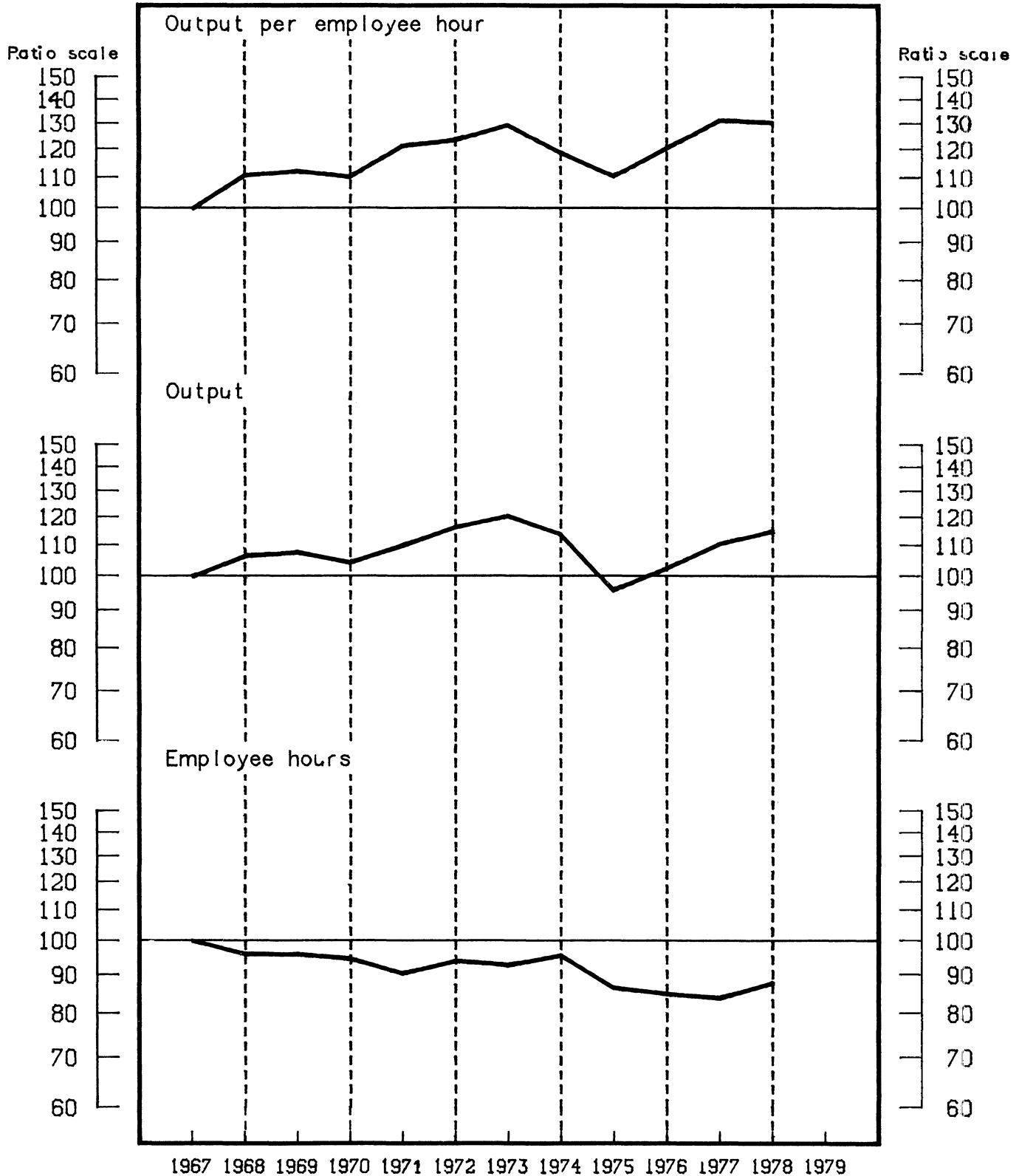
² Less than .05 percent.

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 49. Hydraulic cement (SIC 3241): Output per hour and related data, 1967-78

(1967=100)



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

Table 95. Hydraulic cement (SIC 3241): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	60.8	57.0	85.6	63.4	59.6	86.5
1955	64.2	59.9	94.9	67.2	62.8	95.2
1956	67.6	62.9	100.3	69.8	64.9	101.0
1957	65.6	61.6	92.4	64.9	60.5	92.9
1958	67.8	64.7	86.3	68.2	64.8	86.7
1959	72.7	68.7	98.1	74.2	70.1	98.4
1960	71.9	68.7	91.6	72.6	69.1	91.9
1961	79.6	76.4	96.9	79.4	76.1	96.8
1962	84.4	81.3	101.0	84.4	81.2	101.2
1963	89.4	87.3	100.2	89.9	87.9	100.3
1964	92.4	91.8	95.7	94.3	93.9	96.2
1965	95.2	94.7	97.7	95.7	95.1	97.8
1966	99.8	99.6	101.2	101.5	101.7	100.8
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	110.9	110.1	114.1	112.8	112.2	115.6
1969	112.3	111.8	114.4	115.5	114.8	119.0
1970	110.3	111.3	106.3	112.9	112.7	113.3
1971	121.5	121.9	120.1	124.7	124.4	125.8
1972	123.7	122.9	126.9	126.5	125.6	130.6
1973	129.7	129.2	132.6	132.3	132.1	133.0
1974	119.0	118.4	121.9	119.8	119.9	119.5
1975	110.6	111.6	106.4	109.0	110.2	104.0
1976	120.7	122.0	115.0	119.1	120.7	113.4
1977	131.6	132.1	130.1	130.7	131.8	126.5
1978 ²	130.6	130.2	132.6	129.8	130.1	129.2
Average annual percent change:						
1947-78	3.9	4.2	1.9	3.7	4.0	1.8
1973-78	1.2	1.3	.8	.7	.8	.3

¹ 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.

² Preliminary.

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 96. Hydraulic cement (SIC 3241): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	77.4	127.2	135.7	90.4	122.0	129.8	89.5
1955	84.1	130.9	140.5	88.6	125.1	134.0	88.3
1956	88.7	131.2	141.0	88.4	127.1	136.6	87.8
1957	82.7	126.1	134.3	89.5	127.5	136.8	89.0
1958	86.0	126.8	133.0	99.6	126.1	132.7	99.2
1959	93.7	128.8	136.3	95.5	126.2	133.7	95.2
1960	87.7	121.9	127.7	95.7	120.8	126.9	95.4
1961	88.6	111.3	115.9	91.4	111.6	116.5	91.5
1962	92.0	109.0	113.1	91.1	109.0	113.3	90.9
1963	96.2	107.6	110.2	96.0	107.0	109.5	95.9
1964	100.2	108.4	109.2	104.7	106.3	106.7	104.2
1965	101.3	106.4	107.0	103.7	105.9	106.5	103.6
1966	104.4	104.6	104.8	103.2	102.9	102.7	103.6
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.6	96.1	96.8	93.4	94.5	95.0	92.2
1969	107.8	96.0	96.4	94.2	93.3	93.9	90.6
1970	104.5	94.7	93.9	98.3	92.6	92.7	92.2
1971	110.1	90.6	90.3	91.7	88.3	88.5	87.5
1972	116.4	94.1	94.7	91.7	92.0	92.7	89.1
1973	120.5	92.9	93.3	90.9	91.1	91.2	90.6
1974	113.9	95.7	96.2	93.4	95.1	95.0	95.3
1975	95.9	86.7	85.9	90.1	88.0	87.0	92.2
1976	102.7	85.1	84.2	89.3	86.2	85.1	90.6
1977	110.7	84.1	83.8	85.1	84.7	84.0	87.5
1978 ¹	115.1	88.1	88.4	86.8	88.7	88.5	89.1
Average annual percent change:							
1947-78	2.1	-1.8	-2.1	.1	-1.6	-2.0	.2
1973-78	-7	-1.9	-2.0	-1.5	-1.4	-1.5	-1.0

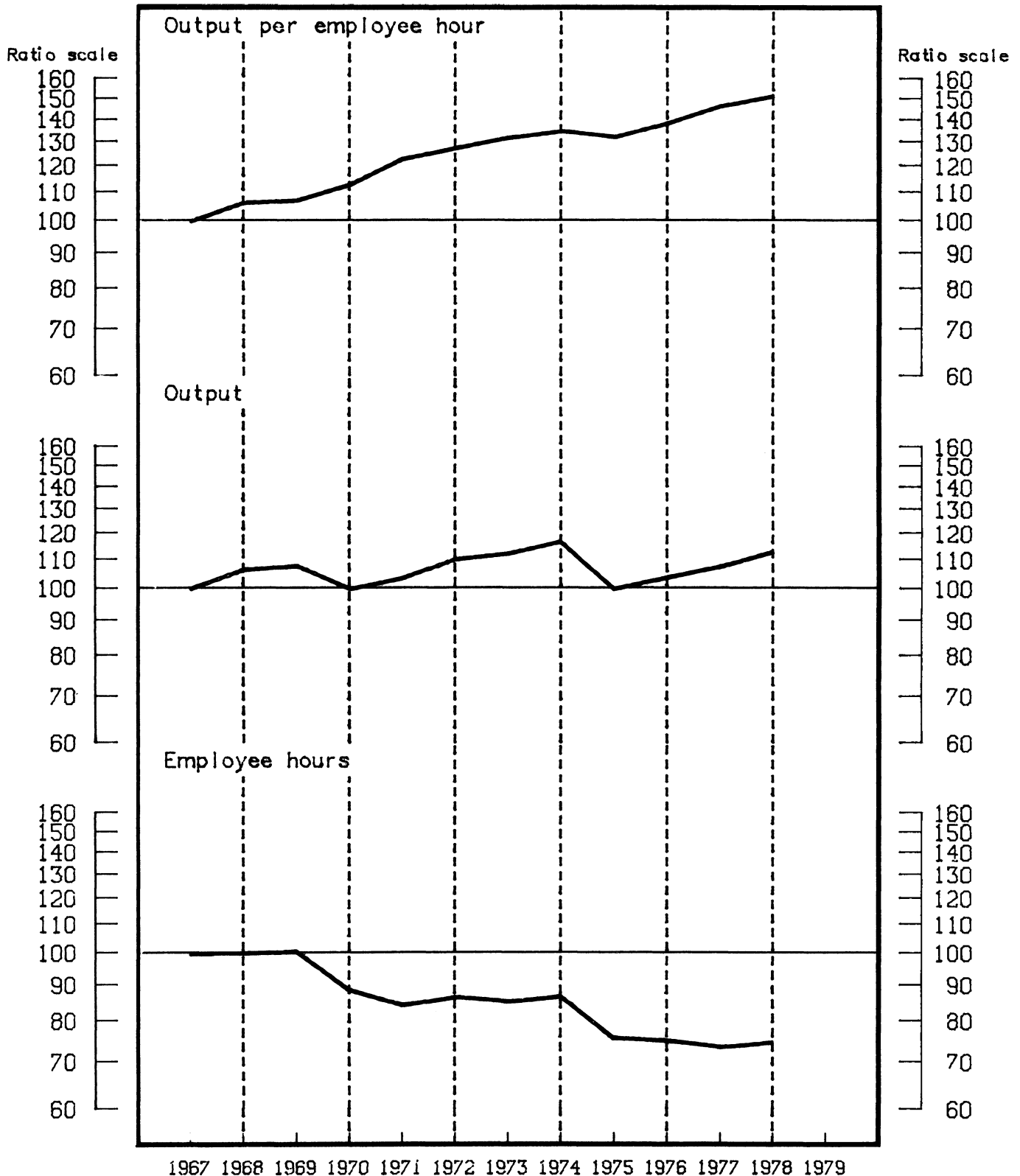
¹ Preliminary.

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 50. Structural clay products (SIC 325): Output per hour and related data, 1967-78

(1967=100)



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

Table 97. Structural clay products (SIC 325): Indexes of output per employee hour and output per employee, 1958-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	75.7	74.2	84.2	74.1	72.2	84.8
1959	81.2	79.0	95.1	80.6	78.0	95.8
1960	83.5	81.6	95.5	81.6	79.2	96.2
1961	86.5	84.2	100.5	84.4	81.7	100.5
1962	93.1	90.5	108.9	91.9	89.0	109.4
1963	89.5	87.8	99.3	89.9	88.1	99.6
1964	95.7	94.8	100.9	99.7	98.1	101.6
1965	97.4	95.9	106.8	98.3	96.7	106.9
1966	99.3	97.6	108.7	100.6	99.0	108.7
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.4	106.9	103.8	107.3	107.6	105.4
1969	107.2	108.1	102.6	108.7	109.1	106.7
1970	112.8	117.7	92.8	114.3	118.1	98.9
1971	122.8	128.4	100.4	124.5	129.4	105.5
1972	127.3	128.9	119.4	128.4	129.6	123.3
1973	131.7	130.9	135.8	131.7	130.6	137.5
1974	134.6	135.0	132.3	134.9	135.8	130.6
1975	132.0	136.5	113.1	129.2	133.6	111.7
1976	138.3	142.8	118.9	133.6	137.5	117.2
1977	146.4	149.0	134.3	143.9	146.6	131.7
1978 ²	151.3	155.4	133.4	149.1	153.5	130.6
Average annual percent change:						
1958-78	3.4	3.7	1.7	3.4	3.7	1.7
1973-78	2.9	3.5	(³)	2.5	3.1	-5

¹ 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.

³ Less than .05 percent.

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

² Preliminary.

Table 98. Structural clay products (SIC 325): Indexes of output, employee hours, and employees, 1958-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	86.4	114.2	116.5	102.6	116.6	119.6	101.9
1959	101.4	124.8	128.4	106.6	125.8	130.0	105.8
1960	101.8	121.9	124.8	106.6	124.7	128.6	105.8
1961	101.5	117.4	120.6	101.0	120.2	124.2	101.0
1962	107.3	115.2	118.5	98.5	116.7	120.6	98.1
1963	96.7	108.0	110.1	97.4	107.6	109.8	97.1
1964	106.5	111.3	112.4	105.6	107.9	108.6	104.8
1965	108.9	111.8	113.6	102.0	110.8	112.6	101.9
1966	108.7	109.5	111.4	100.0	108.1	109.8	100.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.5	100.1	99.6	102.6	99.3	99.0	101.0
1969	107.8	100.6	99.7	105.1	99.2	98.8	101.0
1970	99.9	88.6	84.9	107.7	87.4	84.6	101.0
1971	103.5	84.3	80.6	103.1	83.1	80.0	98.1
1972	110.2	86.6	85.5	92.3	85.8	85.0	89.4
1973	112.3	85.3	85.8	82.7	85.3	86.0	81.7
1974	116.8	86.8	86.5	88.3	86.6	86.0	89.4
1975	99.9	75.7	73.2	88.3	77.3	74.8	89.4
1976	103.7	75.0	72.6	87.2	77.6	75.4	88.5
1977	107.6	73.5	72.2	80.1	74.8	73.4	81.7
1978 ¹	113.0	74.7	72.7	84.7	75.8	73.6	86.5
Average annual percent change:							
1958-78	.6	-2.7	-3.0	-1.1	-2.7	-3.0	-1.1
1973-78	-5	-3.3	-3.9	-5	-2.9	-3.5	(²)

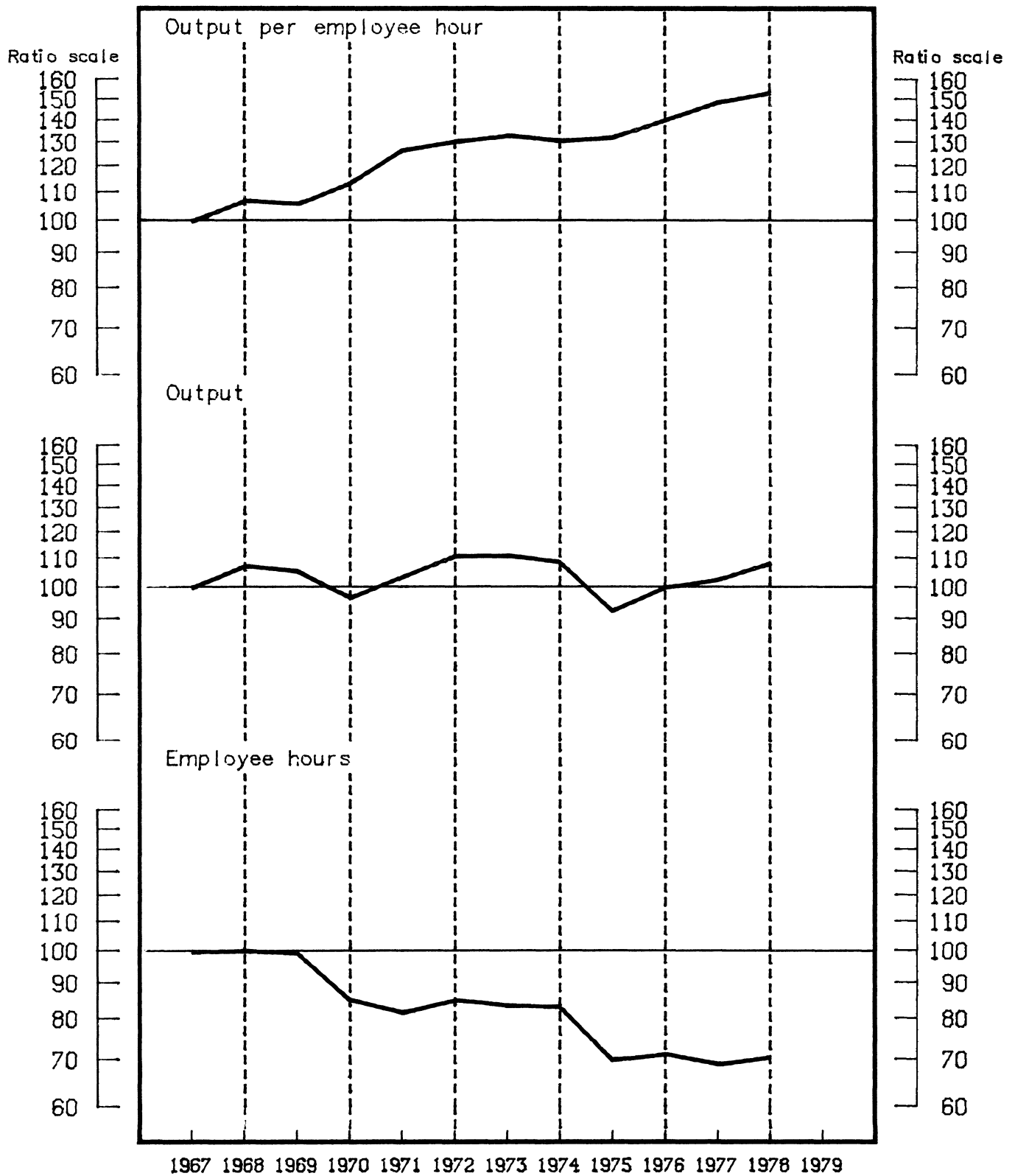
¹ Preliminary.

² Less than .05 percent.

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

Chart 51. Clay construction products (SIC 3251, 3253, 3259): Output per hour and related data, 1967-78

(1967=100)



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

Table 99. Clay construction products (SIC 3251, 3253, 3259): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	76.3	74.8	85.5	74.7	72.7	86.2
1959	81.5	80.0	90.4	81.3	79.6	91.1
1960	84.4	83.2	91.4	83.0	81.6	91.6
1961	86.6	85.1	96.6	85.2	83.3	96.6
1962	93.5	91.7	105.3	93.0	90.8	105.8
1963	89.3	88.0	97.5	89.3	87.8	97.7
1964	95.5	95.1	98.1	98.1	98.0	98.7
1965	97.7	96.6	104.1	97.8	96.6	104.5
1966	98.7	97.4	107.0	99.8	98.5	107.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.2	107.1	107.5	107.7	107.5	108.9
1969	106.0	106.5	104.1	107.5	107.4	108.2
1970	113.5	117.0	96.8	114.3	116.6	103.3
1971	126.7	130.3	109.5	128.2	131.3	115.2
1972	130.4	130.7	128.3	130.9	130.4	133.1
1973	133.0	132.2	138.1	131.6	130.1	139.5
1974	130.7	131.2	128.7	130.1	130.9	126.5
1975	132.2	135.7	116.0	129.7	133.0	114.4
1976	140.2	143.8	123.3	134.7	137.7	121.6
1977	148.6	150.6	137.9	144.9	146.9	135.3
1978 ²	153.5	155.2	144.3	149.2	152.4	140.5
Average annual percent change:						
1958-78	3.4	3.6	2.2	3.3	3.6	2.1
1973-78	3.4	3.7	1.4	2.9	3.4	.9

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

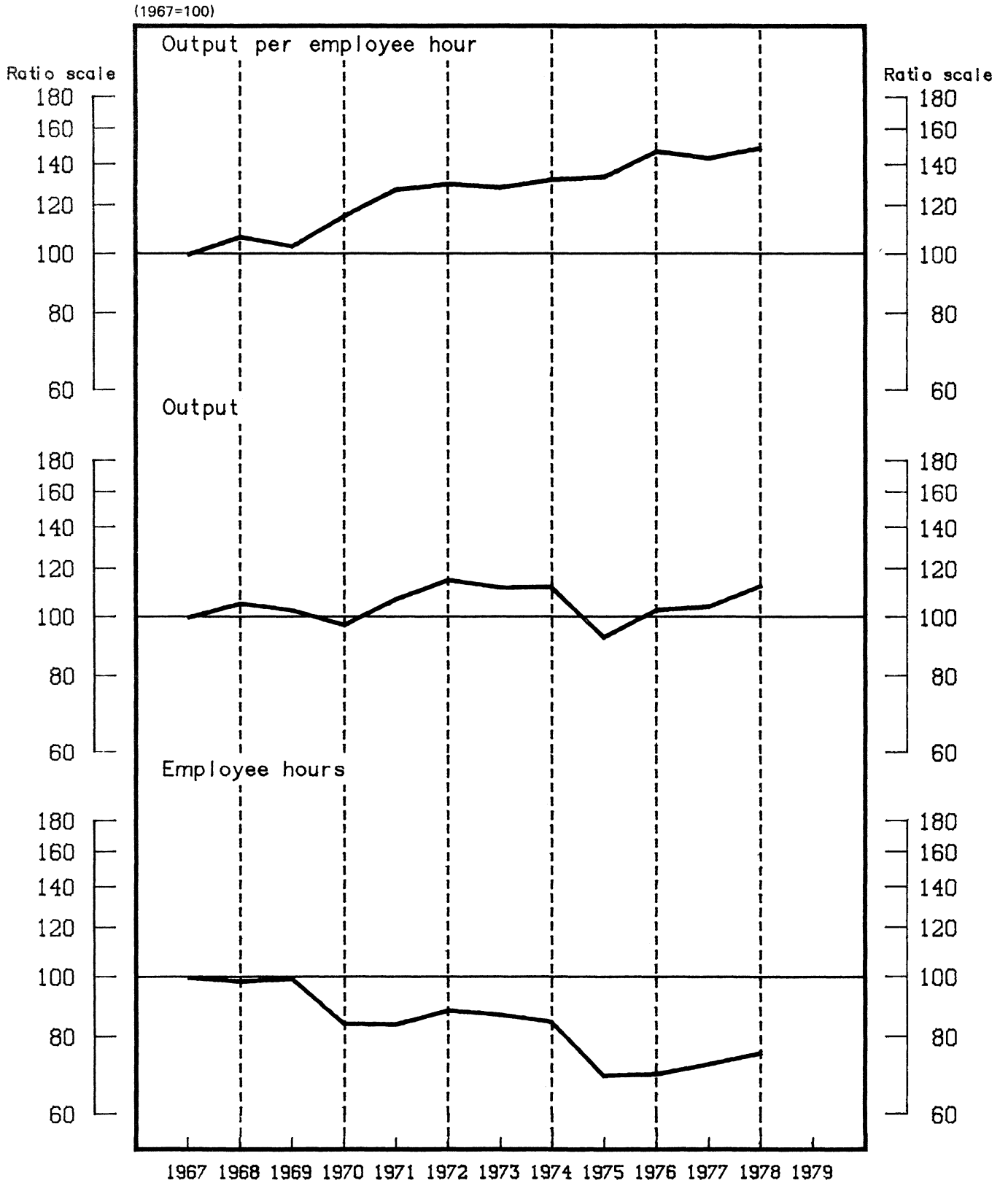
Table 100. Clay construction products (SIC 3251, 3253, 3259): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	90.6	118.8	121.1	106.0	121.3	124.6	105.1
1959	106.1	130.2	132.6	117.4	130.5	133.3	116.5
1960	106.7	126.4	128.2	116.8	128.5	130.8	116.5
1961	106.4	122.8	125.1	110.1	124.9	127.8	110.1
1962	113.8	121.7	124.1	108.1	122.4	125.3	107.6
1963	100.1	112.1	113.8	102.7	112.1	114.0	102.5
1964	110.0	115.2	115.7	112.1	112.1	112.3	111.4
1965	111.1	113.7	115.0	106.7	113.6	115.0	106.3
1966	108.4	109.8	111.3	101.3	108.6	110.0	101.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.5	100.3	100.4	100.0	99.8	100.0	98.7
1969	105.5	99.5	99.1	101.3	98.1	98.2	97.5
1970	96.8	85.3	82.7	100.0	84.7	83.0	93.7
1971	103.6	81.8	79.5	94.6	80.8	78.9	89.9
1972	111.1	85.2	85.0	86.6	84.9	85.2	83.5
1973	111.2	83.6	84.1	80.5	84.5	85.5	79.7
1974	108.9	83.3	83.0	84.6	83.7	83.2	86.1
1975	92.7	70.1	68.3	79.9	71.5	69.7	81.0
1976	100.1	71.4	69.6	81.2	74.3	72.7	82.3
1977	102.7	69.1	68.2	74.5	70.9	69.9	75.9
1978 ¹	108.5	70.7	69.9	75.2	72.7	71.2	77.2
Average annual percent change:							
1958-78	(²)	-3.3	-3.5	-2.2	-3.2	-3.5	-2.1
1973-78	-6	-3.9	-4.2	-2.0	-3.4	-3.9	-1.5

¹ Preliminary.
² Less than .05 percent.

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

Chart 52. Brick and structural clay title (SIC 3251): Output per hour and related data, 1967-78



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

Table 101. Brick and structural clay tile (SIC 3251): Indexes of output per employee hour and output per employee, 1958-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	78.8	77.2	90.3	78.8	76.9	91.3
1959	84.4	82.2	101.3	84.8	82.3	102.7
1960	89.4	88.3	96.7	87.6	86.1	97.4
1961	91.9	89.6	108.6	90.0	87.3	108.7
1962	98.3	96.0	115.2	98.1	95.6	115.3
1963	90.1	88.5	101.0	91.0	89.2	101.8
1964	97.7	96.6	105.1	100.3	99.3	106.5
1965	100.3	98.8	109.8	101.0	99.5	109.8
1966	101.5	99.7	113.4	103.5	101.8	113.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.8	106.8	106.8	106.6	106.4	108.0
1969	103.1	103.7	98.9	105.0	105.4	102.7
1970	115.4	118.5	99.7	114.8	116.1	107.4
1971	127.5	131.7	107.2	128.7	132.2	112.6
1972	130.2	130.8	126.5	131.5	131.5	130.8
1973	128.6	129.0	126.4	128.3	128.6	127.1
1974	132.3	133.1	128.5	131.8	132.8	127.4
1975	133.7	137.0	116.6	131.0	134.4	114.7
1976	147.2	152.7	121.3	140.0	144.5	120.1
1977	143.5	146.8	126.6	139.9	142.7	125.1
1978 ²	149.2	151.4	137.1	145.5	147.6	135.4
Average annual percent change:						
1958-78	3.1	3.4	1.4	3.0	3.3	1.3
1973-78	3.1	3.5	1.1	2.5	2.8	.9

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 102. Brick and structural clay tile (SIC 3251): indexes of output, employee hours, and employees, 1958-78
(1967=100)

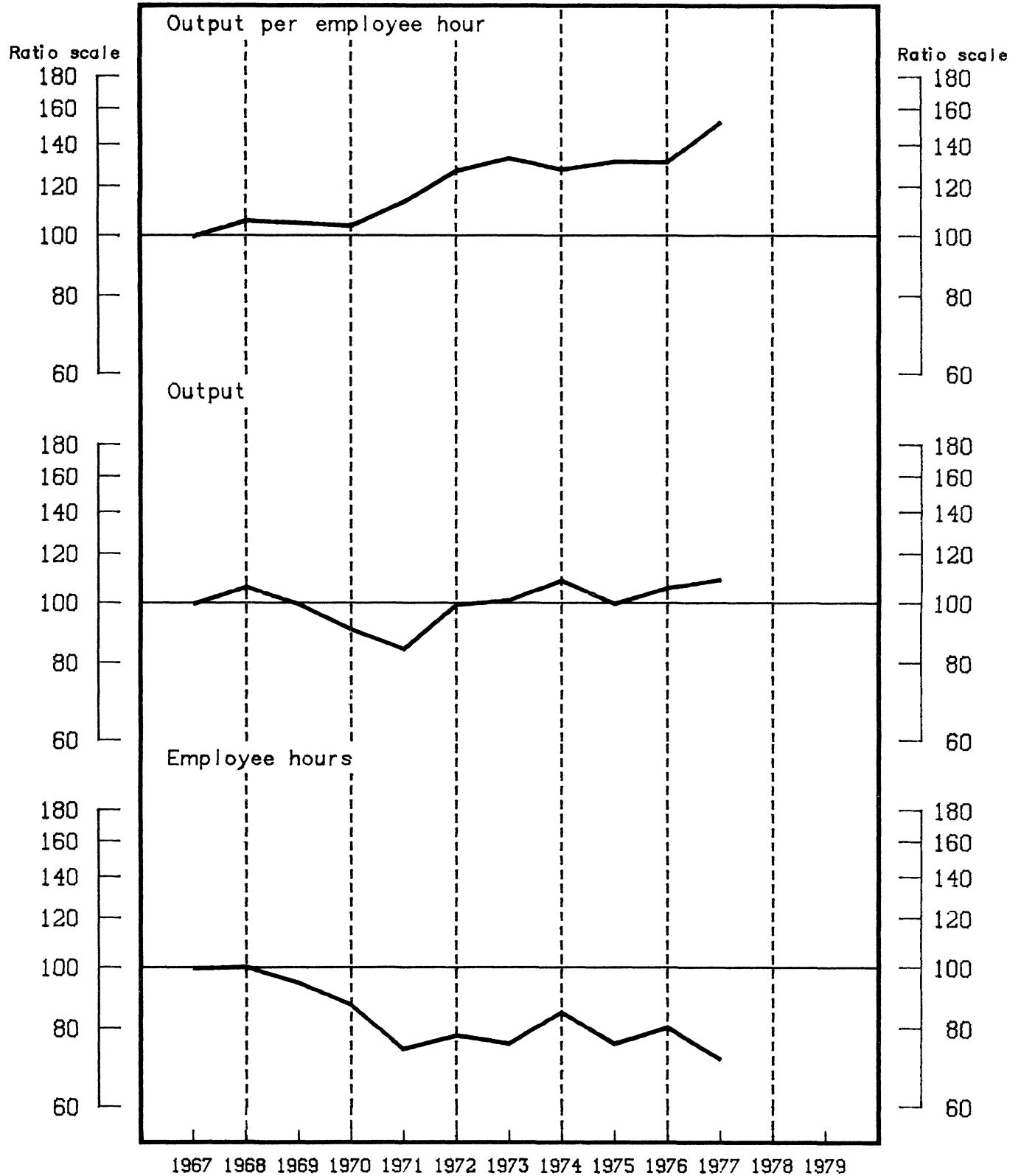
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	89.1	113.1	115.4	98.7	113.1	115.9	97.6
1959	105.2	124.6	128.0	103.8	124.0	127.9	102.4
1960	109.0	121.9	123.4	112.7	124.4	126.6	111.9
1961	111.3	121.1	124.2	102.5	123.6	127.5	102.4
1962	118.1	120.1	123.0	102.5	120.4	123.6	102.4
1963	94.6	105.0	106.9	93.7	104.0	106.0	92.9
1964	106.5	109.0	110.2	101.3	106.2	107.3	100.0
1965	109.8	109.5	111.1	100.0	108.7	110.3	100.0
1966	110.6	109.0	110.9	97.5	106.9	108.6	97.6
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.4	98.7	98.7	98.7	98.9	99.1	97.6
1969	102.7	99.6	99.0	103.8	97.8	97.4	100.0
1970	97.2	84.2	82.0	97.5	84.7	83.7	90.5
1971	107.2	84.1	81.4	100.0	83.3	81.1	95.2
1972	115.2	88.5	88.1	91.1	87.6	87.6	88.1
1973	112.0	87.1	86.8	88.6	87.3	87.1	88.1
1974	112.2	84.8	84.3	87.3	85.1	84.5	88.1
1975	92.9	69.5	67.8	79.7	70.9	69.1	81.0
1976	102.9	69.9	67.4	84.8	73.5	71.2	85.7
1977	104.2	72.6	71.0	82.3	74.5	73.0	83.3
1978 ¹	112.8	75.6	74.5	82.3	77.5	76.4	83.3
Average annual percent change:							
1958-78 .....	.1	-2.9	-3.1	-1.2	-2.8	-3.0	-1.2
1973-78	-.2	-3.3	-3.6	-1.4	-2.7	-3.0	-1.1

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 53. Ceramic wall and floor tile (SIC 3253): Output per hour and related data, 1967-77

(1967=100)



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

Table 103. Ceramic wall and floor tile (SIC 3253): Indexes of output per employee hour and output per employee, 1958-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	71.6	69.6	82.1	69.7	67.2	82.3
1959	77.8	76.8	82.2	77.2	76.2	81.5
1960	75.6	75.3	77.2	75.6	75.3	76.5
1961	80.5	81.4	76.3	78.6	79.5	75.5
1962	88.5	87.5	93.1	87.9	86.9	91.9
1963	86.8	85.9	91.1	84.9	83.7	89.7
1964	90.5	91.2	87.8	90.5	91.4	87.0
1965	92.5	91.6	96.7	91.5	90.7	95.2
1966	93.6	92.2	100.2	93.9	92.9	98.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.0	107.1	101.4	106.5	107.8	101.6
1969	105.2	105.8	102.4	104.7	104.7	104.8
1970	104.0	107.4	91.0	106.1	109.0	95.6
1971	113.6	113.7	112.8	113.6	112.4	118.5
1972	127.4	125.3	137.4	127.2	124.5	139.5
1973	133.5	130.2	150.1	130.9	126.6	151.9
1974	128.1	127.2	132.2	125.7	125.3	127.3
1975	131.8	134.4	121.2	127.7	130.7	116.7
1976	131.6	131.5	132.6	129.2	128.8	131.0
1977 ²	152.4	149.2	168.3	148.6	145.3	164.0
Average annual percent change:						
1958-77	3.7	3.7	3.5	3.7	3.7	3.5
1973-77	3.0	3.1	2.3	2.9	3.1	1.8

