

# INDEXES OF OUTPUT PER MAN-HOUR SELECTED INDUSTRIES 1939 and 1947-66

OCTOBER 1967

BLS Bulletin No.1572

UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS



OTHER RECENT BLS PUBLICATION ON PRODUCTIVITY  
AND AUTOMATION<sup>1</sup>

Indexes of Output Per Man-Hour--

- Air Transportation Industry, 1947-64 (Report 308). August 1966. 14 pp. (Free).  
Aluminum Rolling and Drawing Industry, 1958-65 (Report 314)  
December 1966. 20 pp. (Free).  
Concrete Products Industry, 1947-63. (Report 300). November 1965.  
20 pp. (Free).  
Footwear Industry, 1947-63. July 1965. 17 pp. (Free).  
Gas and Electric Utilities Industry, 1932-62. April 1964. 19 pp. (Free).  
Hosiery Industry, 1947-64. (Report 307). June 1966. 22 pp. (Free).  
Man-Made Fibers Industry, 1957-63. October 1965. 20 pp. (Free).  
Primary Aluminum Industry, 1947-62. September 1964. 15 pp. (Free).

- Labor Productivity of the Steel Industry in the United States (Report 310).  
July 1966. 36 pp. (Free).  
Productivity: A Bibliography, July 1966. (Bulletin 1514). 129 pp. 65 cents.  
Industry Productivity Projections, A Methodological Study. 1966. 5 pp.  
(Free).

Implications of Automation and Other Technological Developments in--

- Job Redesign for Older Workers, Ten Case Studies (Bulletin 1523, 1967).  
63 pp. 40 cents.  
Technological Trends in Major American Industries (Bulletin 1474, 1966).  
269 pp. \$1.50.  
Technological Change and Disemployment of Labor at the Establishment  
Level. 1966. 17 pp. (Free).  
Impact of Office Automation in the Insurance Industry (Bulletin 1468, 1966).  
71 pp. 45 cents.  
Manpower Planning to Adapt to New Technology at an Electric and Gas  
Utility (Report 293, 1965). 25 pp. (Free).  
Outlook for Numerical Control of Machine Tools: A Study of a Key  
Technological Development in Metalworking Industries (Bulletin 1437,  
1965). 63 pp. 40 cents.

Labor and Material Requirements for--

- Private One-Family House Construction (Bulletin 1404, 1964). 37 pp.  
30 cents.  
Public Housing Construction (Bulletin 1402, 1964). 42 pp. 30 cents.  
College Housing Construction (Bulletin 1441, 1965). 34 pp. 30 cents.  
Sewer Works Construction (Bulletin 1490, 1966). 31 pp. 30 cents.  
Construction of Federally Aided Highways, 1958, 1961, and 1964.  
(Report 299, 1966). 17 pp. (Free).

---

<sup>1</sup> Sales publications may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402, or from any of the regional offices of the Bureau of Labor Statistics located at John Fitzgerald Kennedy Federal Building, Government Center, Room 1603-B, Boston, Massachusetts 02203; 341 Ninth Avenue, New York, New York 10001; 911 Walnut Street, Kansas City, Missouri 64106; 219 S. Dearborn Street, Chicago, Illinois 60604; 1371 Peachtree Street, NE., Atlanta, Georgia 30309; and 450 Golden Gate Avenue, Box 36017, San Francisco, California 94102. Other publications may be obtained free, as long as a supply is available from the Bureau of Labor Statistics, Washington, D. C. 20212, or from any of the Bureau's regional offices.

**INDEXES OF OUTPUT PER MAN-HOUR**  
**SELECTED INDUSTRIES**  
**1939 and 1947-66**

**OCTOBER 1967**

**BLS Bulletin No.1572**

**UNITED STATES DEPARTMENT OF LABOR**  
Willard Wirtz, Secretary  
**BUREAU OF LABOR STATISTICS**  
Arthur M. Ross, Commissioner



---

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402 - Price 55 cents



# Contents

	Page
Introduction . . . . .	1
Highlights of trends in output per man-hour for selected industries . . . . .	2
Methods and data . . . . .	6

## TABLES

Selected Industries: SIC codes, 1965 employment, and average annual rates of change in output per man-hour, 1947-65 and 1957-65 . . . . .	9
---	---

### Nonmanufacturing Industries

#### Output per man-hour, unit labor requirements, and related data:

##### Air transportation:

1. All employees . . . . .	10
----------------------------	----

##### Bituminous coal and lignite mining:

2. All employees . . . . .	11
3. Production workers . . . . .	12
4. Nonproduction workers . . . . .	13

##### Coal mining:

5. All employees . . . . .	14
6. Production workers . . . . .	15
7. Nonproduction workers . . . . .	16

##### Copper mining, crude ore:

8. All employees . . . . .	17
9. Production workers . . . . .	18
10. Nonproduction workers . . . . .	19

##### Copper mining, recoverable metal:

11. All employees . . . . .	20
12. Production workers . . . . .	21
13. Nonproduction workers . . . . .	22

##### Gas and electric utilities:

14. All employees . . . . .	23
15. Nonsupervisory workers . . . . .	24

##### Iron mining, crude ore:

16. All employees . . . . .	25
17. Production workers . . . . .	26
18. Nonproduction workers . . . . .	27

##### Iron mining, usable ore:

19. All employees . . . . .	28
20. Production workers . . . . .	29
21. Nonproduction workers . . . . .	30

# Contents--Continued

Page

## TABLES

### Nonmanufacturing Industries

#### Output per man-hour, unit labor requirements, and related data:

##### Railroad transportation--total revenue traffic:

22. All employees . . . . .	31
23. Production workers . . . . .	32
24. Nonproduction workers . . . . .	33

##### Railroad transportation--total car-miles:

25. All employees . . . . .	34
26. Production workers . . . . .	35
27. Nonproduction workers . . . . .	36

### Manufacturing Industries

#### Aluminum rolling and drawing:

28. All employees . . . . .	37
29. Production workers . . . . .	38
30. Nonproduction workers . . . . .	39

#### Beet sugar:

31. All employees . . . . .	40
32. Production workers . . . . .	41
33. Nonproduction workers . . . . .	42

#### Candy and other confectionery products:

34. All employees . . . . .	43
35. Production workers . . . . .	44
36. Nonproduction workers . . . . .	45

#### Canning and preserving:

37. All employees . . . . .	46
38. Production workers . . . . .	47
39. Nonproduction workers . . . . .	48

#### Cement, hydraulic:

40. All employees . . . . .	49
41. Production workers . . . . .	50
42. Nonproduction workers . . . . .	51

#### Concrete products:

43. All employees . . . . .	52
44. Production workers . . . . .	53
45. Nonproduction workers . . . . .	54

#### Flour and other grain-mill products:

46. All employees . . . . .	55
47. Production workers . . . . .	56
48. Nonproduction workers . . . . .	57

# Contents--Continued

Page

## TABLES

### Manufacturing Industries

#### Output per man-hour, unit labor requirements, and related data:

##### Footwear:

49. All employees . . . . .	58
50. Production workers . . . . .	59
51. Nonproduction workers . . . . .	60

##### Glass containers:

52. All employees . . . . .	61
53. Production workers . . . . .	62
54. Nonproduction workers . . . . .	63

##### Hosiery:

55. All employees . . . . .	64
56. Production workers . . . . .	65
57. Nonproduction workers . . . . .	66

##### Malt liquors:

58. All employees . . . . .	67
59. Production workers . . . . .	68
60. Nonproduction workers . . . . .	69

##### Man-made fibers:

61. All employees . . . . .	70
62. Production workers . . . . .	71
63. Nonproduction workers . . . . .	72

##### Paper, paperboard, and pulp mills:

64. All employees . . . . .	73
65. Production workers . . . . .	74
66. Nonproduction workers . . . . .	75

##### Petroleum refining:

67. All employees . . . . .	76
68. Production workers . . . . .	77
69. Nonproduction workers . . . . .	78

##### Primary aluminum:

70. All employees . . . . .	79
71. Production workers . . . . .	80
72. Nonproduction workers . . . . .	81

##### Primary smelting and refining of copper, lead, and zinc:

73. All employees . . . . .	82
74. Production workers . . . . .	83
75. Nonproduction workers . . . . .	84

# Contents--Continued

Page

## TABLES

### Manufacturing Industries

#### Output per man-hour, unit labor requirements, and related data:

##### Steel:

76. All employees . . . . .	85
77. Production workers . . . . .	86
78. Nonproduction workers . . . . .	87

##### Tires and inner tubes:

79. All employees . . . . .	88
80. Production workers . . . . .	89
81. Nonproduction workers . . . . .	90

##### Tobacco products--total:

82. All employees . . . . .	91
83. Production workers . . . . .	92
84. Nonproduction workers . . . . .	93

##### Tobacco--cigars:

85. All employees . . . . .	94
86. Production workers . . . . .	95
87. Nonproduction workers . . . . .	96

##### Tobacco--cigarettes, chewing and smoking tobacco, and snuff:

88. All employees . . . . .	97
89. Production workers . . . . .	98
90. Nonproduction workers . . . . .	99



# INDEXES OF OUTPUT PER MAN-HOUR: SELECTED INDUSTRIES, 1939 and 1947-66

## Introduction

This bulletin contains updated industry indexes of output per man-hour, output per employee, and unit labor requirements for the industries currently included in the U.S. Government's productivity measurement program. The data cover the years 1939 and 1947 through 1965 or 1966. Indexes for the aluminum rolling and drawing industry are included for the first time.

The selected industries for which output per man-hour indexes are shown are not necessarily a representative cross section of American industry. They should not be combined, therefore, to obtain an overall measure for the entire economy or any sector. Each index is intended to represent only the change in output per man-hour for the designated industry or combination of industries. However, the Bureau of Labor Statistics publishes indexes of output per man-hour and related measures for the total private economy and major sectors--agriculture, nonagriculture, manufacturing, and nonmanufacturing.<sup>1</sup> Those measures show the relationship between gross national product originating in the private economy or major sectors and employment and man-hours.

This bulletin was prepared in the Office of Productivity, Technology and Growth under the general direction of Jerome A. Mark, Assistant Commissioner. Preparation of the statistical measures was supervised by Joseph E. Dragonette and Virgil H. Ketterling in the Division of Industry Productivity Studies, Chester Myslicki, Chief.

---

<sup>1</sup> Trends in Output per Man-Hour in the Private Economy, 1909-1958 (BLS Bulletin 1249, 1959), and subsequent releases.

## Highlights of Trends in Output Per Man-Hour in Selected Industries

One of the most important aspects of American economic growth is the steady long run advance of productivity in different industries. This feature is highlighted by the data for 27 selected industries covered by this report. All industries recorded increases in output per man-hour over the 1947-65 period. Output per man-hour in some industries declined for short periods, reflecting largely changes in capacity utilization due to fluctuations in output, but the upward trend over the long run was unmistakable in every case.

Productivity growth took place in industries which differ greatly in technology, markets, organization, and type of labor employed. Consumer good industries such as the hosiery, canning and preserving, candy, and flour industries as well as basic steel, coal railroads, gas and electric utilities, and petroleum refining reported gains.

### Impact of Technology

The main source of the long-term advance of productivity is the application of scientific and technical knowledge which is incorporated in new plant and equipment. Major changes in basic processes and equipment are particularly noteworthy in some industries: for example, the introduction of jet aircraft in air transportation; the use of continuous mining machinery in the coal industry; the shift from rail to truck hauling in copper mining; and the beginning of the basic oxygen process in steel. Adoption of these basic changes involved large capital outlays for new equipment and considerable retraining and adaptation of labor and management.

Modifications, involving less extensive changes in equipment and methods of production, also have had a cumulative impact. Improvements in the power, speed, and capacity of conventional machinery and equipment, use of auxiliary machinery for material handling and instrumentation for control, and modifications of plant lay-out, often in combination with major changes, contributed to rises in productivity in many industries. Modifications of existing methods which increase productivity are exemplified by longer cement kilns, larger oil refining units, longer railroad trains, and larger shovels and other types of mining equipment, all of which permit a larger output with the same or less labor.

### Differences in Growth Rates

While output per man-hour advanced in all industries over the 1947-65 period, annual rates of growth differed widely among the industries, ranging from about 1 percent to close to 8 percent. Annual rates of increase considerably above the national postwar average of about 3 percent a year

are recorded for the gas and electric utilities, petroleum refining, coal, cigar, air transportation, and primary aluminum industries. Rates of increase significantly below the national average include glass containers, cigarette, footwear, nonferrous smelting, and steel industries. Moderate growth rates are found in copper mining, iron mining, and the beet sugar, candy, canning, cement, concrete, flour, manmade fibers, malt liquor, paper, and tire industries.

Indexes of output per production worker man-hour for most of the selected industries covered in the report increased at a faster rate than those based on all employee man-hours. This difference reflects the long term growth in proportions of nonproduction workers, i. e., administrative, technical, sales, and clerical employees. In recent years, however, as the ratio of nonproduction workers to all employees has tended to stabilize in many industries, relative changes in the two indexes have been about the same.

Output per man-hour generally tended to increase at a slightly faster rate over the 1957 to 1965 period than over the longer period since 1947. In 20 of the 25 industries for which comparable data are available, the rate for the recent period exceeded that for the entire period, largely reflecting effects of higher levels of investment in new plant and equipment, particularly since 1963.

### Productivity and Output

Rapid rates of increase in productivity in some industries are related closely to substantial advances in output. Such an increase was particularly noticeable in the gas and electric utilities, air transportation, and primary aluminum industries where postwar demand has stimulated rapid expansion. Expanding output either through enlargement of existing plants or the building of new plants provides opportunities for installing the latest equipment. Continued growth encourages firms to spend capital funds more readily for investment and research. Also, larger markets make possible longer runs, standardization of products, and other mass production techniques which have a substantial effect on productivity.

Output per man-hour also advanced rapidly in several industries despite moderate or little growth in output over the 1947-65 period. For example, gains in the coal, petroleum refining, and cigar industries reflected, in part, concentration of production in larger, more efficient plants, and a reduction in the total number of establishments.

Industries with low rates of productivity growth tended to be characterized by low rates of output. For example, glass containers, cigarettes, and steel industries, in which growth in output per man-hour averaged less

than 2 percent a year, recorded relatively small output increases. In the iron and copper mining industries, the deterioration of the quality of natural resources, as less accessible ore beds are exploited, shows up in the lower rates of advance in output per man-hour, measured in terms of recoverable or useable ores, compared with measures based on crude ore.

### Productivity and Employment

The relationship between productivity advances and employment changes is by no means simple and direct. Changes in output must be taken into account in assessing the impact. Thus, in industries where output growth exceeds gains in productivity, and there is no change in the work-week, employment rises. This situation developed in air transportation, primary aluminum, and gas and electric utilities where output per man-hour rose sharply between 1947 and 1965, but output increased slightly faster. Employment also increased in glass containers and cigarette industries, where less-than-average gains in output per man-hour and output were registered, and in concrete products and paper industries, where output gains substantially exceeded average rates of productivity growth.

Productivity gains in excess of the rise in output which are not accompanied by change in average weekly hours result in employment reductions. Thus, employment was lower in 1965 than in 1947 in 16 of the 25 industries for which data are available, despite increased output. The decline in employment since 1947 was particularly sharp in bituminous coal mining and railroads, where output declined while productivity was advancing.

### Outlook

The growth of productivity is likely to continue over the next few years as a result of the cumulative effects of large investments in new plant and equipment, the application of new knowledge of production processes coming from extensive research and development programs, and the steady improvement in the quality of labor and management through education and training.

Technological advances which may serve to stimulate productivity growth over the next few years will include further use of versatile machines such as the electronic computer. In many industries application already has been made in routine data processing, production planning, and engineering. Computers are used to keep account of the location of railroad freight cars, to control seat inventory of airlines, and to make out bills in

gas and electric utilities. In processing industries such as steel, petroleum refining, paper, cement, and electric utilities, computers are being introduced to link instrumentation and control devices for more automatic control of processing.

New manufacturing processes such as continuous casting in the steel and in the aluminum industries and continuous processing in the malt liquor industry may have important effects on productivity. One of the most significant recent developments in railroad and airline transportation is the trend toward greater integration of services through piggy-back and containerization. The footwear and tire and tube industries will probably be affected by the further use of manmade materials. Others such as concrete and glass containers may see marked improvements in the quality of output.

## Methods and Data

The productivity measures presented reflect the relationship between output in physical terms and related labor time. They show the changes from year to year in the amount of labor time required to produce a unit of output. Although the measures relate output to employment and man-hours, they do not measure the specific contributions of labor, capital, or any other factor of production. Rather, they reflect the joint effect of a number of interrelated influences such as changes in technology, capital investment per worker, changes in the levels of output, utilization of capacity, layout and flow of material, managerial skill, and skills and effort of the work force.

The indexes of output per man-hour are computed by dividing an output index by an index of aggregate man-hours. Corresponding measures also are computed relating output to the number of employees. Thus, the industry indexes presented here measure changes in the relationship between output and employment or man-hours. Although, traditionally, output per man-hour has been the measurement most frequently used, in some instances studies of physical output per man-hour are simplified if made in terms of the reciprocal: man-hour requirements per unit of output (unit man-hours). Therefore, unit labor requirements indexes are shown for all industries covered in this report.

The output indexes are based primarily on the physical output of the products of the industry combined with fixed period weights. Man-hour weights are used whenever possible. For most industries, however, unit value weights which are assumed to be proportional to unit man-hour weights, are used as substitute weights. Indexes for 1947-58 are based on 1947 weights, for 1958-63, 1958 weights, and for 1963-66, 1963 weights. For three industries--railroads, iron mining, and copper mining--two alternative output measures, representing different concepts of industry output, are presented.

Employment and man-hours indexes are developed from basic data compiled by the Bureau of the Census or the Bureau of Labor Statistics. In concept, indexes based on man-hours data from the Bureau of the Census relate to plant hours only. Man-hours data from the Bureau of Labor Statistics include not only hours at work but also payroll hours such as vacations, holidays, and

sick leave paid by the establishment directly to the employee.<sup>2</sup> In general, because of increases in paid leave during the period, output per man-hour worked would tend to show a somewhat higher rate of gain than output per man-hour paid. However, actual differences also may result from statistical limitations in the data as well as from differences in concept.

This report includes indexes of output per man-hour and output per employee. In most cases, the indexes are shown for all employees, production workers, and nonproduction workers.<sup>3</sup> Although both the Bureau of the Census and the Bureau of Labor Statistics provide data on production worker man-hours, neither source provides annual data by industry on nonproduction worker or all employee man-hours. Therefore, the nonproduction worker man-hours are estimated.

The estimates of aggregate nonproduction worker man-hours for the manufacturing industries are derived from published employment data and from estimates of average annual hours worked or paid per nonproduction worker. The estimates of average annual hours paid are calculated by multiplying the number of workweeks in the year times the scheduled weekly hours. Estimated hours for vacations, holidays, disability, and personal time off are subtracted from average annual hours paid, to obtain an estimate of average annual hours worked. Vacation and holiday trends are based on studies by the U. S. Department of Health, Education, and Welfare, and on data from BLS surveys. Personal time off has been estimated as a constant on the basis of data obtained from various sources.

All employee man-hour estimates for manufacturing industries are derived by summing the aggregate man-hours for production workers and the estimated aggregate man-hours for nonproduction workers.<sup>4</sup>

Indexes involving nonproduction worker man-hours are subject to a wider margin of error than are the indexes involving only production worker man-hours because it was necessary to estimate the average man-hours of nonproduction workers. Any likely errors in these estimates, however, would have a relatively insignificant effect on the indexes of man-hours for all employees.

---

<sup>2</sup> Indexes for the railroad transportation industry are based on data from the Interstate Commerce Commission (ICC), and relate primarily to hours at work.

<sup>3</sup> The term "production workers" has been used for many years to cover manufacturing and mining employees who work at the plant or mine and who are generally in nonsupervisory occupations. The remaining employees, professional, technical, clerical, supervisory, etc., have been identified as "nonproduction workers."

<sup>4</sup> The ICC publishes all employee man-hours for the railroad transportation industry.

The output indexes and man-hours components of the industry productivity indexes are based on data from various sources which are identified in the accompanying tables.

The indexes refer to the standard reference base (1957-59=100) and conform to the 1957 Standard Industrial Classification (SIC) system.

All average annual rates of change 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 upon 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 for Surveys and Studies, Bulletin 1458, 1966, Chapter 23, and in a number of individual industry reports. These publications, as well as additional information, are available upon request from the Bureau of Labor Statistics.