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

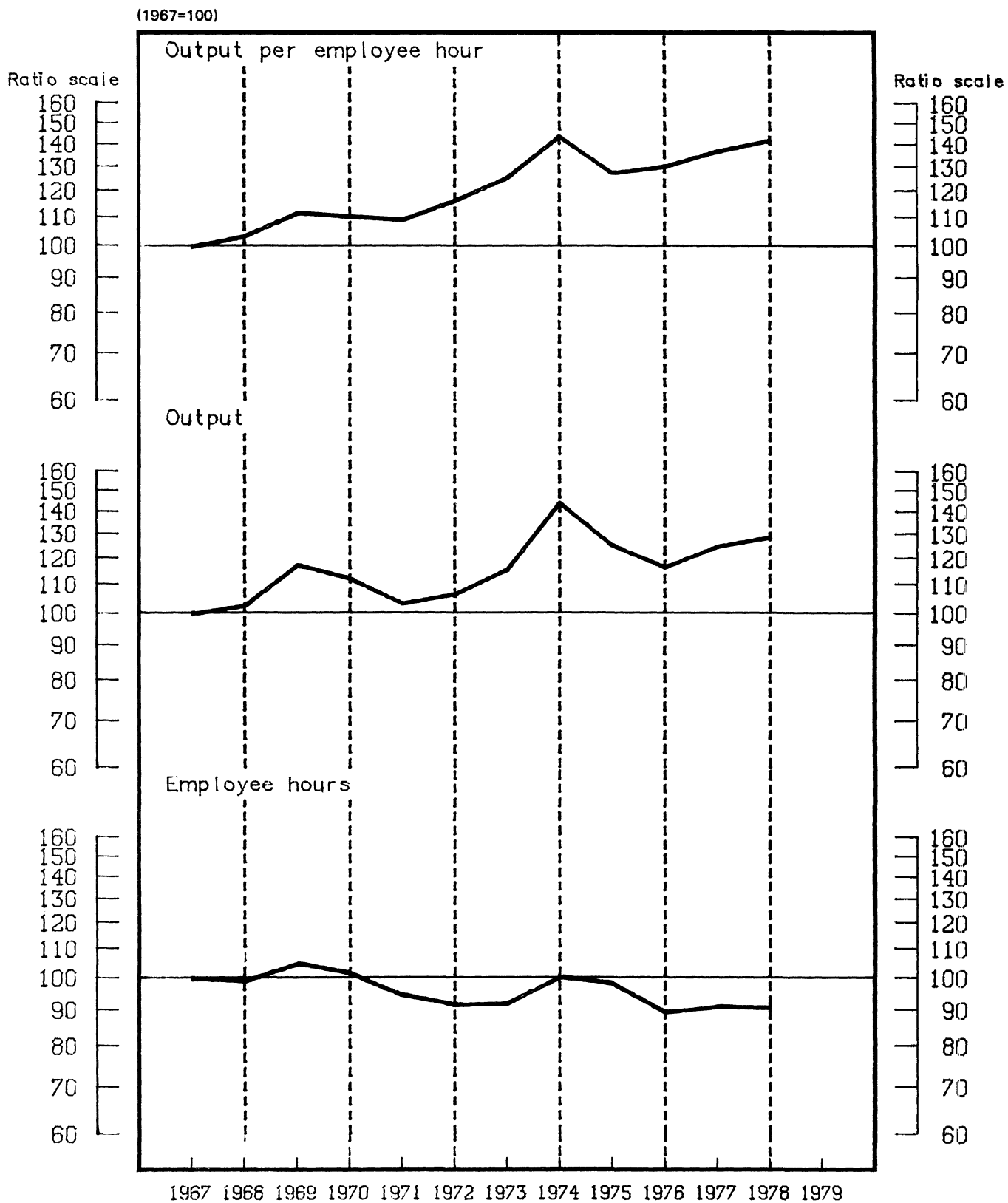
Table 104. Ceramic wall and floor tile (SIC 3253): Indexes of output, employee hours, and employees, 1958-77
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	86.2	120.4	123.9	105.0	123.6	128.2	104.8
1959	104.8	134.7	136.4	127.5	135.8	137.6	128.6
1960	98.4	130.1	130.7	127.5	130.2	130.6	128.6
1961	93.5	116.2	114.8	122.5	118.9	117.6	123.8
1962	109.4	123.6	125.0	117.5	124.5	125.9	119.0
1963	102.5	118.1	119.3	112.5	120.8	122.4	114.3
1964	111.9	123.6	122.7	127.5	123.6	122.4	128.6
1965	108.8	117.6	118.8	112.5	118.9	120.0	114.3
1966	102.7	109.7	111.4	102.5	109.4	110.6	104.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.5	100.5	99.4	105.0	100.0	98.8	104.8
1969	99.8	94.9	94.3	97.5	95.3	95.3	95.2
1970	91.0	87.5	84.7	100.0	85.8	83.5	95.2
1971	84.6	74.5	74.4	75.0	74.5	75.3	71.4
1972	99.6	78.2	79.5	72.5	78.3	80.0	71.4
1973	101.3	75.9	77.8	67.5	77.4	80.0	66.7
1974	109.1	85.2	85.8	82.5	86.8	87.1	85.7
1975	100.0	75.9	74.4	82.5	78.3	76.5	85.7
1976	106.1	80.6	80.7	80.0	82.1	82.4	81.0
1977 ¹	109.4	71.8	73.3	65.0	73.6	75.3	66.7
Average annual percent change:							
1958-77 .....	.2	-3.3	-3.4	-3.2	-3.3	-3.3	-3.2
1973-77	1.3	-1.7	-1.8	-1.1	-1.6	-1.8	-6

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 54. Clay refractories (SIC 3255): Output per hour and related data, 1967-78



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

Table 105. Clay refractories (SIC 3255): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	72.3	71.8	74.4	70.7	69.6	75.7
1959	80.1	74.6	114.0	76.4	70.5	114.4
1960	79.7	74.3	113.4	74.3	68.4	113.9
1961	85.4	80.7	112.7	79.6	74.2	113.2
1962	91.1	86.1	119.2	85.3	79.6	119.4
1963	90.4	87.8	102.3	91.5	88.9	103.5
1964	96.9	94.4	108.6	100.3	98.2	110.0
1965	96.3	93.0	112.2	100.3	97.4	114.0
1966	101.8	98.9	115.3	103.8	101.3	114.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.5	106.5	92.9	105.2	108.1	95.1
1969	111.8	115.0	100.3	113.8	116.2	104.8
1970	110.4	119.1	85.1	115.1	123.3	90.0
1971	109.3	121.1	78.4	112.3	122.8	83.4
1972	116.4	123.2	94.5	119.9	126.6	98.7
1973	125.6	124.8	129.4	131.3	131.3	131.5
1974	143.9	143.1	147.6	148.1	149.0	144.5
1975	127.6	133.0	109.1	126.4	132.0	108.1
1976	130.3	136.5	109.6	128.8	135.4	108.0
1977	137.1	139.5	127.7	139.4	143.5	125.0
1978 ²	142.0	151.8	112.2	143.7	154.9	111.1
Average annual percent change:						
1958-78	3.2	3.8	.6	3.5	4.2	.6
1973-78	1.4	2.7	-3.2	.8	2.1	-3.6

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 106. Clay refractories (SIC 3255): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

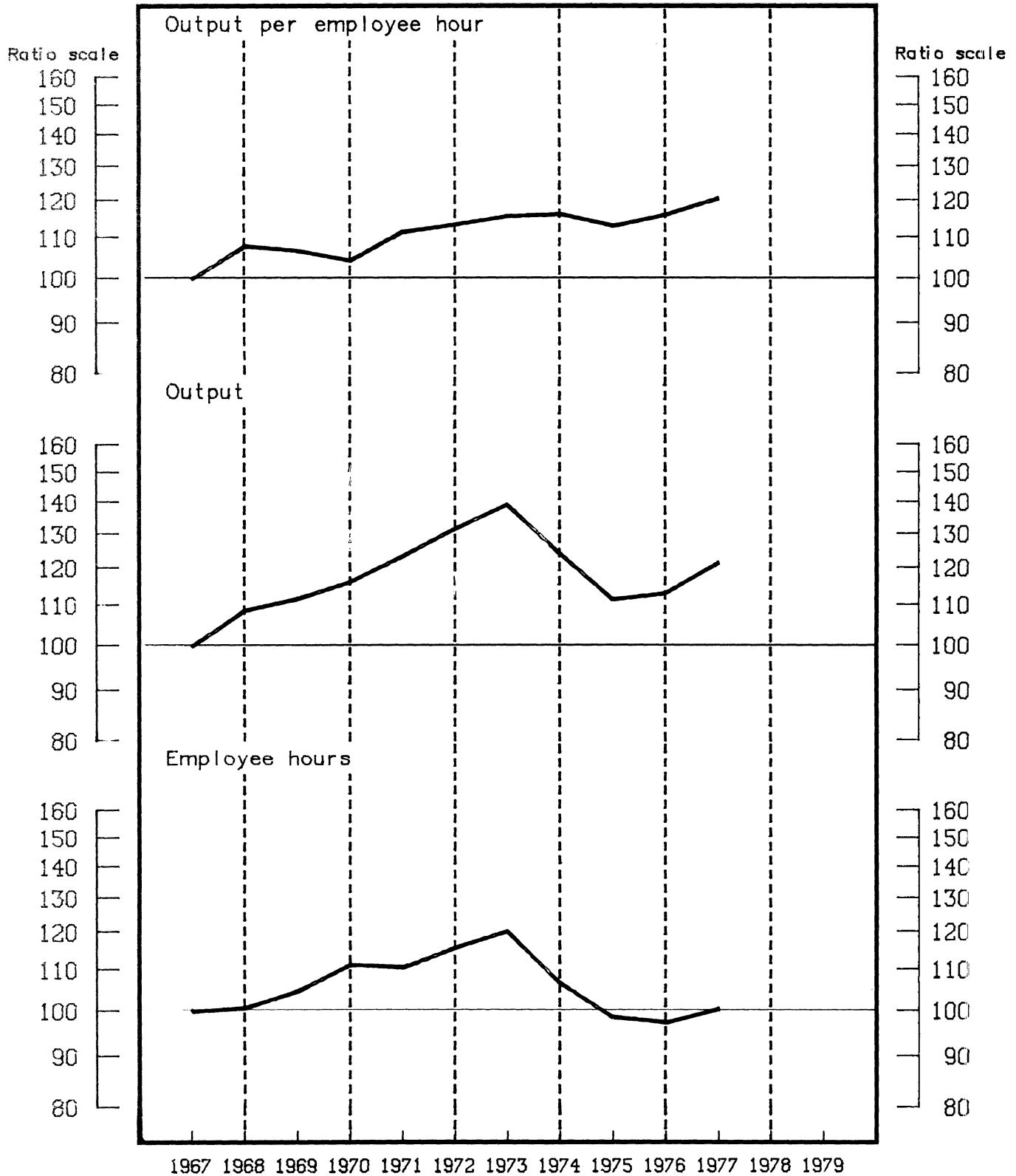
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	69.6	96.2	96.9	93.6	98.4	100.0	92.0
1959	82.4	102.9	110.4	72.3	107.9	116.8	72.0
1960	82.0	102.9	110.4	72.3	110.3	119.8	72.0
1961	81.5	95.4	101.0	72.3	102.4	109.9	72.0
1962	81.2	89.1	94.3	68.1	95.2	102.0	68.0
1963	82.8	91.6	94.3	80.9	90.5	93.1	80.0
1964	92.4	95.4	97.9	85.1	92.1	94.1	84.0
1965	100.3	104.2	107.8	89.4	100.0	103.0	88.0
1966	110.3	108.4	111.5	95.7	106.3	108.9	96.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.7	99.2	96.4	110.6	97.6	95.0	108.0
1969	117.4	105.0	102.1	117.0	103.2	101.0	112.0
1970	112.3	101.7	94.3	131.9	97.6	91.1	124.0
1971	103.4	94.6	85.4	131.9	92.1	84.2	124.0
1972	106.6	91.6	86.5	112.8	88.9	84.2	108.0
1973	115.7	92.1	92.7	89.4	88.1	88.1	88.0
1974	144.5	100.4	101.0	97.9	97.6	97.0	100.0
1975	125.4	98.3	94.3	114.9	99.2	95.0	116.0
1976	116.6	89.5	85.4	106.4	90.5	86.1	108.0
1977	125.0	91.2	89.6	97.9	89.7	87.1	100.0
1978 ¹	128.9	90.8	84.9	114.9	89.7	83.2	116.0
Average annual percent change:							
1958-78	2.9	-.3	-.9	2.2	-.6	-1.3	2.3
1973-78 .....	.1	-1.3	-2.5	3.4	-.7	-2.0	3.8

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 55. Concrete products (SIC 3271, 3272): Output per hour and related data, 1967-77

(1967=100)



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

Table 107. Concrete products (SIC 3271, 3272): Indexes of output per employee hour and output per employee, 1954-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	67.3	67.9	67.5	67.8	67.7	68.5
1955	71.3	71.3	73.8	71.3	70.4	74.4
1956	77.7	77.9	80.0	79.1	78.7	80.8
1957	76.1	77.1	75.1	76.6	76.8	75.9
1958	75.0	76.8	71.0	74.0	74.7	71.7
1959	76.2	75.5	82.0	77.8	76.4	82.7
1960	73.0	72.0	79.6	76.7	75.7	80.1
1961	74.5	73.9	79.3	78.4	78.1	79.6
1962	75.9	75.1	82.1	80.5	79.9	82.6
1963	82.2	83.5	80.5	84.4	85.7	80.9
1964	87.1	89.0	83.2	89.9	91.9	83.9
1965	90.5	92.1	88.0	91.8	92.8	88.4
1966	95.9	99.4	88.1	95.5	98.0	88.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.0	108.5	106.7	109.0	109.2	108.3
1969	106.8	107.8	103.3	109.5	110.0	107.7
1970	104.4	105.3	101.3	107.1	106.7	108.4
1971	111.7	113.9	103.9	111.4	111.9	109.6
1972	113.7	116.3	105.0	113.4	114.9	108.7
1973	115.9	118.4	107.3	116.0	118.4	108.6
1974	116.4	118.0	110.9	114.5	116.3	109.1
1975	113.3	118.6	97.3	109.4	114.3	95.6
1976	116.3	120.3	103.8	114.3	118.4	102.4
1977 ²	120.9	126.0	105.1	117.9	123.2	103.1
Average annual percent change:						
1947-77	3.0	3.3	1.6	2.8	3.2	1.5
1973-77 .....	.8	1.4	-1.1	.3	1.0	-1.6

¹ 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.

² Preliminary.

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

Table 108. Concrete products (SIC 3271, 3272): Indexes of output, employee hours, and employees, 1954-77
(1967=100)

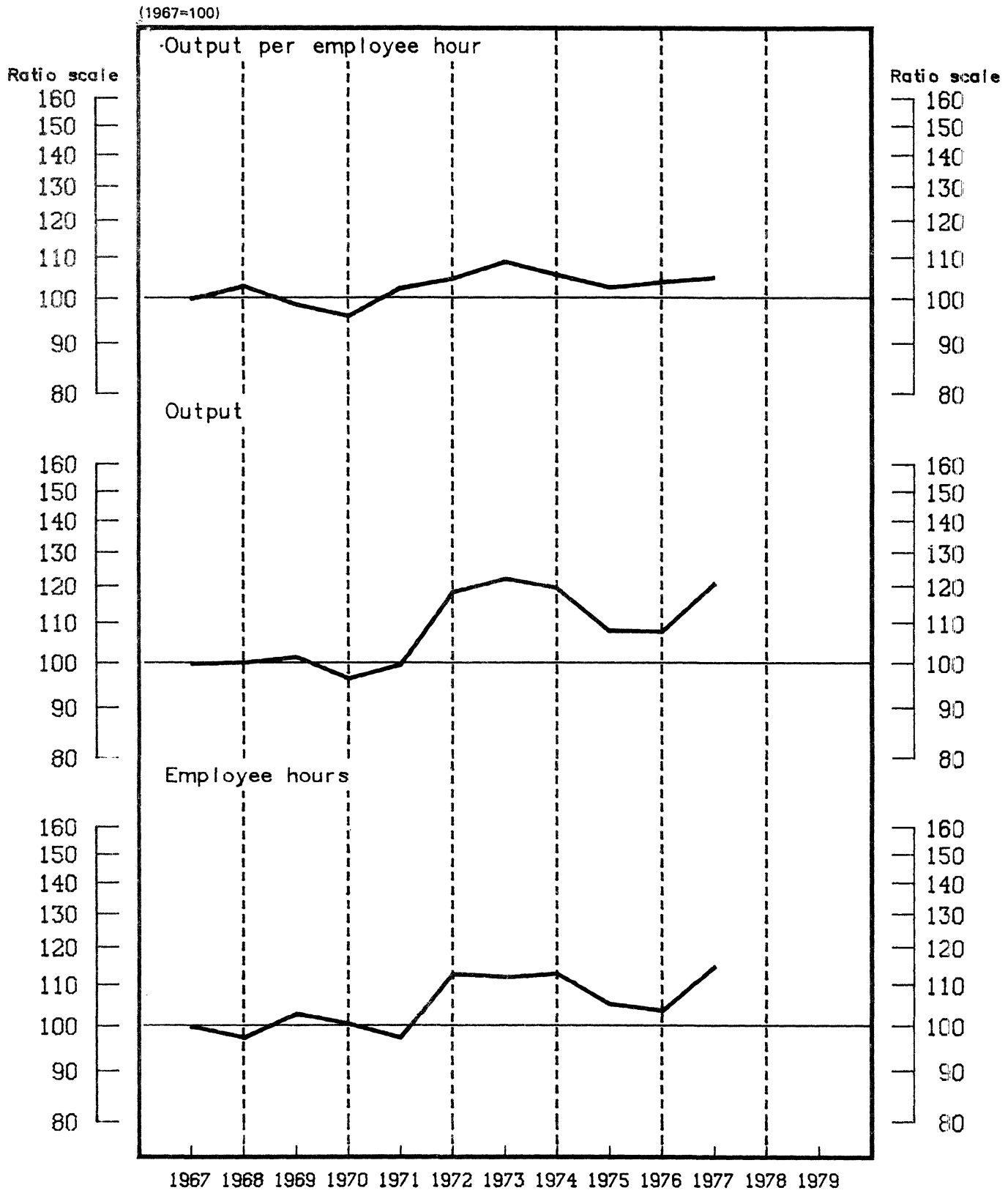
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	52.6	78.1	77.5	77.9	77.6	77.7	76.8
1955	60.7	85.1	85.1	82.2	85.1	86.2	81.6
1956	71.1	91.5	91.3	88.9	89.9	90.4	88.0
1957	68.7	90.3	89.1	91.5	89.7	89.4	90.5
1958	65.6	87.5	85.4	92.4	88.6	87.8	91.5
1959	70.6	92.6	93.5	86.1	90.8	92.4	85.4
1960	71.4	97.8	99.1	89.7	93.1	94.3	89.1
1961	71.6	96.1	96.9	90.3	91.3	91.7	90.0
1962	74.0	97.5	98.6	90.1	91.9	92.6	89.6
1963	82.5	100.4	98.8	102.5	97.7	96.3	102.0
1964	89.9	103.2	101.0	108.1	100.0	97.8	107.1
1965	97.9	108.2	106.3	111.2	106.6	105.5	110.8
1966	104.2	108.6	104.8	118.3	109.1	106.3	118.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.9	100.8	100.4	102.1	99.9	99.7	100.6
1969	111.9	104.8	103.8	108.3	102.2	101.7	103.9
1970	116.3	111.4	110.4	114.8	108.6	109.0	107.3
1971	123.6	110.7	108.5	119.0	111.0	110.5	112.8
1972	131.8	115.9	113.3	125.5	116.2	114.7	121.2
1973	139.5	120.4	117.8	130.0	120.3	117.8	128.5
1974	124.4	106.9	105.4	112.2	108.6	107.0	114.0
1975	111.7	98.6	94.2	114.8	102.1	97.7	116.8
1976	113.3	97.4	94.2	109.2	99.1	95.7	110.6
1977 ¹	121.6	100.6	96.5	115.7	103.1	98.7	117.9
Average annual percent change:							
1947-77	4.4	1.4	1.1	2.8	1.6	1.2	2.9
1973-77	-3.6	-4.4	-5.0	-2.6	-3.9	-4.5	-2.0

¹ Preliminary.

SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 56. Ready-mixed concrete (SIC 3273): Output per hour and related data, 1967-77



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

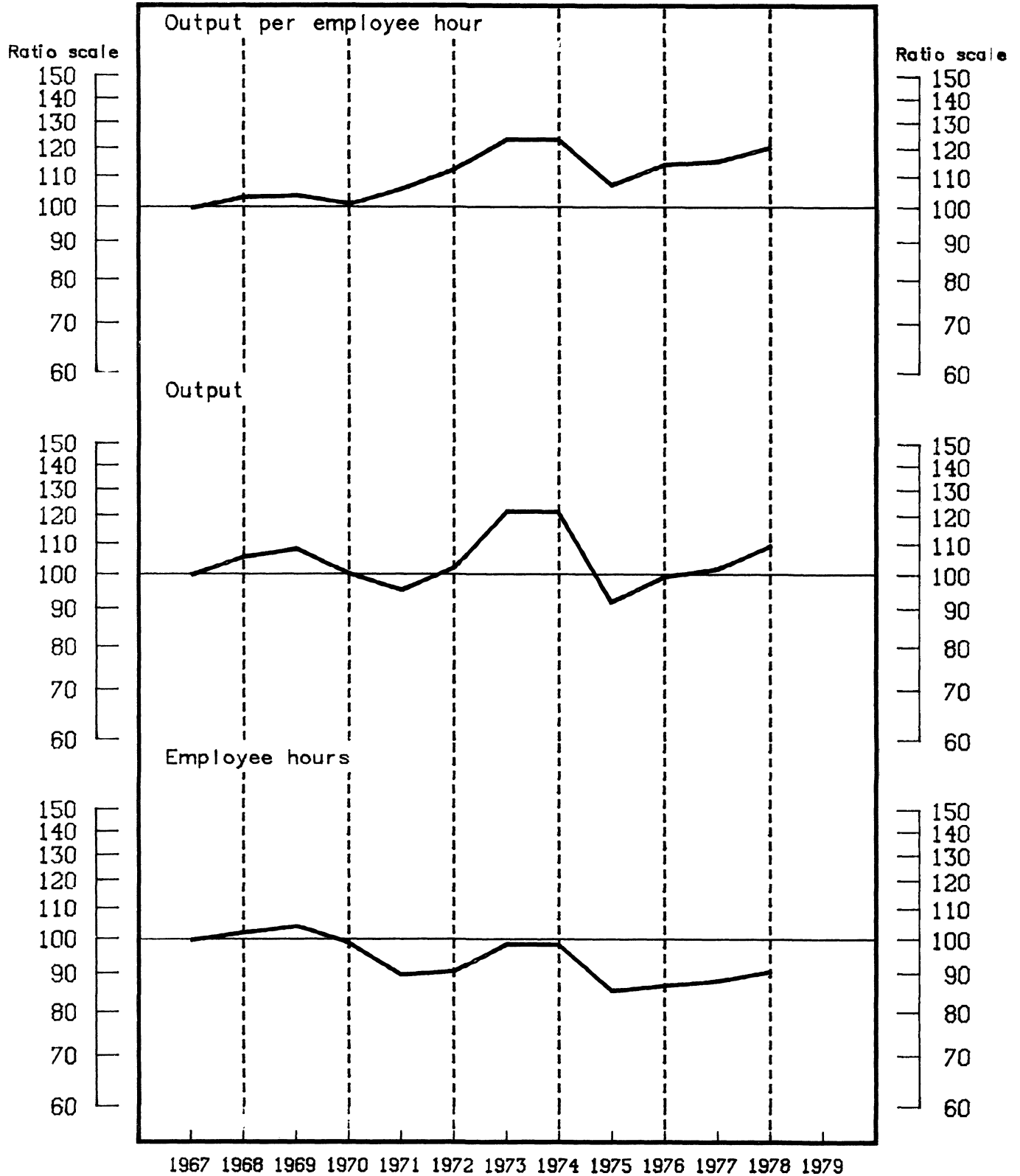
Table 109. Ready-mixed concrete (SIC 3273): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-77
(1967 = 100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958	81.6	79.6	66.4	81.4	83.4
1959	83.4	81.7	74.1	88.9	90.7
1960	82.0	83.0	72.2	88.0	87.0
1961	80.9	83.0	72.8	90.0	87.7
1962	83.0	83.8	75.0	90.4	89.5
1963	90.3	92.0	88.3	97.8	96.0
1964	90.8	92.4	89.6	98.7	97.0
1965	95.1	94.7	96.9	101.9	102.3
1966	95.6	95.0	96.1	100.5	101.2
1967	100.0	100.0	100.0	100.0	100.0
1968	103.0	102.2	100.3	97.4	98.1
1969	98.6	101.1	101.6	103.0	100.5
1970	96.0	94.2	96.6	100.6	102.6
1971	102.5	96.9	99.8	97.4	103.0
1972	104.8	103.0	118.4	113.0	115.0
1973	109.0	105.4	122.3	112.2	116.0
1974	105.7	102.2	119.6	113.2	117.0
1975	102.7	96.9	108.2	105.4	111.7
1976	104.0	98.4	108.0	103.8	109.8
1977	105.1	104.1	120.9	115.0	116.1
Average annual percent change:					
1958-77	1.6	1.3	3.0	1.4	1.7
1973-77	-9	-6	-1.2	-4	-6

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 57. Steel (SIC 331): Output per hour and related data, 1967-78

(1967=100)



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

Table 110. Steel (SIC 331): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	77.2	74.1	93.7	73.4	69.6	94.3
1955	87.8	82.4	120.0	88.5	82.9	120.7
1956	86.4	82.3	108.8	87.1	82.8	109.4
1957	84.3	81.6	97.3	82.4	79.3	98.0
1958	77.9	78.4	76.0	73.8	73.1	76.5
1959	87.5	87.7	86.7	87.4	87.4	87.3
1960	82.3	82.3	82.4	79.0	78.0	82.7
1961	84.9	85.4	83.0	82.7	82.5	83.2
1962	89.2	89.6	87.9	87.4	87.2	87.9
1963	93.2	92.1	98.1	93.2	91.9	98.1
1964	97.2	94.8	108.6	99.2	97.0	108.6
1965	101.1	98.7	112.9	103.3	101.0	112.9
1966	103.2	101.3	111.6	104.8	103.1	111.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.5	104.7	98.8	105.8	106.5	102.6
1969	104.0	104.8	100.8	107.0	107.6	104.7
1970	101.3	102.9	95.3	101.7	102.3	99.1
1971	106.2	108.8	96.9	105.8	107.1	100.6
1972	112.7	114.2	106.9	114.4	115.3	111.1
1973	123.5	123.5	123.4	128.0	128.2	127.9
1974	123.5	124.0	121.6	126.9	127.4	125.3
1975	107.6	111.8	93.6	106.8	109.8	96.5
1976	114.5	117.8	102.3	115.3	118.0	105.4
1977	115.6	119.6	102.3	117.0	120.3	105.5
1978 ²	120.7	122.8	112.7	124.5	126.7	116.3
Average annual percent change:						
1947-78	1.8	2.1	(³)	1.9	2.3	.1
1973-78	-7	-2	-2.5	-9	-5	-2.5

¹ 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.

² Preliminary.

³ Less than .05 percent.

SOURCE: Output based on data from the American Iron and Steel Institute, and the Energy Information Administration, U.S. Department of Energy. Employment and hours based on data from the Bureau of Labor Statistics.

Table 111. Steel (SIC 331): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	74.6	96.6	100.7	79.6	101.6	107.2	79.1
1955	98.4	112.1	119.4	82.0	111.2	118.7	81.5
1956	96.8	112.0	117.6	89.0	111.2	116.9	88.5
1957	93.4	110.8	114.5	96.0	113.3	117.8	95.3
1958	69.8	89.6	89.0	91.8	94.6	95.5	91.2
1959	80.8	92.3	92.1	93.2	92.4	92.5	92.6
1960	81.0	98.4	98.4	98.3	102.5	103.8	97.9
1961	77.5	91.3	90.8	93.4	93.7	93.9	93.2
1962	81.5	91.4	91.0	92.7	93.3	93.5	92.7
1963	86.5	92.8	93.9	88.2	92.8	94.1	88.2
1964	98.2	101.0	103.6	90.4	99.0	101.2	90.4
1965	106.8	105.6	108.2	94.6	103.4	105.7	94.6
1966	107.5	104.2	106.1	96.3	102.6	104.3	96.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.9	102.3	101.1	107.2	100.1	99.4	103.2
1969	108.5	104.3	103.5	107.6	101.4	100.8	103.6
1970	100.4	99.1	97.6	105.3	98.7	98.1	101.3
1971	95.5	89.9	87.8	98.6	90.3	89.2	94.9
1972	102.4	90.9	89.7	95.8	89.5	88.8	92.2
1973	121.9	98.7	98.7	98.8	95.2	95.1	95.3
1974	121.8	98.6	98.2	100.2	96.0	95.6	97.2
1975	92.2	85.7	82.5	98.5	86.3	84.0	95.5
1976	99.7	87.1	84.6	97.5	86.5	84.5	94.6
1977	102.1	88.3	85.4	99.8	87.3	84.9	96.8
1978 ¹	109.7	90.9	89.3	97.3	88.1	86.6	94.3
Average annual percent change:							
1947-78	1.3	-5	-8	1.2	-6	-1.0	1.1
1973-78	-2.8	-2.1	-2.5	-3	-1.9	-2.3	-2

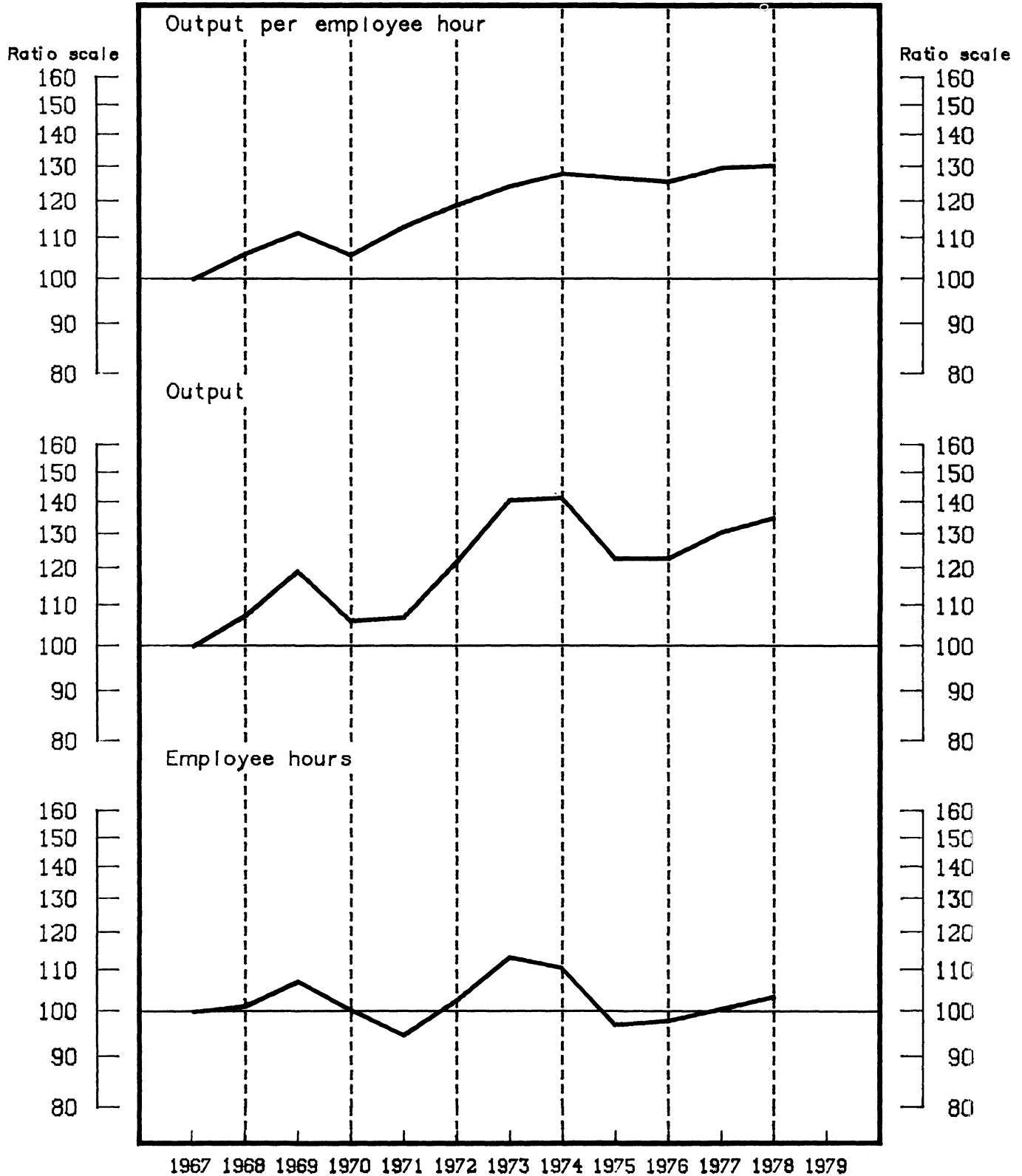
¹ Preliminary.

SOURCE: Output based on data from the American Iron and Steel Institute, and

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

Chart 58. Gray iron foundries (SIC 3321): Output per hour and related data, 1967-78

(1967=100)



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

Table 112. Gray iron foundries (SIC 3321): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	78.2	77.2	87.2	75.5	73.9	87.7
1955	84.3	82.3	101.7	86.0	84.1	101.8
1956	83.8	82.6	92.2	83.3	81.9	92.6
1957	81.3	81.3	81.6	77.4	76.7	81.9
1958	84.3	86.4	72.9	77.8	78.6	73.1
1959	87.1	87.2	87.2	85.6	85.4	87.3
1960	86.6	87.9	78.5	82.2	82.7	78.8
1961	88.7	90.4	79.0	83.3	84.0	79.1
1962	92.2	92.8	88.4	90.4	90.6	89.0
1963	94.1	94.1	95.0	95.3	95.2	95.5
1964	100.1	99.0	108.1	105.1	104.7	109.2
1965	104.9	103.9	113.4	111.1	110.5	114.1
1966	105.6	104.7	112.8	110.0	109.6	113.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.1	106.2	105.1	109.0	109.1	108.7
1969	111.4	111.3	112.0	114.5	114.4	115.1
1970	105.8	107.4	95.8	103.9	104.8	98.3
1971	113.0	115.4	99.1	111.3	113.1	101.6
1972	118.9	120.3	110.0	121.6	123.2	112.3
1973	124.2	125.2	117.8	127.4	128.4	121.3
1974	128.0	129.7	117.4	128.7	129.9	121.4
1975	126.7	130.9	103.4	122.9	125.8	106.9
1976	125.6	129.7	103.0	124.7	128.1	107.0
1977	129.8	133.6	107.9	129.7	133.1	111.1
1978 ²	130.4	134.0	109.9	130.5	133.8	113.2
Average annual percent change:						
1954-78	2.3	2.4	1.3	2.4	2.6	1.4
1973-78	.8	1.2	-1.7	.4	.9	-1.7

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 113. Gray iron foundries (SIC 3321): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

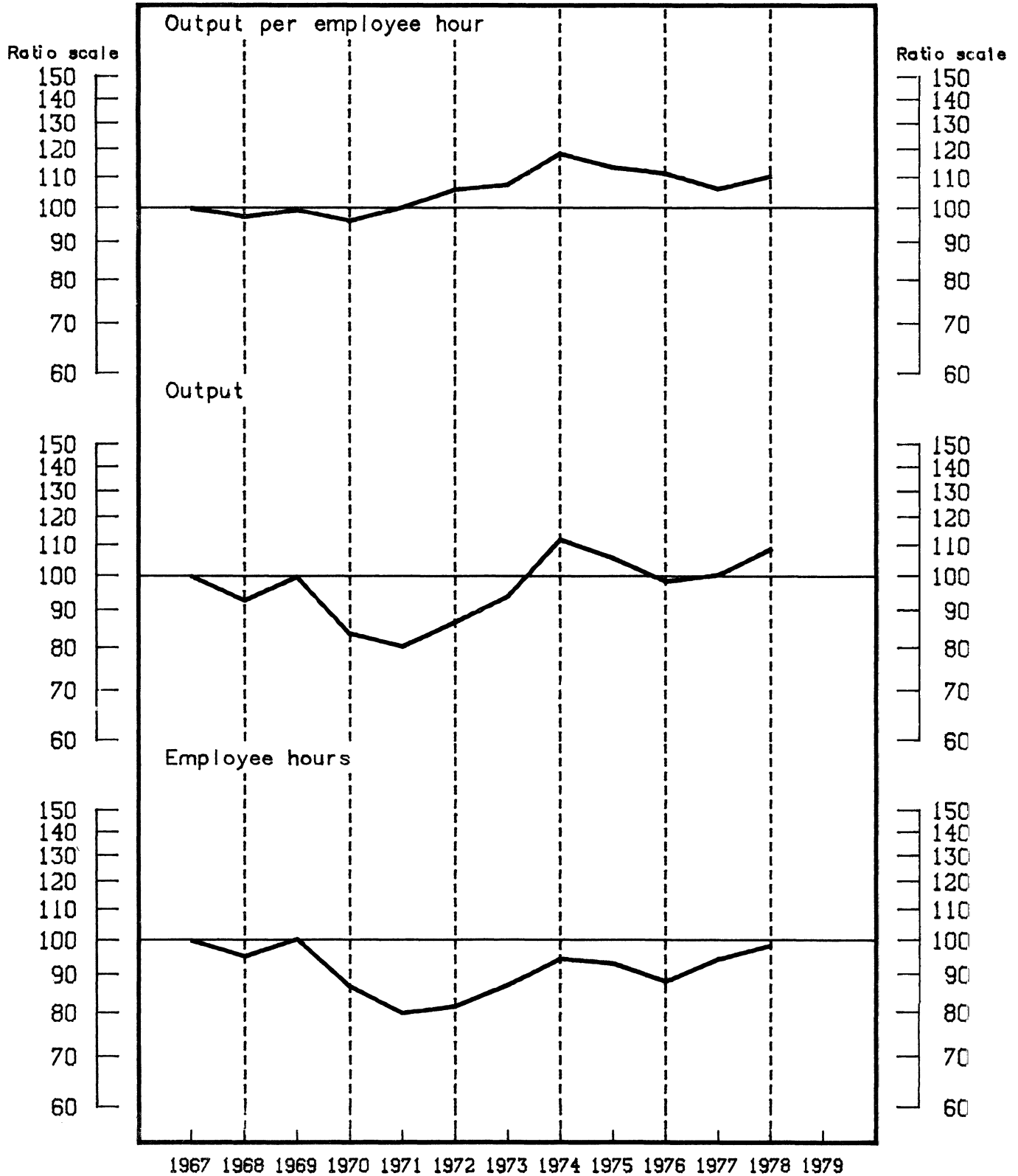
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	73.3	93.7	95.0	84.1	97.1	99.2	83.6
1955	90.2	107.0	109.6	88.7	104.9	107.3	88.6
1956	86.1	102.8	104.2	93.4	103.4	105.1	93.0
1957	76.3	93.8	93.8	93.5	98.6	99.5	93.2
1958	63.5	75.3	73.5	87.1	81.6	80.8	86.9
1959	78.1	89.7	89.6	89.6	91.2	91.5	89.5
1960	72.4	83.6	82.4	92.2	88.1	87.5	91.9
1961	68.6	77.3	75.9	86.8	82.4	81.7	86.7
1962	78.1	84.7	84.2	88.3	86.4	86.2	87.8
1963	83.2	88.4	88.4	87.6	87.3	87.4	87.1
1964	96.3	96.2	97.3	89.1	91.6	92.0	88.2
1965	108.5	103.4	104.4	95.7	97.7	98.2	95.1
1966	112.2	106.3	107.2	99.5	102.0	102.4	99.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.5	101.3	101.2	102.3	98.6	98.5	98.9
1969	119.4	107.2	107.3	106.6	104.3	104.4	103.7
1970	106.2	100.4	98.9	110.9	102.2	101.3	108.0
1971	107.0	94.7	92.7	108.0	96.1	94.6	105.3
1972	122.0	102.6	101.4	110.9	100.3	99.0	108.6
1973	140.7	113.3	112.4	119.4	110.4	109.6	116.0
1974	141.6	110.6	109.2	120.6	110.0	109.0	116.6
1975	122.9	97.0	93.9	118.9	100.0	97.7	115.0
1976	123.0	97.9	94.8	119.4	98.6	96.0	115.0
1977	130.7	100.7	97.8	121.1	100.8	98.2	117.6
1978 ¹	135.1	103.6	100.8	122.9	103.5	101.0	119.3
Average annual percent change:							
1954-78	2.9	.7	.5	1.6	.5	.4	1.5
1973-78	-1.3	-2.0	-2.4	.5	-1.7	-2.1	.5

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 59. Steel foundries (SIC 3324 3325): Output per hour and related data, 1967-78

(1967=100)



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

Table 114. Steel foundries (SIC 3324, 3325): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	78.2	79.4	71.4	73.3	73.5	71.8
1955	85.9	84.9	91.3	85.9	84.7	91.4
1956	90.8	88.2	107.8	92.6	90.0	108.2
1957	88.8	87.8	94.8	87.5	86.1	95.1
1958	81.0	83.7	88.6	75.1	76.5	68.7
1959	87.1	86.6	90.3	84.5	83.4	90.2
1960	86.3	87.1	82.3	83.1	83.2	82.4
1961	87.3	88.7	80.4	83.6	84.2	80.4
1962	91.6	91.8	91.5	90.1	89.8	91.9
1963	97.5	97.2	99.5	96.3	95.6	99.9
1964	97.9	95.9	109.5	100.0	98.1	110.5
1965	100.5	98.4	113.0	103.7	101.9	113.5
1966	102.1	100.1	114.4	106.5	104.9	114.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	97.5	99.4	88.4	96.6	97.7	91.3
1969	99.5	100.3	95.1	99.9	100.3	97.5
1970	96.2	97.9	87.9	94.9	96.0	90.0
1971	100.4	104.7	82.1	98.3	101.6	84.1
1972	106.0	109.3	91.2	103.7	106.1	93.2
1973	107.6	109.7	97.3	107.2	108.7	100.0
1974	118.5	119.9	111.8	116.8	117.1	115.1
1975	113.6	116.4	100.7	112.6	114.6	104.2
1976	111.5	116.5	90.5	108.8	112.4	93.7
1977	106.3	111.8	84.1	104.7	109.3	86.4
1978 ²	110.5	116.1	88.1	110.9	116.1	91.0
Average annual percent change:						
1954-78	1.4	1.6	.4	1.4	1.6	.5
1973-78	-6	.2	-4.1	-5	.3	-4.0

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 115. Steel foundries (SIC 3324, 3325): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

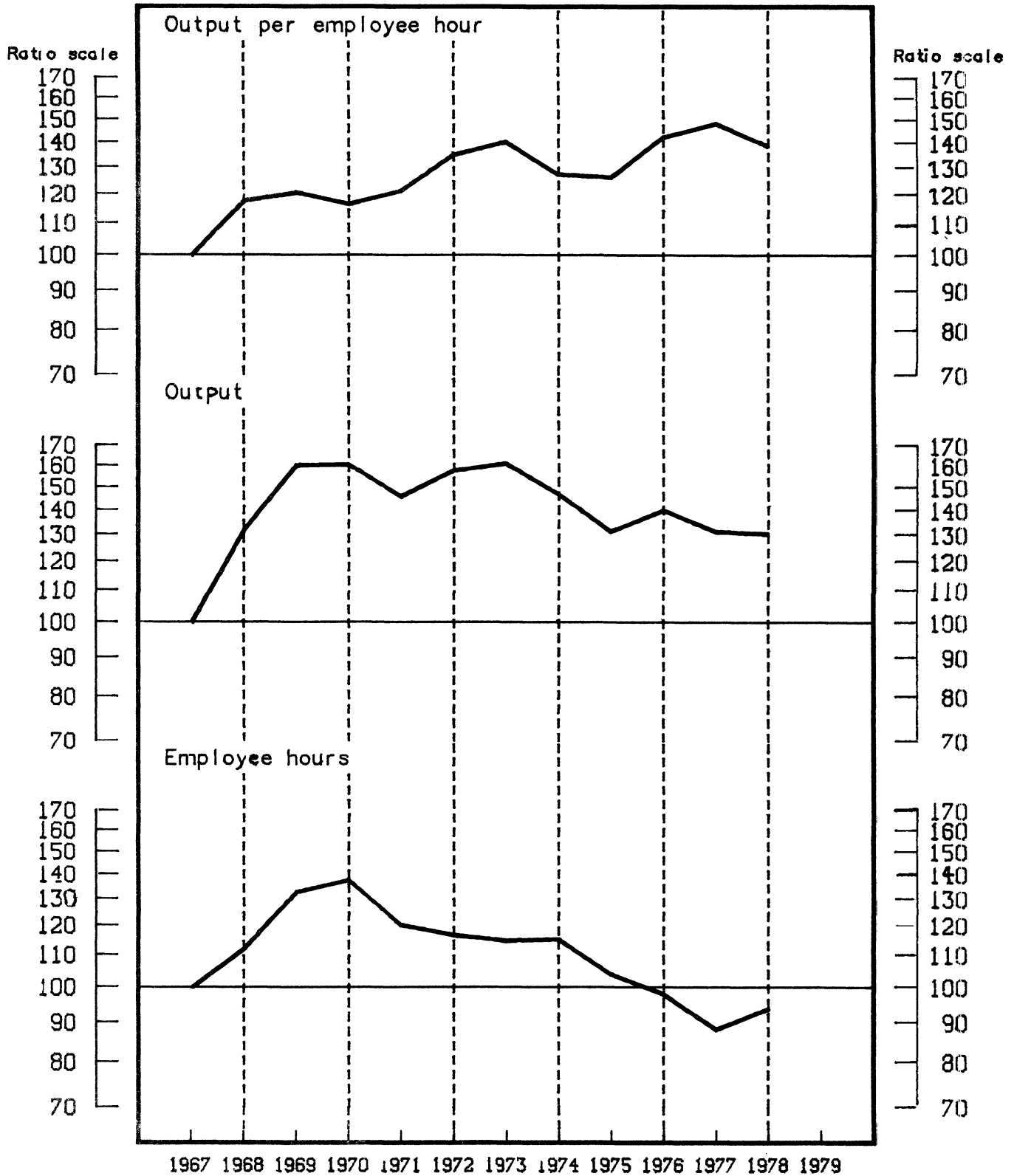
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	58.3	74.6	73.4	81.6	79.5	79.3	81.2
1955	74.7	87.0	88.0	81.8	87.0	88.2	81.7
1956	94.2	103.8	106.8	87.4	101.7	104.7	87.1
1957	85.3	96.1	97.2	90.0	97.5	99.1	89.7
1958	53.3	65.8	63.7	77.7	71.0	69.7	77.6
1959	66.0	75.8	76.2	73.1	78.1	79.1	73.2
1960	61.0	70.7	70.0	74.1	73.4	73.3	74.0
1961	56.5	64.7	63.7	70.3	67.6	67.1	70.3
1962	65.8	71.8	71.7	71.9	73.0	73.3	71.6
1963	79.1	81.1	81.4	79.5	82.1	82.7	79.2
1964	89.6	91.5	93.4	81.8	89.6	91.3	81.1
1965	98.2	97.7	99.8	86.9	94.7	96.4	86.5
1966	108.9	106.7	108.8	95.2	102.3	103.8	95.2
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	92.9	95.3	93.5	105.1	96.2	95.1	101.7
1969	100.0	100.5	99.7	105.2	100.1	99.7	102.6
1970	83.8	87.1	85.6	95.3	88.3	87.3	93.1
1971	80.5	80.2	76.9	98.0	81.9	79.2	95.7
1972	86.8	81.9	79.4	95.2	83.7	81.8	93.1
1973	94.0	87.4	85.7	96.6	87.7	86.5	94.0
1974	112.1	94.6	93.5	100.3	96.0	95.7	97.4
1975	106.0	93.3	91.1	105.3	94.1	92.5	101.7
1976	98.6	88.4	84.6	109.0	90.6	87.7	105.2
1977	100.6	94.6	90.0	119.6	96.1	92.0	116.4
1978 ¹	109.0	98.6	93.9	123.7	98.3	93.9	119.8
Average annual percent change:							
1954-78	2.1	.8	.6	1.8	.7	.5	1.6
1973-78	1.0	1.6	.8	5.3	1.5	.7	5.2

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 60. Primary copper, lead, and zinc (SIC 3331, 3332, 3333): Output per hour and related data, 1967-78

(1967=100)



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

Table 116. Primary copper, lead, and zinc (SIC 3331, 3332, 3333): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	84.4	80.7	104.0	83.0	78.6	104.7
1955	94.1	88.6	125.7	95.1	89.2	125.7
1956	95.5	89.1	134.8	97.7	90.9	135.2
1957	96.0	90.7	125.5	96.2	90.4	125.9
1958	94.1	91.4	106.9	92.8	89.7	107.1
1959	88.5	86.7	97.0	85.9	83.4	97.1
1960	98.7	94.4	121.3	99.0	94.3	121.5
1961	103.2	99.0	125.2	104.4	99.9	125.2
1962	109.6	104.8	135.2	110.6	105.4	135.9
1963	112.2	106.4	143.3	112.1	105.9	143.9
1964	116.6	110.2	152.7	115.4	108.0	154.1
1965	120.2	113.1	161.5	121.1	113.3	162.4
1966	118.7	111.6	159.8	120.7	113.3	159.8
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	117.8	112.8	143.5	117.8	111.8	147.7
1969	120.7	113.8	160.4	121.4	113.6	163.8
1970	116.7	111.4	144.3	117.7	111.6	148.2
1971	121.4	119.2	131.2	120.8	117.6	134.7
1972	135.2	129.4	165.3	134.5	127.6	168.7
1973	140.6	136.7	159.6	138.5	132.8	164.9
1974	127.6	126.7	130.8	127.3	125.3	135.7
1975	126.4	129.0	116.9	124.8	125.8	121.2
1976	142.7	143.7	138.6	140.7	140.1	143.1
1977	148.6	149.3	146.3	145.7	144.4	150.7
1978 ²	138.8	135.8	153.2	135.4	130.5	157.2
Average annual percent change:						
1947-78	2.1	2.4	.8	2.0	2.2	.8
1973-78	1.5	1.6	.9	1.2	1.3	.7

¹ 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.

² Preliminary.

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 the Census and the Bureau of Labor Statistics.

Table 117. Primary copper, lead, and zinc (SIC 3331, 3332, 3333): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	108.2	128.2	134.1	104.0	130.4	137.6	103.3
1955	123.1	130.8	139.0	97.9	129.5	138.0	97.9
1956	133.6	139.9	149.9	99.1	136.8	147.0	98.8
1957	130.4	135.9	143.8	103.9	135.6	144.3	103.6
1958	112.8	119.9	123.4	105.5	121.5	125.7	105.3
1959	93.5	107.9	107.9	96.4	108.8	112.1	96.3
1960	121.4	123.0	128.6	100.1	122.6	128.7	99.9
1961	123.2	119.4	124.5	98.4	118.0	123.3	98.4
1962	129.4	118.1	123.5	95.7	117.0	122.8	95.2
1963	128.1	114.2	120.4	89.4	114.3	121.0	89.0
1964	134.5	115.4	122.1	88.1	116.6	124.5	87.3
1965	142.1	118.2	125.6	88.0	117.3	125.4	87.5
1966	146.1	123.1	130.9	91.4	121.0	128.9	91.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	132.0	112.1	117.0	92.0	112.1	118.1	89.4
1969	160.4	132.9	140.9	100.0	132.1	141.2	97.9
1970	160.8	137.8	144.3	111.4	136.6	144.1	108.5
1971	146.2	120.4	122.6	111.4	121.0	124.3	108.5
1972	157.9	116.8	122.0	95.5	117.4	123.7	93.6
1973	161.4	114.8	118.1	101.1	116.5	121.5	97.9
1974	147.2	115.4	116.2	112.5	115.6	117.5	108.5
1975	131.5	104.0	101.9	112.5	105.4	104.5	108.5
1976	140.1	98.2	97.5	101.1	99.6	100.0	97.9
1977	131.4	88.4	88.0	89.8	90.2	91.0	87.2
1978 ¹	130.5	94.0	96.1	85.2	96.4	100.0	83.0
Average annual percent change:							
1947-78	1.1	-1.1	-1.3	.3	-.9	-1.1	.2
1973-78	-3.8	-5.2	-5.3	-4.6	-4.9	-5.0	-4.4

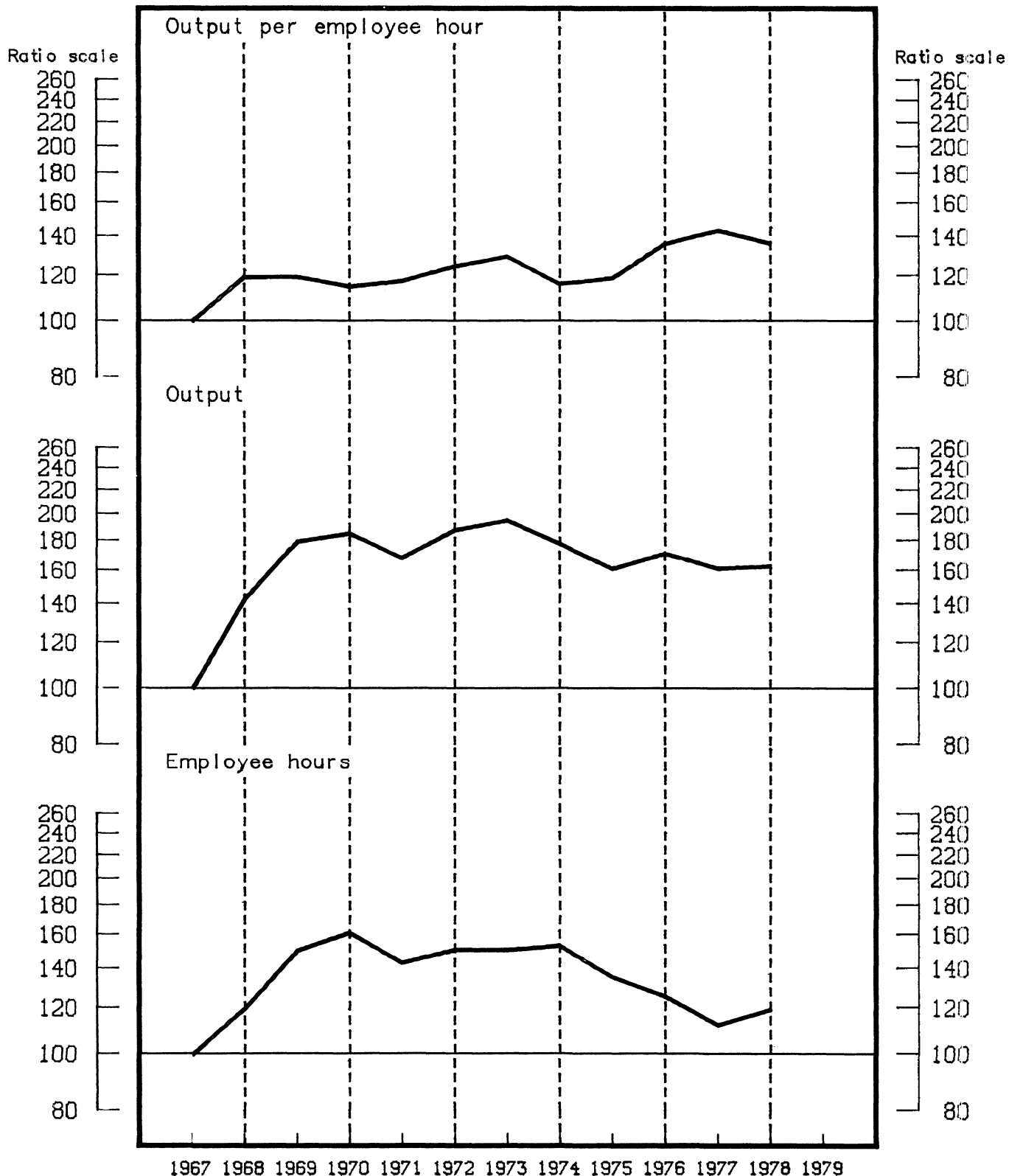
¹ Preliminary.

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 the Census and the Bureau of Labor Statistics.

Chart 61 Primary copper (SIC 3331): Output per hour and related data, 1967-78

(1967=100)



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

Table 118. Primary copper (SIC 3331): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	84.1	78.9	114.4	85.9	80.7	115.0
1955	99.4	92.0	146.3	104.3	97.1	146.2
1956	101.4	92.6	164.0	108.2	99.4	164.4
1957	100.3	92.1	156.8	104.5	96.0	157.2
1958	94.3	88.9	125.6	96.0	90.4	125.7
1959	88.9	85.2	107.5	84.6	80.2	107.5
1960	99.1	91.7	146.0	100.2	92.6	146.2
1961	101.0	95.7	130.6	103.4	98.0	130.6
1962	109.6	103.5	144.0	112.9	106.8	144.7
1963	109.2	101.8	155.2	112.7	105.1	155.9
1964	116.1	108.4	162.7	117.1	108.9	163.9
1965	118.7	109.0	183.7	123.3	113.4	184.6
1966	115.7	107.6	165.3	121.4	113.5	165.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	119.2	113.4	149.5	120.1	113.3	155.8
1969	119.3	111.3	168.2	121.8	113.1	172.3
1970	114.9	108.7	149.1	119.5	113.0	153.6
1971	117.4	114.6	130.6	118.4	114.8	134.7
1972	124.5	118.5	156.6	126.7	120.1	161.0
1973	129.6	124.1	157.2	133.4	127.5	161.8
1974	116.1	115.6	117.9	118.1	117.1	122.2
1975	118.7	121.1	109.9	120.7	122.6	113.8
1976	136.3	137.1	132.9	138.9	139.5	137.0
1977	143.7	141.9	151.4	143.0	140.2	155.0
1978 ²	136.4	131.7	159.5	134.0	128.1	163.0
Average annual percent change:						
1947-78	1.6	1.9	(³)	1.4	1.6	.1
1973-78	3.0	3.0	2.9	2.1	2.0	2.7

¹ 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.

² Preliminary.

³ Less than .05 percent.

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 the Census and the Bureau of Labor Statistics.

Table 119. Primary copper (SIC 3331): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

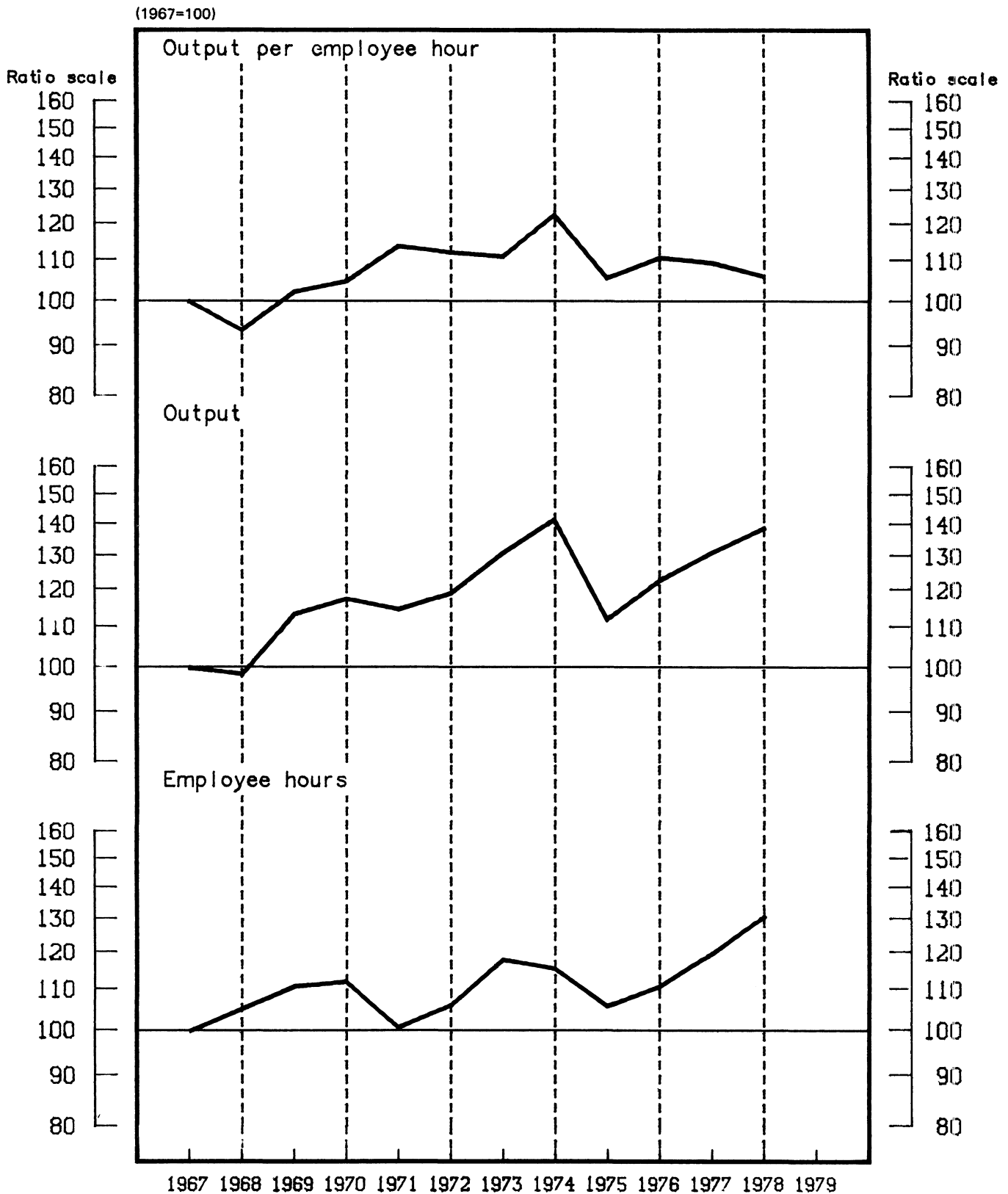
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	108.8	129.4	137.9	95.1	126.6	134.9	94.6
1955	127.9	128.7	139.0	87.4	122.6	131.7	87.5
1956	140.9	139.0	152.2	85.9	130.2	141.8	85.7
1957	135.5	135.1	147.2	86.4	129.7	141.1	86.2
1958	121.8	129.1	137.0	97.0	126.9	134.8	96.9
1959	95.9	107.9	112.5	89.2	113.3	119.6	89.2
1960	139.3	140.6	151.9	95.4	139.0	150.4	95.3
1961	137.3	135.9	143.5	105.1	132.8	140.1	105.1
1962	148.5	135.5	143.5	103.1	131.5	139.1	102.6
1963	145.3	133.0	142.8	93.6	128.9	138.2	93.2
1964	150.3	129.5	138.7	92.4	128.4	138.0	91.7
1965	161.5	136.1	148.1	87.9	131.0	142.4	87.5
1966	165.3	142.9	153.6	100.0	136.2	145.7	100.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	142.9	119.9	126.0	95.6	119.0	126.1	91.7
1969	179.5	150.4	161.3	106.7	147.4	158.7	104.2
1970	185.5	161.5	170.7	124.4	155.2	164.1	120.8
1971	168.4	143.4	147.0	128.9	142.2	146.7	125.0
1972	187.9	150.9	158.6	120.0	148.3	156.5	116.7
1973	195.5	150.9	157.5	124.4	146.6	153.3	120.8
1974	178.2	153.5	154.1	151.1	150.9	152.2	145.8
1975	161.2	135.8	133.1	146.7	133.6	131.5	141.7
1976	171.3	125.7	124.9	128.9	123.3	122.8	125.0
1977	161.5	112.4	113.8	106.7	112.9	115.2	104.2
1978 ¹	163.0	119.5	123.8	102.2	121.6	127.2	100.0
Average annual percent change:							
1947-78	1.8	.1	-2	1.8	.4	.2	1.7
1973-78	-3.2	-6.0	-6.0	-6.0	-5.2	-5.1	-5.8

¹ Preliminary.

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 the Census and the Bureau of Labor Statistics.

Chart 62. Primary aluminum (SIC 3334): Output per hour and related data, 1967-78



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

Table 120. Primary aluminum (SIC 3334): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	51.8	50.5	58.3	53.7	52.6	58.6
1955	57.4	56.3	62.8	59.1	58.3	62.8
1956	59.0	58.8	59.7	60.0	60.0	60.0
1957	59.2	59.7	57.0	60.3	61.2	57.3
1958	65.9	68.2	57.2	67.5	70.5	57.4
1959	78.4	78.6	77.7	81.3	82.2	77.8
1960	81.9	83.0	77.4	84.0	85.7	77.7
1961	85.3	87.5	76.8	87.2	90.3	76.9
1962	89.4	90.4	84.8	90.9	92.4	85.3
1963	92.5	93.2	89.1	94.0	95.1	89.6
1964	95.2	94.4	98.7	92.3	90.6	99.9
1965	97.5	97.0	99.5	97.7	97.0	100.1
1966	100.9	100.7	102.1	102.5	102.6	102.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	93.5	94.5	89.1	93.8	94.1	92.5
1969	102.3	102.5	101.7	103.9	103.7	104.4
1970	104.9	106.2	99.2	104.8	105.5	102.1
1971	113.8	117.3	100.7	112.9	115.4	103.5
1972	112.2	116.7	95.8	110.8	114.4	97.9
1973	111.1	111.8	108.4	111.8	111.8	111.6
1974	122.8	123.7	118.4	121.8	121.5	123.1
1975	105.8	112.8	83.2	105.6	111.6	86.0
1976	110.8	114.0	98.8	111.2	113.5	102.8
1977	109.5	111.2	102.6	110.0	111.0	105.9
1978 ²	106.1	106.4	104.8	107.7	107.5	108.3
Average annual percent change:						
1947-78	3.6	3.8	2.7	3.4	3.5	2.8
1973-78	-1.5	-1.6	-1.2	-1.3	-1.3	-1.2

¹ 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.

² Preliminary.

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 121. Primary aluminum (SIC 3334): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

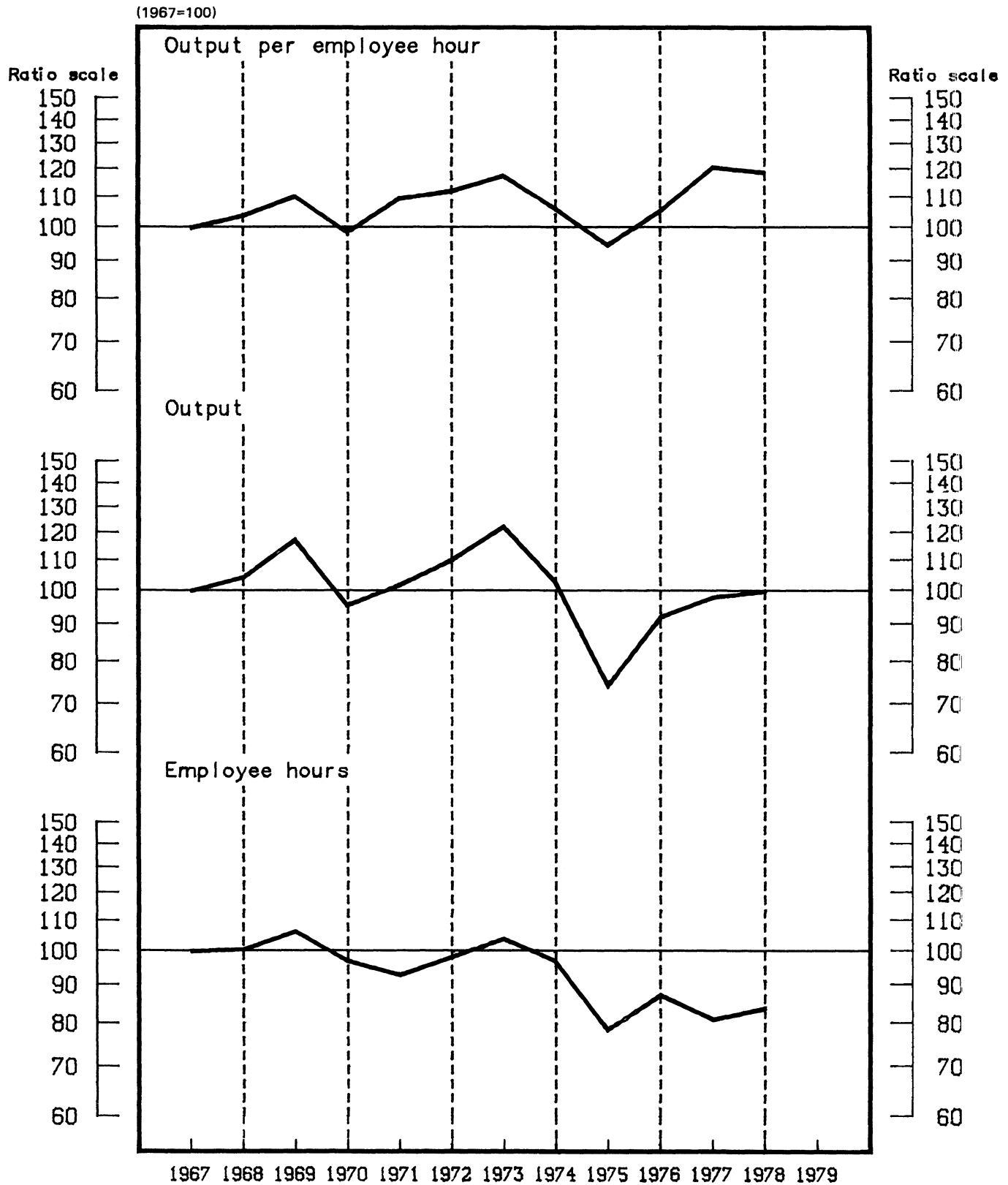
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	46.5	89.8	92.1	79.8	86.6	88.4	79.3
1955	49.7	86.6	88.3	79.2	84.1	85.3	79.1
1956	53.2	90.2	90.5	89.1	88.7	88.7	88.6
1957	52.0	87.8	87.1	91.2	86.2	85.0	90.8
1958	49.3	74.8	72.3	86.2	73.0	69.9	85.9
1959	61.5	78.4	78.2	79.2	75.6	74.8	79.0
1960	63.0	76.9	75.9	81.4	75.0	73.5	81.1
1961	59.4	69.6	67.9	77.3	68.1	65.8	77.2
1962	65.8	73.6	72.8	77.6	72.4	71.2	77.1
1963	71.6	77.4	76.8	80.4	76.2	75.3	79.9
1964	78.8	82.8	83.5	79.8	85.4	87.0	78.9
1965	84.8	87.0	87.4	85.2	86.8	87.4	84.7
1966	91.0	90.2	90.4	89.1	88.8	88.7	88.9
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	98.5	105.3	104.2	110.5	105.0	104.7	106.5
1969	113.5	110.9	110.7	111.6	109.2	109.4	108.7
1970	117.6	112.1	110.7	118.6	112.2	111.5	115.2
1971	114.8	100.9	97.9	114.0	101.7	99.5	110.9
1972	119.2	106.2	102.1	124.4	107.6	104.2	121.7
1973	131.0	117.9	117.2	120.9	117.2	117.2	117.4
1974	141.8	115.5	114.6	119.8	116.4	116.7	115.2
1975	112.2	106.0	99.5	134.9	106.3	100.5	130.4
1976	122.9	110.9	107.8	124.4	110.5	108.3	119.6
1977	131.2	119.8	118.0	127.9	119.3	118.2	123.9
1978 ¹	138.9	130.9	130.5	132.6	129.0	129.2	128.3
Average annual percent change:							
1947-78	6.8	2.9	2.7	3.8	3.1	3.0	3.7
1973-78	.4	2.0	2.0	1.7	1.7	1.7	1.7

¹ Preliminary.