Selected Industries: SIC Codes, 1965 Employment, and Average Annual Rates of Change in Output Per Man-Hour, 1947-65 and 1957-65

SIC Code	Industry title	1965 employment (thousands) <sup>1</sup>			Output per man-hour: Average annual rate of change (percent) <sup>2</sup>					
		All employees	Production workers	Non-production workers	1947-65			1957-65		
					All employees	Production workers	Non-production workers*	All employees	Production workers	Non-production workers*
<u>Nonmanufacturing</u>										
451	Air transportation <sup>3</sup>	197	(4)	(4)	<sup>5</sup> 7.8	(4)	(4)	<sup>5</sup> 7.6	(4)	(4)
12	Bituminous coal and lignite mining <sup>3</sup>	132	115	17	(4)	6.4	(4)	(4)	6.3	(4)
11, 12	Coal mining <sup>3</sup>	141	124	18	(4)	6.3	(4)	(4)	6.2	(4)
102	Copper mining, crude ore <sup>3</sup>	30	25	5	(4)	4.7	(4)	(4)	4.0	(4)
102	Copper mining, recoverable metal <sup>3</sup>	30	25	5	(4)	3.2	(4)	(4)	3.2	(4)
491, 492, 493	Gas and electric utilities	583	<sup>6</sup> 507	<sup>7</sup> 76	7.3	<sup>6</sup> 7.9	(4)	6.8	<sup>6</sup> 7.2	(4)
101	Iron mining, crude ore <sup>3</sup>	26	22	4	(4)	5.3	(4)	(4)	8.1	(4)
101	Iron mining, usable ore <sup>3</sup>	26	22	4	(4)	1.8	(4)	(4)	3.8	(4)
401, Class I	Railroads--revenue traffic <sup>3</sup>	667	598	69	4.9	5.2	2.1	6.3	6.5	4.4
401, Class I	Railroads--car-miles <sup>3</sup>	667	598	69	4.2	4.5	1.4	4.1	4.3	2.2
<u>Manufacturing</u>										
3352	Aluminum rolling and drawing	58	46	12	(4)	(4)	(4)	<sup>8</sup> 8.1	<sup>8</sup> 8.1	<sup>8</sup> 8.1
2063	Beet sugar	12	11	1	4.6	4.3	(6.6)	<sup>8</sup> 3.8	<sup>8</sup> 3.7	<sup>8</sup> (5.5)
2071	Candy and other confectionery products	65	55	11	3.4	3.4	(3.2)	3.5	2.9	(6.3)
203	Canning and preserving	261	220	40	3.7	4.0	(1.5)	3.5	3.5	(3.8)
3241	Cement, hydraulic	34	28	7	4.8	5.2	(2.2)	5.2	5.9	(1.2)
3271, 3272	Concrete products	81	61	20	3.2	3.7	(.7)	2.1	2.3	(1.6)
2041	Flour and other grain-mill products	21	15	5	4.1	4.3	(3.2)	4.7	4.3	(6.0)
3141, 3142	Footwear	217	197	20	2.0	2.1	(1.7)	1.4	1.2	(2.7)
3221	Glass containers	61	55	7	1.2	1.3	(.6)	2.2	2.2	(2.4)
2251, 2252	Hosiery	96	88	8	4.6	4.7	(3.9)	6.4	6.4	(6.7)
2082	Malt liquors	60	41	20	4.1	4.3	(3.8)	6.0	5.6	(6.8)
2823, 2824	Man-made fibers	85	63	22	(4)	(4)	(4)	4.3	4.4	(4.2)
261, 262, 263, 266	Paper, paperboard, and pulp mills	222	180	42	3.7	4.1	(1.2)	4.7	5.0	(3.4)
2911	Petroleum refining	110	79	31	5.8	6.3	(4.1)	7.3	7.6	(6.6)
3334	Primary aluminum	21	17	4	5.4	5.7	(3.8)	6.0	5.8	(7.3)
3331, 3332, 3333	Primary smelting and refining of copper, lead, and zinc	26	22	4	2.7	2.9	(.9)	3.7	3.5	(5.1)
331	Steel <sup>3</sup>	657	538	119	1.6	2.1	(-0.9)	2.7	2.6	(3.4)
3011	Tires and inner tubes	89	68	20	4.2	4.5	(3.0)	6.6	6.6	(6.4)
211, 212, 213	Tobacco products, total	61	55	6	3.7	3.9	(1.4)	4.5	4.8	(1.6)
212	Tobacco: cigars	21	19	2	6.7	6.9	(4.0)	8.5	8.6	(7.4)
211, 213	Tobacco: cigarettes, chewing and smoking tobacco, and snuff	40	36	5	1.3	1.5	(.0)	2.0	2.4	(-1.2)

<sup>1</sup> Because of rounding, the sum of production workers and nonproduction workers does not always equal all employees.

<sup>2</sup> Based on the linear least squares trends of the logarithms of the index numbers.

<sup>3</sup> Rates of change through 1966 are shown on industry tables.

<sup>4</sup> Not available.

<sup>5</sup> Output per employee.

<sup>6</sup> Nonsupervisory workers.

<sup>7</sup> Supervisory personnel and force account construction workers.

<sup>8</sup> Average annual rate of change is for 1959-65.

\* Note: Rates of change for nonproduction workers (in parentheses) are subject to a wider margin of error than other rates shown because of the method for estimating nonproduction worker man-hours.

TABLE 1. AIR TRANSPORTATION  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1947-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER ALL EMPLOYEE	UNIT LABOR REQUIREMENTS IN TERMS OF ALL EMPLOYEES	RELATED DATA	
			OUTPUT	ALL EMPLOYEES
1947.....	37.4	267.4	22.7	60.7
1948.....	41.6	240.4	23.5	56.5
1949.....	47.8	209.1	26.4	55.2
1950.....	55.7	179.6	31.4	56.4
1951.....	64.0	156.3	39.8	62.2
1952.....	66.5	150.4	46.4	69.8
1953.....	71.8	139.3	53.5	74.5
1954.....	79.5	125.8	60.4	76.0
1955.....	89.5	111.7	71.9	80.3
1956.....	92.0	108.7	83.1	90.3
1957.....	95.1	105.2	94.1	99.0
1958.....	98.5	101.6	95.6	97.1
1959.....	106.2	94.2	110.3	103.9
1960.....	107.1	93.4	117.3	109.5
1961.....	113.4	88.2	124.1	109.4
1962.....	126.2	79.2	140.2	111.1
1963.....	139.4	71.7	158.8	113.9
1964.....	153.4	65.2	185.0	120.6
1965.....	172.0	58.1	224.6	130.6
1966 <sup>1</sup> .....	194.4	51.4	277.8	142.9
AVERAGE ANNUAL RATES (PERCENT)				
1947-66....	7.9	-7.4	13.5	5.1
1957-66....	8.3	-7.6	12.4	3.9

<sup>1</sup> Preliminary.

Source: Based on Civil Aeronautics Board data.

TABLE 2. BITUMINOUS COAL AND LIGNITE MINING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER ALL EMPLOYEE	UNIT LABOR REQUIREMENTS IN TERMS OF ALL EMPLOYEES	RELATED DATA	
			OUTPUT	ALL EMPLOYEES
1939.....	44.2	226.1	88.8	200.8
1947.....	66.1	151.2	141.8	214.4
1948.....	61.6	162.5	134.8	219.0
1949.....	50.0	200.0	98.4	196.8
1950.....	63.3	158.1	116.1	183.5
1951.....	64.9	154.1	120.0	184.9
1952.....	64.6	154.8	104.9	162.4
1953.....	72.0	138.9	102.7	142.7
1954.....	78.3	127.7	88.0	112.4
1955.....	97.0	103.1	104.9	108.1
1956.....	100.1	99.9	113.5	113.4
1957.....	98.0	102.1	112.1	114.4
1958.....	97.2	102.9	93.8	96.5
1959.....	105.5	94.8	94.1	89.2
1960.....	112.5	88.9	94.7	84.2
1961.....	124.8	80.2	91.7	73.5
1962.....	137.3	72.8	96.0	69.9
1963.....	151.5	66.0	104.2	68.8
1964.....	162.6	61.5	110.6	68.0
1965.....	176.7	56.6	116.3	65.8
1966 <sup>1</sup> .....	186.7	53.5	121.2	64.9

  

AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	6.6	-6.2	-0.7	-6.9
1957-66 ....	8.3	-7.7	2.0	-5.8

<sup>1</sup> Preliminary.

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

TABLE 3. BITUMINOUS COAL AND LIGNITE MINING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	40.9	47.3	244.4	211.3	88.8	217.0	187.6
1947.....	61.8	53.9	161.8	185.5	141.8	229.5	263.1
1948.....	57.7	53.7	173.4	186.1	134.8	233.8	250.8
1949.....	47.1	56.6	212.2	176.8	98.4	208.8	174.0
1950.....	59.7	61.9	167.5	161.5	116.1	194.5	187.5
1951.....	61.1	61.5	163.7	162.5	120.0	196.4	195.0
1952.....	61.3	65.2	163.2	153.5	104.9	171.2	161.0
1953.....	68.4	70.5	146.2	141.8	102.7	150.1	145.6
1954.....	75.3	81.9	132.8	122.0	88.0	116.9	107.4
1955.....	93.6	88.2	106.9	113.3	104.9	112.1	118.9
1956.....	57.3	91.2	102.8	109.7	113.5	116.7	124.5
1957.....	96.3	93.3	103.8	107.2	112.1	116.4	120.2
1958.....	98.0	103.5	102.0	96.6	93.8	95.7	90.6
1959.....	107.1	105.5	93.4	94.8	94.1	87.9	89.2
1960.....	114.1	111.9	87.6	89.3	94.7	83.0	84.6
1961.....	126.3	123.6	79.2	80.9	91.7	72.6	74.2
1962.....	137.5	130.8	72.7	76.5	96.0	69.8	73.4
1963.....	150.1	135.7	66.6	73.7	104.2	69.4	76.8
1964.....	161.5	144.4	61.9	69.3	110.6	68.5	76.6
1965.....	176.5	154.2	56.7	64.8	116.3	65.9	75.4
1966 <sup>2</sup> .....	186.2	162.9	53.1	61.4	121.2	64.4	74.4
AVERAGE ANNUAL RATES (PERCENT)							
1947-66 ....	7.1	6.4	-6.7	-6.0	-0.7	-7.3	-6.7
1957-66 ....	8.3	6.3	-7.6	-5.9	2.0	-5.7	-4.0

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

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

TABLE 4. BITUMINOUS COAL AND LIGNITE MINING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER NON- PRODUCTION WORKER	UNIT LABOR REQUIREMENTS IN TERMS OF NON- PRODUCTION WORKERS	RELATED DATA	
			OUTPUT <sup>1</sup>	NON- PRODUCTION WORKERS
1939.....	106.2	94.1	88.8	83.6
1947.....	134.4	74.4	141.8	105.5
1948.....	121.1	82.6	134.8	111.3
1949.....	89.4	111.9	98.4	110.1
1950.....	111.8	89.4	116.1	103.8
1951.....	117.5	85.1	120.0	102.1
1952.....	106.3	94.1	104.9	98.7
1953.....	115.8	86.4	102.7	88.7
1954.....	109.6	91.3	88.0	80.3
1955.....	132.8	75.3	104.9	79.0
1956.....	127.4	78.5	113.5	89.1
1957.....	112.6	88.8	112.1	99.6
1958.....	92.2	108.4	93.8	101.7
1959.....	95.7	104.5	94.1	98.3
1960.....	102.9	97.1	94.7	92.0
1961.....	115.5	66.6	91.7	79.4
1962.....	135.2	74.0	96.0	71.0
1963.....	162.1	61.7	104.2	64.3
1964.....	173.1	57.8	110.6	63.9
1965.....	178.6	56.0	116.3	65.1
1966 <sup>2</sup> .....	178.0	56.2	121.2	68.1
AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	2.0	-2.0	-0.7	-2.6
1957-66 ....	8.3	-7.7	2.0	-5.8

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

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

TABLE 5. COAL MINING<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER ALL EMPLOYEE	UNIT LABOR REQUIREMENTS IN TERMS OF ALL EMPLOYEES	RELATED DATA	
			OUTPUT	ALL EMPLOYEES
1939.....	45.1	221.9	98.9	219.5
1947.....	66.9	149.4	151.3	226.1
1948.....	62.9	159.1	144.7	230.2
1949.....	50.8	196.8	106.3	209.2
1950.....	63.1	158.4	123.9	196.2
1951.....	64.6	154.8	125.8	194.7
1952.....	64.9	154.1	111.7	172.1
1953.....	76.5	141.9	105.9	150.3
1954.....	78.1	128.0	91.7	117.4
1955.....	86.2	104.0	105.8	110.0
1956.....	100.5	99.5	114.8	114.2
1957.....	97.6	102.5	112.2	115.0
1958.....	97.4	102.7	93.9	96.4
1959.....	106.0	94.4	93.9	88.0
1960.....	115.8	86.4	96.2	83.1
1961.....	125.5	79.7	90.2	71.9
1962.....	138.8	72.1	93.8	67.6
1963.....	152.5	65.6	101.7	66.7
1964.....	163.1	61.3	106.8	65.5
1965.....	176.0	56.8	110.7	62.9
1966 <sup>2</sup> .....	186.5	53.6	114.3	61.3
AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	6.6	-6.2	-1.4	-7.5
1957-66 ....	8.2	-7.6	1.3	-6.4

<sup>1</sup> Includes industries 11 and 12 in the Standard Industrial Classification.

<sup>2</sup> Preliminary.

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

TABLE 6. COAL MINING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION <sup>1</sup> WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>2</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	41.9	48.6	238.9	205.9	98.9	236.3	203.6
1947.....	62.7	54.5	159.5	183.3	151.3	241.3	277.4
1948.....	58.9	54.5	169.7	183.4	144.7	245.5	265.4
1949.....	48.0	57.2	208.5	175.0	106.3	221.6	186.0
1950.....	59.7	61.6	167.6	162.2	123.9	207.7	201.0
1951.....	60.9	61.8	164.1	161.7	125.8	206.4	203.4
1952.....	61.6	65.2	162.2	153.4	111.7	181.2	171.3
1953.....	67.1	70.1	149.0	142.6	105.9	157.8	151.0
1954.....	75.7	81.9	132.1	122.0	91.7	121.1	111.9
1955.....	93.1	87.7	107.4	114.0	105.8	113.6	120.6
1956.....	97.9	91.9	102.2	108.8	114.8	117.3	124.9
1957.....	95.8	93.2	104.4	107.3	112.2	117.1	120.4
1958.....	98.3	103.4	101.7	96.7	93.9	95.5	90.8
1959.....	107.4	105.7	93.1	94.6	93.9	87.4	88.8
1960.....	117.6	114.9	85.0	87.0	96.2	81.8	83.7
1961.....	127.0	123.2	78.7	81.2	90.2	71.0	73.2
1962.....	139.2	130.8	71.9	76.4	93.8	67.4	71.7
1963.....	151.6	135.6	66.0	73.7	101.7	67.1	75.0
1964.....	161.8	144.1	61.8	69.4	106.8	66.0	74.1
1965.....	176.0	152.9	56.8	65.4	110.7	62.9	72.4
1966 <sup>3</sup> .....	187.7	161.7	53.3	61.9	114.3	60.9	70.7
AVERAGE ANNUAL RATES (PERCENT)							
1947-66.....	7.1	6.3	-6.6	-5.9	-1.4	-7.9	-7.2
1957-66.....	8.2	6.1	-7.6	-5.8	1.3	-6.4	-4.5

<sup>1</sup> Includes industries 11 and 12 in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

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

TABLE 7.COAL MINING<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER NON- PRODUCTION WORKER	UNIT LABOR REQUIREMENTS IN TERMS OF NON- PRODUCTION WORKERS	RELATED DATA	
			OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS
1939.....	102.8	97.3	98.9	96.2
1947.....	131.8	75.9	151.3	114.8
1948.....	122.8	81.4	144.7	117.8
1949.....	90.2	110.8	106.3	117.8
1950.....	110.5	90.5	123.9	112.1
1951.....	115.3	86.7	125.8	109.1
1952.....	106.1	94.3	111.7	105.3
1953.....	110.9	90.2	105.9	95.5
1954.....	102.6	97.5	91.7	89.4
1955.....	126.4	79.1	105.8	83.7
1956.....	125.7	79.5	114.8	91.3
1957.....	112.7	88.8	112.2	99.6
1958.....	91.8	108.9	93.9	102.3
1959.....	96.1	104.0	93.9	97.7
1960.....	104.6	95.6	96.2	92.0
1961.....	115.6	86.5	90.2	78.0
1962.....	136.1	73.5	93.8	68.9
1963.....	159.9	62.5	101.7	63.6
1964.....	173.1	57.8	106.8	61.7
1965.....	178.3	56.1	110.7	62.1
1966 <sup>3</sup> .....	177.5	56.3	114.3	64.4
AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	2.1	-2.0	-1.4	-3.4
1957-66 ....	8.3	-7.6	1.3	-6.4

<sup>1</sup> Includes industries 11 and 12 in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

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



TABLE 8. COPPER MINING, CRUDE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER ALL EMPLOYEE	UNIT LABOR REQUIREMENTS IN TERMS OF ALL EMPLOYEES	RELATED DATA	
			OUTPUT <sup>1</sup>	ALL EMPLOYEES
1939.....	( <sup>2</sup> )	( <sup>2</sup> )	46.1	( <sup>2</sup> )
1947.....	74.9	133.5	74.4	99.3
1948.....	72.9	137.1	71.9	98.6
1949.....	69.2	144.5	64.7	93.5
1950.....	86.6	115.5	80.6	93.1
1951.....	87.2	114.7	81.5	93.5
1952.....	89.3	111.9	85.5	95.7
1953.....	83.8	119.3	86.6	103.3
1954.....	79.8	125.2	80.4	100.7
1955.....	92.7	107.9	96.7	104.3
1956.....	94.3	106.1	113.4	120.3
1957.....	95.7	104.5	111.7	116.7
1958.....	98.9	101.1	98.9	100.0
1959.....	106.8	93.6	89.4	83.7
1960.....	116.2	86.1	117.0	100.7
1961.....	121.5	82.3	124.2	102.2
1962.....	131.6	76.0	131.1	99.6
1963.....	133.6	74.8	128.3	96.0
1964.....	145.0	69.0	136.0	93.8
1965.....	146.0	68.5	151.8	104.0
1966 <sup>3</sup> .....	149.2	67.0	163.8	109.8
AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	4.1	-3.9	4.3	0.2
1957-66 ....	5.4	-5.2	5.5	0.1

<sup>1</sup> Represents output in terms of copper ore (including old tailings) sold or treated.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 9. COPPER MINING, CRUDE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	40.5	39.3	247.1	254.4	46.1	113.9	117.3
1947.....	68.2	61.8	146.6	161.7	74.4	109.1	120.3
1948.....	60.2	59.5	151.0	168.2	71.9	108.6	120.9
1949.....	63.5	61.0	157.5	163.8	64.7	101.9	106.0
1950.....	60.6	72.9	124.1	137.2	80.0	100.0	110.6
1951.....	62.3	72.5	121.5	137.9	81.5	99.0	112.4
1952.....	65.5	76.1	117.0	131.3	85.5	100.0	112.3
1953.....	61.2	72.0	123.2	138.9	86.6	106.7	120.3
1954.....	78.1	74.7	128.0	134.0	80.4	102.9	107.7
1955.....	91.1	84.0	109.8	119.0	96.7	106.2	115.1
1956.....	91.5	85.4	109.3	117.1	113.4	123.9	132.8
1957.....	94.1	93.6	106.3	106.9	111.7	118.7	119.4
1958.....	98.9	103.3	101.1	96.8	98.9	100.0	95.7
1959.....	109.3	105.3	91.5	95.0	89.4	81.6	84.9
1960.....	116.4	107.9	85.9	92.6	117.0	100.5	108.4
1961.....	116.9	110.4	85.5	90.6	124.2	106.2	112.5
1962.....	125.1	120.3	79.9	83.1	131.1	104.8	109.0
1963.....	125.3	119.7	79.8	83.6	128.3	102.4	107.2
1964.....	126.7	131.1	73.2	76.3	136.0	99.5	103.7
1965.....	136.1	129.1	73.5	77.5	151.8	111.5	117.6
1966 <sup>2</sup> .....	135.2	131.7	71.9	75.9	163.8	117.7	124.4
AVERAGE ANNUAL RATES (PERCENT)							
1947-66.....	4.2	4.6	-4.0	-4.4	4.3	0.1	-0.3
1957-66.....	4.4	3.8	-4.2	-3.6	5.5	1.0	1.7

18

<sup>1</sup> Represents output in terms of copper ore (including old tailings) sold or treated. The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

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

TABLE 10. COPPER MINING, CRUDE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER NON- PRODUCTION WORKER	UNIT LABOR REQUIREMENTS IN TERMS OF NON- PRODUCTION	RELATED DATA	
			OUTPUT <sup>1</sup>	NON- PRODUCTION WORKERS
1939.....	( <sup>2</sup> )	( <sup>2</sup> )	46.1	( <sup>2</sup> )
1947.....	108.3	92.3	74.4	68.7
1948.....	107.0	93.5	71.9	67.2
1949.....	96.3	103.9	64.7	67.2
1950.....	112.6	88.8	80.6	71.6
1951.....	107.1	93.4	81.5	76.1
1952.....	104.1	95.0	35.5	82.1
1953.....	93.6	106.8	36.6	92.5
1954.....	84.2	118.0	80.4	95.5
1955.....	92.2	101.9	96.7	98.5
1956.....	104.0	96.1	113.4	109.0
1957.....	101.2	98.8	111.7	110.4
1958.....	98.9	101.1	98.9	100.0
1959.....	99.8	100.2	89.4	89.6
1960.....	115.3	86.8	117.0	101.5
1961.....	130.0	72.1	124.2	89.6
1962.....	156.8	63.8	131.1	83.6
1963.....	168.0	59.3	128.3	76.1
1964.....	178.7	56.0	136.0	76.1
1965.....	188.3	53.1	151.8	80.6
1966 <sup>3</sup> .....	192.5	52.0	163.3	85.1
AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	3.4	-3.3	4.3	0.9
1957-66 ....	9.2	-8.4	5.5	-3.3