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 63. Copper rolling and drawing (SIC 3351): Output per hour and related data, 1967--78



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

Table 122. Copper rolling and drawing (SIC 3351): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	71.1	72.1	67.1	70.6	71.6	67.1
1959	78.1	77.1	82.5	81.0	80.7	82.4
1960	75.4	75.1	76.2	74.7	74.4	76.2
1961	81.6	82.9	76.7	82.7	84.4	76.5
1962	87.5	88.3	84.2	89.9	91.5	84.5
1963	95.7	94.0	103.6	99.2	98.0	103.9
1964	105.4	103.5	114.0	110.2	109.0	115.1
1965	111.4	108.9	123.4	116.8	115.2	123.7
1966	117.7	114.1	136.3	125.4	123.1	135.7
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.8	104.7	99.8	105.5	106.1	103.2
1969	110.3	110.5	109.5	114.9	115.6	111.9
1970	98.6	101.4	88.0	98.8	101.3	90.0
1971	109.6	112.0	100.6	111.2	113.5	103.1
1972	112.2	112.4	111.0	117.5	118.6	113.0
1973	117.7	117.4	119.3	123.6	123.9	122.4
1974	106.3	108.6	97.4	109.9	112.6	100.6
1975	94.7	102.6	71.2	93.2	100.0	73.6
1976	105.4	108.3	94.7	109.0	112.0	98.3
1977	120.7	123.4	110.4	125.3	128.8	113.4
1978 ²	118.8	119.5	115.9	125.0	126.6	118.9
Average annual percent change:						
1958-78	2.0	2.1	1.2	2.0	2.2	1.4
1973-78	1.5	1.5	1.5	1.7	1.8	1.5

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 123. Copper rolling and drawing (SIC 3351): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

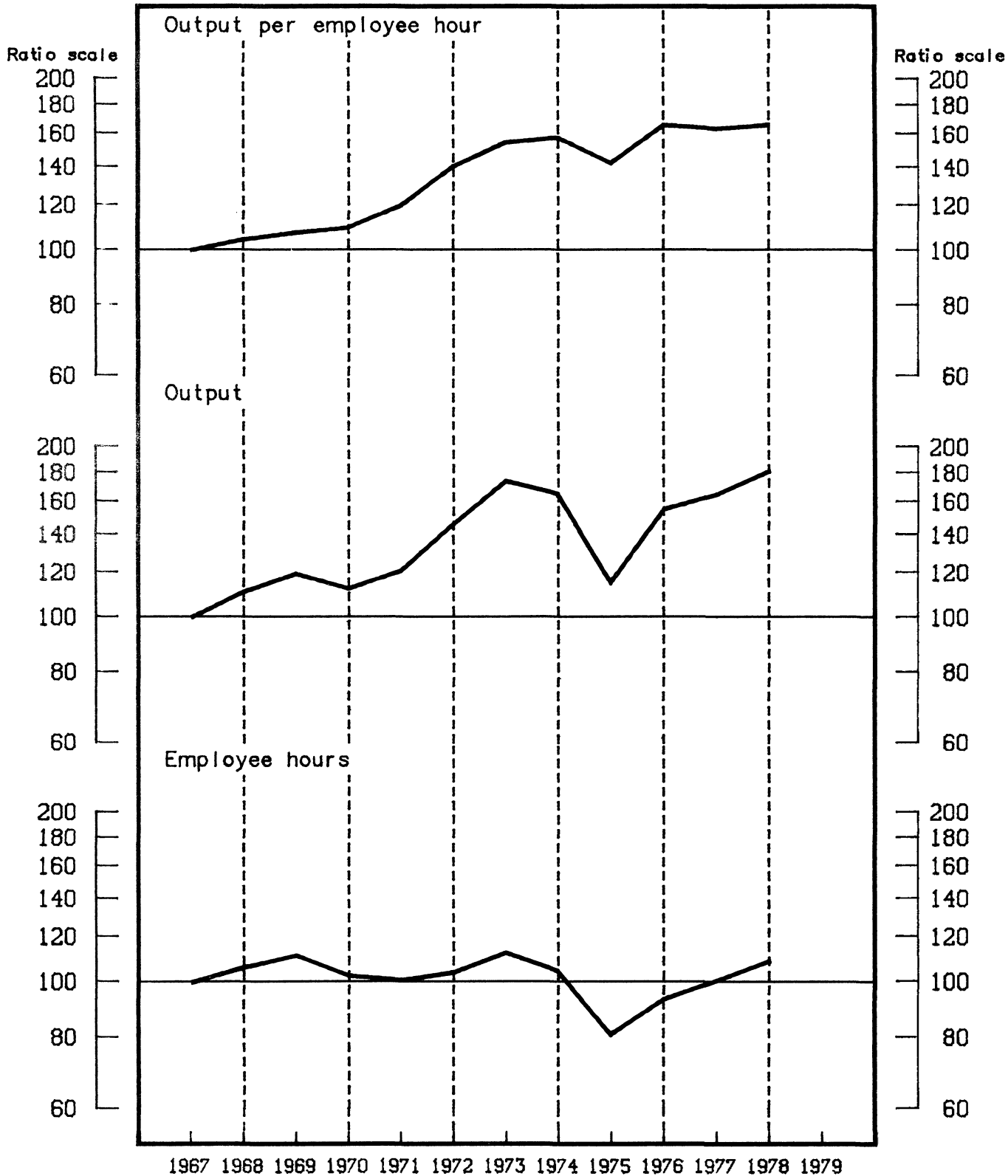
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	70.7	99.5	98.1	105.4	100.1	98.7	105.4
1959	86.7	111.0	112.4	105.1	107.0	107.4	105.2
1960	73.4	97.4	97.7	96.3	98.2	98.7	96.3
1961	80.9	99.1	97.6	105.5	97.8	95.8	105.7
1962	92.0	105.2	104.2	109.2	102.3	100.6	108.9
1963	95.8	100.1	101.9	92.5	96.6	97.8	92.2
1964	108.0	102.5	104.3	94.7	98.0	99.1	93.8
1965	114.5	102.8	105.1	92.8	98.0	99.4	92.6
1966	127.3	108.2	111.6	93.4	101.5	103.4	93.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.4	100.6	99.7	104.6	99.0	98.4	101.2
1969	117.4	106.4	106.2	107.2	102.2	101.6	104.9
1970	95.6	97.0	94.3	108.6	96.8	94.4	106.2
1971	101.9	93.0	91.0	101.3	91.6	89.8	98.8
1972	110.2	98.2	98.0	99.3	93.8	92.9	97.5
1973	122.4	104.0	104.3	102.6	99.0	98.8	100.0
1974	103.1	97.0	94.9	105.9	93.8	91.6	102.5
1975	74.5	78.7	72.6	104.6	79.9	74.5	101.2
1976	92.2	87.5	85.1	97.4	84.6	82.3	93.8
1977	98.0	81.2	79.4	88.8	78.2	76.1	86.4
1978 ¹	99.9	84.1	83.6	86.2	79.9	78.9	84.0
Average annual percent change:							
1958-78 .....	.9	-1.0	-1.2	-.3	-1.1	-1.3	-.5
1973-78	-2.7	-4.2	-4.1	-4.1	-4.4	-4.4	-4.1

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 64. Aluminum rolling and drawing (SIC 3353, 3354, 3355): Output per hour and related data, 1967-78

(1967=100)



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

Table 124. Aluminum rolling and drawing (SIC 3353, 3354, 3355): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	63.8	64.9	59.3	63.5	64.6	59.4
1959	68.9	67.8	73.3	70.1	69.3	73.3
1960	65.2	66.3	61.5	66.0	67.3	61.5
1961	71.7	72.2	69.6	72.8	73.7	69.5
1962	77.8	78.4	76.1	78.5	79.1	76.5
1963	86.3	86.5	85.3	87.2	87.7	85.7
1964	91.7	91.9	91.0	93.3	93.6	91.8
1965	100.5	100.0	103.1	103.8	104.0	103.4
1966	101.1	99.4	109.2	104.5	103.3	109.2
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.5	105.9	99.0	103.4	103.7	102.2
1969	107.4	108.1	102.0	107.8	108.5	104.7
1970	109.6	114.4	93.1	106.4	109.8	95.3
1971	119.9	124.9	102.9	115.3	118.2	105.3
1972	140.5	141.3	136.9	141.3	141.7	139.5
1973	154.7	154.1	157.0	156.6	155.5	161.4
1974	157.9	159.2	153.1	155.1	154.4	157.8
1975	142.5	152.4	112.0	134.5	140.6	115.7
1976	166.0	168.9	154.6	162.9	163.5	160.2
1977	163.7	164.5	160.2	162.4	161.9	164.8
1978 ²	166.2	166.9	163.5	165.0	164.3	168.1
Average annual percent change:						
1958-78	5.2	5.3	4.8	5.0	5.0	5.1
1973-78	1.8	1.7	1.9	1.7	1.6	1.9

¹ 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.

² Preliminary.
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 125. Aluminum rolling and drawing (SIC 3353, 3354, 3355): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

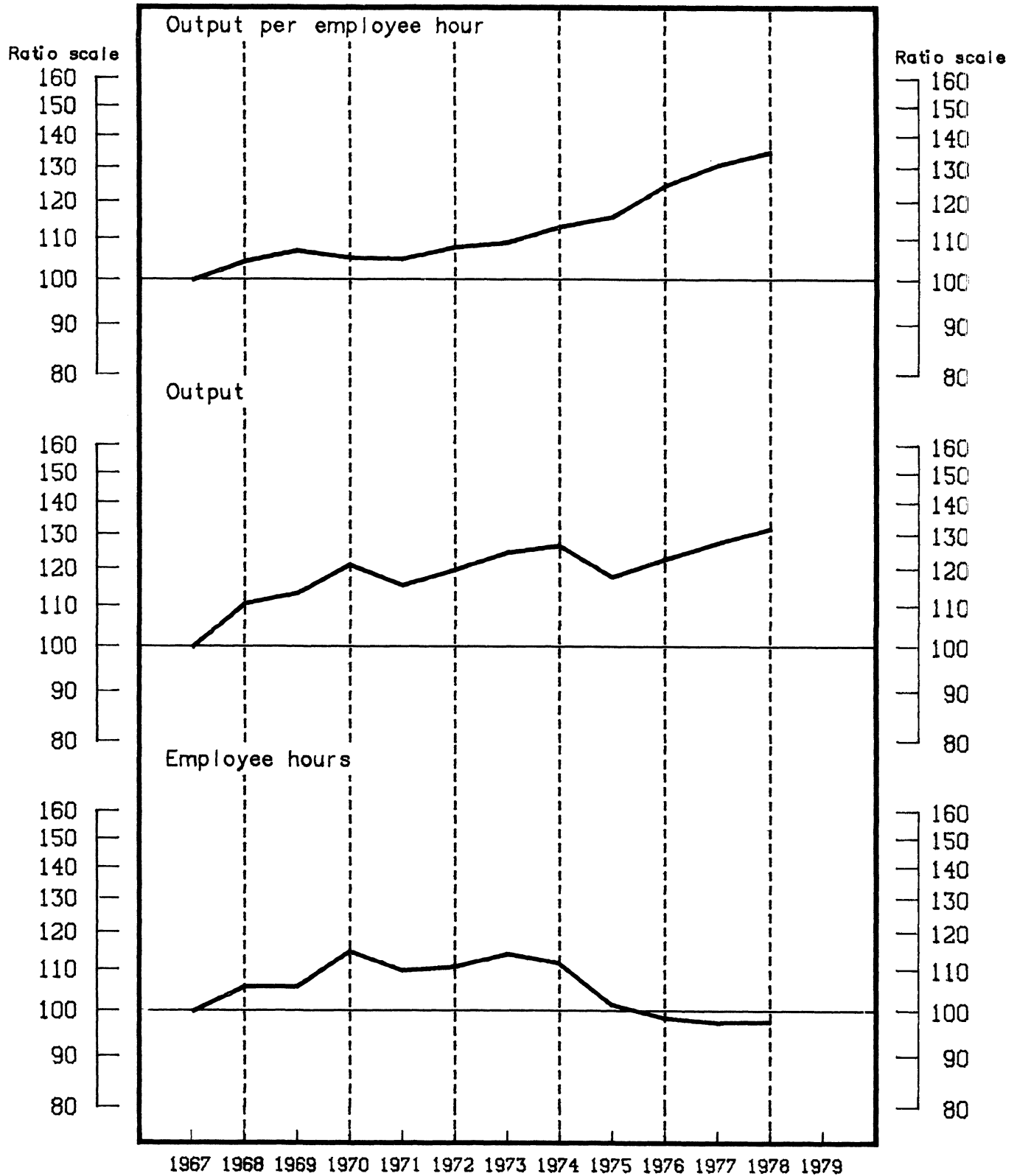
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	48.4	75.9	74.6	81.6	76.2	74.9	81.5
1959	63.1	91.6	93.0	86.1	90.0	91.1	86.1
1960	56.5	86.6	85.2	91.8	85.6	84.0	91.8
1961	61.7	86.0	85.4	88.7	84.7	83.7	88.8
1962	69.5	89.3	88.7	91.3	88.5	87.9	90.9
1963	77.0	89.2	89.0	90.3	88.3	87.8	89.9
1964	85.1	92.8	92.6	93.5	91.2	90.9	92.7
1965	97.2	96.7	97.2	94.3	93.6	93.5	94.0
1966	107.6	106.4	108.3	98.5	103.0	104.2	98.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	111.0	106.2	104.8	112.1	107.3	107.0	108.6
1969	119.5	111.3	110.5	117.1	110.9	110.1	114.1
1970	112.5	102.6	98.3	120.8	105.7	102.5	118.0
1971	120.9	100.8	96.8	117.5	104.9	102.3	114.8
1972	146.1	104.0	103.4	106.7	103.4	103.1	104.7
1973	174.0	112.5	112.9	110.8	111.1	111.9	107.8
1974	165.2	104.6	103.8	107.9	106.5	107.0	104.7
1975	115.7	81.2	75.9	103.3	86.0	82.3	100.0
1976	155.2	93.5	91.9	100.4	95.3	94.9	96.9
1977	164.8	100.7	100.2	102.9	101.5	101.8	100.0
1978 ¹	181.2	109.0	108.6	110.8	109.8	110.3	107.8
Average annual percent change:							
1958-78	6.2	1.0	.9	1.3	1.2	1.2	1.1
1973-78	1.4	-4	-3	-5	-3	-2	-5

¹ Preliminary.
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 65. Metal cans (SIC 3411): Output per hour and related data, 1967-78

(1967=100)



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

Table 126. Metal cans (SIC 3411): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	73.2	73.7	70.0	69.7	69.5	70.7
1955	77.5	77.9	74.5	73.9	73.8	74.9
1956	80.9	81.0	79.9	78.1	77.8	80.5
1957	79.5	80.0	75.2	75.8	75.9	75.8
1958	83.4	84.3	76.7	78.4	78.7	77.2
1959	86.3	86.7	83.3	84.0	84.0	83.8
1960	88.3	88.8	83.8	85.1	85.2	84.2
1961	93.2	93.8	89.3	90.3	90.4	89.5
1962	90.2	90.3	89.2	89.7	89.7	89.6
1963	89.6	89.9	86.8	88.0	88.1	87.2
1964	91.5	92.2	87.1	91.2	91.9	87.8
1965	94.1	95.6	83.3	96.2	98.4	83.7
1966	96.7	96.7	96.6	95.1	94.9	96.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.5	104.6	104.5	104.9	105.1	103.1
1969	107.1	107.7	102.9	105.1	105.3	104.3
1970	105.4	106.7	96.6	104.2	104.8	101.0
1971	105.1	107.0	92.3	101.5	102.8	93.4
1972	108.0	109.1	100.5	105.5	106.8	97.8
1973	109.2	109.9	104.6	107.8	108.4	104.0
1974	113.3	116.0	96.6	110.6	113.0	97.5
1975	116.0	121.0	88.8	113.4	118.1	89.9
1976	124.8	129.5	98.1	121.3	125.5	99.3
1977	131.0	135.6	104.7	128.7	133.3	105.4
1978 ²	135.1	140.6	104.8	131.7	136.9	105.6
Average annual percent change:						
1947-78	2.3	2.4	1.8	2.4	2.5	1.8
1973-78	4.6	5.2	1.0	4.5	5.0	1.2

¹ 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.

² Preliminary.

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

Table 127. Metal cans (SIC 3411): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	63.8	87.2	86.6	91.2	91.6	91.8	90.3
1955	66.9	86.3	85.9	89.8	90.5	90.6	89.3
1956	71.4	88.3	88.1	89.4	91.4	91.8	88.7
1957	68.9	86.7	86.1	91.6	90.9	90.8	90.9
1958	70.6	84.7	83.7	92.1	90.0	89.7	91.5
1959	74.9	86.8	86.4	89.9	89.2	89.2	89.4
1960	75.6	85.6	85.1	90.2	88.8	88.7	89.8
1961	79.9	85.7	85.2	89.5	88.5	88.4	89.3
1962	78.9	87.5	87.4	88.5	88.0	88.0	88.1
1963	77.7	86.7	86.4	89.5	88.3	88.2	89.1
1964	83.4	91.1	90.5	95.8	91.4	90.8	95.0
1965	87.5	93.0	91.5	105.0	91.0	88.9	104.6
1966	92.6	95.8	95.8	95.9	97.4	97.6	95.9
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	110.8	106.0	105.9	106.0	105.6	105.4	107.5
1969	113.5	106.0	105.4	110.3	108.0	107.8	108.8
1970	121.2	115.0	113.6	125.5	116.3	115.7	120.0
1971	115.6	110.0	108.0	125.2	113.9	112.4	123.8
1972	119.8	110.9	109.8	119.2	113.6	112.2	122.5
1973	124.8	114.3	113.6	119.3	115.8	115.1	120.0
1974	126.8	111.9	109.3	131.3	114.6	112.2	130.0
1975	117.9	101.6	97.4	132.7	104.0	99.8	131.2
1976	122.9	98.5	94.9	125.3	101.3	97.9	123.8
1977	127.7	97.5	94.2	122.0	99.2	95.8	121.2
1978 ¹	132.0	97.7	93.9	126.0	100.2	96.4	125.0
Average annual percent change:							
1947-78	3.4	1.1	1.0	1.6	1.0	.9	1.7
1973-78	1.0	-3.5	-4.0	(²)	-3.3	-3.9	-2

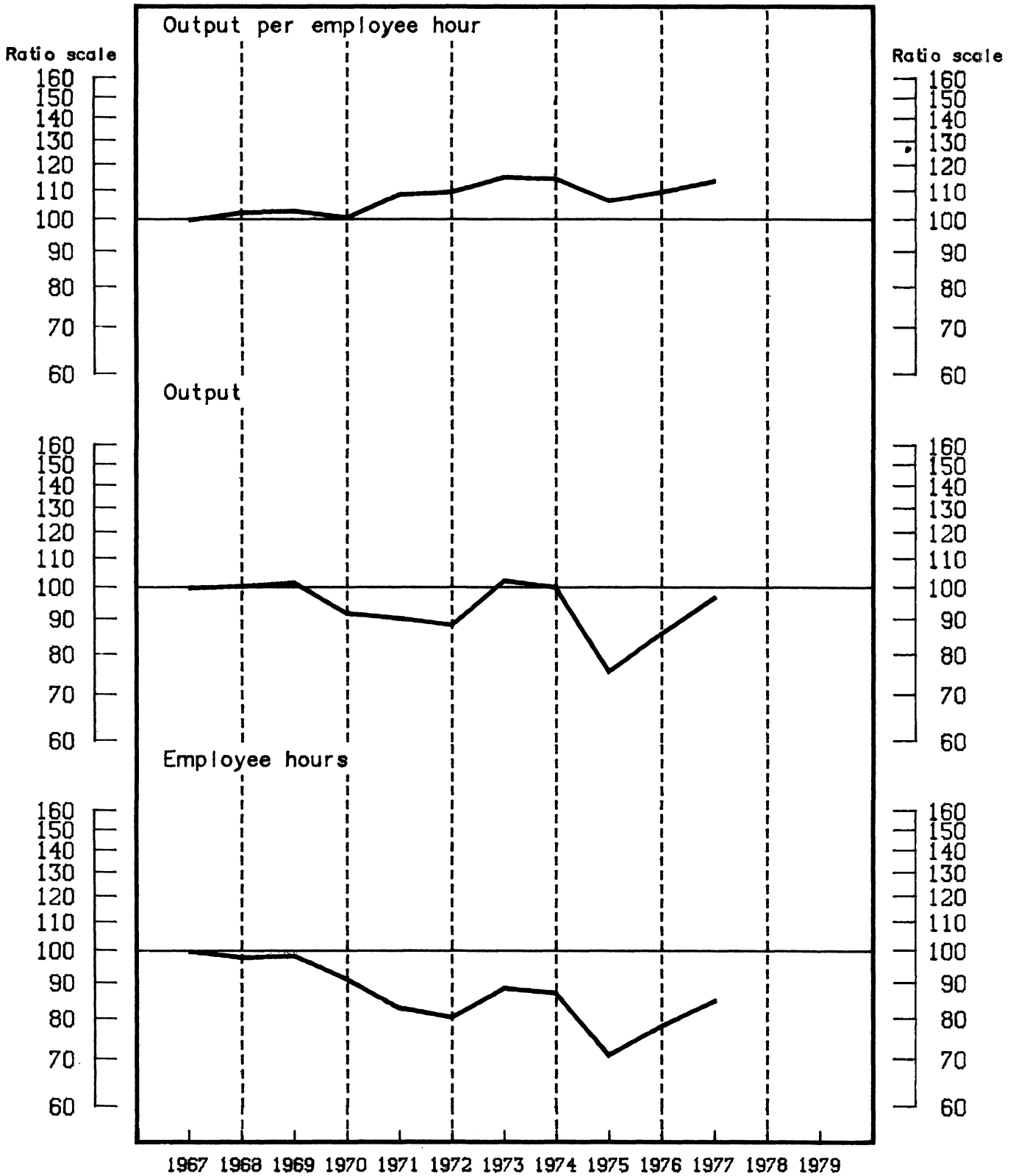
¹ Preliminary.

² Less than .05 percent.

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

Chart 66. Motors and generators (SIC 3621): Output per hour and related data, 1967-78

(1967=100)



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

Table 128. Motors and generators (SIC 3621): Indexes of output per employee hour and output per employee, 1954-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	57.3	59.6	50.6	56.2	57.8	51.9
1955	58.8	60.7	53.0	58.5	60.0	54.0
1956	62.2	63.9	57.3	61.5	62.5	58.5
1957	60.3	64.8	48.6	59.0	62.8	49.7
1958	59.9	65.8	45.9	58.9	64.2	46.7
1959	69.5	73.6	58.3	69.1	73.0	59.3
1960	71.2	76.4	57.9	69.5	73.9	58.7
1961	76.2	81.9	61.4	74.6	79.8	61.9
1962	84.8	89.0	73.0	84.2	88.3	73.3
1963	85.8	88.6	77.4	86.3	89.6	77.8
1964	94.8	97.9	85.6	96.0	99.5	86.3
1965	101.4	101.8	100.3	102.4	103.0	100.7
1966	103.7	101.4	112.4	103.0	100.4	112.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.5	103.2	100.6	103.7	103.9	103.2
1969	103.1	103.7	101.5	104.8	104.8	104.7
1970	100.8	102.8	94.7	99.9	100.2	98.8
1971	108.9	111.3	101.1	108.9	110.1	105.5
1972	109.9	109.7	111.3	100.0	109.2	115.5
1973	115.4	112.4	126.7	114.8	110.6	130.4
1974	114.8	113.2	120.1	112.8	110.0	122.5
1975	106.7	110.3	96.0	104.5	107.0	97.7
1976	109.9	108.3	116.0	107.2	104.0	118.6
1977 ²	114.0	114.1	113.8	111.4	110.2	115.5
Average annual percent change:						
1954-77	3.3	3.0	4.4	3.3	3.0	4.4
1973-77	-7	-1	-2.5	-1.1	-6	-2.7

¹ 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.

² Preliminary.
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 129. Motors and generators (SIC 3621): Indexes of output, employee hours, and employees, 1954-77
(1967 = 100)

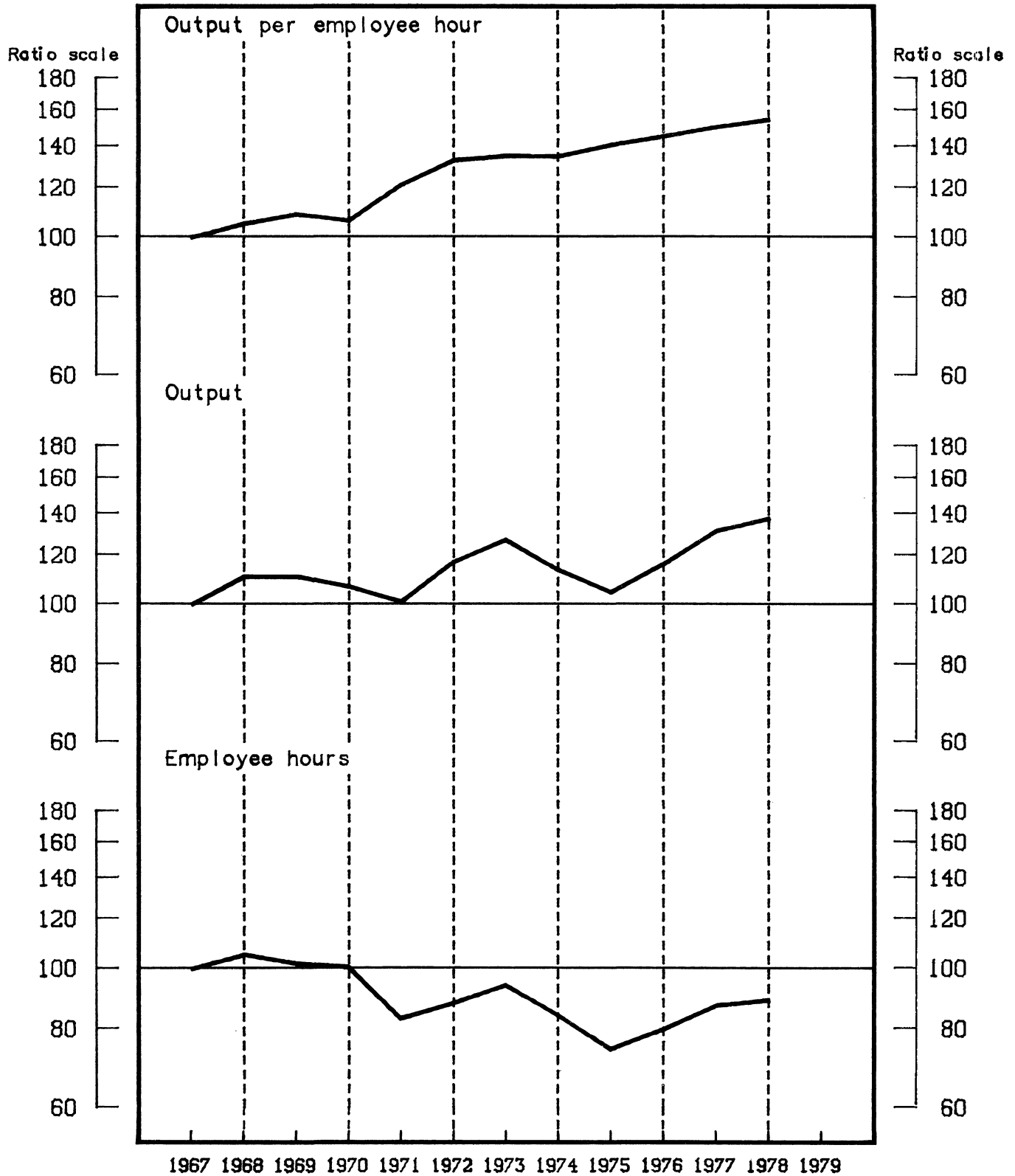
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	55.8	97.4	93.6	110.3	99.3	96.6	107.6
1955	58.7	99.9	96.7	110.7	100.4	97.8	108.7
1956	67.0	107.7	104.9	117.0	109.0	107.2	114.5
1957	61.4	101.8	94.7	126.3	104.0	97.7	123.6
1958	48.8	81.5	74.2	106.3	82.9	76.0	104.4
1959	61.0	87.8	82.9	104.7	88.3	83.6	102.9
1960	62.7	88.0	82.1	108.3	90.2	84.8	106.9
1961	63.4	83.2	77.4	103.2	85.0	79.4	102.5
1962	70.1	82.7	78.8	96.0	83.3	79.4	95.6
1963	72.1	84.0	81.4	93.1	83.5	80.5	92.7
1964	80.7	85.1	82.4	94.3	84.1	81.1	93.5
1965	92.6	91.3	91.0	92.3	90.4	89.9	92.0
1966	102.6	98.9	101.2	91.3	99.6	102.2	91.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	100.6	98.1	97.5	100.0	97.0	96.8	97.5
1969	101.7	98.6	98.1	100.2	97.0	97.0	97.1
1970	92.0	91.3	89.5	97.2	92.1	91.8	93.1
1971	90.5	83.1	81.3	89.5	83.1	82.2	85.8
1972	88.6	80.6	80.8	79.6	88.6	81.1	76.7
1973	102.4	88.7	91.1	80.8	89.2	92.6	78.5
1974	100.2	87.3	88.5	83.4	88.8	91.1	81.8
1975	76.0	71.2	68.9	79.2	72.7	71.0	77.8
1976	86.2	78.4	79.6	74.3	80.4	82.9	72.7
1977 ¹	97.0	85.1	85.0	85.2	87.1	88.0	84.0
Average annual percent change:							
1954-77	2.6	-7	-4	-1.7	-6	-3	-1.7
1973-77	-2.6	-1.9	-2.4	-1	-1.5	-1.9	.2

¹ Preliminary.
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 67. Major household appliances (SIC 3631, 3632, 3633, 3639): Output per hour and related data, 1967-78

(1967=100)



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

Table 130. Major household appliances (SIC 3631, 3632, 3633, 3639): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	58.3	61.3	48.0	59.4	62.7	49.0
1959	63.6	65.1	57.4	64.4	66.1	58.4
1960	66.3	68.9	56.9	65.9	68.2	57.6
1961	70.6	73.7	59.5	71.4	75.0	59.8
1962	76.8	78.3	70.8	79.5	81.6	71.1
1963	87.7	87.8	87.3	89.5	89.8	87.6
1964	91.4	91.1	92.3	93.9	94.2	92.9
1965	94.2	94.3	93.6	97.7	98.5	94.0
1966	94.5	93.2	100.2	96.1	95.0	100.0
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.2	104.4	108.9	107.0	105.9	111.9
1969	108.8	109.6	106.0	109.0	109.0	109.4
1970	106.3	107.3	102.0	107.5	107.8	106.4
1971	121.4	123.0	114.5	122.7	123.4	119.6
1972	133.0	132.7	134.4	134.4	133.3	139.5
1973	135.1	134.4	138.7	135.9	134.3	142.7
1974	134.9	136.7	127.8	132.1	132.7	130.2
1975	140.7	145.2	124.3	136.7	139.4	126.8
1976	145.2	149.5	129.5	142.7	145.6	132.5
1977	150.4	150.7	148.7	148.9	148.4	150.7
1978 ²	154.6	154.1	157.1	151.0	149.1	159.6
Average annual percent change:						
1958-78	4.9	4.8	5.4	4.7	4.5	5.5
1973-78	3.0	2.9	3.2	2.7	2.6	3.0

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 131. Major household appliances (SIC 3631, 3632, 3633, 3639): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

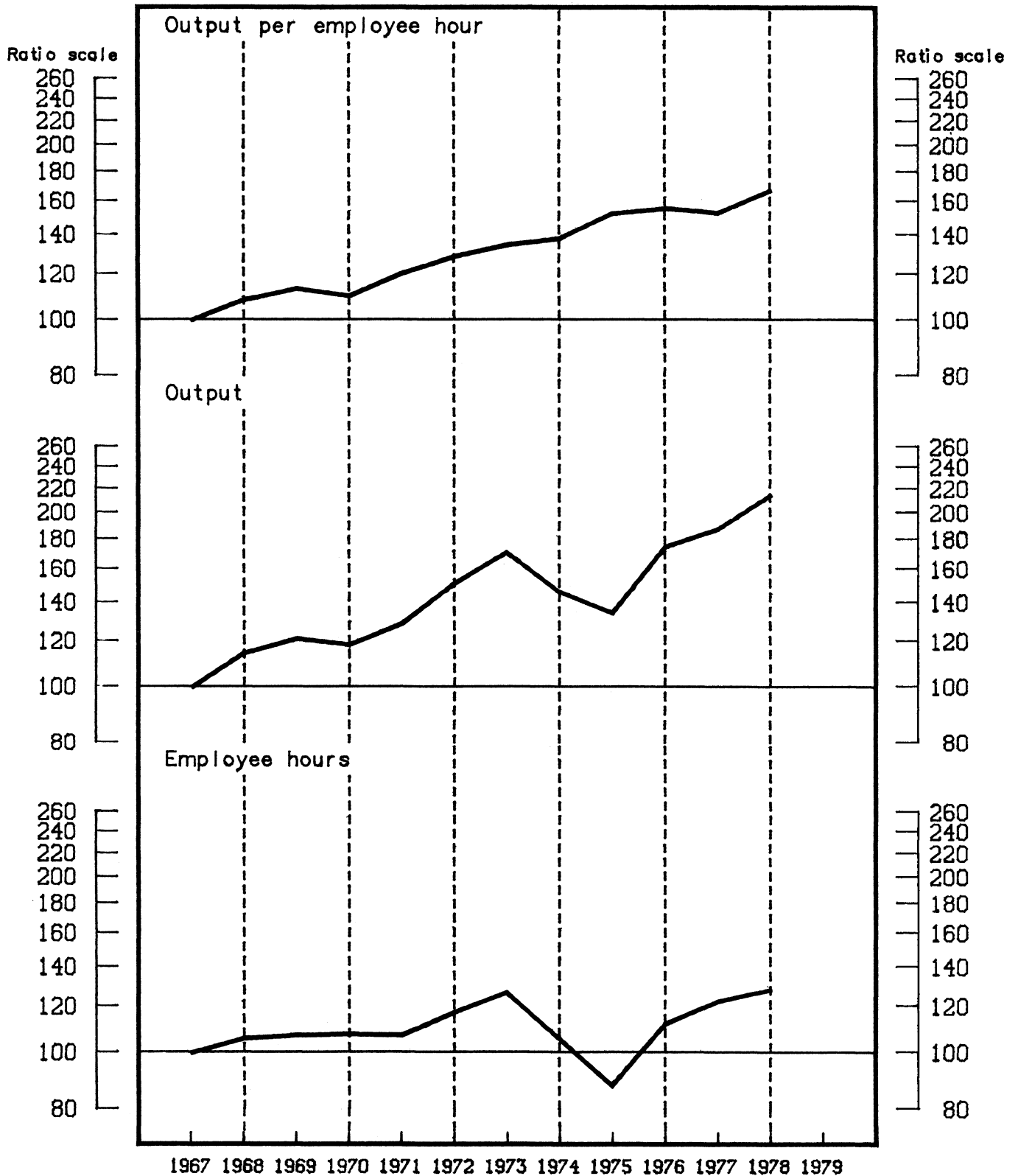
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	53.9	92.4	87.9	112.2	90.7	86.0	110.1
1959	62.8	98.8	96.4	109.4	97.5	95.0	107.5
1960	62.5	94.3	90.7	109.9	94.8	91.6	108.5
1961	61.8	87.5	83.8	103.9	86.5	82.4	103.4
1962	69.3	90.2	88.5	97.9	87.2	84.9	97.5
1963	76.9	87.7	87.6	88.1	85.9	85.6	87.8
1964	85.4	93.4	93.7	92.5	90.9	90.7	91.9
1965	92.6	98.3	98.2	98.9	94.8	94.0	98.5
1966	97.5	103.2	104.6	97.3	101.5	102.6	97.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	110.9	105.4	106.2	101.8	103.6	104.7	99.1
1969	110.9	101.9	101.2	104.6	101.7	101.7	101.4
1970	106.9	100.6	99.6	104.8	99.4	99.2	100.5
1971	101.1	83.3	82.2	86.3	82.4	81.9	84.5
1972	117.2	88.1	88.3	87.2	87.2	87.9	84.0
1973	127.3	94.2	94.7	91.8	93.7	94.8	89.2
1974	113.7	84.3	83.2	89.0	86.1	85.7	87.3
1975	104.7	74.4	72.1	84.2	76.6	75.1	82.6
1976	116.3	80.1	77.8	89.8	81.5	79.9	87.8
1977	131.6	87.5	87.3	88.5	88.4	88.7	87.3
1978 ¹	137.9	89.2	89.5	87.8	91.3	92.5	86.4
Average annual percent change:							
1958-78	4.2	-6	-5	-1.1	-4	-2	-1.1
1973-78	2.7	-2	-2	-5	(²)	.1	-3

¹ Preliminary.
² Less than .05 percent.

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

Chart 68. Household cooking equipment (SIC 3631): Output per hour and related data, 1967-78

(1967=100)



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

Table 132. Household cooking equipment (SIC 3631): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	79.4	80.2	76.0	81.1	82.1	77.6
1959	83.4	82.9	85.7	85.3	84.6	87.3
1960	81.5	85.7	68.2	81.2	85.3	69.0
1961	84.4	88.0	73.0	84.7	88.3	73.4
1962	87.4	91.1	75.5	85.9	89.2	75.8
1963	95.5	94.9	98.2	97.9	97.6	98.8
1964	96.4	97.4	92.9	96.8	97.7	94.0
1965	101.2	100.0	106.1	104.0	103.5	106.1
1966	100.1	98.7	106.4	102.2	101.2	106.1
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.4	107.5	111.9	110.9	109.9	114.7
1969	113.4	114.8	108.2	114.7	115.7	111.4
1970	110.2	111.8	104.4	111.5	112.3	108.7
1971	120.4	122.3	113.5	122.9	124.2	118.1
1972	128.9	128.6	130.3	132.4	131.5	135.7
1973	134.9	134.0	138.6	138.6	137.6	142.1
1974	138.4	144.1	119.8	134.6	138.6	121.5
1975	152.8	161.4	126.7	147.6	153.8	128.8
1976	156.1	164.6	130.1	154.7	162.0	132.9
1977	153.3	161.1	129.0	152.1	159.1	131.2
1978 ²	167.4	172.6	150.1	164.2	167.8	152.6
Average annual percent change:						
1958-78	3.8	3.9	3.4	3.7	3.7	3.5
1973-78	4.1	4.7	1.9	3.7	4.3	1.8

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

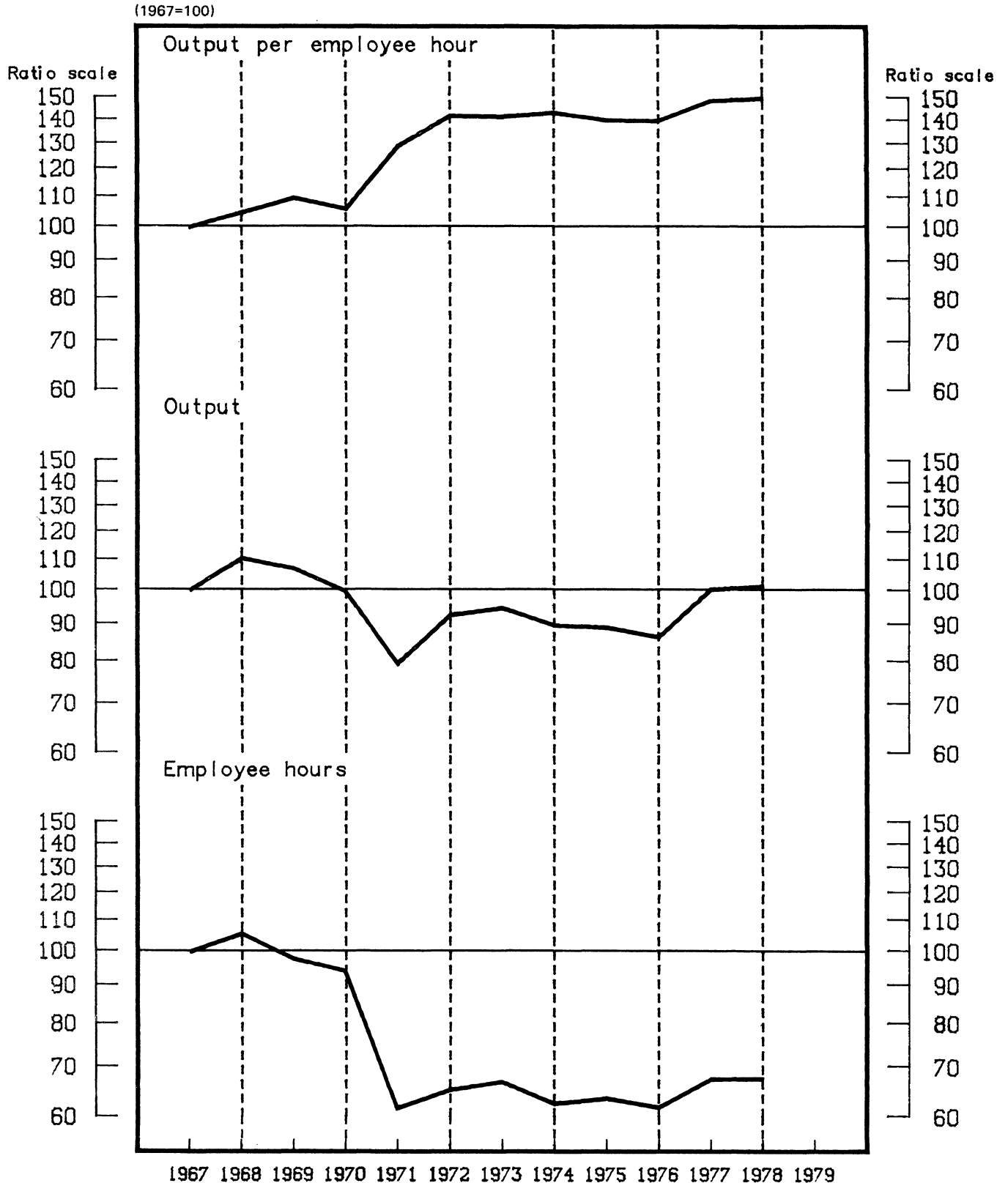
Table 133. Household cooking equipment (SIC 3631): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	72.3	91.1	90.1	95.1	89.2	88.1	93.2
1959	79.4	95.2	95.8	92.6	93.1	93.8	90.9
1960	80.0	98.2	93.3	117.3	98.5	93.8	115.9
1961	78.4	92.9	89.1	107.4	92.6	88.8	106.8
1962	79.2	90.6	86.9	104.9	92.2	88.8	104.5
1963	92.1	96.4	97.1	93.8	94.1	94.4	93.2
1964	94.0	97.5	96.5	101.2	97.1	96.2	100.0
1965	106.1	104.8	106.1	100.0	102.0	102.5	100.0
1966	103.7	103.6	105.1	97.5	101.5	102.5	97.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	114.7	105.8	106.7	102.5	103.4	104.4	100.0
1969	121.5	107.1	105.8	112.3	105.9	105.0	109.1
1970	118.6	107.6	106.1	113.6	106.4	105.6	109.1
1971	128.9	107.1	105.4	113.6	104.9	103.8	109.1
1972	151.2	117.3	117.6	116.0	114.2	115.0	111.4
1973	171.2	126.9	127.8	123.5	123.5	124.4	120.5
1974	146.4	105.8	101.6	122.2	108.8	105.6	120.5
1975	134.6	88.1	83.4	106.2	91.2	87.5	104.5
1976	175.1	112.2	106.4	134.6	113.2	108.1	131.8
1977	187.9	122.6	116.6	145.7	123.5	118.1	143.2
1978 ¹	215.0	128.4	124.6	143.2	130.9	128.1	140.9
Average annual percent change:							
1958-78	5.1	1.3	1.1	1.7	1.4	1.3	1.6
1973-78	6.3	2.1	1.5	4.4	2.6	2.0	4.5

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 69. Household refrigerators and freezers (SIC 3632): Output per hour and related data, 1967-78



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

Table 134. Household refrigerators and freezers (SIC 3632): Indexes of output per employee hour and output per employee, 1958-78
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	50.1	51.8	43.0	51.3	53.2	44.1
1959	55.0	54.8	55.9	56.6	56.5	57.1
1960	60.5	61.0	57.5	60.1	60.4	58.6
1961	64.6	65.5	60.1	65.8	67.1	60.4
1962	69.7	69.0	73.8	75.1	75.2	74.3
1963	81.9	82.7	78.4	84.3	85.4	78.9
1964	87.8	87.5	89.2	91.4	91.8	89.9
1965	90.7	90.7	90.7	95.3	96.1	91.4
1966	91.7	90.4	99.2	93.4	92.2	99.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.6	104.3	106.0	106.9	106.4	109.3
1969	109.5	110.5	104.5	111.0	111.6	108.2
1970	105.8	107.0	100.8	108.1	108.7	105.4
1971	128.8	129.6	125.4	129.9	129.4	131.8
1972	141.7	140.6	147.1	143.9	142.1	153.1
1973	141.3	141.9	138.4	143.2	143.0	143.4
1974	143.1	145.0	133.5	145.2	147.4	136.0
1975	139.9	145.2	118.0	137.6	141.5	120.9
1976	139.6	145.0	118.2	136.7	140.5	121.0
1977	148.6	148.4	149.5	148.2	147.3	152.2
1978 ²	149.9	148.5	156.6	146.0	143.5	159.0
Average annual percent change:						
1958-78	5.7	5.7	5.6	5.4	5.4	5.7
1973-78	1.2	.9	2.8	.4	(³)	2.5

¹ 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.

² Preliminary.

³ Less than .05 percent.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

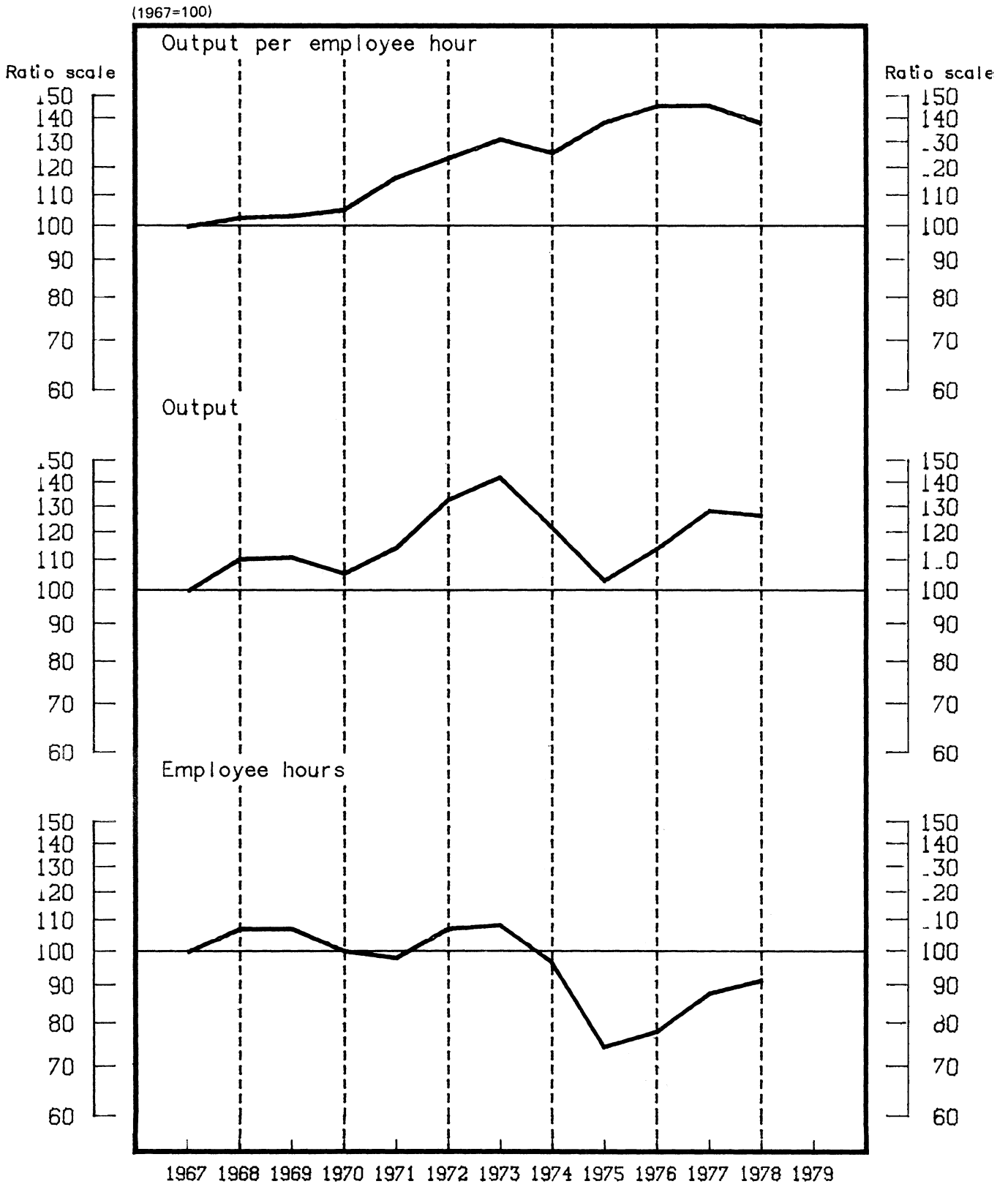
Table 135. Household refrigerators and freezers (SIC 3632): Indexes of output, employee hours, and employees, 1958-78
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	40.2	80.2	77.6	93.4	78.3	75.6	91.2
1959	50.2	91.3	91.6	89.8	88.7	88.8	87.9
1960	53.4	88.3	87.5	92.8	88.9	88.4	91.2
1961	51.8	80.2	79.1	86.2	78.7	77.2	85.7
1962	59.6	85.5	86.4	80.8	79.4	79.3	80.2
1963	68.5	83.6	82.8	87.4	81.3	80.2	86.8
1964	79.0	90.0	90.3	88.6	86.4	86.1	87.9
1965	87.4	96.4	96.4	96.4	91.7	90.9	95.6
1966	95.0	103.6	105.1	95.8	101.7	103.0	95.6
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	110.5	105.6	105.9	104.2	103.4	103.9	101.1
1969	107.0	97.7	96.8	102.4	96.4	95.9	98.9
1970	99.6	94.1	93.1	98.8	92.1	91.6	94.5
1971	79.6	61.8	61.4	63.5	61.3	61.5	60.4
1972	92.5	65.3	65.8	62.9	64.3	65.1	60.4
1973	94.5	66.9	66.6	68.3	66.0	66.1	65.9
1974	89.6	62.6	61.8	67.1	61.7	60.8	65.9
1975	89.0	63.6	61.3	75.4	64.7	62.9	73.6
1976	86.4	61.9	59.6	73.1	63.2	61.5	71.4
1977	100.3	67.5	67.6	67.1	67.7	68.1	65.9
1978 ¹	101.3	67.6	68.2	64.7	69.4	70.6	63.7
Average annual percent change:							
1958-78	3.7	-1.9	-1.9	-1.8	-1.7	-1.6	-1.9
1973-78	1.9	.7	1.0	-9	1.5	1.9	-6

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 70. Household laundry equipment (SIC 3633): Output per hour and related data, 1967--78



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

Table 136. Household laundry equipment (SIC 3633): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	59.3	64.4	44.7	61.7	67.7	45.6
1959	64.5	68.9	50.9	65.7	70.4	51.9
1960	63.3	68.8	47.7	63.7	69.0	48.4
1961	69.2	75.8	50.8	70.7	78.1	51.0
1962	76.8	82.6	59.6	78.9	85.6	60.0
1963	91.4	90.5	95.0	93.9	93.7	94.6
1964	90.5	89.0	97.4	94.2	93.4	97.7
1965	91.6	94.8	80.4	95.5	99.9	81.1
1966	94.7	94.6	95.1	97.0	97.7	94.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.8	101.1	110.4	104.2	102.3	113.0
1969	103.4	102.5	107.0	101.8	99.8	111.0
1970	105.4	105.9	103.0	106.1	105.6	108.1
1971	116.6	116.5	117.3	120.4	119.8	122.7
1972	123.9	121.6	134.7	125.2	122.1	139.4
1973	131.5	128.6	144.5	132.6	129.0	149.5
1974	126.0	126.3	125.2	119.9	118.1	127.9
1975	138.5	139.2	135.0	132.6	131.3	137.7
1976	145.9	146.3	144.4	143.2	142.1	147.6
1977	146.1	143.0	160.3	143.5	139.6	161.8
1978 ²	138.2	133.3	162.7	137.2	131.7	163.8
Average annual percent change:						
1958-78	4.6	4.0	6.5	4.3	3.6	6.5
1973-78	2.2	1.7	4.1	2.3	2.0	3.6

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

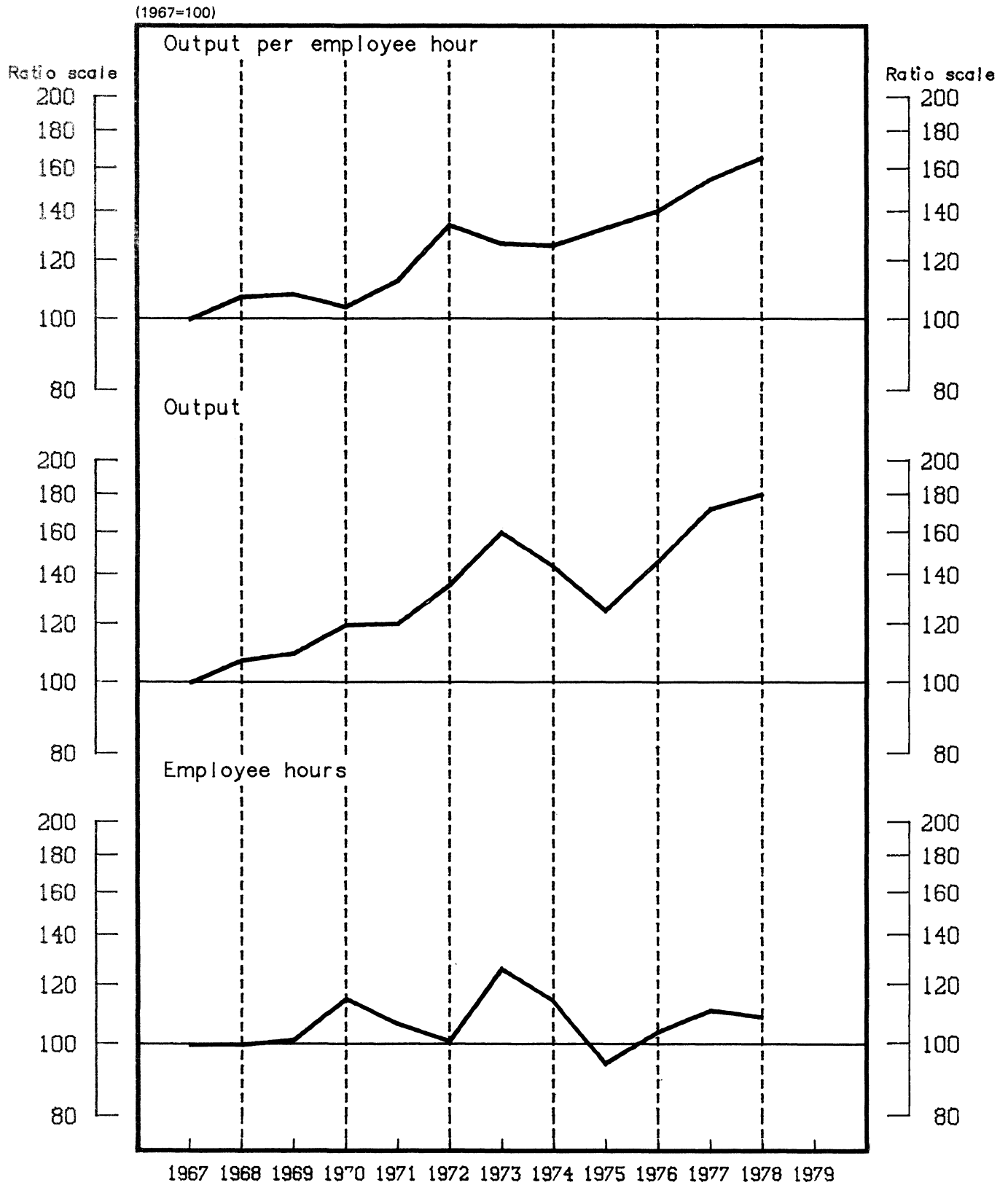
Table 137. Household laundry equipment (SIC 3633): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	68.4	115.3	106.2	153.1	110.8	101.1	150.0
1959	76.7	118.9	111.3	150.6	116.7	109.0	147.7
1960	67.1	106.0	97.6	140.7	105.4	97.2	138.6
1961	68.4	98.8	90.2	134.6	96.8	87.6	134.1
1962	75.0	97.6	90.8	125.9	95.0	87.6	125.0
1963	77.4	84.7	85.5	81.5	82.4	82.6	81.8
1964	86.6	95.7	97.3	88.9	91.9	92.7	88.6
1965	90.3	98.6	95.3	112.3	94.6	90.4	111.4
1966	101.0	106.7	106.8	106.2	104.1	103.4	106.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	110.4	107.4	109.2	100.0	105.9	107.9	97.7
1969	111.0	107.4	108.3	103.7	109.0	111.2	100.0
1970	105.6	100.2	99.7	102.5	99.5	100.0	97.7
1971	114.4	98.1	98.2	97.5	95.0	95.5	93.2
1972	133.1	107.4	109.5	98.8	106.3	109.0	95.5
1973	142.8	108.6	111.0	98.8	107.7	110.7	95.5
1974	122.1	96.9	96.7	97.5	101.8	103.4	95.5
1975	103.3	74.6	74.2	76.5	77.9	78.7	75.0
1976	114.1	78.2	78.0	79.0	79.7	80.3	77.3
1977	128.6	88.0	89.9	80.2	89.6	92.1	79.5
1978 ¹	126.6	91.6	95.0	77.8	92.3	96.1	77.3
Average annual percent change:							
1958-78	3.5	-1.0	-0.5	-2.8	-0.7	-0.1	-2.8
1973-78	-1.0	-3.1	-2.7	-4.9	-3.2	-2.9	-4.4

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 71. Household appliances not elsewhere classified (SIC 3639): Output per hour and related data, 1967-78



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

Table 138. Household appliances not elsewhere classified (SIC 3639): Indexes of output per employee hour and output per employee, 1958-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	64.2	69.8	50.9	62.2	67.1	51.2
1959	72.6	79.6	56.4	68.3	73.4	56.7
1960	76.2	79.7	66.6	74.1	77.0	66.9
1961	80.7	85.6	68.0	79.5	84.1	68.3
1962	89.9	91.1	86.6	87.9	88.4	86.6
1963	94.4	93.7	96.6	92.5	91.4	96.2
1964	102.2	101.4	104.6	100.2	99.0	104.1
1965	104.2	101.0	116.1	102.6	98.5	116.6
1966	97.0	94.4	106.5	96.6	93.9	105.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.2	105.6	112.6	106.5	104.1	113.9
1969	108.1	108.6	106.3	105.8	104.5	109.7
1970	104.0	103.3	106.3	101.6	99.0	110.1
1971	112.7	113.7	109.9	109.0	107.4	113.6
1972	134.2	133.7	135.7	129.9	126.8	139.8
1973	126.7	120.4	152.8	119.2	110.4	155.6
1974	125.9	118.7	156.5	118.5	109.2	158.0
1975	132.9	130.6	141.2	126.4	121.8	142.3
1976	140.3	134.4	164.3	135.0	127.0	165.6
1977	154.9	144.3	204.9	150.0	136.7	209.1
1978 ²	165.7	157.0	203.0	156.0	144.4	204.6
Average annual percent change:						
1958-78	3.9	3.3	6.0	3.8	3.1	6.1
1973-78	5.9	5.7	7.0	6.2	6.1	7.0

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

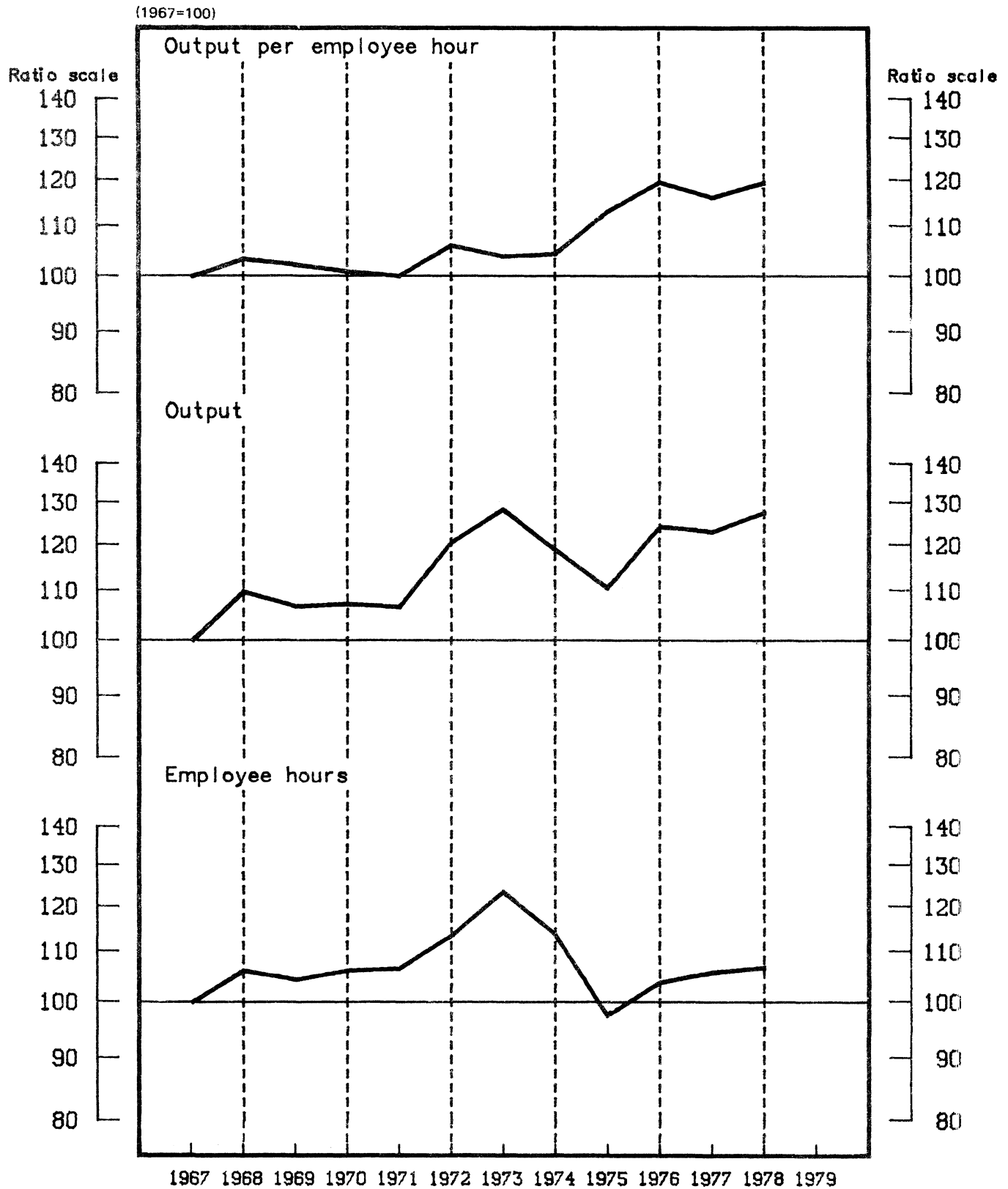
Table 139. Household appliances not elsewhere classified (SIC 3639): Indexes of output, employee hours, and employees, 1958-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	67.8	105.6	97.1	133.3	109.0	101.0	132.4
1959	73.4	101.1	92.2	130.2	107.5	100.0	129.4
1960	70.8	92.9	88.8	106.3	95.5	92.0	105.9
1961	72.3	89.6	84.5	106.3	91.0	86.0	105.9
1962	86.6	96.3	95.1	100.0	98.5	98.0	100.0
1963	90.5	95.9	96.6	93.7	97.8	99.0	94.1
1964	98.0	95.9	96.6	93.7	97.8	99.0	94.1
1965	99.5	95.5	98.5	85.7	97.0	101.0	85.3
1966	93.0	95.9	98.5	87.3	96.3	99.0	88.2
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.2	100.0	101.5	95.2	100.7	103.0	94.1
1969	109.7	101.5	101.0	103.2	103.7	105.0	100.0
1970	119.8	115.2	116.0	112.7	117.9	121.0	108.8
1971	120.3	106.7	105.8	109.5	110.4	112.0	105.9
1972	135.7	101.1	101.5	100.0	104.5	107.0	97.1
1973	160.1	126.4	133.0	104.8	134.3	145.0	102.9
1974	144.1	114.5	121.4	92.1	121.6	132.0	91.2
1975	125.5	94.4	96.1	88.9	99.3	103.0	88.2
1976	146.1	104.1	108.7	88.9	108.2	115.0	88.2
1977	172.3	111.2	119.4	84.1	114.9	126.0	82.4
1978 ¹	180.5	108.9	115.0	88.9	115.7	125.0	88.2
Average annual percent change:							
1958-78	4.7	.8	1.4	-1.2	.9	1.6	-1.3
1973-78	3.7	-2.1	-1.9	-3.1	-2.3	-2.2	-3.0

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 72. Electric lamps (SIC 3641): Output per hour and related data, 1967-78



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

Table 140. Electric lamps (SIC 3641): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	71.4	72.5	64.5	70.6	71.3	65.6
1955	76.1	76.7	71.9	77.0	77.5	73.1
1956	79.4	79.2	81.4	81.3	81.1	82.8
1957	76.4	77.9	66.9	76.7	78.1	68.1
1958	78.8	81.7	62.0	78.5	81.1	63.1
1959	84.2	85.8	73.9	86.6	88.4	75.1
1960	86.4	87.9	77.1	85.8	87.0	77.9
1961	85.1	86.8	74.0	85.6	87.3	74.3
1962	90.5	91.7	81.7	91.9	93.4	81.7
1963	92.4	93.1	88.2	93.9	94.8	88.3
1964	95.5	96.3	90.3	96.7	97.7	90.3
1965	101.5	101.5	101.4	104.2	104.6	101.4
1966	102.1	101.4	107.5	104.9	104.5	107.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.4	103.3	104.1	104.4	104.3	104.9
1969	102.3	102.9	97.9	102.3	102.7	99.8
1970	101.0	100.7	104.1	102.8	102.2	107.3
1971	100.1	100.2	98.9	100.7	100.5	101.9
1972	106.2	105.7	109.4	108.5	107.9	112.7
1973	104.0	103.0	112.1	106.4	105.3	115.1
1974	104.5	105.0	100.2	104.7	105.0	102.4
1975	113.3	114.8	103.5	114.1	115.3	105.7
1976	119.7	120.5	113.7	123.8	124.8	116.3
1977	116.3	117.2	110.3	119.3	120.2	112.7
1978 ²	119.6	120.2	114.4	124.1	125.0	116.9
Average annual percent change:						
1954-78	2.0	1.9	2.4	2.0	2.0	2.4
1973-78	3.1	3.3	1.4	3.6	3.9	1.3

¹ 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.

² Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the Census and the Bureau of Labor Statistics.

Table 141. Electric lamps (SIC 3641): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

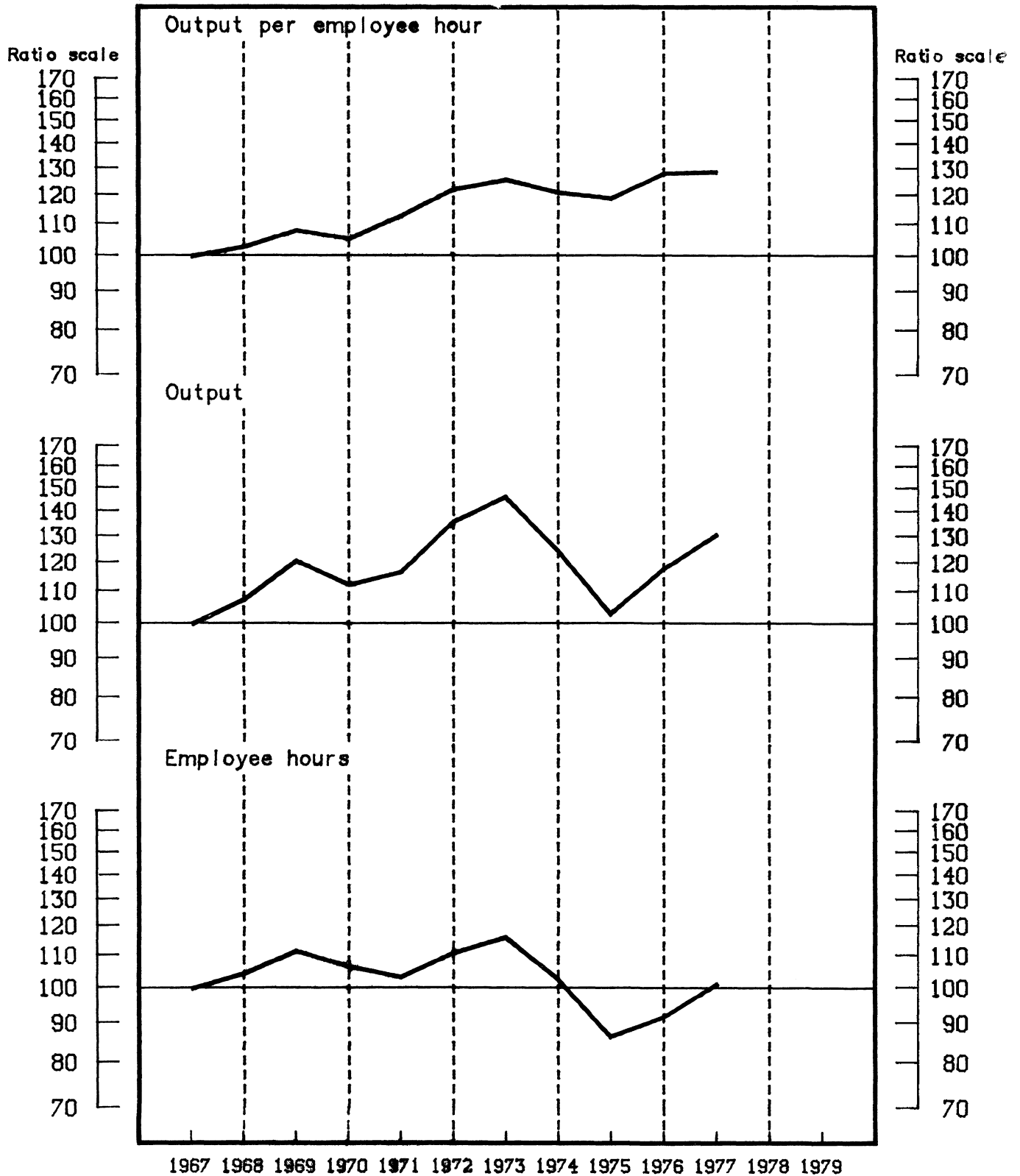
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	50.3	70.4	69.4	78.0	71.2	70.5	76.7
1955	56.1	73.7	73.1	78.0	72.9	72.4	76.7
1956	63.5	80.0	80.2	78.0	78.1	78.3	76.7
1957	63.3	82.8	81.3	94.6	82.5	81.1	93.0
1958	57.2	72.6	70.0	92.2	72.9	70.5	90.7
1959	68.1	80.9	79.4	92.2	78.6	77.0	90.7
1960	68.9	79.7	78.4	89.4	80.3	79.2	88.4
1961	64.0	75.2	73.7	86.5	74.8	73.3	86.1
1962	72.2	79.8	78.7	88.4	78.6	77.3	88.4
1963	75.9	82.1	81.5	86.1	80.8	80.1	86.0
1964	79.8	83.6	82.9	88.4	82.5	81.7	88.4
1965	89.6	88.3	88.3	88.4	86.0	85.7	88.4
1966	100.0	97.9	98.6	93.0	95.3	95.7	93.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	109.8	106.2	106.3	105.5	105.2	105.3	104.7
1969	106.8	104.4	103.8	109.1	104.4	104.0	107.0
1970	107.3	106.2	106.6	103.1	104.4	105.0	100.0
1971	106.7	106.6	106.5	107.9	106.0	106.2	104.7
1972	120.6	113.6	114.1	110.2	111.2	111.8	107.0
1973	128.5	123.6	124.8	114.6	120.8	122.0	111.6
1974	119.1	114.0	113.4	118.9	113.7	113.4	116.3
1975	110.7	97.7	96.4	107.0	97.0	96.0	104.7
1976	124.4	103.9	103.2	109.4	100.5	99.7	107.0
1977	123.2	105.9	105.1	111.7	103.3	102.5	109.3
1978 ¹	127.8	106.9	106.3	111.7	103.0	102.2	109.3
Average annual percent change:							
1954-78	4.0	2.0	2.1	1.6	1.9	2.0	1.5
1973-78 .....	.5	-2.5	-2.7	-8	-3.0	-3.2	-8

¹ Preliminary.
SOURCE: Output, employment, and hours based on data from the Bureau of the

Census and the Bureau of Labor Statistics.

Chart 73. Lighting fixtures (SIC 3645, 3647, 3648): Output per hour and related data, 1967-78

(1967=100)



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

Table 142. Lighting fixtures (SIC 3645, 3646, 3647, 3648): Indexes of output per employee hour and output per employee, 1961-77
(1967=100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1961	83.6	82.6	87.4	82.1	80.5	88.0
1962	91.1	89.5	97.3	90.4	88.3	98.1
1963	91.0	90.4	93.7	91.4	90.5	94.3
1964	93.0	93.4	92.3	92.6	92.5	93.0
1965	97.4	95.4	105.1	98.7	96.9	105.8
1966	100.5	99.1	105.8	100.1	98.5	106.1
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.9	104.0	99.0	104.3	105.0	101.9
1969	108.1	109.9	102.1	108.5	109.4	105.6
1970	105.4	109.3	93.3	105.5	108.1	97.7
1971	113.0	116.1	102.5	111.1	112.4	107.2
1972	122.4	124.9	114.2	122.7	123.8	118.8
1973	126.0	126.6	123.4	125.2	124.6	127.3
1974	121.2	125.1	108.7	118.9	121.4	111.0
1975	119.1	125.7	99.4	115.6	120.7	101.0
1976	128.3	131.4	117.9	124.5	125.7	120.4
1977	128.9	134.1	112.9	125.9	129.6	114.9
Average annual percent change:						
1961-77	2.7	3.0	1.3	2.5	2.8	1.5
1973-77	1.0	1.7	-1.0	.6	1.1	-1.2

¹ 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.