<sup>1</sup> Represents output in terms of copper ore (including old tailings) sold or treated. The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 11. COPPER MINING, RECOVERABLE METAL  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-66  
 (INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER ALL EMPLOYEE	UNIT LABOR REQUIREMENTS IN TERMS OF ALL EMPLOYEES	RELATED DATA	
			OUTPUT <sup>1</sup>	ALL EMPLOYEES
1939.....	( <sup>2</sup> )	( <sup>2</sup> )	74.1	( <sup>2</sup> )
1947.....	87.9	113.7	87.3	99.3
1948.....	87.1	114.8	85.9	98.6
1949.....	82.1	121.7	76.8	93.5
1950.....	100.1	99.9	93.2	93.1
1951.....	101.6	98.4	95.0	93.5
1952.....	99.4	100.6	95.1	95.7
1953.....	92.6	107.9	95.7	103.3
1954.....	85.7	116.7	86.3	100.7
1955.....	99.3	100.7	103.6	104.3
1956.....	95.3	105.0	114.6	120.3
1957.....	96.4	103.7	112.5	116.7
1958.....	101.8	98.2	101.8	100.0
1959.....	102.3	97.8	85.6	83.7
1960.....	111.5	89.7	112.3	100.7
1961.....	118.6	84.3	121.2	102.2
1962.....	128.2	78.0	127.7	99.6
1963.....	131.3	76.2	126.0	96.0
1964.....	138.4	72.3	129.8	93.8
1965.....	135.3	73.9	140.7	104.0
1966 <sup>3</sup> .....	135.6	73.7	148.9	109.8
AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	2.5	-2.5	2.8	0.2
1957-66 ....	4.4	-4.2	4.5	0.1

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

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 12. COPPER MINING, RECOVERABLE METAL  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	85.1	83.2	153.7	158.3	74.1	113.9	117.3
1947.....	80.0	72.6	125.0	137.8	87.3	109.1	120.3
1948.....	75.1	71.1	126.4	140.7	85.9	108.6	120.9
1949.....	75.4	72.5	132.7	138.0	76.8	101.9	106.0
1950.....	55.2	84.3	107.3	118.7	93.2	100.0	110.6
1951.....	96.0	84.5	104.2	118.3	95.0	99.0	112.4
1952.....	95.1	84.7	105.2	118.1	95.1	100.0	112.3
1953.....	89.7	79.6	111.5	125.7	95.7	106.7	120.3
1954.....	83.9	80.1	119.2	124.8	86.3	102.9	107.7
1955.....	97.6	90.0	102.5	111.1	103.6	106.2	115.1
1956.....	92.5	86.3	108.1	115.5	114.6	123.5	132.8
1957.....	94.8	94.2	105.5	106.1	112.5	118.7	119.4
1958.....	101.8	106.4	98.2	94.0	101.5	100.0	95.7
1959.....	104.6	100.8	95.6	95.2	85.6	81.8	84.9
1960.....	111.7	103.6	89.5	90.5	112.3	100.5	106.4
1961.....	114.1	107.7	87.6	92.8	121.2	106.2	112.5
1962.....	121.9	117.2	82.1	85.4	127.7	104.8	109.0
1963.....	123.0	117.5	81.3	85.1	126.0	102.4	107.2
1964.....	130.5	125.2	76.7	75.9	125.8	99.5	103.7
1965.....	126.2	119.6	79.2	83.6	140.7	111.5	117.6
1966 <sup>2</sup> .....	126.5	119.7	79.0	82.5	140.9	117.7	124.4

AVERAGE ANNUAL RATES (PERCENT)

1947-66.....	2.7	3.1	-2.6	-3.0	2.8	0.1	-0.3
1957-66.....	3.4	2.8	-3.3	-2.7	4.5	1.0	1.7

<sup>1</sup> Represents output in terms of copper recovered from copper ore, old tailings, and precipitates. The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

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

**TABLE 13. COPPER MINING, RECOVERABLE METAL  
OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
NONPRODUCTION WORKERS, 1939-66**

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER NON- PRODUCTION WORKER	UNIT LABOR REQUIREMENTS IN TERMS OF NON- PRODUCTION WORKERS	RELATED DATA	
			OUTPUT <sup>1</sup>	NON- PRODUCTION WORKERS
1939.....	( <sup>2</sup> )	( <sup>2</sup> )	74.1	( <sup>2</sup> )
1947.....	127.1	78.7	87.3	68.7
1948.....	127.8	78.2	85.9	67.2
1949.....	114.3	87.5	76.8	67.2
1950.....	130.2	76.8	93.2	71.6
1951.....	124.8	30.1	95.0	76.1
1952.....	115.8	86.3	95.1	82.1
1953.....	103.5	96.7	95.7	92.5
1954.....	90.4	110.7	86.3	95.5
1955.....	105.2	95.1	103.6	98.5
1956.....	105.1	95.1	114.6	109.0
1957.....	101.9	98.1	112.5	110.4
1958.....	101.8	98.2	101.8	100.0
1959.....	95.5	104.7	85.6	89.6
1960.....	110.6	90.4	112.3	101.5
1961.....	135.3	73.9	121.2	89.6
1962.....	152.8	65.5	127.7	83.6
1963.....	165.6	60.4	126.0	76.1
1964.....	170.6	58.6	129.8	76.1
1965.....	174.6	57.3	140.7	80.6
1966 <sup>3</sup> .....	175.0	57.2	148.9	85.1
AVERAGE ANNUAL RATES (PERCENT)				
1947-66 ....	1.9	-1.8	2.8	0.9
1957-66 ....	8.1	-7.5	4.5	-3.3

<sup>1</sup> Represents output in terms of copper recovered from copper ore, old tailings, and precipitates. The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 14. GAS AND ELECTRIC UTILITIES<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	26.7	27.6	374.5	362.2	19.6	73.4	71.0
1947.....	46.8	45.8	213.5	218.5	37.8	80.7	82.6
1948.....	49.1	48.1	203.8	208.1	42.0	85.6	87.4
1949.....	49.8	49.2	200.7	203.4	44.1	88.5	89.7
1950.....	55.6	54.6	179.7	183.1	50.3	90.4	92.1
1951.....	62.2	60.6	160.9	164.9	57.0	91.7	94.0
1952.....	65.8	64.7	151.9	154.6	61.5	93.4	95.1
1953.....	70.3	69.3	142.2	144.3	66.8	95.0	96.4
1954.....	74.7	74.0	133.8	135.2	71.6	95.8	96.8
1955.....	83.4	82.5	119.9	121.2	80.6	96.6	97.7
1956.....	90.3	89.4	110.7	111.8	88.7	98.2	99.2
1957.....	94.1	93.7	106.3	106.7	94.1	100.0	100.4
1958.....	98.2	98.6	101.8	101.4	98.2	100.0	99.6
1959.....	107.7	107.6	92.9	92.9	107.7	100.0	100.1
1960.....	114.8	114.7	87.1	87.2	114.9	100.1	100.2
1961.....	121.2	121.4	82.5	82.4	120.7	99.6	99.4
1962.....	131.3	130.8	76.2	76.5	129.6	98.7	99.1
1963.....	139.9	139.0	71.5	71.9	137.9	98.6	99.2
1964.....	149.8	149.1	66.7	67.1	148.5	99.1	99.6
1965 <sup>2</sup> .....	157.7	156.0	63.4	64.1	158.0	100.2	101.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	7.2	7.3	-6.7	-6.8	8.2	0.9	0.8
1957-65....	6.9	6.8	-6.4	-6.3	6.8	-0.1	0.0

<sup>1</sup> Includes industries 491, 492, and 493 in the Standard Industrial Classification.

<sup>2</sup> Preliminary.

Source: Output based on data from the American Gas Association, Federal Power Commission, Rural Electrification Administration of U.S. Department of Agriculture, and Bureau of Labor Statistics, U.S. Department of Labor. Employment and hours based on data from the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 15. GAS AND ELECTRIC UTILITIES<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR <sup>2</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS <sup>2</sup>	OUTPUT <sup>3</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS <sup>2</sup>
1939.....	(4)	(4)	(4)	(4)	19.6	(4)	(4)
1947.....	44.1	43.1	227.0	232.0	37.8	85.8	87.7
1948.....	46.4	45.5	215.5	219.8	42.0	90.5	92.3
1949.....	47.4	46.8	211.1	213.8	44.1	93.1	94.3
1950.....	53.2	52.3	187.9	191.3	50.3	94.5	96.2
1951.....	59.6	58.1	167.7	172.1	57.0	95.6	98.1
1952.....	63.3	62.2	158.0	160.8	61.5	97.2	98.9
1953.....	68.2	67.2	146.6	148.8	66.8	97.9	99.4
1954.....	73.2	72.5	136.6	138.0	71.6	97.8	98.8
1955.....	82.2	81.3	121.7	123.0	80.6	98.1	99.1
1956.....	89.5	88.5	111.7	113.0	88.7	99.1	100.2
1957.....	93.6	93.3	106.8	107.2	94.1	100.5	100.9
1958.....	98.2	98.6	101.8	101.4	98.2	100.0	99.6
1959.....	108.2	108.1	92.4	92.5	107.7	99.5	99.6
1960.....	115.8	115.7	86.3	86.4	114.9	99.2	99.3
1961.....	122.8	123.0	81.4	81.3	120.7	98.3	98.1
1962.....	133.6	133.1	74.8	75.2	129.6	97.0	97.4
1963.....	143.2	142.5	69.8	70.2	137.9	96.3	96.8
1964.....	154.0	153.3	64.9	65.3	148.5	96.4	96.9
1965 <sup>5</sup> .....	162.2	160.4	61.6	62.3	158.0	97.4	98.5
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	7.8	7.9	-7.2	-7.3	8.2	0.4	0.3
1957-65....	7.3	7.2	-6.8	-6.7	6.8	-0.5	-0.4

<sup>1</sup> Includes industries 491, 492, and 493 in the Standard Industrial Classification.

<sup>2</sup> Represents nonsupervisory workers.

<sup>3</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>4</sup> Not available.

<sup>5</sup> Preliminary.

Source: Output based on data from the American Gas Association, Federal Power Commission, Rural Electrification Administration of U.S. Department of Agriculture, and Bureau of Labor Statistics, U.S. Department of Labor. Employment and hours based on data from the Bureau of Labor Statistics, U.S. Department of Labor.



TABLE 16. IRON MINING, CRUDE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER ALL EMPLOYEE	UNIT LABOR REQUIREMENTS IN TERMS OF ALL EMPLOYEES	RELATED DATA	
			OUTPUT	ALL EMPLOYEES
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	48.7	( <sup>1</sup> )
1947.....	88.3	113.3	93.9	106.4
1948.....	91.4	109.5	103.6	113.4
1949.....	82.0	121.9	85.7	104.5
1950.....	92.5	107.6	102.4	110.2
1951.....	105.5	94.8	123.3	116.9
1952.....	99.8	100.2	103.6	103.8
1953.....	101.4	98.7	126.0	124.3
1954.....	80.1	124.8	87.6	109.3
1955.....	106.3	92.4	114.1	105.4
1956.....	108.9	91.8	117.3	107.7
1957.....	107.8	92.8	129.1	119.8
1958.....	91.7	109.1	88.2	96.2
1959.....	98.3	101.7	82.6	84.0
1960.....	123.9	80.7	125.1	101.0
1961.....	135.2	74.0	110.6	81.8
1962.....	151.2	66.2	116.4	77.0
1963.....	168.6	59.3	124.4	73.8
1964.....	187.5	53.3	141.4	75.4
1965.....	183.0	54.7	144.9	79.2
1966 <sup>2</sup> .....	184.5	54.2	148.5	80.5
AVERAGE ANNUAL RATES (PERCENT)				
1947-66....	4.2	-4.0	1.8	-2.3
1957-66....	8.8	-8.1	4.6	-3.9

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 17. IRON MINING, CRUDE CRE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	56.8	60.2	176.0	166.1	48.7	85.7	80.9
1947.....	74.8	70.4	133.8	142.0	93.9	125.6	133.3
1948.....	78.0	71.5	128.2	139.8	103.6	132.8	144.8
1949.....	71.6	68.3	139.7	146.4	85.7	119.7	125.5
1950.....	81.5	75.5	122.7	132.5	102.4	125.6	135.7
1951.....	92.8	82.9	107.7	120.6	123.3	132.8	148.7
1952.....	90.3	78.1	110.7	128.1	103.6	114.7	132.7
1953.....	91.4	81.7	109.4	122.5	126.0	137.8	154.3
1954.....	73.9	74.1	135.3	134.9	87.6	118.5	118.2
1955.....	101.3	95.5	98.7	104.7	114.1	112.6	119.5
1956.....	104.5	99.5	95.7	100.5	117.3	112.2	117.9
1957.....	104.5	100.5	95.7	99.5	129.1	123.5	128.5
1958.....	93.3	98.0	107.1	102.0	88.2	94.5	90.0
1959.....	100.9	101.3	99.2	98.7	82.6	81.9	81.5
1960.....	121.0	114.6	82.7	87.3	125.1	103.4	109.2
1961.....	135.7	132.5	73.7	75.5	110.6	81.5	83.5
1962.....	150.6	142.3	66.4	70.3	116.4	77.3	81.8
1963.....	163.5	157.3	61.2	63.6	124.4	76.1	79.1
1964.....	180.8	169.1	55.3	59.1	141.4	78.2	83.6
1965.....	176.9	162.6	56.5	61.5	144.9	81.9	89.1
1966 <sup>2</sup> .....	180.2	161.1	55.5	62.1	148.5	82.4	92.2
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	5.1	5.2	-4.8	-5.0	1.8	-3.1	-3.3
1957-66....	8.4	7.1	-7.7	-6.7	4.6	-3.5	-2.3

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

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

TABLE 18. IRON MINING, CRUDE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER NON- PRODUCTION WORKER	UNIT LABOR REQUIREMENTS IN TERMS OF NON- PRODUCTION WORKERS	RELATED DATA	
			OUTPUT <sup>1</sup>	NON- PRODUCTION WORKERS
1939.....	( <sup>2</sup> )	( <sup>2</sup> )	48.7	( <sup>2</sup> )
1947.....	207.3	48.2	93.9	45.3
1948.....	199.2	50.2	103.6	52.0
1949.....	153.0	65.3	85.7	56.0
1950.....	167.0	59.9	102.4	61.3
1951.....	184.9	54.1	123.3	66.7
1952.....	149.5	66.9	103.6	69.3
1953.....	155.0	64.5	126.0	81.3
1954.....	109.5	91.3	87.6	80.0
1955.....	138.0	72.5	114.1	82.7
1956.....	125.7	79.5	117.3	93.3
1957.....	119.5	83.7	129.1	108.0
1958.....	87.1	114.9	88.2	101.3
1959.....	91.1	109.8	82.6	90.7
1960.....	134.1	74.6	125.1	93.3
1961.....	133.7	74.8	110.6	82.7
1962.....	153.2	65.3	116.4	76.0
1963.....	186.5	53.6	124.4	66.7
1964.....	212.0	47.2	141.4	66.7
1965.....	205.0	48.8	144.9	70.7
1966 <sup>3</sup> .....	198.8	50.3	148.5	74.7
AVERAGE ANNUAL RATES (PERCENT)				
1947-66....	0.0	0.0	1.8	1.8
1957-66....	10.1	-9.2	4.6	-5.0

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 19. IRON MINING, USABLE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER ALL EMPLOYEE	UNIT LABOR REQUIREMENTS IN TERMS OF ALL EMPLOYEES	RELATED DATA	
			OUTPUT	ALL EMPLOYEES
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	66.7	( <sup>1</sup> )
1947.....	113.1	88.4	120.3	106.4
1948.....	115.3	86.7	130.8	113.4
1949.....	105.2	95.1	109.9	104.5
1950.....	115.2	86.8	127.0	110.2
1951.....	129.3	77.3	151.2	116.9
1952.....	122.4	81.7	127.1	103.8
1953.....	123.4	81.0	153.4	124.3
1954.....	92.5	108.1	101.1	109.3
1955.....	126.2	79.2	133.0	105.4
1956.....	116.8	85.6	125.8	107.7
1957.....	113.9	87.8	136.5	119.8
1958.....	89.9	111.2	86.5	96.2
1959.....	91.7	109.1	77.0	84.0
1960.....	113.2	88.4	114.3	101.0
1961.....	112.5	88.9	92.0	81.8
1962.....	120.8	82.8	93.0	77.0
1963.....	129.3	77.4	95.4	73.8
1964.....	145.5	68.7	109.7	75.4
1965.....	143.8	69.5	113.9	79.2
1966 <sup>2</sup> .....	146.3	68.3	117.8	80.5
AVERAGE ANNUAL RATES (PERCENT)				
1947-66....	0.9	-0.9	-1.4	-2.3
1957-66....	5.2	-4.9	1.1	-3.9

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 20. IRON MINING, USABLE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	77.8	82.4	128.5	121.3	66.7	85.7	80.9
1947.....	95.8	90.2	104.4	110.8	120.3	125.6	133.3
1948.....	98.5	90.3	101.5	110.7	130.8	132.8	144.8
1949.....	91.8	87.6	108.9	114.2	109.9	119.7	125.5
1950.....	101.1	93.6	98.9	106.9	127.0	125.6	135.7
1951.....	113.9	101.7	87.8	98.3	151.2	132.8	148.7
1952.....	110.8	95.8	90.2	104.4	127.1	114.7	132.7
1953.....	111.3	99.4	89.8	100.6	153.4	137.8	154.3
1954.....	85.3	85.5	117.2	116.9	101.1	118.5	118.2
1955.....	118.1	111.3	84.7	89.8	133.0	112.6	119.5
1956.....	112.1	106.7	89.2	93.7	125.8	112.2	117.9
1957.....	110.5	106.2	90.5	94.1	136.5	123.5	128.5
1958.....	91.5	96.1	109.2	104.0	86.5	94.5	90.0
1959.....	94.0	94.5	106.4	105.8	77.0	81.9	81.5
1960.....	110.5	104.7	90.5	95.5	114.3	103.4	109.2
1961.....	112.9	110.2	88.6	90.8	92.0	81.5	83.5
1962.....	120.3	113.7	83.1	88.0	93.0	77.3	81.8
1963.....	125.4	120.6	79.8	82.9	95.4	76.1	79.1
1964.....	140.3	131.2	71.3	76.2	109.7	78.2	83.6
1965.....	135.1	127.8	71.9	78.2	113.9	81.9	89.1
1966 <sup>2</sup> .....	143.0	127.8	69.9	78.3	117.8	82.4	92.2
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	1.7	1.9	-1.7	-1.8	-1.4	-3.1	-3.3
1957-66....	4.8	3.6	-4.6	-3.4	1.1	-3.5	-2.3

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

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

TABLE 21. IRON MINING, USABLE ORE  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER NON- PRODUCTION WORKER	UNIT LABOR REQUIREMENTS IN TERMS OF NON- PRODUCTION WORKERS	RELATED DATA	
			OUTPUT <sup>1</sup>	NON- PRODUCTION WORKERS
1939.....	( <sup>2</sup> )	( <sup>2</sup> )	66.7	( <sup>2</sup> )
1947.....	265.6	37.7	120.3	45.3
1948.....	251.5	39.8	130.8	52.0
1949.....	196.3	51.0	109.9	56.0
1950.....	207.2	48.3	127.0	61.3
1951.....	226.7	44.1	151.2	66.7
1952.....	183.4	54.5	127.1	69.3
1953.....	188.7	53.0	153.4	81.3
1954.....	126.4	79.1	101.1	80.0
1955.....	160.8	62.2	133.0	82.7
1956.....	134.8	74.2	125.8	93.3
1957.....	126.4	79.1	136.5	108.0
1958.....	85.4	117.1	86.5	101.3
1959.....	84.9	117.8	77.0	90.7
1960.....	122.5	81.6	114.3	93.3
1961.....	111.2	89.9	92.0	82.7
1962.....	122.4	81.7	93.0	76.0
1963.....	143.0	69.9	95.4	66.7
1964.....	164.5	60.8	109.7	66.7
1965.....	161.1	62.1	113.9	70.7
1966 <sup>3</sup> .....	157.7	63.4	117.8	74.7
AVERAGE ANNUAL RATES (PERCENT)				
1947-66....	-3.2	3.3	-1.4	1.8
1957-66....	6.4	-6.1	1.1	-5.0

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 22. RAILROAD TRANSPORTATION - TOTAL REVENUE TRAFFIC<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	54.5	48.4	183.3	206.7	60.0	110.0	124.0
1947.....	78.3	66.4	127.6	150.6	118.3	151.0	178.2
1948.....	77.0	65.3	129.9	153.2	114.2	148.3	174.9
1949.....	70.8	63.7	141.2	157.0	94.6	133.6	148.5
1950.....	75.5	72.8	132.4	137.4	103.5	137.0	142.2
1951.....	79.3	77.1	126.1	129.8	113.6	143.3	147.4
1952.....	78.5	77.2	127.4	129.5	108.3	138.0	140.2
1953.....	78.2	77.7	127.9	128.7	106.2	135.8	136.7
1954.....	80.4	80.9	124.4	123.6	96.5	120.0	119.3
1955.....	90.6	89.4	110.4	111.8	108.1	119.3	120.9
1956.....	94.7	93.7	105.6	106.7	111.8	118.1	119.3
1957.....	95.1	95.1	105.2	105.2	106.5	112.0	112.0
1958.....	99.7	99.9	100.3	100.1	95.1	95.4	95.2
1959.....	106.4	106.1	94.0	94.2	98.5	92.6	92.8
1960.....	110.1	110.4	90.8	90.6	97.7	88.7	88.5
1961.....	117.8	118.2	84.9	84.6	96.0	81.5	81.2
1962.....	126.5	125.9	79.0	79.4	100.6	79.5	79.9
1963.....	135.6	133.9	73.7	74.7	104.7	77.2	78.2
1964.....	146.4	142.5	68.3	70.2	110.4	75.4	77.5
1965.....	161.2	157.5	62.0	63.5	116.2	72.1	73.8
1966 <sup>2</sup> .....	172.8	169.2	57.9	59.1	122.5	70.9	72.4
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	4.5	5.1	-4.3	-4.9	0.1	-4.3	-4.8
1957-66....	6.9	6.6	-6.5	-6.2	2.1	-4.5	-4.2

<sup>1</sup> Class I railroads and Class I switching and terminal companies. Includes industry 401, Class I in the Standard Industrial Classification.