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

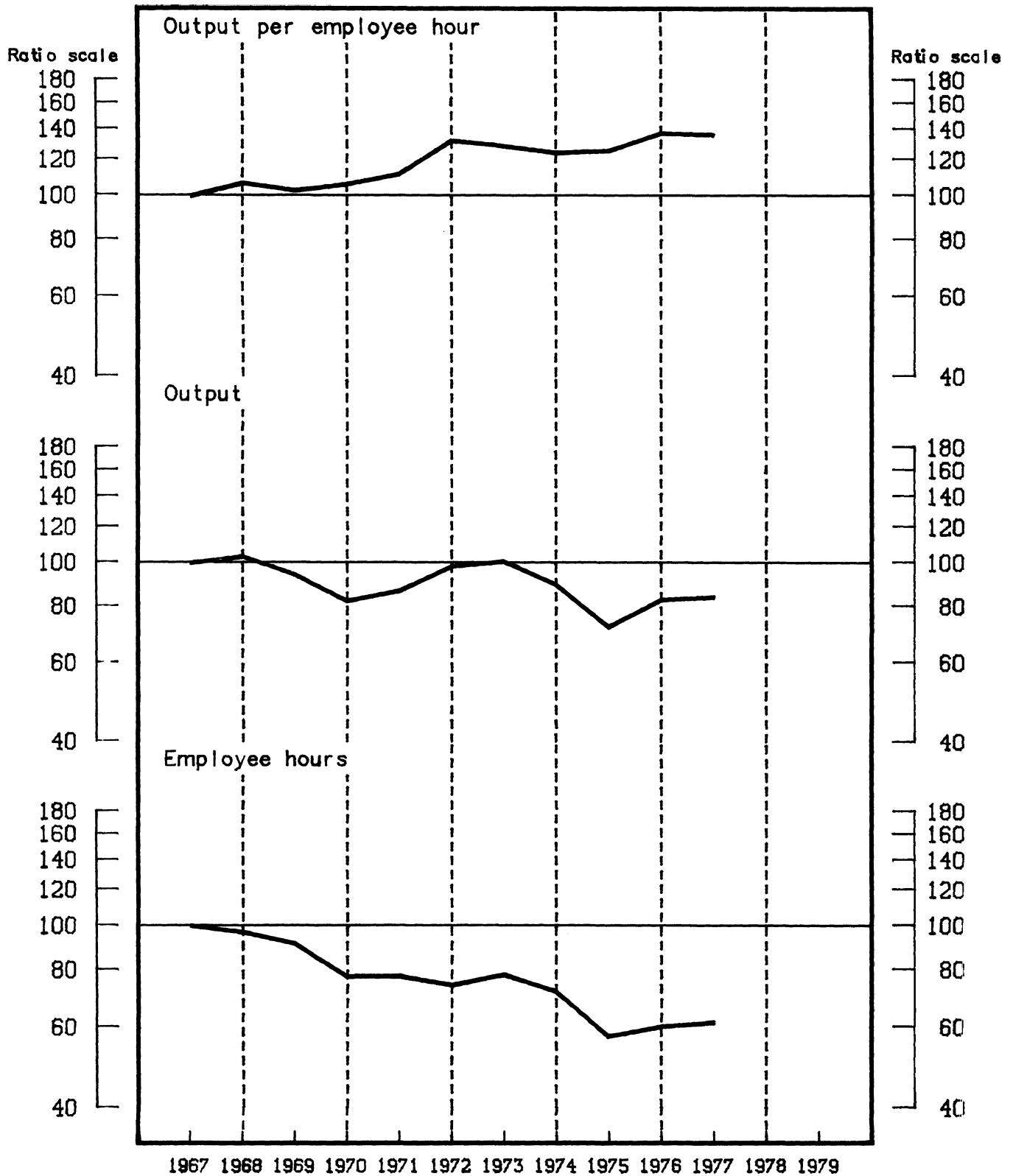
Table 143. Lighting fixtures (SIC 3645, 3646, 3647, 3648): Indexes of output, employee hours, and employees, 1961-77
(1967=100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1961	63.3	75.7	76.6	72.4	77.1	78.6	71.9
1962	72.6	79.7	81.1	74.6	80.3	82.2	74.0
1963	76.2	83.7	84.3	81.3	83.4	84.2	80.8
1964	81.6	87.7	87.4	88.4	88.1	88.2	87.7
1965	94.2	96.7	98.7	89.6	95.4	97.2	89.0
1966	100.3	99.8	101.2	94.8	100.2	101.8	94.5
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	107.5	104.5	103.4	108.6	103.1	102.4	105.5
1969	120.8	111.7	109.9	118.3	111.3	110.4	114.4
1970	112.4	106.6	102.8	120.5	106.5	104.0	115.1
1971	116.7	103.3	100.5	113.8	105.0	103.8	108.9
1972	135.9	111.0	108.8	119.0	110.8	109.8	114.4
1973	146.5	116.3	115.7	118.7	117.0	117.6	115.1
1974	124.6	102.8	99.6	114.6	104.8	102.6	112.3
1975	103.1	86.6	82.0	103.7	89.2	85.4	102.1
1976	117.9	91.9	89.7	100.0	94.7	93.8	97.9
1977	130.6	101.3	97.4	115.7	103.7	100.8	113.7
Average annual percent change:							
1961-77	4.0	1.3	1.0	2.7	1.5	1.2	2.5
1973-77	-2.8	-3.8	-4.4	-1.9	-3.4	-3.9	-1.6

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

Chart 74. Radio and television receiving sets (SIC 3651): Output per hour and related data, 1967-78

(1967=100)



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

Table 144. Radio and television receiving sets (SIC 3651): Indexes of output per employee hour and output per employee, 1958-77
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1958	62.9	66.2	50.5	63.7	67.1	51.5
1959	67.2	69.0	59.8	68.1	69.8	60.9
1960	68.8	72.3	55.8	69.4	73.0	56.6
1961	70.5	75.1	54.1	69.8	74.2	54.4
1962	78.5	81.1	67.9	79.2	82.0	68.3
1963	87.4	87.9	85.2	88.4	88.9	85.5
1964	87.2	87.3	86.5	89.7	90.2	87.3
1965	95.5	94.3	102.3	99.5	98.8	102.8
1966	98.4	95.9	112.5	100.4	98.1	112.6
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	106.7	108.2	100.2	107.3	108.3	102.9
1969	102.8	105.8	90.3	104.1	106.8	93.2
1970	106.2	115.6	75.9	107.2	115.9	79.3
1971	111.6	118.8	86.0	112.6	118.9	89.8
1972	132.2	136.0	116.1	132.5	135.3	120.5
1973	128.7	131.4	117.3	127.8	129.2	120.9
1974	124.4	132.3	95.9	119.3	125.1	97.7
1975	125.7	137.7	88.2	122.5	132.9	89.8
1976	137.3	151.6	93.9	135.2	148.3	96.1
1977	136.3	148.1	98.1	132.2	142.3	99.6
Average annual percent change:						
1958-77	4.2	4.5	3.1	4.0	4.2	3.2
1973-77	2.1	3.8	-3.7	2.0	3.7	-4.0

¹ 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.

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

Table 145. Radio and television receiving sets (SIC 3651): Indexes of output, employee hours, and employees, 1958-77
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1958	36.3	57.7	54.8	71.9	57.0	54.1	70.5
1959	43.7	65.0	63.3	73.1	64.2	62.6	71.7
1960	42.7	62.1	59.1	76.5	61.5	58.5	75.5
1961	45.9	65.1	61.1	84.8	65.8	61.9	84.3
1962	56.3	71.7	69.4	82.9	71.1	68.7	82.4
1963	61.5	70.4	70.0	72.2	69.6	69.2	71.9
1964	66.5	76.3	76.2	76.9	74.1	73.7	76.2
1965	85.4	89.4	90.6	83.5	85.8	86.4	83.1
1966	111.9	113.7	116.7	99.5	111.5	114.1	99.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.4	96.9	95.6	103.2	96.4	95.5	100.5
1969	94.1	91.5	88.9	104.2	90.4	88.1	101.0
1970	82.4	77.6	71.3	108.5	76.9	71.1	103.9
1971	86.7	77.7	73.0	100.8	77.0	72.9	96.6
1972	98.2	74.3	72.2	84.6	74.1	72.6	81.5
1973	100.8	78.3	76.7	85.9	78.9	78.0	83.4
1974	89.6	72.0	67.7	93.4	75.1	71.6	91.7
1975	72.3	57.5	52.5	82.0	59.0	54.4	80.5
1976	82.9	60.4	54.7	88.3	61.3	55.9	86.3
1977	84.1	61.7	56.8	85.7	63.6	59.1	84.4
Average annual percent change:							
1958-77	4.2	(¹)	-2	1.1	.2	(¹)	1.0
1973-77	-4.3	-6.3	-7.8	-6	-6.1	-7.7	-4

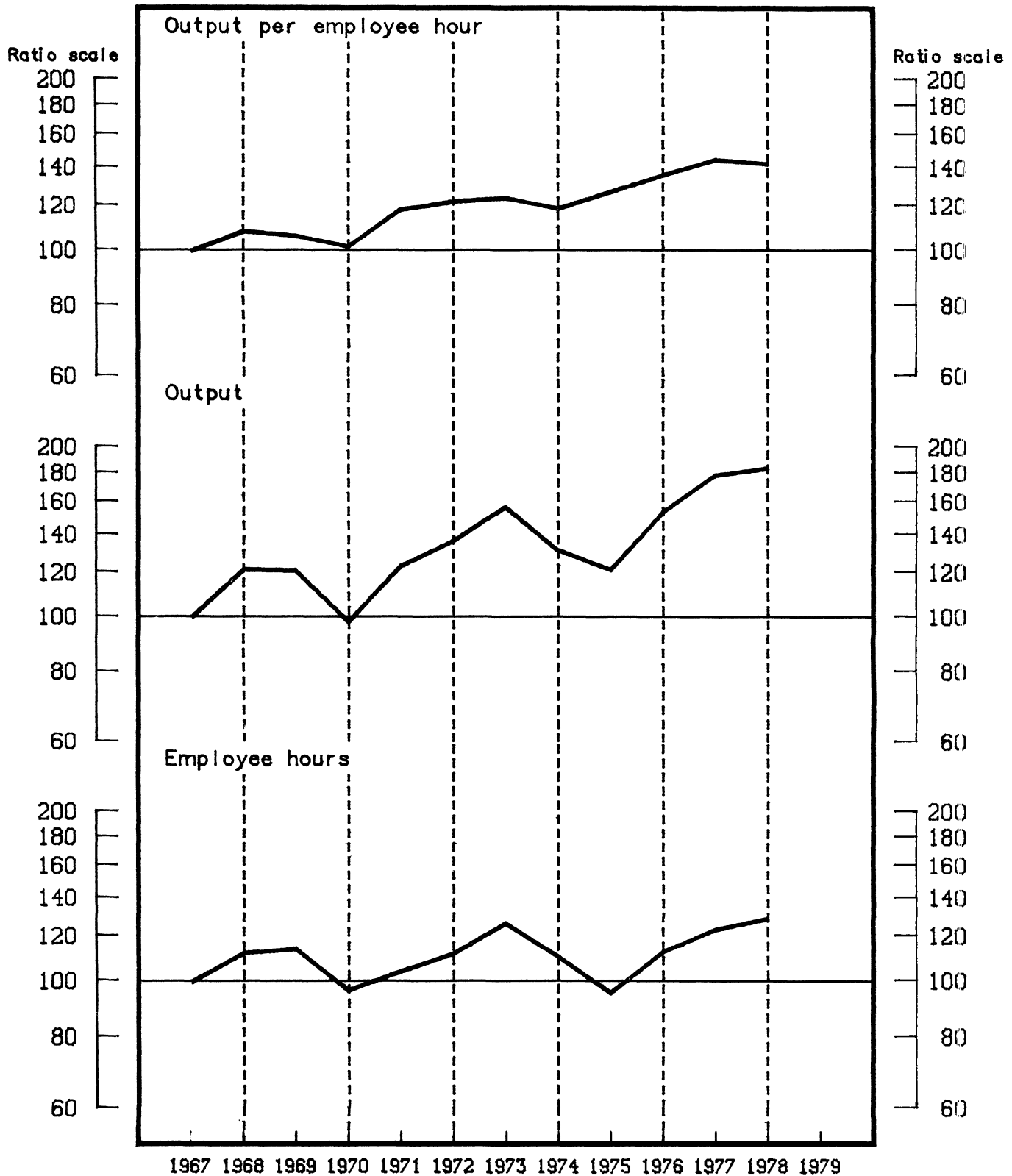
¹ Less than .05 percent.

Census and the Bureau of Labor Statistics.

SOURCE: Output, employment, and hours based on data from the Bureau of the

Chart 75. Motor vehicles and equipment (SIC 371): Output per hour and related data, 1967-78

(1967=100)



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

Table 146. Motor vehicles and equipment (SIC 371): Indexes of output per employee hour and output per employee, 1957-78
(1967 = 100)

Year	Output per hour ¹			Output per employee ¹		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1957	68.9	67.6	73.3	68.9	67.7	73.3
1958	66.9	69.2	60.5	65.3	67.3	59.6
1959	73.3	72.5	75.9	73.7	73.0	76.4
1960	79.6	78.5	83.1	79.8	78.9	83.3
1961	80.6	81.9	76.7	79.4	80.4	75.8
1962	88.4	87.2	92.6	91.6	91.2	93.2
1963	91.9	90.4	96.7	95.5	94.9	97.9
1964	92.8	91.9	96.1	97.0	96.8	97.4
1965	99.0	96.0	110.1	105.8	103.9	112.4
1966	99.5	97.9	105.9	103.8	102.6	108.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	108.3	106.0	116.1	113.5	112.0	119.1
1969	106.2	105.0	110.4	108.5	107.4	112.5
1970	101.8	103.0	97.7	100.4	101.8	95.9
1971	118.2	117.0	122.3	118.7	118.1	120.7
1972	122.1	120.3	128.1	127.5	126.8	129.9
1973	123.9	122.1	129.8	131.0	130.2	133.7
1974	118.8	120.6	113.1	118.2	120.0	112.9
1975	127.1	128.1	123.8	125.2	126.5	120.9
1976	136.0	134.4	141.9	142.3	141.1	146.2
1977	144.7	142.4	152.8	154.8	153.5	159.6
1978 ²	142.3	139.8	150.7	150.3	148.4	156.9
Average annual percent change:						
1957-78	3.5	3.5	3.6	3.7	3.7	3.7
1973-78	3.9	3.5	5.2	4.8	4.4	6.0

¹ 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.

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.

² Preliminary.

SOURCE: Output based on data from company records; the Motor Vehicle

Table 147. Motor vehicles and equipment (SIC 371): Indexes of output, employee hours, and employees, 1957-78
(1967 = 100)

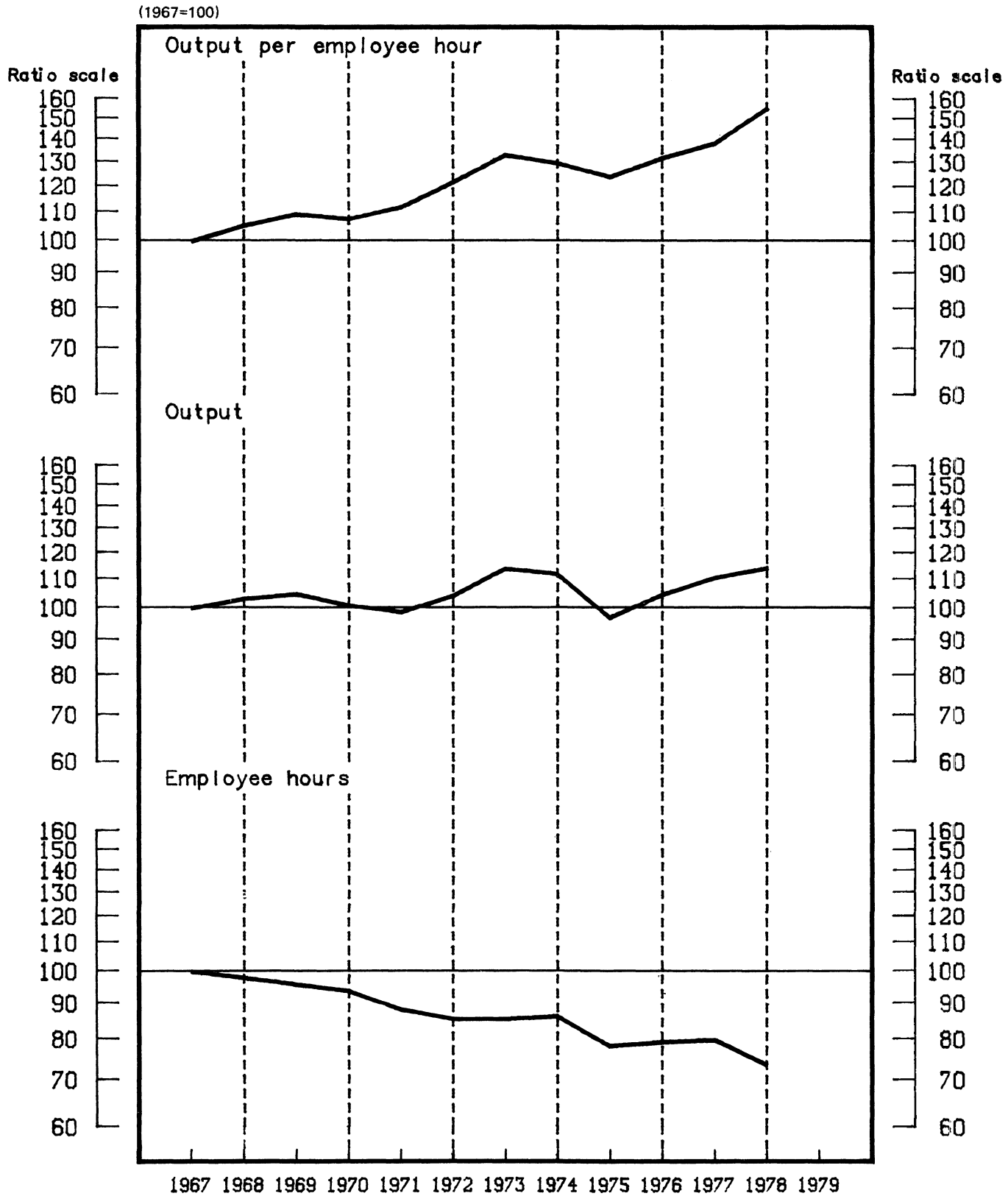
Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1957	65.0	94.4	96.2	88.7	94.3	96.0	88.7
1958	48.6	72.6	70.2	80.3	74.4	72.2	81.5
1959	62.6	85.4	86.4	82.5	84.9	85.8	81.9
1960	70.9	89.1	90.3	85.3	88.8	89.9	85.1
1961	61.5	76.3	75.1	80.2	77.5	76.5	81.1
1962	77.7	87.9	89.1	83.9	84.8	85.2	83.4
1963	86.8	94.5	96.0	89.8	90.9	91.5	88.7
1964	89.5	96.4	97.4	93.1	92.3	92.5	91.9
1965	109.3	110.4	113.8	99.3	103.3	105.2	97.2
1966	109.7	110.2	112.1	103.6	105.7	106.9	101.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	121.6	112.3	114.7	104.7	107.1	108.6	102.1
1969	121.2	114.1	115.4	109.8	111.7	112.9	107.7
1970	98.3	96.6	95.4	100.6	97.9	96.6	102.5
1971	123.4	104.4	105.5	100.9	104.0	104.5	102.2
1972	136.7	112.0	113.6	106.7	107.2	107.8	105.2
1973	156.8	126.6	128.4	120.8	119.7	120.4	117.3
1974	131.6	110.8	109.1	116.4	111.3	109.7	116.6
1975	121.6	95.7	94.9	98.2	97.1	96.1	100.6
1976	153.7	113.0	114.4	108.3	108.0	108.9	105.1
1977	178.8	123.6	125.6	117.0	115.5	116.5	112.0
1978 ¹	183.7	129.1	131.4	121.9	122.2	123.8	117.1
Average annual percent change:							
1957-78	5.4	1.9	1.9	1.8	1.7	1.7	1.7
1973-78	5.7	1.7	2.1	.5	.9	1.3	-.2

¹ Preliminary.

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 76. Railroad transportation, revenue traffic (SIC 401): Output per hour and related data, 1967--78



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

Table 148. Railroad transportation, revenue traffic (SIC 401)¹: Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ²			Output per employee ²		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	48.9	47.5	63.4	49.9	48.4	66.5
1955	51.9	50.3	67.2	53.8	52.1	72.7
1956	52.9	51.4	67.4	54.6	53.0	73.1
1957	53.0	51.8	64.7	54.1	52.6	70.1
1958	56.9	56.2	62.5	57.7	56.7	67.7
1959	60.7	60.0	66.7	61.9	60.8	72.4
1960	62.4	61.9	66.7	63.2	62.2	72.2
1961	67.4	67.2	69.2	68.1	67.3	74.5
1962	72.3	72.0	74.8	73.6	72.8	80.7
1963	78.0	75.7	78.5	77.8	77.0	84.7
1964	80.9	80.6	83.3	83.9	83.1	90.6
1965	90.1	90.2	89.4	92.5	91.9	96.9
1966	97.2	97.2	96.9	99.3	98.9	102.4
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	105.3	105.5	103.8	106.5	106.7	104.3
1969	109.3	109.5	107.3	110.4	110.8	107.0
1970	107.6	108.0	104.1	108.5	109.1	103.6
1971	111.9	112.9	104.6	108.2	108.9	103.3
1972	121.7	123.2	112.2	120.9	122.3	110.1
1973	133.2	134.4	123.9	130.9	132.1	120.8
1974	129.6	130.8	121.2	128.4	129.9	117.8
1975	123.9	126.3	107.8	120.2	122.5	104.3
1976	131.9	133.9	117.8	129.5	131.6	114.3
1977	138.4	140.4	125.3	135.9	138.1	119.7
1978 ³	155.3	158.1	136.7	153.0	156.1	131.1
Average annual percent change:						
1947-78	4.8	5.0	2.7	4.3	4.5	2.1
1973-78	3.0	3.1	2.0	3.0	3.2	1.6

¹ Class I railroads and Class I switching and terminal companies.

² 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.

³ Preliminary.

SOURCE: Based on Interstate Commerce Commission data.

Table 149. Railroad transportation, revenue traffic (SIC 401)¹: Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	87.4	178.7	184.0	137.9	175.2	180.7	131.5
1955	93.7	180.7	186.1	139.5	174.2	179.9	128.8
1956	94.2	178.2	183.1	139.8	172.4	177.9	128.8
1957	88.4	166.9	170.8	136.6	163.5	168.2	126.1
1958	80.4	141.4	143.1	128.6	139.3	141.9	118.8
1959	83.7	137.8	139.4	125.4	135.2	137.6	115.6
1960	81.9	131.2	132.3	122.7	129.5	131.6	113.5
1961	81.0	120.1	120.5	117.1	119.0	120.4	108.7
1962	85.4	118.1	118.6	114.2	116.1	117.3	105.8
1963	87.7	115.4	115.9	111.7	112.7	113.9	103.6
1964	92.4	114.2	114.6	110.9	110.1	111.2	102.0
1965	97.4	108.1	108.0	109.0	105.3	106.0	100.5
1966	102.8	105.8	105.8	106.1	103.5	103.9	100.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.2	98.0	97.8	99.4	96.9	96.7	98.9
1969	104.8	95.9	95.7	97.7	94.9	94.6	97.9
1970	101.0	93.9	93.5	97.0	93.1	92.6	97.5
1971	98.8	88.3	87.5	94.5	91.3	90.7	95.6
1972	104.2	85.6	84.6	92.9	86.2	85.2	94.6
1973	114.0	85.6	84.8	92.0	87.1	86.3	94.4
1974	112.0	86.4	85.6	92.4	87.2	86.2	95.1
1975	97.0	78.3	76.8	90.0	80.7	79.2	93.0
1976	104.6	79.3	78.1	88.8	80.8	79.5	91.5
1977	110.6	79.9	78.8	88.3	81.4	80.1	92.4
1978 ²	114.3	73.6	72.3	83.6	74.7	73.2	87.2
Average annual percent change:							
1947-78 .....	.5	-4.1	-4.3	-2.2	-3.6	-3.9	-1.6
1973-78 .....	.1	-2.8	-2.9	-1.8	-2.7	-2.9	-1.4

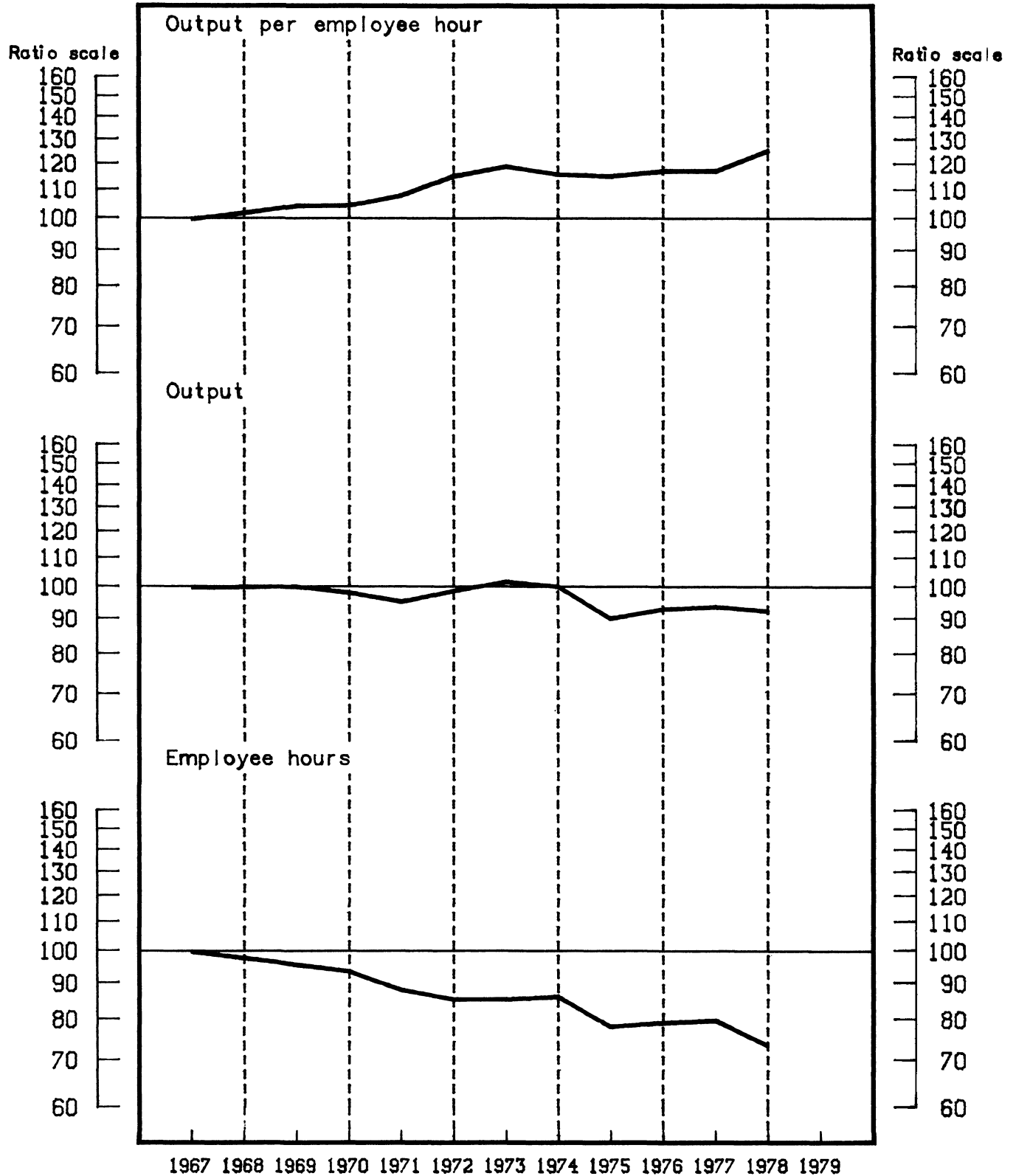
¹ Class I railroads and Class I switching and terminal companies.

² Preliminary.

SOURCE: Based on Interstate Commerce Commission data.

Chart 77. Railroad transportation, car miles (SIC 401): Output per hour and related data, 1967--78

(1967=100)



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

Table 150. Railroad transportation, car miles (SIC 401)¹: Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ²			Output per employee ²		
	All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:						
1954	57.4	55.8	74.4	58.6	56.8	78.0
1955	60.9	59.1	78.9	63.1	61.1	85.4
1956	62.3	60.6	79.4	64.4	62.4	86.2
1957	64.3	62.8	78.6	65.6	63.8	85.1
1958	69.4	68.6	76.3	70.4	69.1	82.6
1959	72.1	71.3	79.3	73.5	72.2	86.0
1960	74.4	73.8	79.5	75.4	74.2	86.0
1961	78.4	78.1	80.4	79.1	78.2	86.6
1962	81.0	80.7	83.8	82.4	81.6	90.5
1963	83.8	83.4	86.6	85.8	84.9	93.3
1964	86.7	86.4	89.3	89.9	89.0	97.1
1965	92.5	92.6	91.7	95.0	94.3	99.5
1966	97.3	97.3	97.0	99.4	99.0	102.5
1967	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.1	102.4	100.7	103.3	103.5	101.2
1969	104.5	104.7	102.6	105.6	105.9	102.3
1970	104.7	105.1	101.3	105.6	106.2	100.8
1971	108.2	109.1	101.1	104.6	105.3	99.9
1972	115.5	116.9	106.5	114.7	116.1	104.5
1973	119.2	120.3	110.9	117.1	118.2	108.1
1974	116.2	117.3	108.7	115.1	116.5	105.6
1975	115.5	117.7	100.4	112.0	114.1	97.2
1976	117.5	119.3	105.0	115.3	117.2	101.9
1977	117.5	119.2	106.3	115.4	117.2	101.6
1978 ³	125.8	128.1	110.8	124.0	126.5	106.2
Average annual percent change:						
1947-78	3.7	3.9	1.7	3.2	3.4	1.1
1973-78 .....	.9	1.1	-.1	.9	1.1	-4

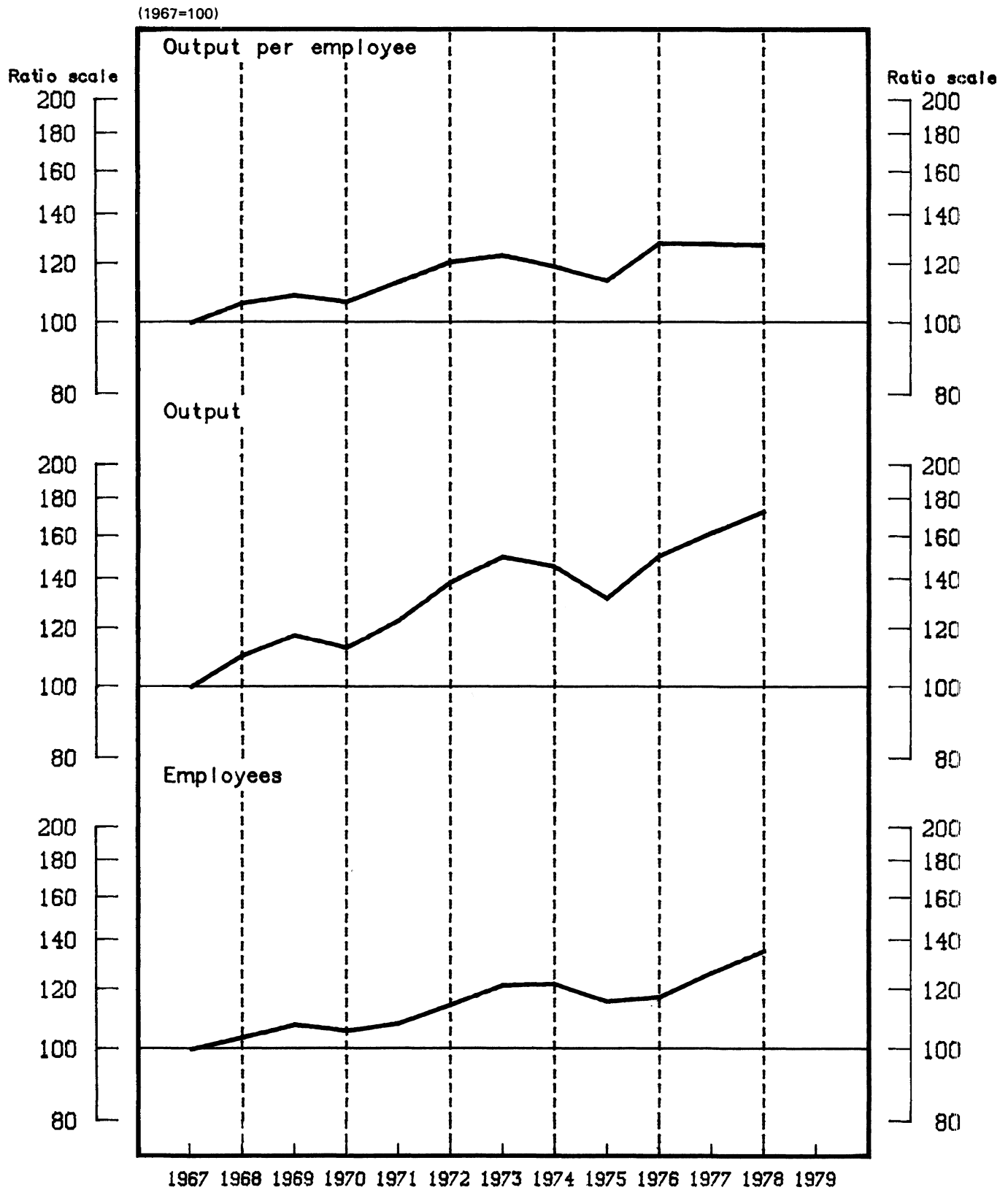
¹ Class I railroads and Class I switching and terminal companies.
² The output measures underlying the output per employee hour and output per employee indexes relate to the total production of the industry. They do not relate to the specific output of any single group of employees.
³ Preliminary.
 SOURCE: Based on Interstate Commerce Commission data.

Table 151. Railroad transportation, car miles (SIC 401)¹: Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours			Employees		
		All employees	Production workers	Nonproduction workers	All employees	Production workers	Nonproduction workers
Index:							
1954	102.6	178.7	184.0	137.9	175.2	180.7	131.5
1955	110.0	180.7	186.1	139.5	174.2	179.9	128.8
1956	111.0	178.2	183.1	139.8	172.4	177.9	128.8
1957	107.3	166.9	170.8	136.6	163.5	168.2	126.1
1958	98.1	141.4	143.1	128.6	139.3	141.9	118.8
1959	99.4	137.8	139.4	125.4	135.2	137.6	115.6
1960	97.6	131.2	132.3	122.7	129.5	131.6	113.5
1961	94.1	120.1	120.5	117.1	119.0	120.4	108.7
1962	95.7	118.1	118.6	114.2	116.1	117.3	105.8
1963	96.7	115.4	115.9	111.7	112.7	113.9	103.6
1964	99.0	114.2	114.6	110.9	110.1	111.2	102.0
1965	100.0	108.1	108.0	109.0	105.3	106.0	100.5
1966	102.9	105.8	105.8	106.1	103.5	103.9	100.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	100.1	98.0	97.8	99.4	96.9	96.7	98.9
1969	100.2	95.9	95.7	97.7	94.9	94.6	97.9
1970	98.3	93.9	93.5	97.0	93.1	92.6	97.5
1971	95.5	88.3	87.5	94.5	91.3	90.7	95.6
1972	98.9	85.6	84.6	92.9	86.2	85.2	94.6
1973	102.0	85.6	84.8	92.0	87.1	86.3	94.4
1974	100.4	86.4	85.6	92.4	87.2	86.2	95.1
1975	90.4	78.3	76.8	90.0	80.7	79.2	93.0
1976	93.2	79.3	78.1	88.8	80.8	79.5	91.5
1977	93.9	79.9	78.8	88.3	81.4	80.1	92.4
1978 ²	92.6	73.6	72.3	83.6	74.7	73.2	87.2
Average annual percent change:							
1947-78	-5	-4.1	-4.3	-2.2	-3.6	-3.9	-1.6
1973-78	-1.9	-2.8	-2.9	-1.8	-2.7	-2.9	-1.4

¹ Class I railroads and Class I switching and terminal companies.
² Preliminary.
 SOURCE: Based on Interstate Commerce Commission data.

Chart 78. Intercity trucking (SIC 4213 part): Output per employee and related data, 1967-78



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

Table 152. Intercity trucking (SIC 4213 part)¹: Indexes of output per employee, output, and employees, 1954-78
(1967=100)

Year	Output per employee	Output	Employees
Index:			
1954	72.8	44.6	61.3
1955	76.7	51.4	67.0
1956	77.0	53.6	69.6
1957	78.2	56.6	72.4
1958	80.4	56.5	70.3
1959	85.1	66.3	77.9
1960	85.0	67.4	79.3
1961	85.9	67.0	78.0
1962	88.6	72.6	81.9
1963	92.9	78.0	84.0
1964	95.3	82.9	87.0
1965	98.6	93.1	94.4
1966	104.0	103.4	99.4
1967	100.0	100.0	100.0
1968	106.4	110.3	103.7
1969	109.0	117.6	107.9
1970	106.8	113.1	105.9
1971	113.6	123.0	108.3
1972	120.9	138.7	114.7
1973	123.4	150.3	121.8
1974	119.3	146.0	122.4
1975	114.1	132.2	115.9
1976	128.2	150.8	117.6
1977 ²	127.9	162.0	126.7
1978 ²	127.6	173.3	135.8
Average annual percent change:			
1954-78	2.5	5.6	3.1
1973-78	1.4	3.4	1.9

¹ Class I and II common and contract carriers.

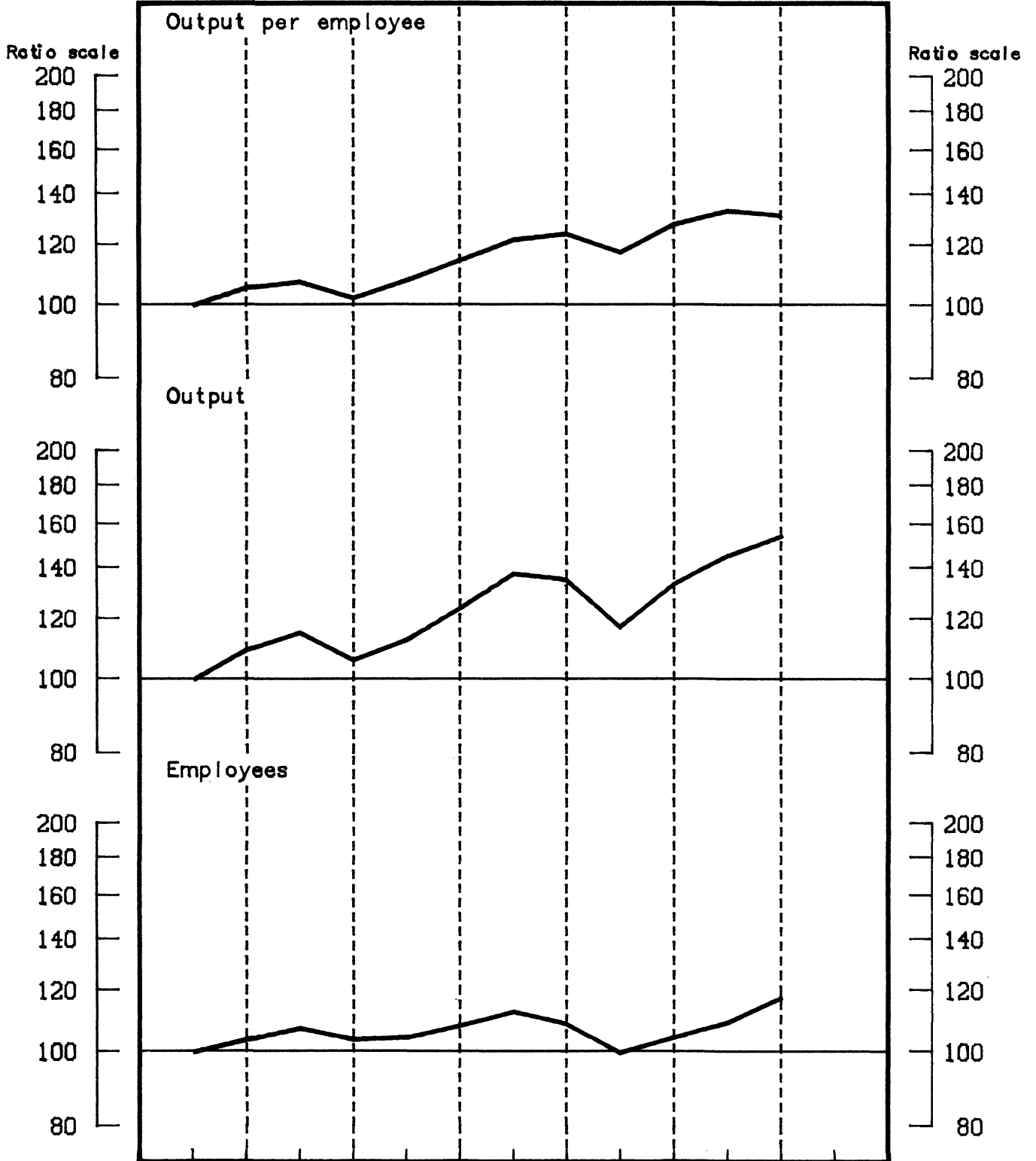
² Preliminary.

SOURCE: Based on data from the Interstate

Commerce Commission and Trinc Transportation Consultants, a division of Dunn and Bradstreet, Inc.

Chart 79. Intercity trucking, general freight (SIC 4213 part): Output per employee and related data, 1967-78

(1967=100)



1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979
 Source - Bureau of Labor Statistics, U.S. Department of Labor

Table 153. Intercity trucking, general freight (SIC 4213 part)¹: Indexes of output per employee, output, and employees, 1954-78
(1967=100)

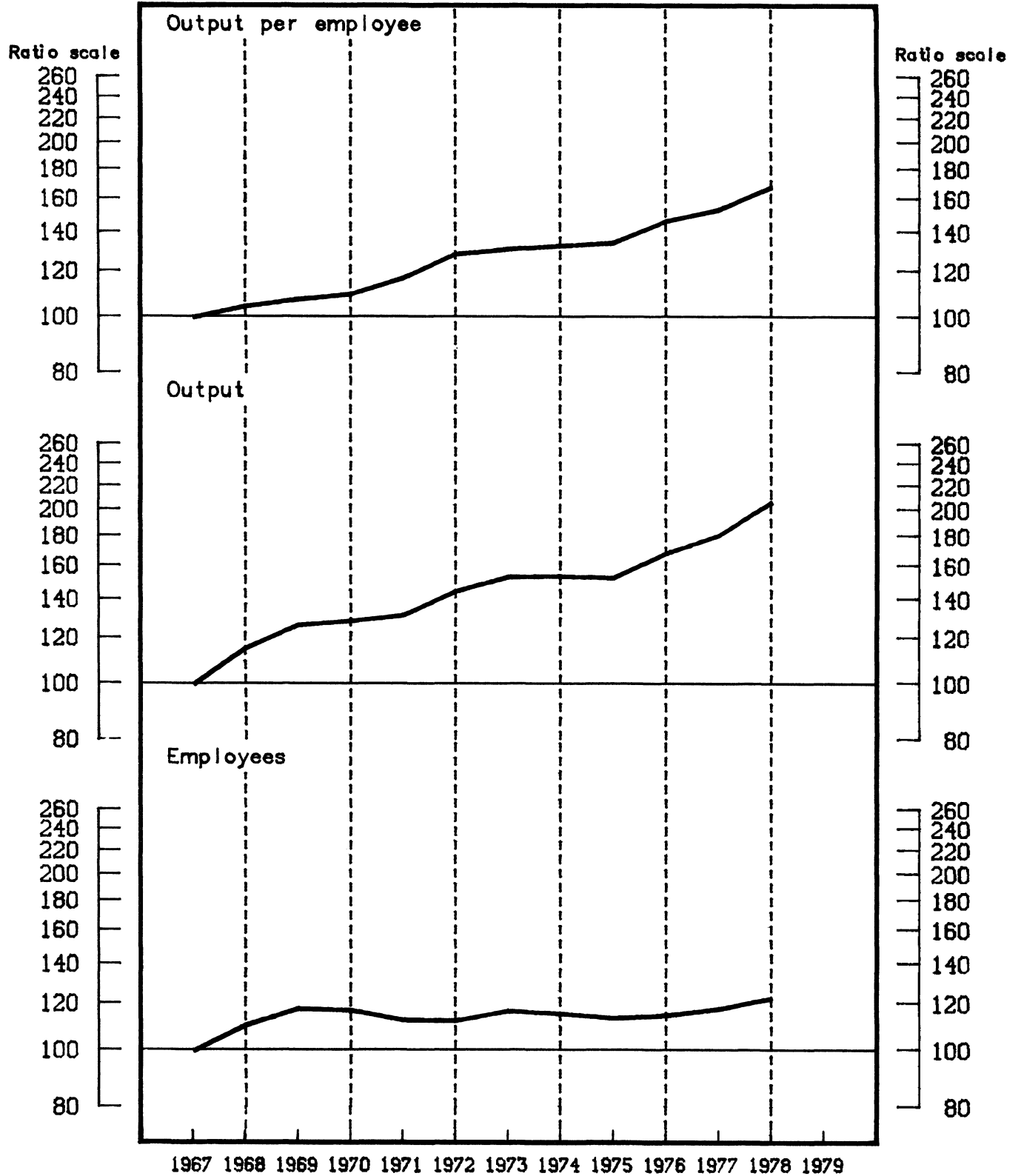
Year	Output per employee	Output	Employees
Index:			
1954	77.6	50.8	65.5
1955	80.1	56.8	70.9
1956	81.0	60.0	74.1
1957	80.7	62.3	77.2
1958	82.1	61.4	74.8
1959	87.8	71.2	81.1
1960	86.6	70.7	81.6
1961	86.6	69.5	80.3
1962	89.0	74.7	83.9
1963	92.7	79.0	85.2
1964	96.8	85.3	88.1
1965	104.8	93.6	89.3
1966	103.1	103.3	100.2
1967	100.0	100.0	100.0
1968	105.6	109.5	103.7
1969	107.5	115.3	107.3
1970	102.3	106.2	103.8
1971	108.0	112.8	104.4
1972	114.7	124.2	108.3
1973	122.1	137.8	112.9
1974	124.3	135.4	108.9
1975	117.6	117.4	99.8
1976	127.9	133.7	104.5
1977 ²	133.2	145.7	109.4
1978 ²	131.3	154.7	117.8
Average annual percent change:			
1954-78	2.3	4.5	2.2
1973-78	1.9	2.7	.8

¹ Class I and II common carriers of general freight.
² Preliminary.
 SOURCE: Based on data from the Interstate

Commerce Commission and Trinc Transportation Consultants, a division of Dunn and Bradstreet, Inc.

Chart 80. Air transportation (SIC 4511): Output per employee and related data, 1967-78

(1967=100)



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

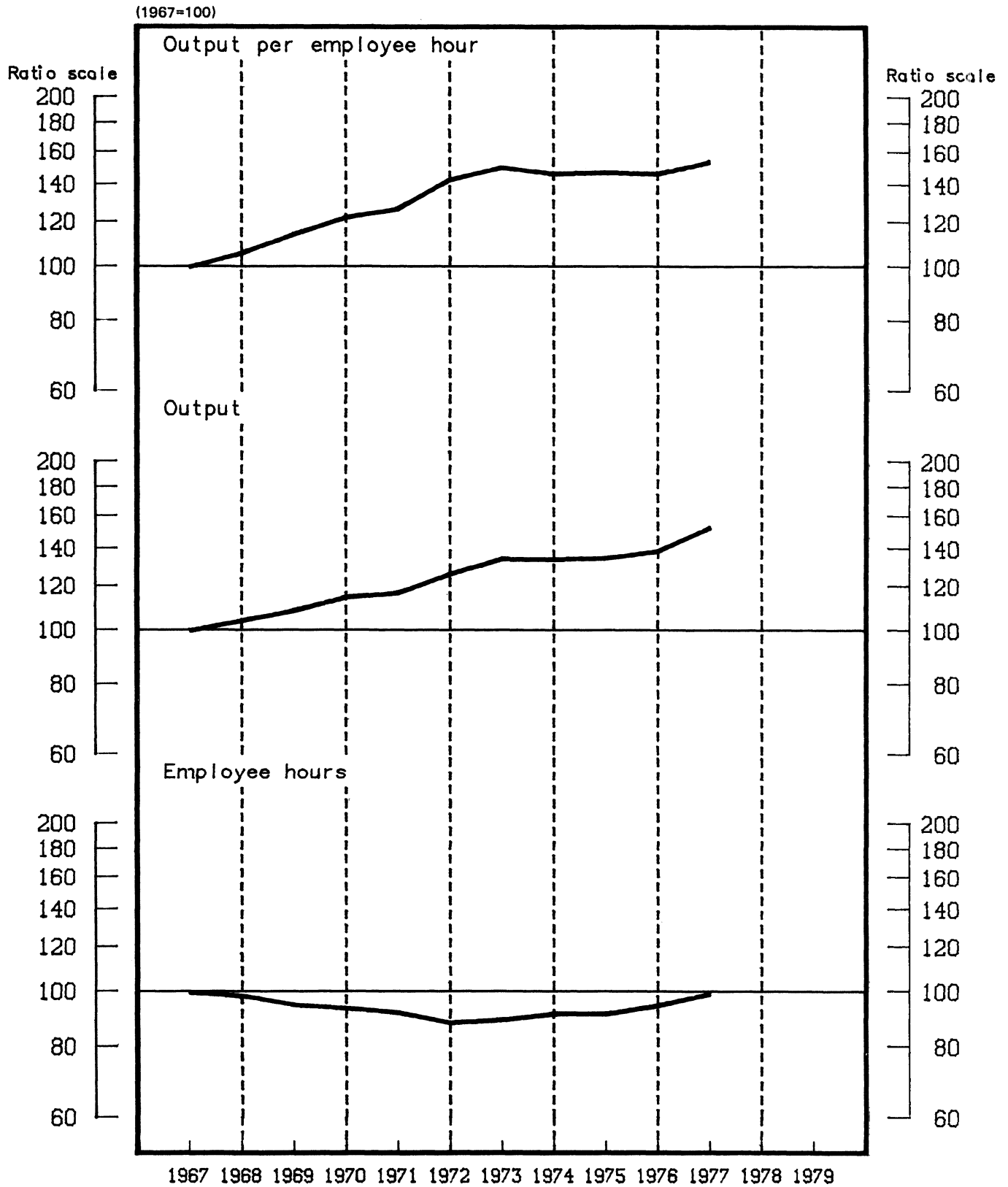
Table 154. Air transportation (SIC 4511): Indexes of output per employee, output, and employees, 1954-78
(1967 = 100)

Year	Output per employee	Output	Employees
Index:			
1954	39.3	17.4	44.3
1955	44.2	20.7	46.8
1956	45.4	23.9	52.6
1957	47.0	27.1	57.7
1958	48.5	27.5	56.7
1959	52.3	31.7	60.6
1960	52.7	33.7	64.0
1961	55.7	35.7	64.1
1962	61.9	40.3	65.1
1963	68.4	45.7	66.8
1964	74.9	53.2	71.0
1965	83.5	64.3	77.0
1966	93.7	78.9	84.2
1967	100.0	100.0	100.0
1968	104.4	115.4	110.5
1969	107.3	126.5	117.9
1970	109.6	128.5	117.2
1971	116.8	131.6	112.7
1972	128.7	144.7	112.4
1973	131.3	153.4	116.8
1974	133.0	153.8	115.6
1975	134.6	152.9	113.6
1976	146.7	168.6	114.9
1977	153.6	181.1	117.9
1978 ¹	167.9	206.3	122.9
Average annual percent change:			
1947-78	7.0	12.3	5.0
1973-78	5.1	6.1	.9

¹ Preliminary.

SOURCE: Based on Civil Aeronautics Board data.

Chart 81. Petroleum pipelines (SIC 4612, 4613): Output per hour and related data, 1967-78



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

Table 155. Petroleum pipelines (SIC 4612, 4613): Indexes of output per employee hour and output per employee, 1954-77
(1967=100)

Year	Output per hour ¹		Output per employee ¹	
	All employees	Production workers ²	All employees	Production workers ²
Index:				
1954	(³)	(³)	31.2	(³)
1955	(³)	(³)	34.8	(³)
1956	(³)	(³)	39.6	(³)
1957	(³)	(³)	39.0	(³)
1958	40.4	39.0	39.7	38.4
1959	46.7	45.0	45.7	44.1
1960	50.2	48.9	48.7	47.4
1961	53.7	53.2	51.9	51.4
1962	56.0	54.5	54.6	53.2
1963	61.6	59.8	60.3	58.5
1964	66.9	66.0	66.2	65.4
1965	79.4	79.2	78.6	78.5
1966	89.5	89.3	88.1	88.0
1967	100.0	100.0	100.0	100.0
1968	105.8	106.8	105.4	106.2
1969	114.3	117.7	113.5	116.9
1970	122.6	128.7	122.1	128.1
1971	126.9	135.8	126.4	135.1
1972	142.9	151.8	141.4	150.4
1973	150.4	160.9	149.8	160.1
1974	146.6	156.7	145.2	155.3
1975	147.4	161.9	144.2	158.3
1976	146.6	164.1	146.6	164.1
1977 ⁴	154.0	174.8	154.8	175.6
Average annual percent change:				
1958-77	7.8	8.7	7.9	8.9
1973-77 .....	.5	2.1	.8	2.4

¹ 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.

² Represents nonsupervisory workers.

³ Data not available.

⁴ Preliminary.

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

Table 156. Petroleum pipelines (SIC 4612, 4613): Indexes of output, employee hours, and employees, 1954-77
(1967=100)

Year	Output	Employee hours		Employees	
		All employees	Production workers ¹	All employees	Production workers ¹
Index:					
1954	45.2	(³)	(³)	145.1	(³)
1955	49.0	(³)	(³)	140.7	(³)
1956	54.8	(³)	(³)	138.5	(³)
1957	55.3	(³)	(³)	141.7	(³)
1958	54.6	135.1	139.9	137.4	142.3
1959	59.3	127.1	131.7	129.9	134.6
1960	60.1	119.7	123.0	123.5	126.9
1961	61.6	114.7	115.8	118.7	119.9
1962	63.1	112.7	115.7	115.5	118.6
1963	66.7	108.3	111.6	110.7	114.1
1964	70.8	105.9	107.3	107.0	108.3
1965	82.0	103.3	103.5	104.3	104.5
1966	89.1	99.6	99.8	101.1	101.3
1967	100.0	100.0	100.0	100.0	100.0
1968	104.2	98.5	97.6	98.9	98.1
1969	108.6	95.0	92.3	95.7	92.9
1970	114.9	93.7	89.3	94.1	89.7
1971	116.9	92.1	86.1	92.5	86.5
1972	126.3	88.4	83.2	89.3	84.0
1973	134.5	89.4	83.6	89.8	84.0
1974	134.3	91.6	85.7	92.5	86.5
1975	135.0	91.6	83.4	93.6	85.3
1976	138.8	94.7	84.6	94.7	84.6
1977 ³	153.1	99.4	87.6	98.9	87.2
Average annual percent change:					
1958-77	5.9	-1.8	-2.6	-1.9	-2.7
1973-77	3.0	2.5	.8	2.2	.5

¹ Represents nonsupervisory workers.

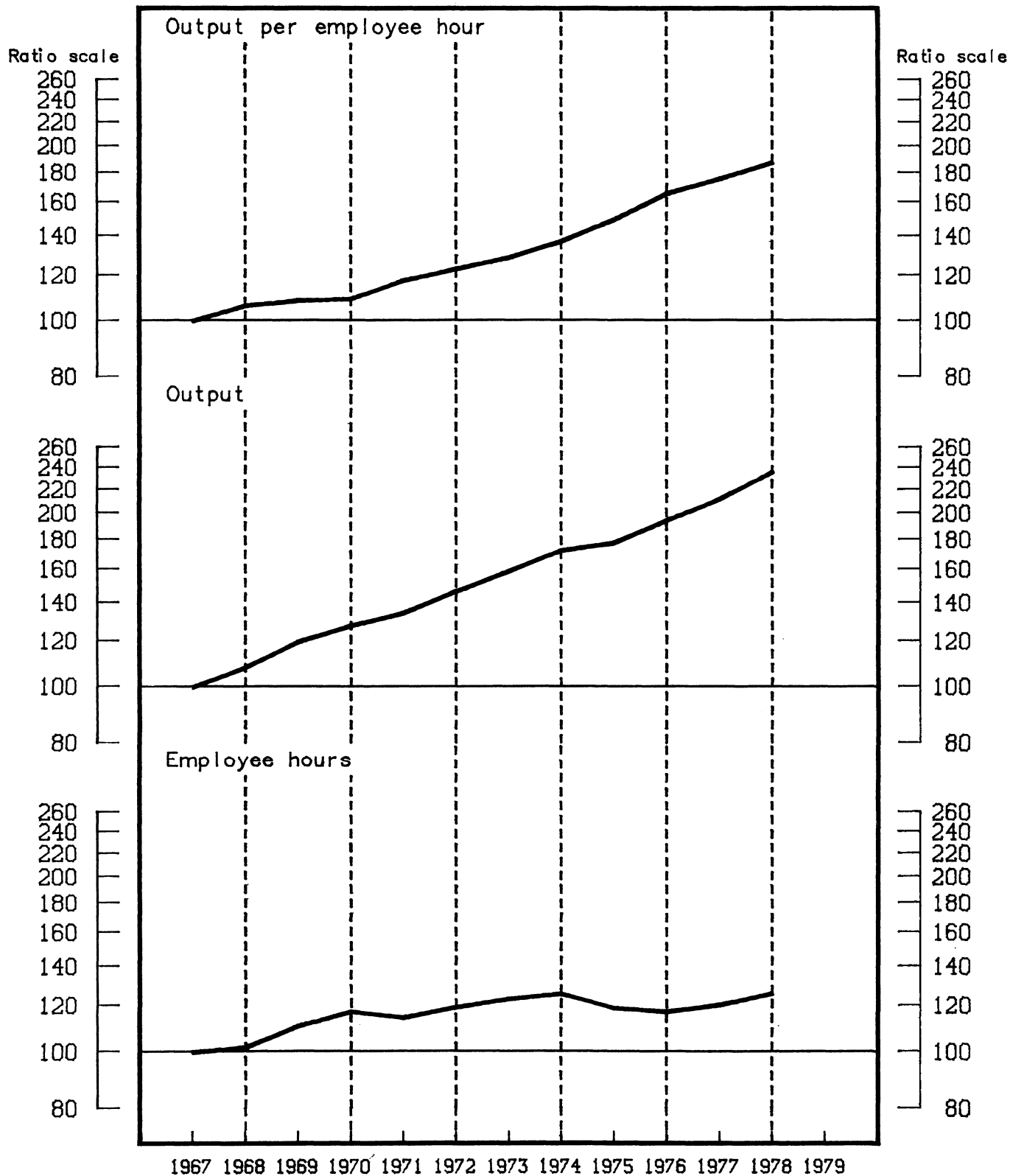
² Data not available.

³ Preliminary.

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

Chart 82. Telephone communications (SIC 4811): Output per hour and related data, 1967-78

(1967=100)



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

Table 157. Telephone communications (SIC 4811): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1954-78
(1967=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1954	40.8	40.4	35.0	85.8	86.6
1955	43.9	44.3	38.8	88.3	87.6
1956	45.1	45.3	42.2	93.6	93.1
1957	49.4	49.0	46.7	94.5	95.3
1958	55.8	54.5	49.5	88.7	90.8
1959	61.9	61.8	54.2	87.5	87.7
1960	65.8	66.3	58.0	88.2	87.5
1961	71.6	71.7	61.7	86.2	86.0
1962	76.4	77.6	66.1	86.5	85.2
1963	82.0	83.4	70.9	86.5	85.0
1964	85.4	87.3	76.5	89.6	87.6
1965	89.1	91.6	83.5	93.7	91.2
1966	93.0	96.1	92.2	99.1	95.9
1967	100.0	100.0	100.0	100.0	100.0
1968	106.2	107.3	108.1	101.8	100.7
1969	108.4	111.1	119.9	110.6	107.9
1970	109.2	109.5	127.9	117.1	116.8
1971	117.5	113.9	134.4	114.4	118.0
1972	123.1	123.8	146.7	119.2	118.5
1973	128.8	130.4	158.7	123.2	121.7
1974	137.3	139.1	172.6	125.7	124.1
1975	149.6	148.4	177.9	118.9	119.9
1976	165.8	164.6	194.5	117.3	118.2
1977	175.9	178.6	212.0	120.5	118.7
1978 ¹	187.5	191.9	236.2	126.0	123.1
Average annual percent change:					
1951-78	6.2	6.3	8.1	1.7	1.6
1973-78	8.1	8.3	8.0	-1	-3

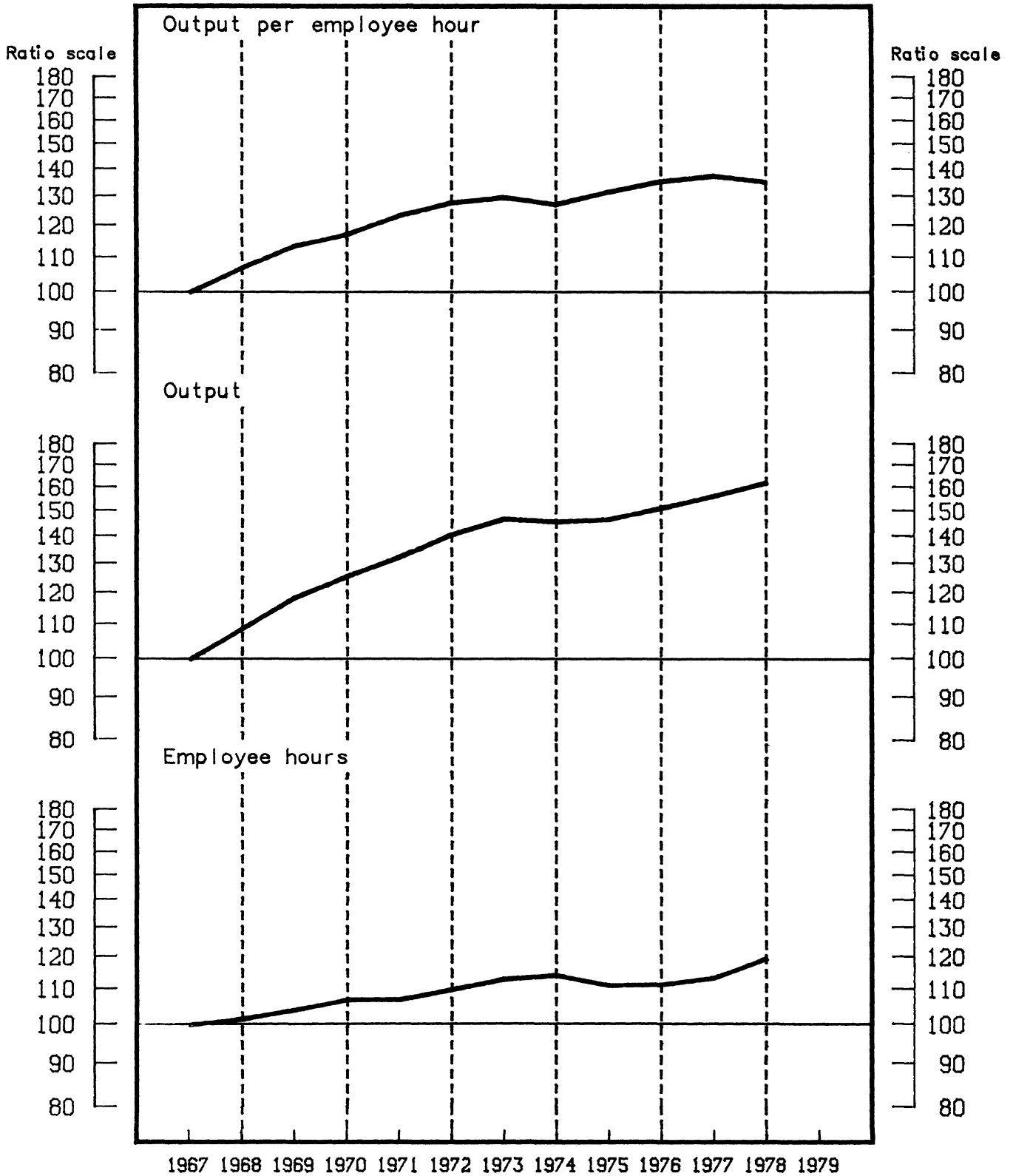
¹ Preliminary.

SOURCE: Output based on data from the Federal Communications Commission

and the American Telephone and Telegraph Company. Employment and hours based on data from the Bureau of Labor Statistics.

Chart 83. Gas and electric utilities (SIC 491, 492, 493): Output per hour and related data, 1967-78

(1967=100)



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

Table 158. Gas and electric utilities (SIC 491, 492, 493): Indexes of output per employee hour and output per employee, 1954-78
(1967 = 100)

Year	Output per hour ¹		Output per employee ¹	
	All employees	Production workers ²	All employees	Production workers ²
Index:				
1954	42.4	40.0	42.3	39.9
1955	47.2	44.9	47.1	44.7
1956	51.1	48.8	51.0	48.7
1957	53.7	51.5	53.2	51.1
1958	56.4	54.4	55.5	53.5
1959	61.5	59.7	60.8	59.0
1960	65.5	63.8	64.8	63.0
1961	69.4	67.9	68.4	66.8
1962	74.9	73.5	74.3	72.8
1963	79.5	78.6	79.0	78.0
1964	85.5	84.8	84.9	84.1
1965	89.2	88.5	89.0	88.3
1966	95.7	95.3	95.8	95.3
1967	100.0	100.0	100.0	100.0
1968	107.1	107.0	107.1	107.0
1969	113.8	114.5	114.2	114.7
1970	117.4	118.0	117.7	118.3
1971	123.6	124.9	123.4	124.6
1972	128.1	129.9	128.3	130.1
1973	129.9	132.4	130.8	133.4
1974	127.5	132.4	127.5	130.9
1975	131.9	136.2	130.7	134.9
1976	135.8	141.3	134.9	140.2
1977	137.8	144.6	137.1	143.8
1978 ³	135.6	143.8	136.6	144.8
Average annual percent change:				
1947-78	5.9	6.4	5.9	6.4
1973-78	1.4	2.1	1.3	2.1

¹ 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.

² Represents nonsupervisory workers.

³ Preliminary.

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 159. Gas and electric utilities (SIC 491, 492, 493): Indexes of output, employee hours, and employees, 1954-78
(1967 = 100)

Year	Output	Employee hours		Employees	
		All employees	Production workers ¹	All employees	Production workers ¹
Index:					
1954	39.4	93.0	98.4	93.2	98.7
1955	44.3	93.9	98.7	94.0	99.0
1956	48.7	95.3	99.8	95.5	100.0
1957	51.8	96.4	100.5	97.3	101.4
1958	54.0	95.7	99.2	97.3	100.9
1959	59.2	96.2	99.2	97.3	100.4
1960	63.1	96.3	98.9	97.4	100.1
1961	66.3	95.5	97.7	96.9	99.2
1962	71.3	95.2	97.0	96.0	97.9
1963	75.8	95.3	96.4	95.9	97.2
1964	81.8	95.7	96.5	96.4	97.3
1965	86.8	97.3	98.1	97.5	98.3
1966	94.1	98.3	98.7	98.2	98.7
1967	100.0	100.0	100.0	100.0	100.0
1968	108.8	101.6	101.7	101.6	101.7
1969	118.5	104.1	103.5	103.8	103.3
1970	125.6	107.0	106.4	106.7	106.2
1971	132.3	107.0	105.9	107.2	106.2
1972	140.9	110.0	108.5	109.8	108.3
1973	147.0	113.2	111.0	112.4	110.2
1974	145.9	114.4	110.2	114.4	111.5
1975	146.8	111.3	107.8	112.3	108.8
1976	151.6	111.6	107.3	112.4	108.1
1977	156.7	113.7	108.4	114.3	109.0
1978 ²	162.5	119.8	113.0	119.0	112.2
Average annual percent change:					
1947-78	7.0	1.0	.5	1.0	.6
1973-78	2.2	.8	.1	.8	(³)

¹ Represents nonsupervisory workers

² Preliminary.

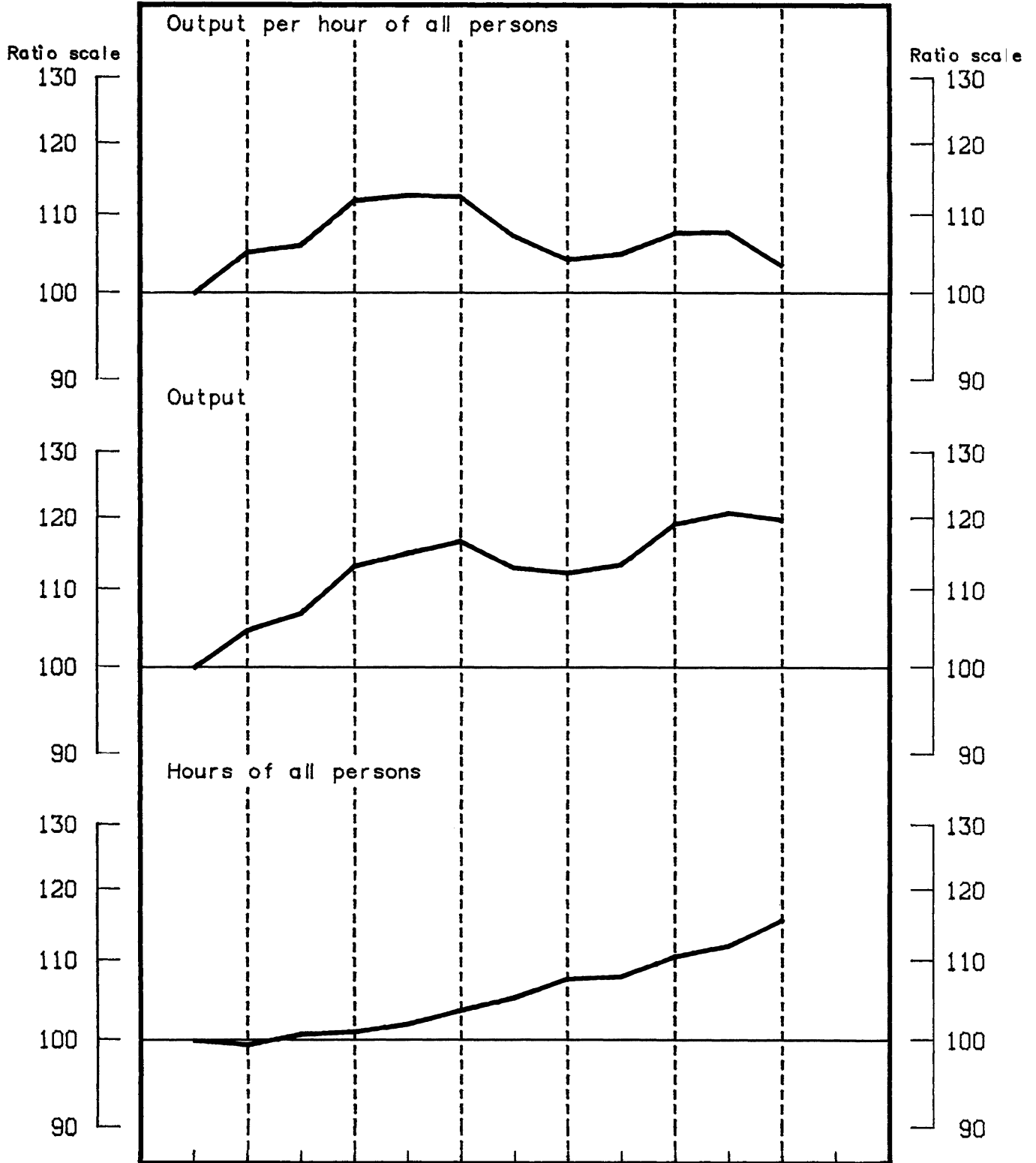
³ Less than .05 percent.

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 84. Retail food stores (SIC 54): Output per hour and related data, 1967-78

(1967=100)



1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979
 Source - Bureau of Labor Statistics, U.S. Department of Labor

Table 160. Retail food stores (SIC 54): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons¹, 1958-78
(1967 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958	75.4	83.8	78.4	104.0	93.6
1959	78.4	87.0	81.9	104.4	94.1
1960	80.9	88.4	84.1	103.9	95.1
1961	84.0	90.9	86.1	102.5	94.7
1962	85.3	92.1	88.0	103.2	95.6
1963	89.4	94.9	88.7	99.2	93.5
1964	91.4	96.9	93.0	101.8	96.0
1965	93.8	97.8	96.4	102.8	98.6
1966	96.3	98.1	98.0	101.8	99.9
1967	100.0	100.0	100.0	100.0	100.0
1968	105.2	103.2	104.7	99.5	101.5
1969	106.1	102.4	106.9	100.8	104.4
1970	112.0	107.1	113.2	101.1	105.7
1971	112.7	107.5	115.0	102.0	107.0
1972	112.5	107.1	116.7	103.7	109.0
1973	107.3	102.1	113.0	105.3	110.7
1974	104.3	97.7	112.3	107.7	115.0
1975	105.0	96.8	113.4	108.0	117.2
1976	107.7	100.3	119.2	110.7	118.8
1977 ²	107.8	99.6	120.8	112.1	121.3
1978 ²	103.5	94.7	119.8	115.7	126.5
Average annual percent change:					
1958-78	1.8	.7	2.2	.4	1.5
1973-78	-2	-.8	1.6	1.8	2.4

¹ All persons include paid employees, unpaid family workers, and the self-employed.

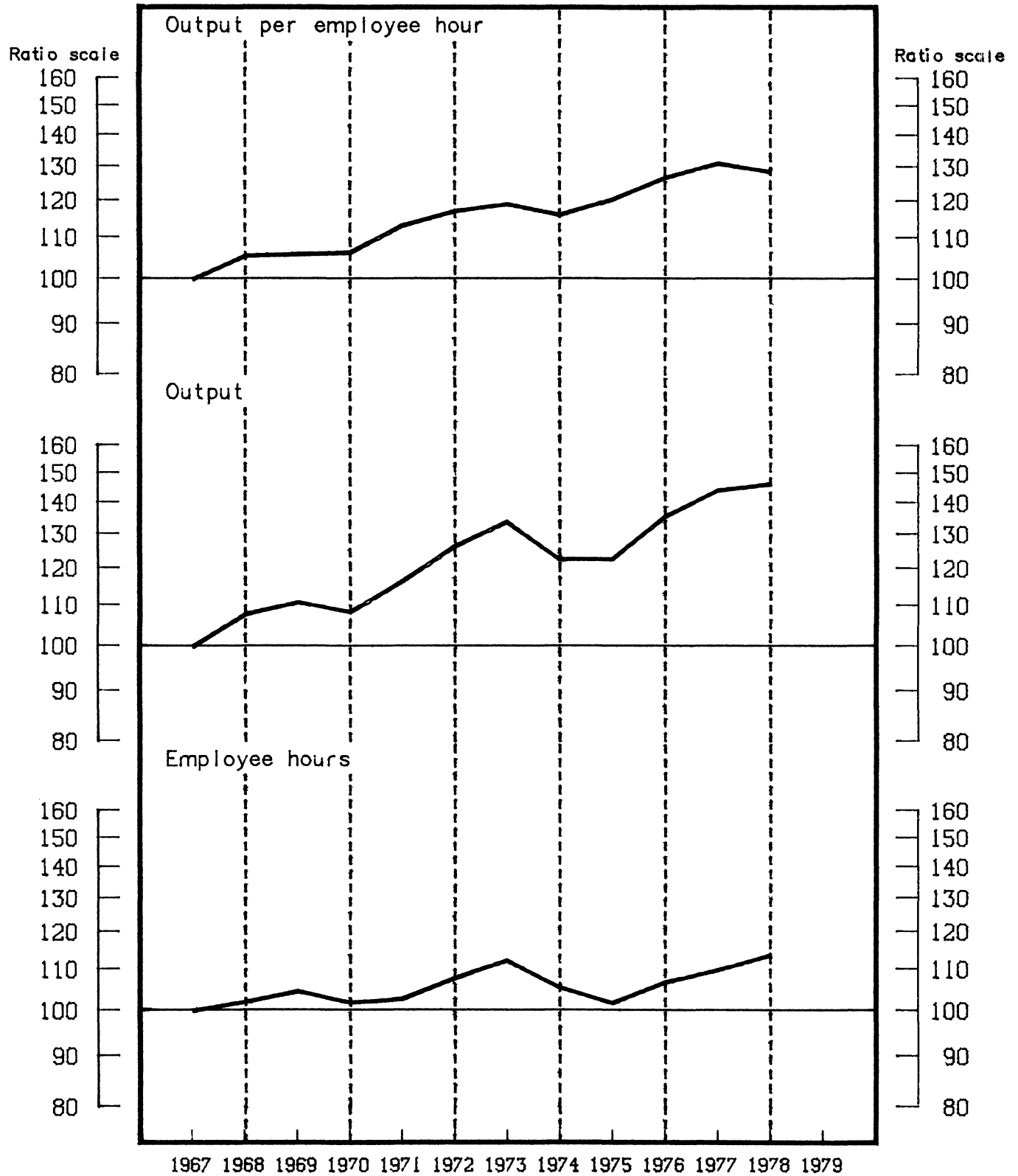
² Preliminary.