<sup>2</sup> Preliminary.

Source: Based on Interstate Commerce Commission data.

TABLE 23. RAILROAD TRANSPORTATION - TOTAL REVENUE TRAFFIC<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>2</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	54.1	47.8	185.0	209.2	60.0	111.0	125.5
1947.....	76.6	64.4	130.6	155.3	118.3	154.5	183.7
1948.....	75.3	63.4	132.7	157.6	114.2	151.6	180.0
1949.....	69.7	62.4	143.4	160.3	94.6	135.7	151.6
1950.....	74.2	71.1	134.7	140.7	103.5	139.4	145.6
1951.....	77.6	75.1	128.8	133.1	113.6	146.3	151.2
1952.....	77.1	75.5	129.7	132.4	108.3	140.5	143.4
1953.....	76.9	76.1	130.0	131.5	106.2	138.1	139.6
1954.....	79.7	79.9	125.5	125.2	96.5	121.1	120.8
1955.....	89.7	88.3	111.5	113.2	108.1	120.5	122.4
1956.....	93.8	92.7	106.6	107.9	111.8	119.2	120.6
1957.....	94.5	94.4	105.8	105.9	106.5	112.7	112.8
1958.....	100.0	100.2	100.0	99.8	95.1	95.1	94.9
1959.....	106.8	106.6	93.6	93.8	98.5	92.2	92.4
1960.....	110.8	111.1	90.3	90.0	97.7	88.2	87.9
1961.....	119.0	119.7	84.1	83.5	96.0	80.7	80.2
1962.....	128.0	127.2	78.1	78.6	100.6	78.6	79.1
1963.....	137.2	135.3	72.9	73.9	104.7	76.3	77.4
1964.....	148.2	143.9	67.5	69.5	110.4	74.5	76.7
1965.....	163.7	159.8	61.1	62.6	116.2	71.0	72.7
1966 <sup>3</sup> .....	176.0	171.6	56.8	58.3	122.5	69.6	71.4
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	4.8	5.4	-4.6	-5.1	0.1	-4.6	-5.1
1957-66....	7.2	6.8	-6.7	-6.3	2.1	-4.7	-4.3

<sup>1</sup> Class I railroads and Class I switching and terminal companies. Includes industry 401, Class I in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Based on Interstate Commerce Commission data.



TABLE 24. RAILROAD TRANSPORTATION - TOTAL REVENUE TRAFFIC<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS
1939.....	60.4	54.4	165.7	183.8	60.0	99.4	110.3
1947.....	102.8	92.9	97.3	107.6	118.3	115.1	127.3
1948.....	99.2	89.5	100.8	111.7	114.2	115.1	127.6
1949.....	83.6	79.0	119.6	126.5	94.6	113.1	119.7
1950.....	91.8	93.7	109.0	106.8	103.5	112.8	110.5
1951.....	100.4	101.8	99.6	98.2	113.6	113.2	111.6
1952.....	96.1	97.8	104.1	102.2	108.3	112.7	110.7
1953.....	94.6	96.4	105.7	103.8	106.2	112.3	110.2
1954.....	88.2	91.1	113.4	109.7	96.5	109.4	105.9
1955.....	100.8	100.9	99.2	99.1	108.1	107.2	107.1
1956.....	104.3	104.1	95.9	96.1	111.8	107.2	107.4
1957.....	101.5	101.5	98.5	98.5	106.5	104.9	104.9
1958.....	96.3	96.3	103.9	103.9	95.1	98.8	98.8
1959.....	102.4	102.3	97.7	97.8	98.5	96.2	96.3
1960.....	103.5	103.7	96.6	96.4	97.7	94.4	94.2
1961.....	106.2	106.8	94.2	93.6	96.0	90.4	89.9
1962.....	114.3	114.7	87.5	87.2	100.6	88.0	87.7
1963.....	121.5	122.0	82.3	81.9	104.7	86.2	85.8
1964.....	130.0	129.6	76.9	77.2	110.4	84.9	85.2
1965.....	139.0	138.8	71.9	72.0	116.2	83.6	83.7
1966 <sup>3</sup> .....	146.7	150.3	68.2	66.5	122.5	83.5	81.5
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	2.0	2.3	-2.0	-2.3	0.1	-2.0	-2.3
1957-66....	4.7	4.9	-4.5	-4.6	2.1	-2.5	-2.6

<sup>1</sup> Class I railroads and Class I switching and terminal companies. Includes industry 401, Class I in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Based on Interstate Commerce Commission data.

**TABLE 25. RAILROAD TRANSPORTATION - TOTAL CAR-MILES<sup>1</sup>**  
**OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,**  
**ALL EMPLOYEES, 1939-66**

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	71.5	63.4	139.9	157.8	78.6	110.0	124.0
1947.....	75.7	64.1	132.1	155.9	114.3	151.0	178.2
1948.....	75.4	63.9	132.6	156.4	111.8	148.3	174.9
1949.....	74.9	67.4	133.5	148.4	100.1	133.6	148.5
1950.....	76.9	74.1	130.1	135.0	105.3	137.0	142.2
1951.....	76.7	74.6	130.4	134.1	109.9	143.3	147.4
1952.....	78.1	76.9	128.0	130.1	107.8	138.0	140.2
1953.....	79.6	79.1	125.6	126.5	108.1	135.8	136.7
1954.....	84.2	84.7	118.8	118.1	101.0	120.0	119.3
1955.....	90.7	89.5	110.3	111.7	108.2	119.3	120.9
1956.....	92.5	91.5	108.2	109.2	109.2	118.1	119.3
1957.....	94.3	94.3	106.1	106.1	105.6	112.0	112.0
1958.....	101.2	101.4	98.9	98.7	96.5	95.4	95.2
1959.....	105.6	105.4	94.7	94.9	97.8	92.6	92.8
1960.....	108.2	108.5	92.4	92.2	96.0	88.7	88.5
1961.....	113.6	114.0	88.0	87.7	92.6	81.5	81.2
1962.....	118.5	117.9	84.4	84.8	94.2	79.5	79.9
1963.....	123.3	121.7	81.1	82.1	95.2	77.2	78.2
1964.....	129.2	125.7	77.4	79.6	97.4	75.4	77.5
1965.....	136.5	133.3	73.3	75.0	98.4	72.1	73.8
1966 <sup>2</sup> .....	142.9	139.9	70.0	71.5	101.3	70.9	72.4
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	3.7	4.3	-3.6	-4.1	-0.8	-4.3	-4.8
1957-66....	4.5	4.2	-4.3	-4.0	-0.2	-4.5	-4.2

<sup>1</sup> Class I railroads and Class I switching and terminal companies. Includes industry 401, Class I in the Standard Industrial Classification.

<sup>2</sup> Preliminary.

Source: Based on Interstate Commerce Commission data.

TABLE 26. RAILROAD TRANSPORTATION - TOTAL CAR-MILES<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>2</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	70.8	62.6	141.2	159.7	78.6	111.0	125.5
1947.....	74.0	62.2	135.2	160.7	114.3	154.5	183.7
1948.....	73.7	62.1	135.6	161.0	111.8	151.6	180.0
1949.....	73.8	66.0	135.6	151.4	100.1	135.7	151.6
1950.....	75.5	72.3	132.4	138.3	105.3	139.4	145.6
1951.....	75.1	72.7	133.1	137.6	109.9	146.3	151.2
1952.....	76.7	75.2	130.3	133.0	107.8	140.5	143.4
1953.....	78.3	77.4	127.8	129.1	108.1	138.1	139.6
1954.....	83.4	83.6	119.9	119.6	101.0	121.1	120.8
1955.....	89.8	88.4	111.4	113.1	108.2	120.5	122.4
1956.....	91.6	90.5	109.2	110.4	109.2	119.2	120.6
1957.....	93.7	93.6	106.7	106.8	105.6	112.7	112.8
1958.....	101.5	101.7	98.5	98.3	96.5	95.1	94.9
1959.....	106.1	105.8	94.3	94.5	97.8	92.2	92.4
1960.....	108.8	109.2	91.9	91.6	96.0	88.2	87.9
1961.....	114.7	115.5	87.1	86.6	92.6	80.7	80.2
1962.....	119.8	119.1	83.4	84.0	94.2	78.6	79.1
1963.....	124.8	123.0	80.1	81.3	95.2	76.3	77.4
1964.....	130.7	127.0	76.5	78.7	97.4	74.5	76.7
1965.....	138.6	135.4	72.2	73.9	98.4	71.0	72.7
1966 <sup>3</sup> .....	145.5	141.9	68.7	70.5	101.3	69.6	71.4
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	3.9	4.5	-3.8	-4.3	-0.8	-4.6	-5.1
1957-66....	4.7	4.4	-4.5	-4.2	-0.2	-4.7	-4.3

<sup>1</sup> Class I railroads and Class I switching and terminal companies. Includes industry 401, Class I in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Based on Interstate Commerce Commission data.

TABLE 27. RAILROAD TRANSPORTATION - TOTAL CAR-MILES<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS
1939.....	79.1	71.3	126.5	140.3	78.6	99.4	110.3
1947.....	99.3	89.8	100.7	111.4	114.3	115.1	127.3
1948.....	97.1	87.6	103.0	114.1	111.8	115.1	127.6
1949.....	88.5	83.6	113.0	119.6	100.1	113.1	119.7
1950.....	93.4	95.3	107.1	104.9	105.3	112.8	110.5
1951.....	97.1	98.5	103.0	101.5	109.9	113.2	111.6
1952.....	95.7	97.4	104.5	102.7	107.8	112.7	110.7
1953.....	96.3	98.1	103.9	101.9	108.1	112.3	110.2
1954.....	92.3	95.4	108.3	104.9	101.0	109.4	105.9
1955.....	100.9	101.0	99.1	99.0	108.2	107.2	107.1
1956.....	101.9	101.7	98.2	98.4	109.2	107.2	107.4
1957.....	100.7	100.7	99.3	99.3	105.6	104.9	104.9
1958.....	97.7	97.7	102.4	102.4	96.5	98.8	98.8
1959.....	101.7	101.6	98.4	98.5	97.8	96.2	96.3
1960.....	101.7	101.9	98.3	98.1	96.0	94.4	94.2
1961.....	102.4	103.0	97.6	97.1	92.6	90.4	89.9
1962.....	107.0	107.4	93.4	93.1	94.2	88.0	87.7
1963.....	110.4	111.0	90.5	90.1	95.2	86.2	85.8
1964.....	114.7	114.3	87.2	87.5	97.4	84.9	85.2
1965.....	117.7	117.6	85.0	85.1	98.4	83.6	83.7
1966 <sup>3</sup> .....	121.3	124.3	82.4	80.5	101.3	83.5	81.5
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	1.2	1.5	-1.2	-1.5	-0.8	-2.0	-2.3
1957-66....	2.4	2.5	-2.3	-2.4	-0.2	-2.5	-2.6

<sup>1</sup> Class I railroads and Class I switching and terminal companies. Includes industry 401, Class I in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Based on Interstate Commerce Commission data.

TABLE 28. ALUMINUM ROLLING AND DRAWING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1958-65

(INDEXES, 1958 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1958.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1959.....	110.2	107.9	90.7	92.7	130.2	118.1	120.7
1960.....	103.8	102.3	96.3	97.8	116.6	112.3	114.0
1961.....	114.7	112.4	87.2	88.9	127.4	111.1	113.3
1962.....	123.6	122.0	80.9	82.0	143.5	116.1	117.6
1963.....	137.4	135.4	72.8	73.9	159.1	115.8	117.5
1964.....	150.0	147.0	66.6	68.0	179.6	119.7	122.2
1965 <sup>1</sup> .....	170.9	164.9	58.5	60.6	210.4	123.1	127.6
AVERAGE ANNUAL RATES (PERCENT)							
1959-65 ....	8.3	8.1	-7.7	-7.5	9.4	1.1	1.2

<sup>1</sup> Preliminary.

Source: Output based on data from the Bureau of the Census, U.S. Department of Commerce. Employment and man-hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 29. ALUMINUM ROLLING AND DRAWING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1958-65

(INDEXES, 1958 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1958.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1959.....	107.0	104.4	93.5	95.8	130.2	121.7	124.7
1960.....	103.9	102.0	96.2	98.0	116.6	112.2	114.3
1961.....	114.0	111.3	87.8	89.9	127.4	111.8	114.5
1962.....	122.2	120.6	81.8	82.9	143.5	117.4	119.0
1963.....	135.6	133.4	73.7	75.0	159.1	117.3	119.3
1964.....	147.9	144.6	67.6	69.2	179.6	121.4	124.2
1965 <sup>2</sup> .....	168.1	161.1	59.5	62.1	210.4	125.2	130.6
AVERAGE ANNUAL RATES (PERCENT)							
1959-65 ....	8.3	8.1	-7.7	-7.5	9.4	1.0	1.2

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

Source: Output, employment, and man-hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 30. ALUMINUM ROLLING AND DRAWING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1958-65

(INDEXES, 1958 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1958.....	100.0	(100.0)	100.0	(100.0)	100.0	100.0	(100.0)
1959.....	123.2	(123.3)	81.2	( 81.1)	130.2	105.7	(105.6)
1960.....	103.6	(103.6)	96.6	( 96.6)	116.6	112.6	(112.6)
1961.....	116.9	(117.1)	85.6	( 85.4)	127.4	109.0	(108.8)
1962.....	128.7	(128.2)	77.7	( 78.0)	143.5	111.5	(111.9)
1963.....	144.2	(143.7)	69.3	( 69.6)	159.1	110.3	(110.7)
1964.....	157.8	(156.7)	63.4	( 63.8)	179.6	113.8	(114.6)
1965 <sup>3</sup> .....	181.8	(181.2)	55.0	( 55.2)	210.4	115.7	(116.1)
AVERAGE ANNUAL RATES (PERCENT)							
1959-65 ....	8.3	(8.1)	-7.6	(-7.5)	9.4	1.1	(1.2)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method of estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Output based on data from the Bureau of the Census, U.S. Department of Commerce. Employment and man-hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 31. BEET SUGAR  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	72.6	( <sup>1</sup> )	( <sup>1</sup> )
1947.....	59.3	60.2	168.7	166.1	77.2	130.2	128.2
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	57.5	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	60.4	66.9	165.4	149.5	65.1	107.7	97.3
1950.....	67.1	73.7	149.0	135.6	82.3	122.6	111.6
1951.....	57.8	63.5	172.9	157.5	65.0	112.4	102.4
1952.....	60.7	65.9	164.7	151.8	62.3	102.6	94.6
1953.....	69.0	72.7	145.0	137.5	75.1	108.9	103.3
1954.....	76.4	81.6	131.0	122.5	81.7	107.0	100.1
1955.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	74.6	( <sup>1</sup> )	( <sup>1</sup> )
1956.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	85.1	( <sup>1</sup> )	( <sup>1</sup> )
1957.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	95.0	( <sup>1</sup> )	( <sup>1</sup> )
1958.....	99.9	98.1	100.1	101.9	100.1	100.2	102.0
1959.....	102.5	103.7	97.5	96.5	104.9	102.3	101.2
1960.....	109.7	109.1	91.2	91.7	109.0	99.4	99.9
1961.....	101.6	105.0	98.4	95.2	109.0	107.3	103.8
1962.....	108.2	113.6	92.4	88.0	114.9	106.2	101.1
1963.....	122.0	130.0	82.0	76.9	133.8	109.7	102.9
1964 <sup>2</sup> .....	122.8	126.9	81.4	78.8	143.8	117.1	113.3
1965 <sup>2</sup> .....	111.2	124.1	89.9	80.6	132.7	119.3	106.9
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.8	4.6	-4.5	-4.4	4.6	-0.3	-0.2
1957-65 ....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	5.1	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> Not available.  
<sup>2</sup> Preliminary.

Source: Output based on data from the Commodity Stabilization Service, U.S. Department of Agriculture, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.



**TABLE 32. BEET SUGAR**  
**OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,**  
**PRODUCTION WORKERS, 1939-65**

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	64.1	65.8	155.9	152.1	72.6	113.2	110.4
1947.....	60.0	61.2	166.6	163.5	77.2	128.6	126.2
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	57.5	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	60.3	67.7	165.9	147.6	65.1	108.0	96.1
1950.....	67.7	75.4	147.6	132.7	82.3	121.5	109.2
1951.....	58.8	65.3	170.0	153.2	65.0	110.5	99.6
1952.....	63.8	69.8	156.7	143.2	62.3	97.6	89.2
1953.....	70.6	74.8	141.7	133.7	75.1	106.4	100.4
1954.....	78.4	84.3	127.5	118.6	81.7	104.2	96.9
1955.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	74.6	( <sup>2</sup> )	( <sup>2</sup> )
1956.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	85.1	( <sup>2</sup> )	( <sup>2</sup> )
1957.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	95.0	( <sup>2</sup> )	( <sup>2</sup> )
1958.....	100.2	98.1	99.8	101.9	100.1	99.9	102.0
1959.....	102.6	103.9	97.4	96.3	104.9	102.2	101.0
1960.....	109.3	108.7	91.5	92.0	109.0	99.7	100.3
1961.....	101.4	105.0	98.6	95.2	109.0	107.5	103.8
1962.....	107.3	113.1	93.2	88.4	114.9	107.1	101.6
1963.....	120.0	128.7	83.3	77.7	133.8	111.5	104.0
1964.....	121.0	125.5	82.6	79.7	143.8	118.8	114.6
1965 <sup>3</sup> .....	109.5	123.4	91.3	81.0	132.7	121.2	107.5
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	4.6	4.3	-4.4	-4.2	4.6	-0.1	0.1
1957-65....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	5.1	( <sup>2</sup> )	( <sup>2</sup> )

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output based on data from the Commodity Stabilization Service, U.S. Department of Agriculture, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 33. BEET SUGAR  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	72.6	( <sup>3</sup> )	( <sup>3</sup> )
1947.....	54.4	( 53.3)	183.7	(187.6)	77.2	141.8	(144.8)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	57.5	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	61.5	( 60.7)	162.5	(164.7)	65.1	105.8	(107.2)
1950.....	62.9	( 62.3)	158.9	(160.5)	82.3	130.8	(132.1)
1951.....	51.8	( 51.1)	193.2	(195.5)	65.0	125.6	(127.1)
1952.....	44.9	( 44.3)	222.8	(225.8)	62.3	138.8	(140.7)
1953.....	59.1	( 58.8)	169.1	(170.2)	75.1	127.0	(127.8)
1954.....	64.5	( 64.2)	155.0	(155.7)	81.7	126.6	(127.2)
1955.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	74.6	( <sup>3</sup> )	( <sup>3</sup> )
1956.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	85.1	( <sup>3</sup> )	( <sup>3</sup> )
1957.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	95.0	( <sup>3</sup> )	( <sup>3</sup> )
1958.....	97.5	( 97.5)	102.6	(102.6)	100.1	102.7	(102.7)
1959.....	101.5	(101.5)	98.5	( 98.5)	104.9	103.3	(103.3)
1960.....	111.9	(113.1)	89.4	( 88.4)	109.0	97.4	( 96.4)
1961.....	102.8	(105.4)	97.2	( 94.9)	109.0	106.0	(103.4)
1962.....	115.0	(118.7)	86.9	( 84.2)	114.9	99.9	( 96.8)
1963.....	138.8	(143.3)	72.0	( 69.8)	133.8	96.4	( 93.4)
1964.....	136.8	(140.7)	73.1	( 71.1)	143.8	105.1	(102.2)
1965 <sup>4</sup> .....	126.0	(130.2)	79.4	( 76.8)	132.7	105.3	(101.9)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	6.3	(6.6)	-5.9	(-6.2)	4.6	-1.8	(-2.1)
1957-65....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	5.1	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

Source: Output based on data from the Commodity Stabilization Service, U.S. Department of Agriculture, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 34. CANDY AND OTHER CONFECTIONERY PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	58.0	( <sup>1</sup> )	( <sup>1</sup> )
1947.....	77.5	75.1	129.0	133.2	88.6	114.3	118.0
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	88.6	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	73.7	71.2	135.6	139.0	85.3	115.7	118.6
1950.....	71.8	70.6	139.3	141.7	88.5	123.3	125.4
1951.....	84.2	81.3	118.8	123.0	85.8	101.9	105.5
1952.....	84.1	80.3	118.9	124.5	88.5	105.2	110.2
1953.....	86.1	85.1	116.2	117.5	88.9	103.3	104.5
1954.....	85.3	85.1	117.2	117.5	86.7	101.6	101.9
1955.....	87.6	87.8	114.1	113.9	90.8	103.6	103.4
1956.....	89.4	89.6	111.8	112.8	93.7	104.8	105.7
1957.....	96.0	95.3	104.2	103.9	97.6	101.7	101.4
1958.....	99.9	100.7	100.1	99.3	100.4	100.5	99.7
1959.....	104.3	103.1	95.9	97.0	102.0	97.8	98.9
1960.....	109.0	107.9	91.7	92.7	106.3	97.5	98.5
1961.....	108.6	107.4	92.1	93.1	107.4	98.9	100.0
1962.....	110.6	109.3	90.4	91.5	109.8	99.3	100.5
1963.....	119.5	120.8	83.6	82.8	115.1	96.2	95.3
1964.....	121.6	123.2	82.2	81.2	120.5	99.1	97.8
1965 <sup>2</sup> .....	127.0	128.0	78.8	78.1	125.2	98.6	97.8
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.2	3.4	-3.1	-3.3	2.1	-1.0	-1.2
1957-65 ....	3.4	3.5	-3.3	-3.4	3.1	-0.3	-0.4

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

Source: Output based on data from the Business and Defense Services Administration and the Bureau of the Census, both of the U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 35. CANDY AND OTHER CONFECTIONERY PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	61.9	62.7	161.6	159.5	58.0	93.7	92.5
1947.....	72.5	70.1	137.9	142.7	88.6	122.2	126.4
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	88.6	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	71.9	70.0	139.0	142.8	85.3	118.6	121.8
1950.....	73.0	71.7	136.9	139.5	88.5	121.2	123.5
1951.....	82.9	79.7	120.6	125.5	85.8	103.5	107.7
1952.....	84.4	79.9	118.5	125.2	88.5	104.9	110.8
1953.....	83.2	82.2	120.1	121.7	88.9	106.8	108.2
1954.....	83.4	83.0	120.0	120.4	86.7	104.0	104.4
1955.....	87.8	88.0	113.9	113.7	90.8	103.4	103.2
1956.....	91.1	90.3	109.7	110.8	93.7	102.8	103.8
1957.....	97.3	97.7	102.8	102.4	97.6	100.3	99.9
1958.....	98.7	99.7	101.3	100.3	100.4	101.7	100.7
1959.....	104.1	102.6	96.1	97.5	102.0	98.0	99.4
1960.....	109.2	107.6	91.5	92.9	106.3	97.3	98.8
1961.....	108.5	106.4	92.2	93.9	107.4	99.0	100.9
1962.....	110.8	108.4	90.3	92.3	109.8	99.1	101.3
1963.....	116.6	117.1	85.8	85.4	115.1	98.7	98.3
1964.....	113.1	119.3	84.6	83.8	120.5	102.0	101.0
1965 <sup>3</sup> .....	122.4	122.9	81.7	81.4	125.2	102.3	101.9
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.2	3.4	-3.1	-3.3	2.1	-1.0	-1.2
1957-65 ....	2.9	2.9	-2.8	-2.8	3.1	0.2	0.2

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output based on data from the Business and Defense Services Administration and the Bureau of the Census, both of the U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 36. CANDY AND OTHER CONFECTIONERY PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	58.0	( <sup>3</sup> )	( <sup>3</sup> )
1947.....	109.4	(107.0)	91.4	( 93.5)	88.6	81.0	( 82.8)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	88.6	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	82.2	( 81.1)	121.7	(123.3)	85.3	103.8	(105.2)
1950.....	66.9	( 56.2)	149.4	(151.0)	88.5	132.2	(133.6)
1951.....	90.5	( 99.4)	110.5	(111.9)	85.8	94.8	( 96.0)
1952.....	83.2	( 82.0)	120.2	(121.9)	88.5	106.4	(107.9)
1953.....	100.5	( 99.8)	99.6	(100.2)	88.9	88.5	( 89.1)
1954.....	95.0	( 94.7)	105.3	(105.7)	86.7	91.3	( 91.6)
1955.....	87.1	( 87.2)	114.8	(114.6)	90.8	104.2	(104.1)
1956.....	82.6	( 82.4)	121.0	(121.3)	93.7	113.4	(113.7)
1957.....	90.6	( 90.5)	110.3	(110.5)	97.6	107.7	(107.8)
1958.....	105.1	(105.1)	95.1	( 95.1)	100.4	95.5	( 95.5)
1959.....	105.3	(105.4)	95.0	( 94.9)	102.0	96.9	( 96.8)
1960.....	107.9	(109.1)	92.7	( 91.6)	106.3	98.5	( 97.4)
1961.....	108.9	(111.8)	91.8	( 89.5)	107.4	98.6	( 96.1)
1962.....	109.7	(113.3)	91.2	( 88.3)	109.8	100.1	( 96.9)
1963.....	134.5	(139.2)	74.4	( 71.9)	115.1	85.6	( 82.7)
1964.....	138.5	(142.8)	72.2	( 70.0)	120.5	87.0	( 84.4)
1965 <sup>4</sup> .....	150.3	(155.5)	66.5	( 64.3)	125.2	83.3	( 80.5)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	2.9	(3.2)	-2.8	(-3.1)	2.1	-0.7	(-1.0)
1957-65 ....	5.8	(6.3)	-5.4	(-5.9)	3.1	-2.5	(-3.1)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

TABLE 37. CANNING AND PRESERVING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	43.9	( <sup>1</sup> )	( <sup>1</sup> )
1947.....	66.3	65.3	150.9	153.1	70.1	105.8	107.3
1948.....	65.2	66.3	153.4	150.8	69.3	106.3	104.5
1949.....	70.8	71.5	141.3	139.8	71.6	101.2	100.1
1950.....	78.7	78.8	127.0	126.9	76.6	97.3	97.2
1951.....	83.7	82.0	119.5	122.0	87.0	104.0	106.1
1952.....	82.2	81.5	121.7	122.7	83.6	101.7	102.6
1953.....	82.6	82.7	121.1	121.0	87.7	106.2	106.1
1954.....	88.1	88.9	113.5	112.5	88.6	100.6	99.7
1955.....	91.0	92.2	109.8	108.4	92.5	101.6	100.3
1956.....	99.2	98.3	100.8	101.7	103.4	104.2	105.2
1957.....	99.5	99.7	100.5	100.3	99.1	99.6	99.4
1958.....	98.9	98.1	101.1	101.9	97.6	98.7	99.5
1959.....	101.7	102.3	98.4	97.8	103.4	101.7	101.1
1960.....	108.1	108.3	92.5	92.3	109.6	101.4	101.2
1961.....	114.0	115.7	87.7	86.4	117.2	102.8	101.3
1962.....	117.0	116.8	85.4	85.6	122.9	105.0	105.2
1963.....	117.3	117.2	85.2	85.3	121.2	103.3	103.4
1964.....	124.7	123.8	80.2	80.8	129.6	103.9	104.7
1965 <sup>2</sup> .....	131.0	129.1	76.3	77.5	139.8	106.7	108.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.7	3.7	-3.6	-3.6	3.8	0.0	0.1
1957-65 ....	3.7	3.5	-3.5	-3.4	4.5	0.8	1.0

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

Source: Output based on data from National Canners Association, U.S. Department of the Interior, U.S. Department of Agriculture, and U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 38. CANNING AND PRESERVING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	52.8	55.8	189.3	179.3	43.9	83.1	78.7
1947.....	62.9	61.9	158.9	161.6	70.1	111.4	113.3
1948.....	62.4	63.5	160.3	157.4	69.3	111.1	109.1
1949.....	68.3	68.9	146.5	145.1	71.6	104.9	103.9
1950.....	76.2	76.1	131.2	131.3	76.6	100.5	100.6
1951.....	80.6	78.6	124.1	127.2	87.0	108.0	110.7
1952.....	79.6	78.8	125.6	126.9	83.6	105.0	106.1
1953.....	80.1	79.9	124.9	125.1	87.7	109.5	109.7
1954.....	85.5	86.4	116.9	115.8	88.6	103.6	102.6
1955.....	88.9	90.0	112.5	111.1	92.5	104.1	102.8
1956.....	96.8	95.7	103.3	104.5	103.4	106.8	108.1
1957.....	98.6	98.7	101.4	101.3	99.1	100.5	100.4
1958.....	99.4	98.5	100.6	101.5	97.6	98.2	99.1
1959.....	102.1	102.8	98.0	97.3	103.4	101.3	100.6
1960.....	108.4	108.5	92.2	92.2	109.6	101.1	101.0
1961.....	114.7	116.3	87.2	86.0	117.2	102.2	100.8
1962.....	117.6	116.2	85.0	86.1	122.9	104.5	105.8
1963.....	117.8	117.0	84.9	85.5	121.2	102.9	103.6
1964.....	124.9	123.3	80.1	81.1	129.6	103.8	105.1
1965 <sup>2</sup> .....	131.5	128.6	76.0	77.8	139.8	106.3	108.7
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.1	4.0	-3.9	-3.9	3.8	-0.3	-0.2
1957-65 ....	3.7	3.5	-3.6	-3.4	4.5	0.8	1.0

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

Source: Output based on data from National Cannery Association, U.S. Department of the Interior, U.S. Department of Agriculture, and U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 39. CANNING AND PRESERVING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	43.9	( <sup>3</sup> )	( <sup>3</sup> )
1947.....	102.0	( 96.8)	98.0	(103.3)	70.1	68.7	( 72.4)
1948.....	93.1	( 88.8)	107.4	(112.6)	69.3	74.4	( 78.0)
1949.....	94.0	( 91.2)	106.4	(109.6)	71.6	76.2	( 78.5)
1950.....	101.3	( 98.8)	98.7	(101.2)	76.6	75.6	( 77.5)
1951.....	113.1	(109.4)	88.4	( 91.4)	87.0	76.9	( 79.5)
1952.....	104.9	(101.8)	95.3	( 98.2)	83.6	79.7	( 82.1)
1953.....	105.0	(102.5)	95.2	( 97.6)	87.7	83.5	( 85.6)
1954.....	109.7	(107.4)	91.2	( 93.1)	88.6	80.8	( 82.5)
1955.....	109.3	(107.9)	91.5	( 92.6)	92.5	84.6	( 85.7)
1956.....	119.4	(117.4)	83.8	( 85.2)	103.4	86.6	( 88.1)
1957.....	106.0	(105.4)	94.3	( 94.9)	99.1	93.5	( 94.0)
1958.....	95.4	( 95.7)	104.8	(104.5)	97.6	102.3	(102.0)
1959.....	99.2	( 99.4)	100.8	(100.6)	103.4	104.2	(104.0)
1960.....	105.9	(107.3)	94.4	( 93.2)	109.6	103.5	(102.1)
1961.....	109.9	(113.0)	91.0	( 88.5)	117.2	106.6	(103.7)
1962.....	113.7	(117.7)	88.0	( 84.9)	122.9	108.1	(104.4)
1963.....	114.6	(118.7)	87.3	( 84.2)	121.2	105.8	(102.1)
1964.....	123.4	(127.3)	81.0	( 78.5)	129.6	105.0	(101.8)
1965 <sup>4</sup> .....	127.9	(132.5)	78.2	( 75.5)	139.8	109.3	(105.5)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.0	(1.5)	-1.0	(-1.5)	3.8	2.7	(2.2)
1957-65 ....	3.2	(3.8)	-3.1	(-3.6)	4.5	1.3	(0.7)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

Source: Output based on data from National Cannery Association, U.S. Department of the Interior, U.S. Department of Agriculture, and U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.



TABLE 40. CEMENT, HYDRAULIC  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	62.8	( <sup>1</sup> )	159.2	( <sup>1</sup> )	43.1	68.6	( <sup>1</sup> )
1947.....	65.2	60.4	153.4	165.5	63.7	97.7	105.4
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	69.8	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	72.2	68.5	138.5	145.9	70.1	97.1	102.3
1950.....	72.6	69.2	137.7	144.5	75.5	104.0	109.1
1951.....	74.5	71.3	134.2	140.2	80.3	107.8	112.6
1952.....	76.0	72.2	131.6	138.5	81.1	106.7	112.3
1953.....	84.0	79.6	119.0	125.7	85.7	102.0	107.7
1954.....	91.9	88.6	108.8	112.9	88.6	96.4	100.0
1955.....	97.4	93.5	102.7	107.0	96.2	98.8	102.9
1956.....	101.0	98.4	99.0	101.7	101.4	100.4	103.1
1957.....	93.9	95.5	106.4	104.8	94.6	100.7	99.1
1958.....	98.7	98.6	101.3	101.4	98.3	99.6	99.7
1959.....	107.4	105.8	93.1	94.5	107.1	99.7	101.2
1960.....	105.1	104.7	95.1	95.5	100.3	95.4	95.8
1961.....	115.0	115.9	87.0	86.3	101.4	88.2	87.5
1962.....	122.3	122.9	81.8	81.4	105.3	86.1	85.7
1963.....	130.2	130.0	76.8	76.9	110.0	84.5	84.6
1964.....	136.5	134.6	73.2	74.3	114.7	84.0	85.2
1965 <sup>2</sup> .....	139.6	139.8	71.6	71.6	116.0	83.1	83.0
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	4.3	4.8	-4.1	-4.5	3.1	-1.2	-1.6
1957-65....	5.3	5.2	-5.0	-4.9	2.3	-2.8	-2.7

<sup>1</sup> Not available.

<sup>2</sup> 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, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 41. CEMENT, HYDRAULIC  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	63.5	64.3	157.5	155.5	43.1	67.9	67.0
1947.....	63.5	58.5	157.5	170.8	63.7	100.3	108.8
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	69.8	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	71.0	67.1	140.8	149.1	70.1	98.7	104.5
1950.....	71.2	67.5	140.5	148.1	75.5	106.1	111.8
1951.....	73.5	70.2	136.0	142.5	80.3	109.2	114.4
1952.....	75.1	71.0	133.2	140.8	81.1	108.0	114.2
1953.....	83.6	78.6	119.6	127.3	85.7	102.5	109.1
1954.....	91.7	87.9	109.0	113.8	88.6	96.6	100.8
1955.....	96.5	92.1	103.6	108.5	96.2	99.7	104.4
1956.....	99.8	96.8	100.2	103.4	101.4	101.6	104.8
1957.....	92.9	94.8	107.6	105.5	94.6	101.8	99.8
1958.....	99.6	99.5	100.4	100.5	98.3	98.7	98.8
1959.....	107.6	105.7	92.9	94.6	107.1	99.5	101.3
1960.....	106.3	105.7	94.1	94.6	100.3	94.4	94.9
1961.....	117.0	117.8	85.5	84.9	101.4	86.7	86.1
1962.....	124.9	125.4	80.1	79.8	105.3	84.3	84.0
1963.....	135.0	134.3	74.1	74.5	110.0	81.5	81.9
1964.....	144.5	141.4	69.2	70.7	114.7	79.4	81.1
1965 <sup>3</sup> .....	147.2	146.8	67.9	68.1	116.0	78.8	79.0
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	4.7	5.2	-4.5	-4.9	3.1	-1.6	-2.0
1957-65....	6.1	5.9	-5.8	-5.6	2.3	-3.6	-3.4

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> 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, U.S. Department of Commerce.

TABLE 42.CEMENT, HYDRAULIC  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	59.3	( <sup>3</sup> )	168.7	( <sup>3</sup> )	43.1	72.7	( <sup>3</sup> )
1947.....	76.7	( 74.9)	130.5	(133.4)	63.7	83.1	( 85.0)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	69.8	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	80.2	( 79.0)	124.7	(126.5)	70.1	87.4	( 88.7)
1950.....	82.5	( 81.6)	121.2	(122.5)	75.5	91.5	( 92.5)
1951.....	80.4	( 79.3)	124.4	(126.0)	80.3	99.9	(101.2)
1952.....	81.6	( 80.5)	122.6	(124.3)	81.1	99.4	(100.8)
1953.....	86.6	( 86.0)	115.5	(116.3)	85.7	99.0	( 99.7)
1954.....	93.5	( 93.0)	107.0	(107.6)	88.6	94.8	( 95.3)
1955.....	102.9	(103.0)	97.2	( 97.1)	96.2	93.5	( 93.4)
1956.....	109.0	(108.8)	91.7	( 91.9)	101.4	93.0	( 93.2)
1957.....	100.4	(100.3)	99.6	( 99.7)	94.6	94.2	( 94.3)
1958.....	93.6	( 93.6)	106.8	(106.8)	98.3	105.0	(105.0)
1959.....	106.3	(106.4)	94.1	( 94.0)	107.1	100.8	(100.7)
1960.....	99.3	( 99.4)	100.7	(100.6)	100.3	101.0	(100.9)
1961.....	104.6	(105.3)	95.6	( 95.0)	101.4	96.9	( 96.3)
1962.....	109.3	(109.7)	91.5	( 91.2)	105.3	96.3	( 96.0)
1963.....	108.1	(108.7)	92.5	( 92.0)	110.0	101.8	(101.2)
1964.....	104.0	(103.9)	96.2	( 96.3)	114.7	110.3	(110.4)
1965 <sup>4</sup> .....	107.4	(107.8)	93.1	( 92.8)	116.0	108.0	(107.6)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	2.1	( 2.2)	-2.0	(-2.1)	3.1	1.0	( 0.8)
1957-65....	1.2	( 1.2)	-1.2	(-1.2)	2.3	1.1	( 1.1)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> 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, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 43. CONCRETE PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1947-65  
 (INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1947.....	61.0	58.3	163.8	171.4	40.9	67.0	70.1
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	68.7	66.4	145.6	150.7	52.9	77.0	79.7
1950.....	77.3	74.8	129.4	133.7	67.3	87.1	90.0
1951.....	83.9	78.5	119.2	127.4	78.2	93.2	99.6
1952.....	88.7	84.5	112.7	118.4	84.4	95.1	99.9
1953.....	88.0	86.6	113.7	115.4	74.5	84.7	86.0
1954.....	88.9	88.7	112.5	112.7	76.9	86.5	86.7
1955.....	93.6	94.0	106.9	106.4	88.8	94.9	94.5
1956.....	104.0	102.6	96.2	97.5	104.2	100.2	101.6
1957.....	100.6	100.4	99.4	99.6	100.6	100.0	100.2
1958.....	97.2	98.9	102.9	101.1	96.0	98.8	97.1
1959.....	102.1	100.5	98.0	99.5	103.3	101.2	102.8
1960.....	100.7	96.2	99.3	103.9	104.5	103.8	108.6
1961.....	102.9	98.2	97.1	101.8	104.8	101.8	106.7
1962.....	105.8	100.2	94.6	99.8	108.4	102.5	108.2
1963.....	110.9	108.4	90.1	92.2	120.8	108.9	111.4
1964.....	115.7	112.6	86.4	88.8	129.0	111.5	114.6
1965 <sup>2</sup> .....	119.4	118.7	83.8	84.2	138.1	115.7	116.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.1	3.2	-3.0	-3.1	5.4	2.3	2.2
1957-65 ....	2.4	2.1	-2.3	-2.1	4.3	1.8	2.1

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 44. CONCRETE PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1947.....	53.1	51.2	188.3	195.4	40.9	77.0	79.9
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	64.4	62.2	155.4	160.7	52.9	82.2	85.0
1950.....	74.5	72.1	134.2	138.8	67.3	90.3	93.4
1951.....	81.5	75.6	122.6	132.4	78.2	95.9	103.5
1952.....	85.0	30.6	117.7	124.1	84.4	99.3	104.7
1953.....	84.2	83.1	118.8	120.4	74.5	88.5	89.7
1954.....	88.9	88.6	112.5	112.9	76.9	86.5	86.8
1955.....	92.6	93.2	108.0	107.3	88.8	95.9	95.3
1956.....	103.6	101.9	96.5	98.2	104.2	100.6	102.3
1957.....	101.1	100.8	98.9	99.2	100.6	99.5	99.8
1958.....	98.3	100.4	101.8	99.6	96.0	97.7	95.6
1959.....	100.5	98.7	99.5	101.4	103.3	102.8	104.7
1960.....	99.5	94.1	100.5	106.2	104.5	105.0	111.0
1961.....	102.6	96.6	97.4	103.5	104.8	102.1	108.5
1962.....	105.1	98.2	95.1	101.8	108.4	103.1	110.4
1963.....	112.7	109.1	88.7	91.6	120.8	107.2	110.7
1964.....	118.5	114.1	84.4	87.7	129.0	108.9	113.1
1965 <sup>3</sup> .....	121.7	120.4	82.2	83.1	138.1	113.5	114.7
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.7	3.7	-3.5	-3.5	5.4	1.7	1.7
1957-65 ....	2.7	2.3	-2.6	-2.2	4.3	1.5	2.0