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 85. Franchised new car dealers (SIC 5511): Output per hour and related data, 1967-78

(1967=100)



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

Table 161. Franchised new car dealers (SIC 5511): Indexes of output per employee hour, output per employee, output, employee hours, and employees, 1958-78
(1967=100)

Year	Output per employee hour	Output per employee	Output	Employee hours	Employees
Index:					
1958	77.0	80.8	69.9	90.8	86.5
1959	87.2	92.3	81.6	93.6	88.4
1960	88.3	93.1	83.9	95.0	90.1
1961	84.2	88.0	74.9	89.0	85.1
1962	90.3	93.7	81.7	90.5	87.2
1963	92.0	95.5	87.0	94.6	91.1
1964	91.2	95.3	89.9	98.6	94.3
1965	97.8	101.5	100.3	102.6	98.8
1966	98.7	100.6	101.5	102.8	100.9
1967	100.0	100.0	100.0	100.0	100.0
1968	105.6	104.2	107.8	102.1	103.5
1969	106.0	103.3	110.9	104.6	107.4
1970	106.4	102.7	108.4	101.9	105.6
1971	113.3	109.0	116.5	102.8	106.9
1972	117.2	112.2	126.5	107.9	112.7
1973	119.2	113.6	134.0	112.4	118.0
1974	116.2	109.7	122.7	105.6	111.9
1975	120.5	113.7	122.8	101.9	108.0
1976	126.9	119.1	135.7	106.9	113.9
1977	131.2	121.5	144.2	109.9	118.7
1978 ¹	128.6	117.6	146.4	113.8	124.5
Average annual percent change:					
1958-78	2.5	1.7	3.5	1.0	1.8
1973-78	2.3	1.5	3.0	.7	1.4

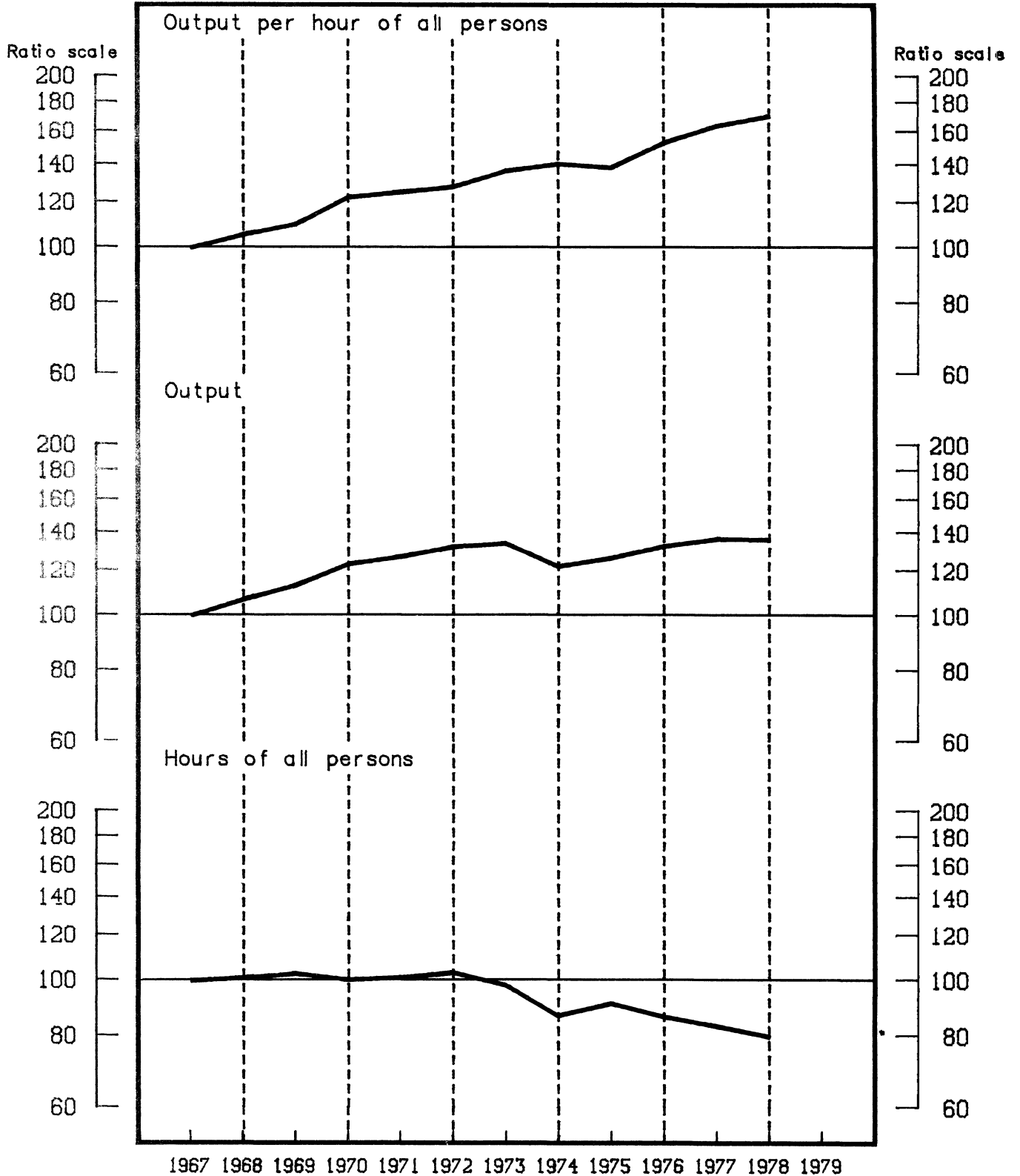
¹ Preliminary.

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 86. Gasoline service stations (SIC 5541): Output per hour and related data, 1967-78

(1967=100)



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

Table 162. Gasoline service stations (SIC 5541): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons¹, 1958-78
(1967=100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958	77.5	81.8	71.3	92.0	87.2
1959	80.3	84.3	74.0	92.2	87.8
1960	82.2	86.2	76.9	93.6	89.2
1961	84.7	88.8	80.3	94.8	90.4
1962	85.0	88.5	79.9	94.0	90.3
1963	89.1	92.4	85.4	95.8	92.4
1964	90.6	94.4	88.7	97.9	94.0
1965	93.7	96.5	93.4	99.7	96.8
1966	98.2	99.6	98.5	100.3	98.9
1967	100.0	100.0	100.0	100.0	100.0
1968	105.5	103.7	106.8	101.2	103.0
1969	109.9	106.5	113.1	102.9	106.2
1970	122.7	116.3	123.2	100.4	105.9
1971	125.4	119.4	127.0	101.3	106.4
1972	128.1	121.3	132.3	103.3	109.1
1973	136.6	124.7	134.1	98.2	107.5
1974	140.5	126.5	122.2	87.0	96.6
1975	138.4	125.5	126.4	91.3	100.7
1976	153.2	133.9	132.7	86.6	99.1
1977 ²	164.0	141.1	136.6	83.3	96.8
1978 ²	170.6	144.7	136.3	79.9	94.2
Average annual percent change:					
1958-78	4.1	2.9	3.6	-4	.7
1973-78	4.9	3.3	1.3	-3.4	-1.9

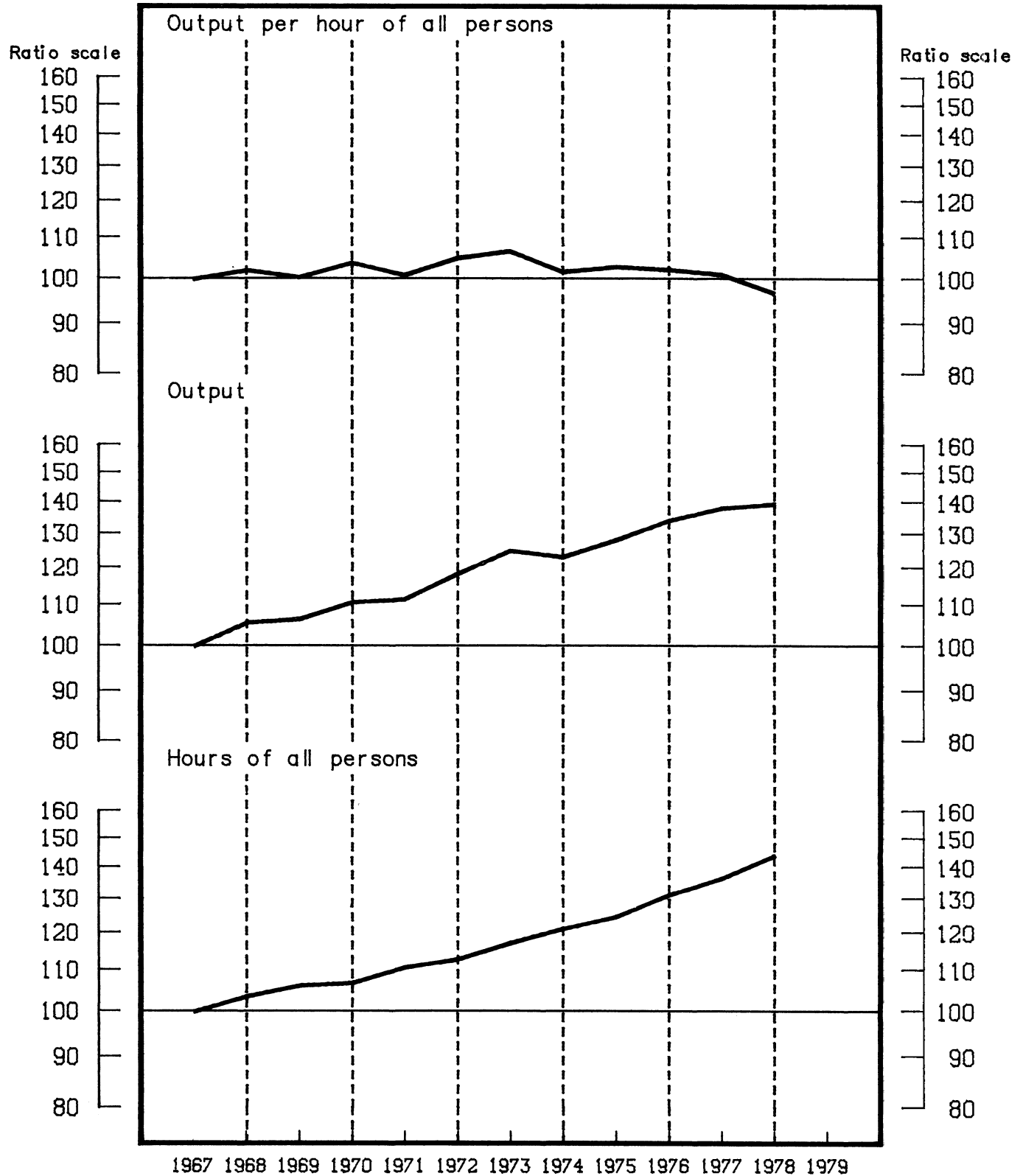
¹ All persons include paid employees, unpaid family workers, and the self-employed.

² Preliminary.

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 87. Eating and drinking places (SIC 58): Output per hour and related data, 1967-78

(1967=100)



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

Table 163. Eating and drinking places (SIC 58): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons¹, 1958-78
(1967=100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958	91.3	102.2	78.8	86.3	77.1
1959	90.3	101.4	81.0	89.7	79.9
1960	90.0	100.1	81.6	90.7	81.5
1961	90.8	100.0	81.5	89.8	81.5
1962	91.8	100.6	84.0	91.5	83.5
1963	93.8	101.8	86.0	91.7	84.5
1964	92.8	101.4	89.6	96.5	88.4
1965	95.6	102.3	95.1	99.5	93.0
1966	97.4	101.0	98.8	101.4	97.8
1967	100.0	100.0	100.0	100.0	100.0
1968	102.0	100.7	105.7	103.6	105.0
1969	100.4	96.1	106.6	106.2	110.9
1970	103.8	96.6	110.9	106.8	114.8
1971	100.9	93.3	111.7	110.7	119.7
1972	105.0	94.6	118.5	112.9	125.2
1973	106.7	94.4	125.1	117.2	132.5
1974	101.7	88.4	123.3	121.2	139.5
1975	102.9	88.4	128.3	124.7	145.1
1976	102.2	86.3	134.3	131.4	155.7
1977 ²	101.1	83.0	138.2	136.7	166.5
1978 ²	96.8	78.3	139.6	144.2	178.3
Average annual percent change:					
1958-78 .....	.7	-1.1	3.1	2.4	4.3
1973-78	-1.5	-3.2	2.7	4.2	6.1

¹ All persons include paid employees, unpaid family workers, and the self-employed.

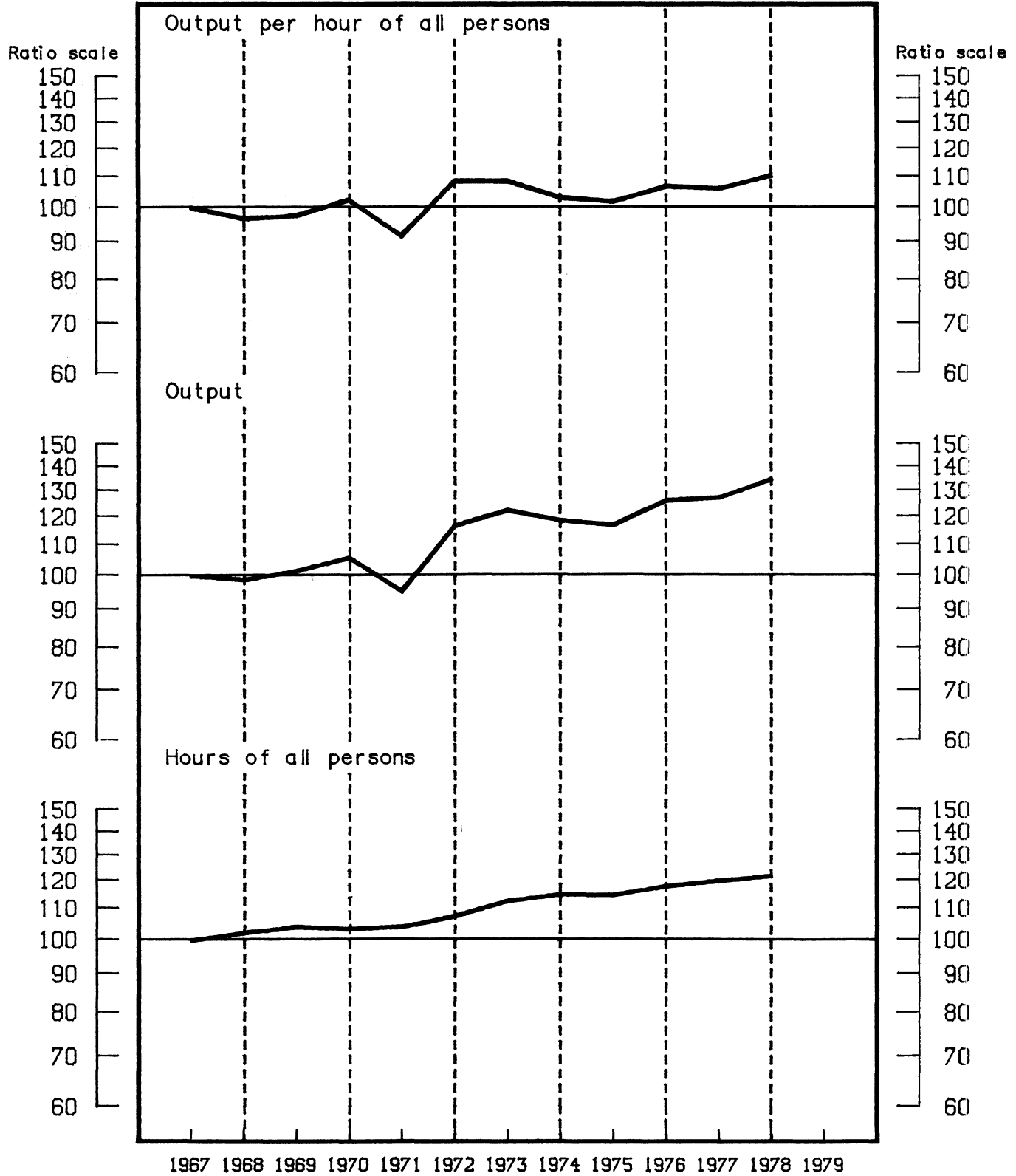
² Preliminary.

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 88. Hotels, motels, and tourist courts (SIC 7011): Output per hour and related data, 1967-78

(1967=100)



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

Table 164. 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 persons¹, 1958-78
(1967 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958	76.8	84.0	68.8	89.6	81.9
1959	77.8	85.1	71.3	91.7	83.8
1960	79.6	86.6	74.4	93.5	85.9
1961	77.0	82.9	71.9	93.4	86.7
1962	82.4	87.6	77.2	93.7	88.1
1963	86.0	91.2	80.8	93.9	88.6
1964	86.5	90.4	83.3	96.3	92.1
1965	93.0	96.2	91.2	98.1	94.8
1966	93.2	94.8	93.0	98.8	98.1
1967	100.0	100.0	100.0	100.0	100.0
1968	96.7	95.3	98.8	102.2	103.7
1969	97.7	95.1	101.6	104.0	106.6
1970	102.5	97.9	105.9	103.3	108.2
1971	91.8	85.6	95.5	104.0	111.6
1972	108.7	100.0	116.8	107.5	116.8
1973	108.7	100.5	122.5	112.7	121.9
1974	103.2	94.1	118.7	115.0	126.1
1975	101.9	90.7	117.0	114.8	129.0
1976	106.9	95.0	126.3	118.1	133.0
1977 ²	106.1	92.5	127.5	120.2	137.9
1978 ²	110.6	96.4	135.1	122.1	140.1
Average annual percent change:					
1958-78	1.9	.6	3.4	1.5	2.8
1973-78 .....	.6	-.6	2.3	1.6	2.9

¹ All persons include paid employees, and the self-employed.

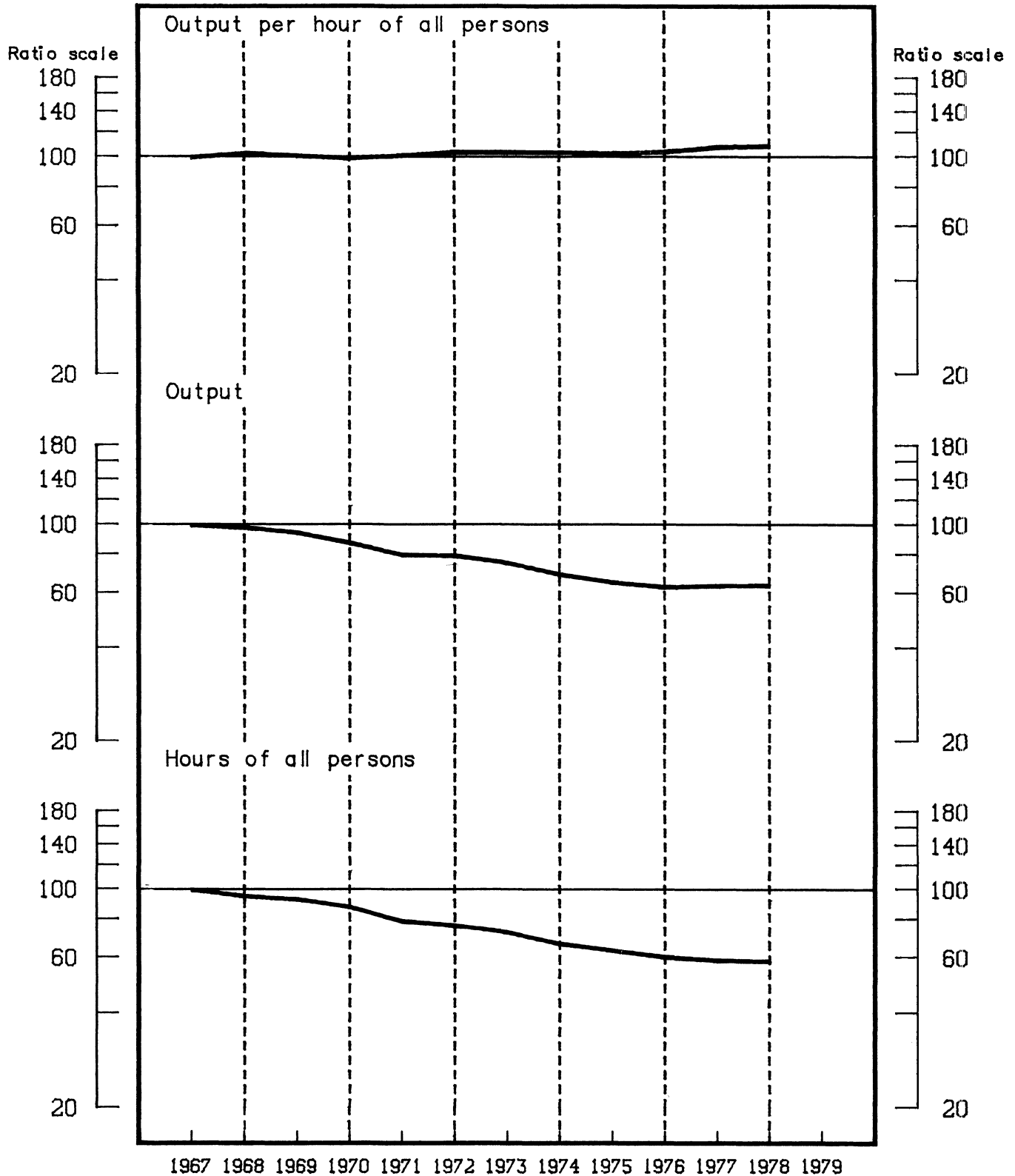
² Preliminary.

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 89. Laundry and cleaning services (SIC 721): Output per hour and related data, 1967-78

(1967=100)



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

Table 165. Laundry and cleaning services (SIC 721): Indexes of output per hour of all persons, output per person, output, hours of all persons, and all persons¹, 1958-78
(1967 = 100)

Year	Output per hour of all persons	Output per person	Output	Hours of all persons	All persons
Index:					
1958	83.9	88.4	86.1	102.6	97.4
1959	87.1	92.5	89.7	103.0	97.0
1960	82.7	87.7	85.1	102.9	97.0
1961	86.9	91.8	88.6	101.9	96.5
1962	86.9	91.6	88.9	102.3	97.1
1963	86.6	92.9	92.4	106.7	99.5
1964	92.7	98.0	97.0	104.6	99.0
1965	87.3	92.6	93.6	107.2	101.1
1966	92.8	95.9	98.6	106.3	102.8
1967	100.0	100.0	100.0	100.0	100.0
1968	102.9	100.0	98.2	95.4	98.2
1969	101.3	98.5	94.4	93.2	95.8
1970	99.5	95.3	87.6	88.0	91.9
1971	101.5	95.0	80.3	79.1	84.5
1972	104.0	99.0	79.7	76.6	80.5
1973	104.0	100.5	75.7	72.8	75.3
1974	103.9	98.6	69.3	66.7	70.3
1975	103.0	96.9	65.4	63.5	67.5
1976	104.5	97.7	63.2	60.5	64.7
1977 ²	108.0	100.3	63.8	59.1	63.6
1978 ²	109.0	101.6	64.0	58.7	63.0
Average annual percent change:					
1958-78	1.4	.6	-1.9	-3.2	-2.4
1973-78	1.1	.3	-3.2	-4.2	-3.5

¹ All persons include paid employees, unpaid family workers, and the self-employed.

² Preliminary.

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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For a more comprehensive list of publications, see *BLS Publications on Productivity and Technology*, BLS Report 559 (1979).

Productivity trends in individual industries and the Federal Government

- "Productivity in the Folding Paperboard Boxes Industry," by James D. York, to be published in the *Monthly Labor Review*.
- "Productivity in the Soaps and Detergents Industry," by Patricia S. Wilder, to be published in the *Monthly Labor Review*.
- "Substantial Productivity Gains in the Fluid Milk Industry," by Elmer S. Persigehl and James D. York, *Monthly Labor Review*, July 1979, pp. 22–27.
- "Productivity Growth Below Average in the Household Furniture Industry," by J. Edwin Henneberger, *Monthly Labor Review*, November 1978, pp. 23–29.
- "The Pattern of Productivity in the Lighting Fixtures Industry," by Phyllis Flohr Otto, *Monthly Labor Review*, September 1978, pp. 31–37.
- "The Veneer and Plywood Industry: Above-Average Productivity Gains," by Mary Robinson Farris, *Monthly Labor Review*, September 1978, pp. 26–30.
- "Productivity and Technology in the Electric Lamp Industry," by Richard B. Carnes, *Monthly Labor Review*, August 1978, pp. 15–19.
- "Productivity and Technology in the Electric Motor Industry," by James York and Horst Brand, *Monthly Labor Review*, August 1978, pp. 20–25.
- "Laundry and Cleaning Services Pressed to Post Productivity Gains," by Richard B. Carnes, *Monthly Labor Review*, February 1978, pp. 38–42.
- "Productivity and New Technology in Eating and Drinking Places," by Richard B. Carnes and Horst Brand, *Monthly Labor Review*, September 1977, pp. 9–15.
- "Productivity in Grain Mill Products: Output Up, Employment Stable," by James A. Urisko, *Monthly Labor Review*, April 1977, pp. 38–43.
- "Productivity in Sawmills Increases as Labor Input Declines Substantially," by John Duke and Clyde Huffstutler, *Monthly Labor Review*, April 1977, pp. 33–37.
- "New-Car Dealers Experience Long-Term Gains in Productivity," by John Duke, *Monthly Labor Review*, March 1977, pp. 29–33.
- "Output Per Unit of Labor Input in the Retail Food Store Industry," by John L. Carey and Phyllis Flohr Otto, *Monthly Labor Review*, January 1977, pp. 42–47.
- "Output Per Employee-Hour Measures: Industries and the Federal Government," reprint of chapter 31 of the *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (1976), pp. 225–32.
- "Productivity in the Nonmetallic Minerals Industry, 1954–75," by Clyde Huffstutler and Michael Broad, *Monthly Labor Review*, June 1976, pp. 25–30.
- "Productivity in the Copper Rolling and Drawing Industry," by Phyllis Flohr Otto, *Monthly Labor Review*, December 1975, pp. 27–30.
- "Productivity in Structural Clay Products," by Clyde Huffstutler and Michael M. Broad, *Monthly Labor Review*, October 1975, pp. 20–33.
- "Productivity in Hotels and Motels, 1958–73," by James A. Urisko, *Monthly Labor Review*, May 1975, pp. 24–28.
- "Productivity in Gasoline Stations, 1958–73," by Brian L. Friedman and John L. Carey, *Monthly*

Labor Review, February 1975, pp. 32–37.

“Measuring Productivity in the Federal Government,” by Charles Ardolini and Jeffrey Hohenstein, *Monthly Labor Review*, November 1974, pp. 13–20. Reprint 3009.

“Problems of Measuring Railroad Productivity,” by Horst Brand, *Monthly Labor Review*, October 1974, pp. 26–32.

“Productivity in the Pharmaceutical Industry,” by Horst Brand, *Monthly Labor Review*, March 1974, pp. 9–14. Reprint 2952.

“Productivity Trends in Intercity Trucking,” by Richard B. Carnes, *Monthly Labor Review*, January 1974, pp. 53–57. Reprint 2940.

“Productivity in the Paints and Allied Products Industry,” by Arthur S. Herman, *Monthly Labor Review*, November 1973, pp. 10–13. Reprint 2922.

“Productivity in Telephone Communications,” by Horst Brand, *Monthly Labor Review*, November 1973, pp. 3–9. Reprint 2921.

“Productivity in the Steel Foundries Industry,” by John L. Carey, *Monthly Labor Review*, May 1973, pp. 8–11. Reprint 2886.

“Productivity in the Ready-Mixed Concrete Industry,” by Robert S. Robinowitz and Martha Farnsworth Riche, *Monthly Labor Review*, May 1973, pp. 12–15. Reprint 2887.

“Productivity in the Metal Cans Industry,” by John L. Carey, *Monthly Labor Review*, July 1972, pp. 28–31. Reprint 2819.

“Productivity in the Bakery Products Industry,” by Clyde E. Huffstutler and Martha Farnsworth Riche, *Monthly Labor Review*, June 1972, pp. 25–28. Reprint 2812.

“Productivity in the Petroleum Pipelines Industry,” by Carolyn S. Fehd, *Monthly Labor Review*, April 1971, pp. 46–48.

“Productivity in the Soft Drinks Industry,” by Edwin Adelman and Charles Ardolini, *Monthly Labor Review*, December 1970, pp. 28–30.

“Productivity in the Major Household Appliance Industry,” by John E. Henneberger and Hazen F. Gale, *Monthly Labor Review*, September 1970, pp. 39–42. Reprint 2691.

“Trends in Output Per Man-Hour in the Sugar Industry,” by John W. Ferris, Jr., and Hazen F. Gale, *Monthly Labor Review*, July 1970, pp. 32–34. Reprint 2680.

Productivity and other economic trends

Productivity and Costs: Private Business Sector (quarterly news release).

Productivity and Costs: Nonfinancial Corporations (quarterly news release).

The Slowdown in Productivity Growth: Analysis of Some

Contributing Factors, BLS Working Paper (forthcoming).

“Productivity and Costs During Recession and Recovery,” by J. R. Norsworthy and L. J. Fulco, *Monthly Labor Review*, August 1978, pp. 31–35.

The Role of Capital Formation in the Recent Productivity Slowdown, BLS Working Paper 87 (January 1979). *CES Efficiency Parameters*, BLS Working Paper 81 (September 1978).

“Productivity and Costs in the Private Economy, 1976,” by J. R. Norsworthy and L. J. Fulco, *Monthly Labor Review*, September 1977, pp. 3–8.

“The Productivity Slowdown and the Outlook to 1985,” by R. E. Kutscher, J. A. Mark, and J. R. Norsworthy, *Monthly Labor Review*, May 1977, pp. 3–8.

Productivity and the Economy, BLS Bulletin 1926 (1977).

Productivity: A Selected, Annotated Bibliography, 1971–75, BLS Bulletin 1933 (1977).

“Productivity Measures: Private Economy and Major Sectors,” reprint of chapter 30 of the *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (1976), pp. 219–24.

“New Sector Definitions for Productivity Series,” by J. R. Norsworthy and L. J. Fulco, *Monthly Labor Review*, October 1976, pp. 40–42.

“Productivity and Costs in the Private Economy, 1975,” by J. R. Norsworthy and L. J. Fulco, *Monthly Labor Review*, May 1976, pp. 3–11.

“Productivity and Costs in the Private Economy, 1974,” by Jerome A. Mark, *Monthly Labor Review*, June 1975, pp. 3–8.

The Meaning and Measurement of Productivity, BLS Bulletin 1714 (1971). Out of print.

Productivity in the Railroad Industry, BLS Report 377 (1970).

Productivity Analysis in Manufacturing Plants, BLS Staff Paper 3 (1970). For sale by Superintendent of Documents.

Technology studies

Technology and Labor in Five Industries, BLS Bulletin 2033 (1979).

Technological Change and Its Labor Impact in Five Energy Industries, BLS Bulletin 2005 (1979).

“Technology in Telecommunications: Its Effect on Labor and Skills,” by Michael D. Dymmel, *Monthly Labor Review*, January 1979, pp. 13–19.

“Technology and Labor in Automobile Production,” by Robert V. Critchlow, *Monthly Labor Review*, October 1977, pp. 32–36.

Technological Change and Its Labor Impact in Five Industries, BLS Bulletin 1961 (1977).

“Technological Change,” reprint of chapter 32 of the

BLS Handbook of Methods for Surveys and Studies, Bulletin 1910 (1976), pp. 233–37.

Technological Change and Manpower Trends in Five Industries, BLS Bulletin 1856 (1975).

The Revised Workweek: Results of a Pilot Study of 16 Firms, BLS Bulletin 1846 (1975).

Computer Manpower Outlook, BLS Bulletin 1826 (1974).

Technological Change and Manpower Trends in Six Industries, BLS Bulletin 1817 (1974). Out of print.

Outlook for Technology and Manpower in Printing and Publishing, BLS Bulletin 1774 (1973). Out of print.*

“Modernization and Manpower in Textile Mills,” by Rose N. Zeisel, *Monthly Labor Review*, June 1973, pp. 18–25. Reprint 2893.

Railroad Technology and Manpower in the 1970’s, BLS Bulletin 1717 (1972). Out of print.

“New Technology in Laundry and Cleaning Services,” by Mary L. Vickery, *Monthly Labor Review*, February 1972, pp. 54–59. Reprint 2792.

Improving Productivity: Labor and Management Approaches, BLS Bulletin 1715 (1971). Out of print.

“Technology and Manpower in Nonelectrical Machinery,” by Lloyd T. O’Carroll, *Monthly Labor Review*, June 1971, pp. 56–62. Reprint 2741.

Outlook for Computer Process Control, BLS Bulletin 1658 (1970).*

“Manpower Implications of Computer Control in Manufacturing,” by Arthur S. Herman, *Monthly Labor Review*, October 1970, pp. 3–8. Reprint 2615.

Construction labor requirements

“Labor Requirements for College-Housing Construction,” by Barbara J. Bingham, *Monthly Labor Review*, May 1979, pp. 28–34.

“Labor and Material Requirements for New School Construction,” by John G. Olsen, *Monthly Labor Review*, April 1979, pp. 38–41.

Labor and Material Requirements for Sewer Works Construction, BLS Bulletin 2003 (1979).

“U.S. Civil Works Construction Shows Decrease in Required Labor,” by Barbara J. Bingham, *Monthly Labor Review*, October 1978, pp. 24–30.

“Labor and Materials Requirements for Sewer Works Construction,” by Robert Ball and Joseph T. Finn, *Monthly Labor Review*, November 1976, pp. 38–41.

“Decline Noted in Hours Required to Erect Federal Office Buildings,” by John G. Olsen, *Monthly Labor Review*, October 1976, pp. 18–22.

“Construction Labor Requirements,” reprint of chapter 33 of the *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (1976), pp. 238–40.

Labor and Material Requirements for Private Multifamily Housing Construction, BLS Bulletin 1892 (1976).

“Labor and Materials Required for Highway Construction,” by Diane S. Finger, *Monthly Labor Review*, December 1975, pp. 31–36.

“Labor and Material Requirements for Apartment Construction,” by Robert Ball, *Monthly Labor Review*, January 1975, pp. 70–72.

Labor and Material Requirements for Public Housing Construction, BLS Bulletin 1821 (1974.)

Labor and Material Requirements for Construction of Private Single-Family Houses, BLS Bulletin 1755 (1972).

“Labor Requirements for Public Housing,” by Joseph T. Finn, *Monthly Labor Review*, April 1972, pp. 40–42. Reprint 2803.

International comparisons

“International Comparisons of Manufacturing Productivity and Labor Costs, Preliminary Measures for 1978,” News Release USDL 79-489, July 10, 1979, 7 pages.

“Recent Labor Market Trends in Nine Industrial Nations,” by Joyanna Moy, *Monthly Labor Review*, May 1979, pp. 8–16.

International Comparisons of Unemployment, BLS Bulletin 1979 (1978).

Comparative Growth in Manufacturing Productivity and Labor Costs in Selected Industrialized Countries, BLS Bulletin 1958 (1977).

“Productivity and Unit Labor Costs in 11 Industrial Countries, 1977,” by Keith Daly and Arthur Neef, *Monthly Labor Review*, November 1978, pp. 11–17.

“Foreign Labor Statistics and Trade Research,” reprint of chapter 34 of the *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (1976), pp. 214–44.

“Unemployment Compensation in Eight Industrial Nations,” by Constance Sorrentino, *Monthly Labor Review*, July 1976, pp. 18–24.

Productivity: An International Perspective, BLS Bulletin 1811 (1974).

“Comparing Employment Shifts in 10 Industrialized Countries,” by Constance Sorrentino, *Monthly Labor Review*, October 1971, pp. 3–9.