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 45. CONCRETE PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1947.....	123.6	(120.6)	80.9	( 82.9)	40.9	33.1	( 33.9)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	88.9	( 87.7)	112.5	(114.0)	52.9	59.5	( 60.3)
1950.....	87.7	( 86.8)	114.0	(115.2)	67.3	76.7	( 77.5)
1951.....	92.9	( 91.7)	107.7	(109.1)	78.2	84.2	( 85.3)
1952.....	104.2	(102.8)	96.0	( 97.3)	84.4	81.0	( 82.1)
1953.....	103.6	(102.9)	96.5	( 97.2)	74.5	71.9	( 72.4)
1954.....	89.2	( 88.8)	112.1	(112.6)	76.9	86.2	( 86.6)
1955.....	97.0	( 97.2)	103.0	(102.9)	88.8	91.5	( 91.4)
1956.....	105.6	(105.4)	94.7	( 94.9)	104.2	98.7	( 98.9)
1957.....	99.1	( 98.9)	100.9	(101.1)	100.6	101.5	(101.7)
1958.....	93.5	( 93.4)	107.0	(107.1)	96.0	102.7	(102.8)
1959.....	107.8	(107.9)	92.7	( 92.6)	103.3	95.8	( 95.7)
1960.....	104.5	(104.7)	95.7	( 95.5)	104.5	100.0	( 99.8)
1961.....	103.8	(104.4)	96.4	( 95.8)	104.8	101.0	(100.4)
1962.....	107.9	(108.2)	92.7	( 92.4)	108.4	100.5	(100.2)
1963.....	105.5	(106.0)	94.8	( 94.4)	120.8	114.5	(114.0)
1964.....	107.3	(107.3)	93.2	( 93.2)	129.0	120.2	(120.2)
1965 <sup>4</sup> .....	112.3	(112.8)	89.1	( 88.6)	138.1	123.0	(122.4)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	0.6	(0.7)	-0.6	(-0.7)	5.4	4.8	(4.7)
1957-65 ....	1.5	(1.6)	-1.5	(-1.6)	4.3	2.7	(2.6)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

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

TABLE 45. FLOUR AND OTHER GRAIN-MILL PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	88.7	( <sup>1</sup> )	( <sup>1</sup> )
1947.....	83.9	76.7	119.3	130.4	118.9	141.8	155.1
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	108.5	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	72.1	70.8	138.7	141.3	92.5	128.3	130.7
1950.....	72.2	72.4	138.6	138.1	89.2	123.6	123.2
1951.....	73.5	72.0	136.1	138.9	91.5	124.5	127.1
1952.....	73.3	70.4	136.5	142.0	91.2	124.5	129.5
1953.....	78.9	76.0	126.7	131.5	88.5	112.1	116.4
1954.....	85.2	84.0	117.3	119.1	88.4	103.7	105.3
1955.....	88.0	87.5	113.7	114.3	90.8	103.2	103.8
1956.....	92.2	91.9	108.4	108.8	92.4	100.2	100.5
1957.....	100.0	99.8	100.0	100.2	97.0	97.0	97.2
1958.....	100.1	101.7	99.9	98.3	101.1	101.0	99.4
1959.....	99.9	98.5	100.1	101.5	101.9	102.0	103.4
1960.....	107.5	104.5	93.0	95.7	104.8	97.5	100.3
1961.....	112.5	109.5	88.9	91.3	107.0	95.1	97.7
1962.....	117.5	113.4	85.1	88.2	103.1	92.0	95.3
1963.....	134.0	128.6	74.6	77.8	107.5	80.2	83.6
1964.....	137.9	133.5	72.5	74.9	108.0	78.3	80.9
1965 <sup>2</sup> .....	139.0	138.6	71.9	72.1	103.0	74.1	74.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.0	4.1	-3.8	-3.9	0.5	-3.1	-3.2
1957-65 ....	5.1	4.7	-4.8	-4.5	1.0	-3.9	-3.6

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 47. FLOUR AND OTHER GRAIN-MILL PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65  
 (INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	74.4	78.0	134.5	128.2	88.7	119.3	113.7
1947.....	78.7	71.3	127.0	140.2	118.9	151.0	166.7
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	103.5	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	68.6	67.7	145.7	147.8	92.5	134.8	136.7
1950.....	68.9	69.7	145.2	143.5	89.2	129.5	128.0
1951.....	70.2	69.0	142.5	144.9	91.5	130.4	132.6
1952.....	71.0	68.1	140.8	146.8	91.2	128.4	133.9
1953.....	75.3	72.3	132.8	138.3	88.5	117.5	122.4
1954.....	84.2	82.7	118.8	120.9	88.4	105.0	106.9
1955.....	87.6	86.8	114.2	115.2	90.8	103.7	104.6
1956.....	91.3	91.1	109.5	109.7	92.4	101.2	101.4
1957.....	99.4	99.2	100.6	100.3	97.0	97.6	97.8
1958.....	100.6	102.7	99.4	97.3	101.1	100.5	98.4
1959.....	100.0	98.2	100.0	101.9	101.9	101.9	103.8
1960.....	109.5	104.8	91.3	95.4	104.8	95.7	100.0
1961.....	112.9	108.0	88.6	92.6	107.0	94.8	99.1
1962.....	116.9	110.6	85.6	90.4	108.1	92.5	97.7
1963.....	133.5	125.4	74.9	79.7	107.5	80.5	85.7
1964.....	138.1	131.2	72.4	76.2	109.0	78.2	82.3
1965 <sup>3</sup> .....	136.6	135.0	73.2	74.1	103.0	75.4	76.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.3	4.3	-4.1	-4.1	0.5	-3.4	-3.4
1957-65 ....	4.9	4.3	-4.7	-4.1	1.0	-3.7	-3.2

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output, employment, and hours based on data from the Bureau of the Census, U. S. Department of Commerce.



TABLE 43. FLOUR AND OTHER GRAIN-MILL PRODUCTS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	88.7	( <sup>3</sup> )	( <sup>3</sup> )
1947.....	101.9	( 99.7)	98.1	(100.3)	118.9	116.7	(119.2)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	108.5	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	83.6	( 82.6)	119.6	(121.1)	92.5	110.6	(112.0)
1950.....	83.1	( 82.3)	120.4	(121.5)	89.2	107.4	(108.4)
1951.....	84.4	( 83.3)	118.5	(120.0)	91.5	108.4	(109.8)
1952.....	79.9	( 78.8)	125.1	(126.9)	91.2	114.1	(115.7)
1953.....	91.0	( 90.3)	109.9	(110.7)	88.5	97.3	( 98.0)
1954.....	88.4	( 88.0)	113.1	(113.7)	88.4	100.0	(100.5)
1955.....	89.3	( 89.4)	112.0	(111.9)	90.8	101.7	(101.6)
1956.....	94.8	( 94.6)	105.5	(105.7)	92.4	97.5	( 97.7)
1957.....	102.0	(101.9)	98.0	( 98.1)	97.0	95.1	( 95.2)
1958.....	98.7	( 98.7)	101.3	(101.3)	101.1	102.4	(102.4)
1959.....	99.4	( 99.5)	100.6	(100.5)	101.9	102.5	(102.4)
1960.....	102.5	(103.7)	97.5	( 96.5)	104.8	102.2	(101.1)
1961.....	111.7	(114.6)	89.5	( 87.3)	107.0	95.8	( 93.4)
1962.....	119.3	(123.3)	83.8	( 81.1)	108.1	90.6	( 87.7)
1963.....	135.4	(139.8)	73.9	( 71.5)	107.5	79.4	( 76.9)
1964.....	137.2	(141.2)	72.9	( 70.8)	108.0	78.7	( 76.5)
1965 <sup>4</sup> .....	146.3	(151.2)	68.3	( 66.1)	103.0	70.4	( 68.1)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	2.9	(3.2)	-2.8	(-3.1)	0.5	-2.1	(-2.4)
1957-65 ....	5.5	(6.0)	-5.2	(-5.7)	1.0	-4.3	(-4.8)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

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

TABLE 49. FOOTWEAR  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1947-65  
 (INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1947.....	78.2	74.8	127.8	133.7	81.3	103.9	108.7
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	80.3	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	75.6	78.7	132.4	127.1	78.5	103.9	99.8
1950.....	83.1	85.0	120.3	117.7	86.6	104.2	101.9
1951.....	83.7	87.1	119.5	114.8	80.9	96.7	92.9
1952.....	89.1	89.0	112.2	112.4	89.0	99.9	100.0
1953.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
1954.....	87.9	89.3	113.7	112.0	87.5	99.5	98.0
1955.....	95.2	93.4	105.0	107.1	96.2	101.0	103.0
1956.....	95.6	95.0	104.6	105.2	97.5	102.0	102.6
1957.....	96.5	96.8	103.7	103.3	98.0	101.6	101.2
1958.....	98.1	99.0	102.0	101.0	96.2	98.1	97.2
1959.....	105.4	104.1	94.9	96.0	105.8	100.4	101.6
1960.....	102.5	103.0	97.5	97.1	100.9	98.4	98.0
1961.....	102.5	103.4	97.5	96.7	101.3	98.8	98.0
1962.....	104.9	104.6	95.3	95.6	103.2	98.4	98.7
1963.....	109.0	108.4	91.7	92.2	100.3	92.0	92.5
1964.....	110.7	107.9	90.3	92.7	102.2	92.3	94.7
1965 <sup>3</sup> .....	110.5	108.4	90.5	92.3	103.8	93.9	95.8
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	2.1	2.0	-2.1	-2.0	1.6	-0.5	-0.4
1957-65 ....	1.7	1.4	-1.7	-1.3	0.5	-1.1	-0.8

<sup>1</sup> Not available.

<sup>2</sup> Indexes for 1953 are not shown since Census data for that year may not be fully comparable with data for other years, possibly due to sampling error.

<sup>3</sup> Preliminary.

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

TABLE 50. FOOTWEAR  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1947.....	77.0	73.3	129.9	136.4	81.3	105.6	110.9
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	80.3	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	74.6	78.0	134.0	128.2	78.5	105.2	100.6
1950.....	82.3	84.4	121.5	118.5	86.6	105.2	102.6
1951.....	83.5	87.3	119.8	114.6	80.9	96.9	92.7
1952.....	88.9	88.9	112.5	112.5	89.0	100.1	100.1
1953.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
1954.....	87.2	88.7	114.6	112.8	87.5	100.3	98.7
1955.....	94.8	92.7	105.5	107.9	96.2	101.5	103.8
1956.....	95.3	94.7	104.9	105.6	97.5	102.3	103.0
1957.....	96.5	96.8	103.7	103.3	98.0	101.6	101.2
1958.....	98.3	99.3	101.8	100.7	96.2	97.9	96.9
1959.....	105.3	103.8	95.0	96.3	105.8	100.5	101.9
1960.....	102.7	103.2	97.3	96.9	100.9	98.2	97.8
1961.....	102.7	103.5	97.3	96.6	101.3	98.6	97.9
1962.....	104.7	104.1	95.5	96.0	103.2	98.6	99.1
1963.....	108.7	107.7	92.0	92.8	100.3	92.3	93.1
1964.....	110.2	106.9	90.7	93.5	102.2	92.7	95.6
1965 <sup>4</sup> .....	110.2	107.5	90.8	93.1	103.8	94.2	96.6
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	2.2	2.0	-2.2	-2.0	1.6	-0.6	-0.4
1957-65 ....	1.6	1.2	-1.6	-1.2	0.5	-1.0	-0.7

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Indexes for 1953 are not shown since Census data for that year may not be fully comparable with data for other years, possibly due to sampling error.

<sup>4</sup> Preliminary.

Source: Output, employment, and hours based on data from the Bureau of the Census, U. S. Department of Commerce.

TABLE 51.FOOTWEAR  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1947.....	92.9	( 91.5)	107.6	(109.3)	81.3	87.5	( 88.9)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	80.3	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	86.0	( 85.2)	116.3	(117.3)	78.5	91.3	( 92.1)
1950.....	91.0	( 90.4)	109.9	(110.6)	86.6	95.2	( 95.8)
1951.....	85.6	( 84.9)	116.8	(117.8)	80.9	94.5	( 95.3)
1952.....	90.5	( 89.5)	110.4	(111.7)	89.0	98.3	( 99.4)
1953.....	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
1954.....	95.1	( 94.9)	105.1	(105.4)	87.5	92.0	( 92.2)
1955.....	99.3	( 99.6)	100.7	(100.4)	96.2	96.9	( 96.6)
1956.....	98.6	( 98.5)	101.4	(101.5)	97.5	98.9	( 99.0)
1957.....	96.6	( 96.6)	103.6	(103.6)	98.0	101.5	(101.5)
1958.....	96.7	( 96.7)	103.4	(103.4)	96.2	99.5	( 99.5)
1959.....	106.9	(106.9)	93.6	( 93.6)	105.8	99.0	( 99.0)
1960.....	100.2	(100.8)	99.8	( 99.2)	100.9	100.7	(100.1)
1961.....	100.4	(102.0)	99.6	( 98.0)	101.3	100.9	( 99.3)
1962.....	106.6	(108.5)	93.8	( 92.2)	103.2	96.8	( 95.1)
1963.....	112.8	(114.9)	88.6	( 87.0)	100.3	88.9	( 87.3)
1964.....	115.6	(117.2)	86.5	( 85.3)	102.2	88.4	( 87.2)
1965 <sup>5</sup> .....	114.7	(116.8)	87.2	( 85.6)	103.8	90.5	( 88.9)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.5	( 1.7)	-1.5	(-1.7)	1.6	0.1	(-0.1)
1957-65 ....	2.4	( 2.6)	-2.3	(-2.6)	0.5	-1.8	(-2.0)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Indexes for 1953 are not shown since Census data for that year may not be fully comparable with data for other years, possibly due to sampling error.

<sup>5</sup> Preliminary.

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

TABLE 52. GLASS CONTAINERS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65  
 (INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	69.2	( <sup>1</sup> )	144.6	( <sup>1</sup> )	36.8	53.2	( <sup>1</sup> )
1947.....	99.2	95.2	100.8	105.1	84.8	85.5	89.1
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	71.4	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	88.8	86.8	112.6	115.3	64.9	73.1	74.8
1950.....	98.2	96.7	101.9	103.5	75.3	76.7	77.9
1951.....	93.7	93.0	106.7	107.6	81.8	87.3	88.0
1952.....	93.0	92.0	107.5	108.7	80.3	86.3	87.3
1953.....	96.9	97.5	103.1	102.6	89.0	91.8	91.3
1954.....	96.1	96.3	104.1	103.8	86.1	89.6	89.4
1955.....	101.2	100.4	98.8	99.6	93.8	92.7	93.4
1956.....	102.4	100.6	97.6	99.4	96.2	93.9	95.6
1957.....	100.9	100.2	99.1	99.8	99.3	98.4	99.1
1958.....	97.4	96.9	102.7	103.2	97.0	99.6	100.1
1959.....	101.8	102.9	98.3	97.2	103.8	102.0	100.9
1960.....	100.8	100.4	99.3	99.6	106.9	106.1	106.5
1961.....	101.7	102.3	98.3	97.7	111.0	109.1	108.5
1962.....	105.5	106.2	93.9	94.1	116.0	108.9	109.2
1963.....	110.2	110.0	90.7	90.9	119.9	108.8	109.0
1964.....	113.5	112.2	88.1	89.1	124.4	109.6	110.9
1965 <sup>2</sup> .....	118.2	118.5	84.6	84.3	131.8	111.5	111.1
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.1	1.2	-1.1	-1.2	3.3	2.2	2.1
1957-65 ....	2.2	2.2	-2.2	-2.2	3.8	1.6	1.6

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 53. GLASS CONTAINERS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	70.1	73.3	142.7	136.4	36.8	52.5	50.2
1947.....	99.2	94.9	100.8	105.4	84.8	85.5	89.4
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	71.4	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	87.8	85.7	113.9	116.6	64.9	73.9	75.7
1950.....	96.7	95.1	103.5	105.2	75.3	77.9	79.2
1951.....	92.2	91.6	108.4	109.2	81.8	88.7	89.3
1952.....	91.8	90.7	109.0	110.2	80.3	87.5	88.5
1953.....	96.4	97.1	103.7	103.0	89.0	92.3	91.7
1954.....	95.9	96.2	104.3	103.9	86.1	89.8	89.5
1955.....	100.5	99.7	99.5	100.3	93.8	93.3	94.1
1956.....	102.0	100.0	98.0	100.0	96.2	94.3	96.2
1957.....	100.6	99.8	99.4	100.2	99.3	98.7	99.5
1958.....	97.9	97.3	102.2	102.8	97.0	99.1	99.7
1959.....	101.7	102.9	98.4	97.2	103.8	102.1	100.9
1960.....	100.8	100.4	99.2	99.6	106.9	106.0	106.5
1961.....	101.5	102.0	98.6	98.0	111.0	109.4	108.8
1962.....	106.7	106.2	93.7	94.1	116.0	108.7	109.2
1963.....	110.0	109.7	90.9	91.2	119.9	109.0	109.3
1964.....	113.5	112.0	88.1	89.3	124.4	109.6	111.1
1965 <sup>3</sup> .....	118.0	118.4	84.7	84.4	131.8	111.7	111.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.2	1.3	-1.1	-1.3	3.3	2.1	2.0
1957-65 ....	2.2	2.2	-2.1	-2.1	3.8	1.6	1.6

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output, employment, and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 54. GLASS CONTAINERS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	62.1	( <sup>3</sup> )	161.1	( <sup>3</sup> )	36.8	59.3	( <sup>3</sup> )
1947.....	99.4	( 97.1)	100.6	(102.9)	84.8	85.3	( 87.3)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	71.4	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	97.2	( 95.9)	102.9	(104.3)	64.9	66.8	( 67.7)
1950.....	113.2	(112.1)	88.3	( 89.2)	75.3	66.5	( 67.2)
1951.....	107.6	(106.4)	92.9	( 94.0)	81.8	76.0	( 76.9)
1952.....	105.4	(104.0)	94.9	( 96.1)	80.3	76.2	( 77.2)
1953.....	102.1	(101.4)	98.0	( 98.7)	89.0	87.2	( 87.8)
1954.....	98.2	( 97.7)	101.9	(102.3)	86.1	87.7	( 88.1)
1955.....	106.2	(106.3)	94.1	( 94.0)	93.8	88.3	( 88.2)
1956.....	106.4	(106.2)	94.0	( 94.2)	96.2	90.4	( 90.6)
1957.....	104.0	(103.9)	96.2	( 96.3)	99.3	95.5	( 95.6)
1958.....	93.5	( 93.5)	106.9	(106.9)	97.0	103.7	(103.7)
1959.....	103.0	(103.1)	97.1	( 97.0)	103.8	100.8	(100.7)
1960.....	99.9	(100.1)	100.1	( 99.9)	106.9	107.0	(106.8)
1961.....	103.8	(104.5)	96.3	( 95.7)	111.0	106.9	(106.2)
1962.....	105.5	(105.8)	94.8	( 94.5)	116.0	110.0	(109.6)
1963.....	112.0	(112.5)	89.3	( 88.9)	119.9	107.1	(106.6)
1964.....	113.8	(113.8)	87.9	( 87.9)	124.4	109.3	(109.3)
1965 <sup>4</sup> .....	119.7	(120.3)	83.5	( 83.2)	131.8	110.1	(109.6)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	0.5	(0.6)	-0.5	(-0.6)	3.3	2.8	(2.7)
1957-65 ....	2.3	(2.4)	-2.3	(-2.3)	3.8	1.5	(1.4)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

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

TABLE 55. HOSIERY  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1947.....	70.2	67.3	142.4	148.6	87.3	124.3	129.7
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	87.5	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	71.4	70.1	140.0	142.7	86.9	121.7	124.0
1950.....	75.7	74.0	132.1	135.2	97.1	128.3	131.3
1951.....	77.4	77.6	129.1	128.8	95.1	122.8	122.5
1952.....	85.9	83.7	116.4	119.5	100.7	117.2	120.3
1953.....	82.1	81.2	121.8	123.1	99.5	121.2	122.5
1954.....	85.1	85.2	117.6	117.4	96.8	113.8	113.6
1955.....	84.1	83.9	118.9	119.2	98.1	116.6	116.9
1956.....	85.7	85.7	116.7	116.7	95.9	111.9	111.9
1957.....	89.5	89.7	111.7	111.5	95.9	107.1	106.9
1958.....	104.5	106.0	95.7	94.4	99.4	95.1	93.8
1959.....	107.0	105.3	93.5	94.9	104.6	97.8	99.3
1960.....	109.2	108.1	91.6	92.5	104.3	95.5	96.5
1961.....	120.0	118.1	83.4	84.7	114.2	95.2	96.7
1962.....	124.4	122.4	80.4	81.7	117.3	94.3	95.8
1963.....	138.9	138.3	72.0	72.3	121.4	87.4	87.8
1964.....	152.4	148.0	65.6	67.6	129.2	84.8	87.3
1965 <sup>2</sup> .....	153.7	150.1	65.1	66.6	136.0	88.5	90.6
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.6	4.6	-4.4	-4.4	2.1	-2.4	-2.4
1957-65 ....	6.8	6.4	-6.4	-6.0	4.4	-2.2	-1.9

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

Source: Output based on data from the National Association of Hosiery Manufacturers, Inc., and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.



TABLE 56. HOSIERY  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1947.....	68.8	55.7	145.4	152.1	87.3	126.9	132.8
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	87.5	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	71.3	69.9	140.3	143.0	86.9	121.9	124.3
1950.....	74.8	72.9	133.7	137.2	97.1	129.8	133.2
1951.....	77.7	78.0	128.7	128.3	95.1	122.4	122.0
1952.....	86.7	84.5	115.3	118.4	100.7	116.1	119.2
1953.....	82.2	81.3	121.7	123.0	99.5	121.1	122.4
1954.....	84.2	84.3	118.8	118.6	96.8	115.0	114.8
1955.....	83.6	83.3	119.7	120.1	98.1	117.4	117.8
1956.....	85.2	85.2	117.4	117.4	95.9	112.6	112.6
1957.....	89.4	89.5	111.9	111.7	95.9	107.3	107.1
1958.....	104.9	106.4	95.4	94.0	99.4	94.8	93.4
1959.....	107.0	105.1	93.5	95.1	104.6	97.8	99.5
1960.....	109.0	107.7	91.8	92.8	104.3	95.7	96.8
1961.....	120.5	118.5	83.0	84.4	114.2	94.8	96.4
1962.....	125.1	123.0	80.0	81.3	117.3	93.8	95.4
1963.....	138.9	138.1	72.0	72.4	121.4	87.4	87.9
1964.....	152.4	147.5	65.6	67.8	129.2	84.8	87.6
1965 <sup>3</sup> .....	153.5	149.6	65.1	66.8	136.0	88.6	90.9
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.7	4.7	-4.5	-4.5	2.1	-2.5	-2.5
1957-65 ....	6.8	6.4	-6.4	-6.0	4.4	-2.2	-1.8

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output based on data from the National Association of Hosiery Manufacturers, Inc., and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 57. HOSIERY  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1947.....	92.1	( 90.4)	108.6	(110.7)	87.3	94.8	( 96.6)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	87.5	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	72.7	( 71.9)	137.6	(139.1)	86.9	119.6	(120.9)
1950.....	87.6	( 87.0)	114.1	(114.9)	97.1	110.8	(111.6)
1951.....	74.9	( 74.2)	133.4	(134.7)	95.1	126.9	(128.1)
1952.....	77.6	( 76.8)	128.8	(130.2)	100.7	129.7	(131.1)
1953.....	80.8	( 80.5)	123.7	(124.2)	99.5	123.1	(123.6)
1954.....	96.7	( 96.5)	103.4	(103.6)	96.8	100.1	(100.3)
1955.....	91.1	( 91.3)	109.8	(109.6)	98.1	107.7	(107.5)
1956.....	91.8	( 91.7)	109.0	(109.1)	95.9	104.5	(104.6)
1957.....	91.5	( 91.5)	109.3	(109.3)	95.9	104.8	(104.8)
1958.....	101.7	(101.7)	98.3	( 98.3)	99.4	97.7	( 97.7)
1959.....	107.3	(107.4)	93.2	( 93.1)	104.6	97.5	( 97.4)
1960.....	111.7	(111.4)	89.5	( 89.7)	104.3	93.4	( 93.6)
1961.....	113.5	(114.0)	88.1	( 87.7)	114.2	100.6	(100.2)
1962.....	116.9	(117.2)	85.5	( 85.3)	117.3	100.3	(100.1)
1963.....	139.4	(139.7)	71.7	( 71.6)	121.4	87.1	( 86.9)
1964.....	152.7	(152.4)	65.5	( 65.6)	129.2	84.6	( 84.8)
1965 <sup>4</sup> .....	155.3	(155.6)	64.4	( 64.3)	136.0	87.6	( 87.4)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.8	(3.9)	-3.7	(-3.8)	2.1	-1.7	(-1.7)
1957-65 ....	6.7	(6.7)	-6.3	(-6.3)	4.4	-2.1	(-2.2)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

Source: Output based on data from the National Association of Hosiery Manufacturers, Inc., and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 58. MALT LIQUORS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	50.8	( <sup>1</sup> )	( <sup>1</sup> )
1947.....	80.2	71.5	124.7	139.8	90.4	112.7	126.4
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	87.9	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	83.3	78.9	120.1	126.8	89.5	107.5	113.5
1950.....	81.4	78.2	122.8	127.8	90.3	110.9	115.4
1951.....	83.1	79.4	120.3	125.9	93.1	112.0	117.2
1952.....	85.6	82.5	116.9	121.3	94.9	110.9	115.1
1953.....	84.6	81.9	118.3	122.0	98.0	115.9	119.6
1954.....	85.8	84.1	116.6	118.9	95.3	111.1	113.3
1955.....	88.8	87.7	112.6	114.0	97.6	109.9	111.3
1956.....	90.7	89.3	110.3	112.0	98.4	108.5	110.2
1957.....	92.8	92.2	107.7	108.5	98.1	105.7	106.4
1958.....	101.5	102.0	98.5	98.1	99.2	97.7	97.3
1959.....	106.4	106.7	94.0	93.7	102.8	96.6	96.3
1960.....	109.3	110.9	91.5	90.2	103.9	95.1	93.7
1961.....	114.3	116.3	87.5	86.0	106.1	92.8	91.2
1962.....	120.9	122.3	82.7	81.8	108.7	89.9	88.9
1963.....	132.9	134.4	75.2	74.4	113.4	85.3	84.4
1964 <sup>2</sup> .....	141.8	143.1	70.5	69.9	119.5	84.3	83.5
1965 <sup>2</sup> .....	148.7	149.5	67.2	66.9	122.4	82.3	81.9
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.6	4.1	-3.5	-4.0	1.6	-1.9	-2.4
1957-65 ....	5.9	6.0	-5.6	-5.7	2.8	-2.9	-3.0

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 59. MALT LIQUORS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	57.0	55.3	175.4	180.7	50.8	89.1	91.8
1947.....	75.1	64.7	133.1	154.5	90.4	120.3	139.7
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	87.9	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	81.8	76.1	122.2	131.4	89.5	109.4	117.6
1950.....	82.3	77.8	121.5	128.5	90.3	109.7	116.0
1951.....	82.9	78.0	120.6	128.1	93.1	112.3	119.3
1952.....	84.7	80.7	118.1	123.9	94.9	112.1	117.6
1953.....	84.3	80.7	118.7	123.9	98.0	116.3	121.4
1954.....	87.0	84.6	115.0	118.2	95.3	109.6	112.6
1955.....	89.1	87.2	112.3	114.7	97.6	109.6	111.9
1956.....	91.5	89.5	109.2	111.7	98.4	107.5	109.9
1957.....	93.9	93.1	106.5	107.4	98.1	104.5	105.4
1958.....	101.4	102.1	98.6	98.0	99.2	97.8	97.2
1959.....	105.2	105.5	95.0	94.7	102.8	97.7	97.4
1960.....	107.0	108.9	93.5	91.8	103.9	97.1	95.4
1961.....	112.8	114.3	88.7	87.5	106.1	94.1	92.8
1962.....	119.2	119.3	83.9	83.8	108.7	91.2	91.1
1963.....	130.5	130.6	76.6	76.5	113.4	86.9	86.8
1964.....	139.6	139.8	71.6	71.5	119.5	85.6	85.5
1965 <sup>3</sup> .....	148.2	146.8	67.5	68.1	122.4	82.6	83.4
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.6	4.3	-3.5	-4.1	1.6	-1.9	-2.5
1957-65 ....	5.7	5.6	-5.4	-5.3	2.8	-2.7	-2.6

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 60. MALT LIQUORS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	50.8	( <sup>3</sup> )	( <sup>3</sup> )
1947.....	92.8	( 90.9)	107.7	(110.1)	90.4	97.4	( 99.5)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	87.9	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	86.3	( 85.2)	115.9	(117.3)	89.5	103.7	(105.0)
1950.....	79.8	( 79.0)	125.4	(126.6)	90.3	113.2	(114.3)
1951.....	83.5	( 82.5)	119.8	(121.3)	93.1	111.5	(112.9)
1952.....	87.5	( 86.4)	114.2	(115.8)	94.9	108.4	(109.9)
1953.....	85.1	( 84.6)	117.4	(118.2)	98.0	115.1	(115.8)
1954.....	83.5	( 83.2)	119.8	(120.3)	95.3	114.2	(114.6)
1955.....	88.5	( 88.6)	113.0	(112.9)	97.6	110.3	(110.2)
1956.....	89.0	( 88.9)	112.3	(112.5)	98.4	110.5	(110.7)
1957.....	90.6	( 90.5)	110.4	(110.5)	98.1	108.3	(108.4)
1958.....	101.7	(101.8)	98.3	( 98.2)	99.2	97.5	( 97.4)
1959.....	109.0	(109.1)	91.7	( 91.6)	102.8	94.3	( 94.2)
1960.....	114.1	(115.3)	87.7	( 86.7)	103.9	91.1	( 90.1)
1961.....	117.5	(120.4)	85.1	( 83.0)	106.1	90.3	( 88.1)
1962.....	124.7	(128.6)	80.2	( 77.7)	108.7	87.2	( 84.5)
1963.....	138.1	(142.6)	72.4	( 70.1)	113.4	82.1	( 79.5)
1964.....	146.3	(150.3)	68.4	( 66.5)	119.5	81.7	( 79.5)
1965 <sup>4</sup> .....	150.0	(154.9)	66.7	( 64.5)	122.4	81.6	( 79.0)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.5	(3.8)	-3.4	(-3.6)	1.6	-1.8	(-2.1)
1957-65 ....	6.3	(6.8)	-5.9	(-6.4)	2.8	-3.3	(-3.7)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 61. MAN-MADE FIBERS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1957-65  
 (INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1957.....	97.3	98.0	102.8	102.0	99.9	102.7	101.9
1958.....	94.2	94.0	106.1	106.4	91.2	96.8	97.0
1959.....	108.4	107.7	92.3	92.8	108.9	100.5	101.1
1960.....	101.9	103.0	98.1	97.1	102.5	100.6	99.5
1961.....	110.1	110.7	90.8	90.4	107.8	97.9	97.4
1962.....	121.8	121.5	82.1	82.3	128.7	105.7	105.9
1963.....	121.9	120.6	82.0	82.9	137.6	112.9	114.1
1964.....	131.1	128.3	76.3	77.9	157.7	120.3	122.9
1965 <sup>1</sup> .....	134.8	133.2	74.2	75.1	180.6	134.0	135.6
AVERAGE ANNUAL RATES (PERCENT)							
1957-65 ....	4.6	4.3	-4.4	-4.2	8.2	3.4	3.7

<sup>1</sup> Preliminary.

Source: Output based on data from the Textile Economics Bureau, Inc. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 62. MAN-MADE FIBERS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1957-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1957.....	96.1	97.1	104.1	103.0	99.9	104.0	102.9
1958.....	97.0	96.5	103.1	103.6	91.2	94.0	94.5
1959.....	106.8	106.1	93.7	94.2	108.9	102.0	102.6
1960.....	102.0	103.4	98.0	96.7	102.5	100.5	99.1
1961.....	111.4	111.8	89.8	89.4	107.8	96.8	96.4
1962.....	121.0	120.3	82.7	83.1	128.7	106.4	107.0
1963.....	124.8	122.3	80.2	81.8	137.6	110.3	112.5
1964.....	133.3	129.3	75.0	77.4	157.7	118.3	122.0
1965 <sup>2</sup> .....	135.7	133.1	73.7	75.1	180.6	133.1	135.7
AVERAGE ANNUAL RATES (PERCENT)							
1957-65....	4.8	4.4	-4.6	-4.2	8.2	3.2	3.6

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

Source: Output based on data from the Textile Economics Bureau, Inc. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 63. MAN-MADE FIBERS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1957-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1957.....	101.2	(101.0)	98.8	( 99.0)	99.9	98.7	( 98.9)
1958.....	86.8	( 86.8)	115.2	(115.2)	91.2	105.1	(105.1)
1959.....	113.2	(113.3)	88.3	( 88.2)	108.9	96.2	( 96.1)
1960.....	101.4	(101.8)	98.6	( 98.2)	102.5	101.1	(100.7)
1961.....	106.2	(107.3)	94.2	( 93.2)	107.8	101.5	(100.5)
1962.....	124.6	(125.8)	80.3	( 79.5)	128.7	103.3	(102.3)
1963.....	114.0	(115.1)	87.7	( 86.8)	137.6	120.7	(119.5)
1964.....	124.8	(125.5)	80.2	( 79.7)	157.7	126.4	(125.7)
1965 <sup>3</sup> .....	132.2	(133.6)	75.6	( 74.9)	180.6	136.6	(135.2)
AVERAGE ANNUAL RATES (PERCENT)							
1957-65....	4.0	(4.2)	-3.9	(-4.0)	8.2	4.0	(3.8)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Output based on data from the Textile Economics Bureau, Inc. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.



TABLE 64. PAPER, PAPERBOARD AND PULP MILLS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	41.0	( <sup>1</sup> )	( <sup>1</sup> )
1947.....	72.8	69.3	137.4	144.3	63.6	87.4	91.8
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	66.2	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	72.7	72.4	137.5	138.1	61.6	84.7	85.1
1950.....	84.5	81.5	118.3	122.7	73.6	87.1	90.3
1951.....	87.8	85.0	113.8	117.7	80.2	91.3	94.4
1952.....	84.7	83.3	118.1	120.1	76.3	90.1	91.6
1953.....	84.9	83.2	117.8	120.1	81.4	95.9	97.8
1954.....	86.8	86.3	115.2	115.9	82.9	95.5	96.1
1955.....	94.9	92.4	105.4	108.3	93.0	98.0	100.7
1956.....	98.5	96.5	101.5	103.6	98.7	100.2	102.3
1957.....	96.1	96.4	104.1	103.7	96.1	100.0	99.7
1958.....	97.9	98.8	102.2	101.2	96.5	98.6	97.7
1959.....	105.9	104.6	94.4	95.6	107.4	101.4	102.7
1960.....	108.2	108.2	92.4	92.4	109.9	101.6	101.6
1961.....	115.4	115.6	86.7	86.5	113.9	98.7	98.5
1962.....	118.9	118.9	84.1	84.1	118.5	99.7	99.7
1963.....	126.0	125.8	79.3	79.5	124.9	99.1	99.3
1964.....	132.9	132.5	74.7	75.5	133.0	99.3	100.4
1965 <sup>2</sup> .....	140.6	138.1	71.1	72.4	140.6	100.0	101.8
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.5	3.7	-3.4	-3.6	4.5	0.9	0.7
1957-65 ....	5.0	4.7	-4.7	-4.5	4.9	-0.1	0.1

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 65. PAPER, PAPERBOARD AND PULP MILLS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65  
 (INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	68.4	71.8	146.1	139.3	41.0	59.9	57.1
1947.....	68.7	65.8	145.6	152.0	63.6	92.6	96.7
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	66.2	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	69.9	70.2	143.0	142.5	61.6	88.1	87.8
1950.....	81.1	78.4	123.4	127.6	73.6	90.8	93.9
1951.....	85.0	82.3	117.7	121.4	80.2	94.4	97.4
1952.....	82.5	81.3	121.2	122.9	76.3	92.5	93.8
1953.....	82.9	81.3	120.6	123.0	81.4	98.2	100.1
1954.....	85.2	84.9	117.4	117.9	82.9	97.3	97.7
1955.....	93.0	90.4	107.5	110.6	93.0	100.0	102.9
1956.....	97.5	95.3	102.5	105.0	98.7	101.2	103.6
1957.....	95.7	96.1	104.5	104.1	96.1	100.4	100.0
1958.....	97.7	98.8	102.4	101.2	96.5	98.8	97.7
1959.....	106.5	104.9	93.9	95.3	107.4	100.8	102.4
1960.....	109.7	109.5	91.2	91.4	109.9	100.2	100.4
1961.....	117.7	117.5	85.0	85.1	113.9	96.8	96.9
1962.....	120.9	120.5	82.7	83.0	118.5	98.0	98.3
1963.....	128.5	127.7	77.8	78.3	124.9	97.2	97.8
1964.....	136.4	134.3	73.3	74.4	133.0	97.5	99.0
1965 <sup>3</sup> .....	144.1	140.3	69.4	71.3	140.6	97.6	100.2
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.0	4.1	-3.9	-4.0	4.5	0.4	0.3
1957-65 ....	5.3	5.0	-5.1	-4.8	4.9	-0.4	-0.1

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output, employment, and hours based on data from the Bureau of the Census, U. S. Department of Commerce.

TABLE 66. PAPER, PAPERBOARD AND PULP MILLS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
1947.....	102.4	(100.2)	97.6	( 99.8)	63.6	62.1	( 63.5)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	90.1	( 88.9)	111.0	(112.5)	61.6	68.4	( 69.3)
1950.....	107.1	(106.1)	93.3	( 94.3)	73.6	68.7	( 69.4)
1951.....	105.7	(104.3)	94.6	( 95.9)	80.2	75.9	( 76.9)
1952.....	97.9	( 96.7)	102.1	(103.4)	76.3	77.9	( 78.9)
1953.....	96.2	( 95.5)	103.9	(104.7)	81.4	84.6	( 85.2)
1954.....	95.7	( 95.3)	104.5	(104.9)	82.9	86.6	( 87.0)
1955.....	105.6	(105.7)	94.7	( 94.6)	93.0	88.1	( 88.0)
1956.....	103.9	(103.8)	96.3	( 96.4)	98.7	95.0	( 95.1)
1957.....	98.1	( 98.0)	102.0	(102.1)	96.1	98.0	( 98.1)
1958.....	98.8	( 98.8)	101.2	(101.2)	96.5	97.7	( 97.7)
1959.....	103.0	(103.1)	97.1	( 97.0)	107.4	104.3	(104.2)
1960.....	101.3	(101.4)	98.7	( 98.6)	109.9	108.5	(108.4)
1961.....	105.7	(106.2)	94.6	( 94.2)	113.9	107.8	(107.3)
1962.....	109.9	(110.0)	91.0	( 90.9)	118.5	107.8	(107.7)
1963.....	115.3	(115.5)	86.7	( 86.5)	124.9	108.3	(108.1)
1964.....	123.4	(123.0)	81.1	( 81.3)	133.0	107.8	(108.1)
1965 <sup>4</sup> .....	126.0	(126.3)	79.4	( 79.2)	140.6	111.6	(111.3)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.1	(1.2)	-1.1	(-1.2)	4.5	3.4	(3.2)
1957-65 ....	3.4	(3.4)	-3.2	(-3.3)	4.9	1.5	(1.5)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

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

TABLE 67. PETROLEUM REFINING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	60.4	( <sup>1</sup> )	165.5	( <sup>1</sup> )	42.0	69.5	( <sup>1</sup> )
1947.....	60.8	57.5	164.4	174.1	60.9	100.1	106.0
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	66.9	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	65.7	63.8	152.2	156.8	65.0	98.9	101.9
1950.....	73.9	71.4	135.3	140.1	70.6	95.5	98.9
1951.....	77.0	74.5	129.9	134.3	80.0	103.9	107.4
1952.....	77.8	76.4	128.5	130.9	81.8	105.1	107.1
1953.....	78.4	77.9	127.5	128.3	85.9	109.5	110.2
1954.....	81.9	81.8	122.1	122.3	86.1	105.1	105.3
1955.....	90.0	89.3	111.2	111.9	93.1	103.5	104.2
1956.....	93.9	93.2	106.5	107.3	99.2	105.6	106.4
1957.....	94.1	93.4	106.2	107.0	99.4	105.6	106.4
1958.....	97.4	98.0	102.7	102.0	97.6	100.2	99.6
1959.....	110.1	110.1	90.8	90.8	103.6	94.1	94.1
1960.....	115.4	114.8	86.6	87.1	106.9	92.6	93.1
1961.....	123.9	123.5	80.7	81.0	109.4	88.3	88.6
1962.....	135.2	134.6	74.0	74.3	114.1	84.4	84.8
1963.....	142.9	144.3	70.0	69.3	117.0	81.9	81.1
1964.....	153.4	151.8	65.2	65.9	119.8	78.1	78.9
1965 <sup>2</sup> .....	163.0	163.6	61.4	61.1	122.9	75.4	75.1
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 . . . .	5.5	5.8	-5.2	-5.4	3.8	-1.6	-1.8
1957-65 . . . .	7.3	7.3	-6.8	-6.8	3.0	-4.0	-4.1

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 68. PETROLEUM REFINING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	55.0	55.9	181.7	178.8	42.0	76.3	75.1
1947.....	57.0	53.5	175.5	186.9	60.9	106.9	113.8
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	66.9	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	60.9	59.1	164.3	169.1	65.0	106.8	109.9
1950.....	71.2	68.3	140.5	146.3	70.6	99.2	103.3
1951.....	74.6	71.8	134.1	139.3	80.0	107.3	111.4
1952.....	76.0	74.6	131.7	134.1	81.8	107.7	109.7
1953.....	76.8	76.4	130.3	130.8	85.9	111.9	112.4
1954.....	80.5	80.5	124.2	124.2	86.1	106.9	106.9
1955.....	88.5	87.8	113.0	113.9	93.1	105.2	106.0
1956.....	92.5	91.7	108.2	109.1	99.2	107.3	108.2
1957.....	94.0	93.2	106.3	107.2	99.4	105.7	106.6
1958.....	97.2	98.1	102.9	101.9	97.6	100.4	99.5
1959.....	110.2	110.3	90.7	90.6	103.6	94.0	93.9
1960.....	117.1	115.9	85.4	86.2	106.9	91.3	92.2
1961.....	126.2	125.3	79.3	79.8	109.4	86.7	87.3
1962.....	138.5	137.3	72.2	72.8	114.1	82.4	83.1
1963.....	145.0	146.8	69.0	68.1	117.0	80.7	79.7
1964.....	156.4	154.2	63.9	64.9	119.8	76.6	77.7
1965 <sup>3</sup> .....	165.9	166.5	60.3	60.0	122.9	74.1	73.8
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	6.0	6.3	-5.7	-5.9	3.8	-2.1	-2.3
1957-65 ....	7.6	7.6	-7.1	-7.1	3.0	-4.3	-4.3

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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

TABLE 69. PETROLEUM REFINING  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	82.4	( <sup>3</sup> )	121.4	( <sup>3</sup> )	42.0	51.0	( <sup>3</sup> )
1947.....	74.7	( 73.0)	133.8	(136.9)	60.9	81.5	( 83.4)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	66.9	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	83.7	( 82.6)	119.5	(121.1)	65.0	77.7	( 78.7)
1950.....	82.6	( 81.7)	121.1	(122.4)	70.6	85.5	( 86.4)
1951.....	84.5	( 83.3)	118.4	(120.0)	80.0	94.7	( 96.0)
1952.....	83.3	( 82.1)	120.0	(121.8)	81.8	98.2	( 99.6)
1953.....	83.3	( 82.8)	120.0	(120.8)	85.9	103.1	(103.8)
1954.....	86.0	( 85.6)	116.3	(116.8)	86.1	100.1	(100.6)
1955.....	94.1	( 94.3)	106.2	(106.0)	93.1	98.9	( 98.7)
1956.....	98.3	( 98.1)	101.7	(101.9)	99.2	100.9	(101.1)
1957.....	94.1	( 94.0)	106.2	(106.3)	99.4	105.6	(105.7)
1958.....	97.8	( 97.8)	102.3	(102.3)	97.6	99.8	( 99.8)
1959.....	109.5	(109.6)	91.3	( 91.2)	103.6	94.6	( 94.5)
1960.....	111.5	(111.6)	89.7	( 89.6)	106.9	95.9	( 95.8)
1961.....	118.0	(118.7)	84.7	( 84.3)	109.4	92.7	( 92.2)
1962.....	127.2	(127.3)	78.6	( 78.5)	114.1	89.7	( 89.6)
1963.....	137.5	(137.6)	72.7	( 72.6)	117.0	85.1	( 85.0)
1964.....	146.1	(145.7)	68.4	( 68.6)	119.8	82.0	( 82.2)
1965 <sup>4</sup> .....	155.8	(156.0)	64.2	( 64.1)	122.9	78.9	( 78.8)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.0	(4.1)	-3.8	(-3.9)	3.8	-0.1	(-0.3)
1957-65 ....	6.5	(6.6)	-6.1	(-6.1)	3.0	-3.3	(-3.3)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

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

TABLE 70. PRIMARY ALUMINUM  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1947.....	68.1	64.6	146.9	154.9	32.6	47.9	50.5
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	35.7	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	72.4	66.1	138.0	151.3	34.7	47.9	52.5
1950.....	72.6	72.4	137.8	138.1	41.5	57.2	57.3
1951.....	74.3	70.8	134.6	141.2	48.5	65.3	68.5
1952.....	71.3	69.3	140.3	144.3	54.6	76.6	78.8
1953.....	69.6	69.8	143.6	143.2	73.2	105.1	104.8
1954.....	77.4	76.7	129.2	130.5	85.7	110.7	111.8
1955.....	85.2	85.0	117.4	117.7	91.6	107.5	107.8
1956.....	86.4	87.3	115.7	114.6	98.0	113.4	112.3
1957.....	87.1	87.7	114.8	114.0	95.9	110.1	109.3
1958.....	97.3	97.5	102.8	102.5	90.8	93.3	93.1
1959.....	117.3	116.1	85.3	86.1	113.3	96.6	97.6
1960.....	121.3	121.4	82.4	82.4	116.2	95.8	95.7
1961.....	125.7	126.2	79.5	79.3	109.4	87.0	86.7
1962.....	131.1	132.4	76.3	75.5	121.3	92.5	91.6
1963.....	135.5	136.9	73.8	73.0	132.0	97.4	96.4
1964.....	133.4	141.3	74.9	70.8	145.7	109.2	103.1
1965 <sup>2</sup> .....	140.9	144.4	71.0	69.3	157.2	111.6	108.9
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.9	5.4	-4.7	-5.1	9.1	3.9	3.4
1957-65 ....	5.5	6.0	-5.3	-5.7	6.4	0.8	0.4

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

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

TABLE 71. PRIMARY ALUMINUM  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1947.....	65.3	61.9	153.1	161.7	32.6	49.9	52.7
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	35.7	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	69.8	62.9	143.2	159.1	34.7	49.7	55.2
1950.....	68.8	69.3	145.3	144.3	41.5	60.3	59.9
1951.....	70.4	67.1	142.1	149.1	48.5	68.9	72.3
1952.....	68.4	66.6	146.2	150.2	54.6	79.8	82.0
1953.....	64.4	65.1	155.3	153.7	73.2	113.7	112.5
1954.....	74.2	73.7	134.8	135.7	85.7	115.5	116.3
1955.....	82.2	82.2	121.6	121.7	91.6	111.4	111.5
1956.....	84.6	85.7	118.3	116.6	98.0	115.9	114.3
1957.....	86.4	87.2	115.7	114.7	95.9	111.0	110.0
1958.....	99.5	99.5	100.6	100.6	90.8	91.3	91.3
1959.....	116.0	114.7	86.2	87.2	113.3	97.7	98.8
1960.....	121.0	121.3	82.6	82.4	116.2	96.0	95.8
1961.....	127.2	127.5	78.6	78.4	109.4	86.0	85.8
1962.....	130.4	132.0	76.7	75.8	121.3	93.0	91.9
1963.....	134.3	136.1	74.5	73.5	132.0	98.3	97.0
1964.....	128.3	138.2	78.0	72.3	145.7	113.6	105.4
1965 <sup>3</sup> .....	137.2	141.6	72.9	70.6	157.2	114.6	111.0
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	5.2	5.7	-4.9	-5.4	9.1	3.6	3.0
1957-65 ....	5.1	5.8	-4.8	-5.4	6.4	1.3	0.6

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

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



TABLE 72. PRIMARY ALUMINUM  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1947.....	80.7	( 78.9)	123.9	(126.7)	32.6	40.4	( 41.3)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	35.7	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	84.2	( 83.2)	118.7	(120.2)	34.7	41.2	( 41.7)
1950.....	90.6	( 89.8)	110.4	(111.3)	41.5	45.8	( 46.2)
1951.....	93.6	( 92.6)	106.8	(108.0)	48.5	51.8	( 52.4)
1952.....	84.4	( 83.2)	118.5	(120.1)	54.6	64.7	( 65.6)
1953.....	101.0	(100.3)	99.0	( 99.7)	73.2	72.5	( 73.0)
1954.....	92.2	( 91.9)	108.5	(108.9)	85.7	93.0	( 93.3)
1955.....	98.7	( 98.9)	101.3	(101.1)	91.6	92.8	( 92.6)
1956.....	94.3	( 94.1)	106.0	(106.2)	98.0	103.9	(104.1)
1957.....	90.0	( 90.0)	111.1	(111.2)	95.9	106.5	(106.6)
1958.....	90.1	( 90.1)	111.0	(111.0)	90.8	100.8	(100.8)
1959.....	122.2	(122.4)	81.8	( 81.7)	113.3	92.7	( 92.6)
1960.....	122.2	(122.2)	81.8	( 81.8)	116.2	95.1	( 95.1)
1961.....	120.8	(121.0)	82.8	( 82.6)	109.4	90.6	( 90.4)
1962.....	134.2	(133.7)	74.5	( 74.8)	121.3	90.4	( 90.7)
1963.....	140.9	(140.4)	71.0	( 71.2)	132.0	93.7	( 94.0)
1964.....	157.3	(156.2)	63.6	( 64.0)	145.7	92.6	( 93.3)
1965 <sup>4</sup> .....	156.9	(156.4)	63.7	( 63.9)	157.2	100.2	(100.5)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.7	(3.8)	-3.6	(-3.7)	9.1	5.1	( 5.0)
1957-65 ....	7.4	(7.3)	-6.9	(-6.8)	6.4	-0.9	(-0.8)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

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

TABLE 73. PRIMARY SMELTING AND REFINING OF COPPER, LEAD, AND ZINC  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	74.7	( <sup>1</sup> )	( <sup>1</sup> )
1947.....	82.4	76.2	121.3	131.2	95.7	116.1	125.6
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	93.6	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	83.1	79.9	120.4	125.1	91.2	109.8	114.1
1950.....	92.8	88.5	107.7	113.0	102.2	110.1	115.5
1951.....	95.5	90.0	104.7	111.2	101.3	106.1	112.6
1952.....	97.7	91.8	102.3	108.9	103.0	105.4	112.2
1953.....	97.2	91.4	102.9	109.4	104.7	107.7	114.5
1954.....	90.2	90.6	110.9	110.4	96.4	106.9	106.4
1955.....	103.3	101.0	96.8	99.0	109.7	106.2	108.6
1956.....	106.1	102.5	94.3	97.6	119.0	112.2	116.1
1957.....	104.5	103.0	95.7	97.1	116.2	111.2	112.8
1958.....	100.9	101.0	99.1	99.0	100.5	99.6	99.5
1959.....	93.4	95.0	107.1	105.3	83.3	89.2	87.7
1960.....	107.7	106.0	92.9	94.4	108.2	100.5	102.1
1961.....	113.4	110.8	88.2	90.3	109.8	96.8	99.1
1962.....	120.2	117.7	83.2	85.0	115.3	95.9	98.0
1963.....	121.8	120.4	82.1	83.1	114.1	93.7	94.8
1964.....	125.3	125.1	79.8	80.0	119.8	95.6	95.8
1965 <sup>2</sup> .....	131.6	131.5	76.0	76.1	126.6	96.2	96.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	2.3	2.7	-2.2	-2.6	1.2	-1.1	-1.5
1957-65....	3.8	3.7	-3.6	-3.6	2.6	-1.1	-1.0

<sup>1</sup> Not available.

<sup>2</sup> 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, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 74. PRIMARY SMELTING AND REFINING OF COPPER, LEAD, AND ZINC  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	69.9	68.7	143.0	145.6	74.7	106.8	108.8
1947.....	76.6	70.6	130.6	141.7	95.7	125.0	135.6
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	93.6	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	80.4	77.2	124.5	129.6	91.2	113.5	118.2
1950.....	88.9	84.5	112.4	118.4	102.2	114.9	121.0
1951.....	92.9	86.9	107.7	115.1	101.3	109.1	116.6
1952.....	94.9	88.6	105.3	112.9	103.0	108.5	116.3
1953.....	93.6	87.5	106.8	114.2	104.7	111.8	119.6
1954.....	89.3	89.8	112.0	111.3	96.4	108.0	107.3
1955.....	101.3	98.7	98.7	101.4	109.7	108.3	111.2
1956.....	103.1	99.2	97.0	100.8	119.0	115.4	119.9
1957.....	102.6	101.0	97.5	99.0	116.2	113.3	115.0
1958.....	101.8	101.8	98.2	98.2	100.5	98.7	98.7
1959.....	94.7	96.5	105.6	103.6	83.3	88.0	86.3
1960.....	107.1	105.2	93.3	95.1	108.2	101.0	102.9
1961.....	113.4	110.2	88.2	90.7	109.8	96.8	99.6
1962.....	119.6	116.7	83.6	85.7	115.3	96.4	98.8
1963.....	120.1	118.5	83.3	84.4	114.1	95.0	96.3
1964.....	122.6	122.6	81.6	81.6	119.8	97.7	97.7
1965 <sup>3</sup> .....	128.7	128.8	77.7	77.6	126.6	98.4	98.3
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	2.5	2.9	-2.5	-2.9	1.2	-1.3	-1.7
1957-65....	3.5	3.5	-3.4	-3.3	2.6	-0.8	-0.8

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> 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, U.S. Department of Commerce.

TABLE 75. PRIMARY SMELTING AND REFINING OF COPPER, LEAD, AND ZINC  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1939.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	74.7	( <sup>3</sup> )	( <sup>3</sup> )
1947.....	129.1	(126.3)	77.4	( 79.2)	95.7	74.1	( 75.8)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	93.6	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	98.4	( 97.3)	101.6	(102.7)	91.2	92.7	( 93.7)
1950.....	117.1	(115.9)	85.4	( 86.3)	102.2	87.3	( 88.2)
1951.....	110.5	(109.0)	90.5	( 91.7)	101.3	91.7	( 92.9)
1952.....	113.3	(111.8)	88.3	( 89.4)	103.0	90.9	( 92.1)
1953.....	118.3	(117.5)	84.5	( 85.1)	104.7	88.5	( 89.1)
1954.....	95.0	( 94.5)	105.3	(105.8)	96.4	101.5	(102.0)
1955.....	114.0	(114.3)	87.7	( 87.5)	109.7	96.2	( 96.0)
1956.....	122.6	(122.4)	81.6	( 81.7)	119.0	97.1	( 97.2)
1957.....	114.1	(114.0)	87.6	( 87.7)	116.2	101.8	(101.9)
1958.....	97.1	( 97.1)	103.0	(103.0)	100.5	103.5	(103.5)
1959.....	88.0	( 88.1)	113.7	(113.6)	83.3	94.7	( 94.6)
1960.....	110.2	(110.2)	90.8	( 90.8)	108.2	98.2	( 98.2)
1961.....	113.5	(113.8)	88.1	( 87.9)	109.8	96.7	( 96.5)
1962.....	123.2	(122.8)	81.2	( 81.4)	115.3	93.6	( 93.9)
1963.....	130.4	(130.1)	76.7	( 76.9)	114.1	87.5	( 87.7)
1964.....	139.6	(138.7)	71.6	( 72.1)	119.8	85.8	( 86.4)
1965 <sup>4</sup> .....	147.2	(146.7)	67.9	( 68.2)	126.6	86.0	( 86.3)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65....	0.8	(0.9)	-0.8	(-0.9)	1.2	0.3	( 0.2)
1957-65....	5.1	(5.1)	-4.9	(-4.8)	2.6	-2.4	(-2.3)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> 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, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 76. STEEL  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1947-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1947.....	84.4	84.3	118.5	118.6	87.0	103.1	103.2
1948.....	85.8	84.8	116.5	117.9	91.6	106.7	108.0
1949.....	83.9	85.3	119.1	117.3	80.5	95.9	94.4
1950.....	95.9	93.9	104.2	106.5	101.7	106.0	108.3
1951.....	98.5	94.4	101.5	106.0	110.6	112.3	117.2
1952.....	97.2	95.0	102.9	105.2	97.5	100.3	102.6
1953.....	100.4	97.0	99.7	103.1	114.5	114.1	118.0
1954.....	90.3	92.6	110.7	108.0	91.7	101.5	99.0
1955.....	108.8	105.2	91.9	95.0	120.9	111.1	114.9
1956.....	107.1	103.7	93.4	96.5	119.0	111.1	114.8
1957.....	101.4	101.1	98.6	99.0	114.8	113.2	113.6
1958.....	90.8	93.5	110.1	107.0	85.8	94.5	91.8
1959.....	107.6	105.0	93.0	95.3	99.3	92.3	94.6
1960.....	97.2	98.6	102.9	101.4	99.5	102.4	100.9
1961.....	101.7	101.7	98.3	98.3	95.2	93.6	93.6
1962.....	107.5	106.9	93.0	93.5	100.2	93.2	93.7
1963.....	114.7	111.8	87.2	89.5	106.3	92.7	95.1
1964.....	122.0	116.6	81.9	85.7	120.7	98.9	103.5
1965.....	127.1	121.3	78.7	82.4	131.3	103.3	108.2
1966 <sup>1</sup> .....	129.0	123.7	77.5	80.8	132.1	102.4	106.8
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	1.8	1.7	-1.8	-1.7	1.3	-0.5	-0.4
1957-66....	3.5	2.8	-3.4	-2.7	3.4	-0.1	0.5

<sup>1</sup> Preliminary.

Source: Output based on data from the American Iron and Steel Institute and the Bureau of Mines, U. S. Department of the Interior. Employment and hours based on data from the Bureau of Labor Statistics, U. S. Department of Labor.

TABLE 77. STEEL  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA.  
 PRODUCTION WORKERS, 1947-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1947.....	78.6	78.4	127.2	127.6	87.0	110.7	111.0
1948.....	80.1	78.8	124.9	126.9	91.6	114.4	116.2
1949.....	79.3	80.8	126.1	123.7	80.5	101.5	99.6
1950.....	90.0	87.7	111.1	114.0	101.7	113.0	115.9
1951.....	92.6	88.1	108.0	113.6	110.6	119.5	125.6
1952.....	93.5	90.9	107.0	110.1	97.5	104.3	107.3
1953.....	95.8	92.0	104.4	108.6	114.5	119.5	124.4
1954.....	87.2	89.7	114.7	111.5	91.7	105.2	102.2
1955.....	103.9	99.8	96.3	100.2	120.9	116.4	121.2
1956.....	103.7	99.7	96.4	100.3	119.0	114.7	119.4
1957.....	99.3	98.8	100.7	101.2	114.8	115.6	116.2
1958.....	91.6	95.0	109.2	105.2	85.8	93.7	90.3
1959.....	109.5	106.2	91.3	94.2	99.3	90.7	93.5
1960.....	97.7	99.6	102.3	100.4	99.5	101.8	99.9
1961.....	103.4	103.3	96.7	96.8	95.2	92.1	92.2
1962.....	109.3	108.4	91.5	92.2	100.2	91.7	92.4
1963.....	115.2	111.5	86.8	89.7	106.3	92.3	95.3
1964.....	121.6	114.7	82.3	87.2	120.7	99.3	105.2
1965.....	126.6	119.6	79.0	83.6	131.3	103.7	109.8
1966 <sup>2</sup> .....	129.3	122.7	77.4	81.5	132.1	102.2	107.7
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	2.3	2.2	-2.3	-2.1	1.3	-0.9	-0.8
1957-66....	3.5	2.7	-3.4	-2.6	3.4	-0.1	0.7

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

Source: Output based on data from the American Iron and Steel Institute and the Bureau of Mines, U.S. Department of the Interior. Employment and hours based on data from the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 78. STEEL  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1947-66

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1947.....	125.9	(124.8)	79.4	( 80.1)	87.0	69.1	( 69.7)
1948.....	126.3	(125.5)	79.1	( 79.7)	91.6	72.5	( 73.0)
1949.....	112.9	(112.3)	88.6	( 89.1)	80.5	71.3	( 71.7)
1950.....	135.8	(135.1)	73.6	( 74.0)	101.7	74.9	( 75.3)
1951.....	137.2	(136.7)	72.9	( 73.1)	110.6	80.6	( 80.9)
1952.....	118.2	(117.9)	84.6	( 84.8)	97.5	82.5	( 82.7)
1953.....	126.7	(126.5)	79.0	( 79.0)	114.5	90.4	( 90.5)
1954.....	107.9	(107.9)	92.7	( 92.7)	91.7	85.0	( 85.0)
1955.....	138.0	(138.0)	72.5	( 72.5)	120.9	87.6	( 87.6)
1956.....	125.1	(125.1)	79.9	( 79.9)	119.0	95.1	( 95.1)
1957.....	112.0	(112.0)	89.3	( 89.3)	114.8	102.5	(102.5)
1958.....	87.6	( 87.6)	114.2	(114.2)	85.8	98.0	( 98.0)
1959.....	99.8	( 99.8)	100.2	(100.2)	99.3	99.5	( 99.5)
1960.....	94.6	( 94.8)	105.7	(105.5)	99.5	105.2	(105.0)
1961.....	95.0	( 95.5)	105.3	(104.7)	95.2	100.2	( 99.7)
1962.....	100.5	(101.2)	99.5	( 98.8)	100.2	99.7	( 99.0)
1963.....	112.1	(112.8)	89.2	( 88.6)	106.3	94.8	( 94.2)
1964.....	124.2	(125.1)	80.5	( 80.0)	120.7	97.2	( 96.5)
1965.....	129.1	(130.0)	77.5	( 76.9)	131.3	101.7	(101.0)
1966 <sup>3</sup> .....	127.8	(128.6)	78.3	( 77.7)	132.1	103.4	(102.7)
AVERAGE ANNUAL RATES (PERCENT)							
1947-66....	-0.7	(-0.6)	0.7	( 0.7)	1.3	2.1	( 2.0)
1957-66....	3.4	( 3.5)	-3.3	(-3.4)	3.4	-0.1	(-0.2)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Output based on data from the American Iron and Steel Institute and the Bureau of Mines, U. S. Department of the Interior. Employment and hours based on data from the Bureau of Labor Statistics, U. S. Department of Labor.

TABLE 79. TIRES AND INNER TUBES  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1947.....	71.2	69.7	140.4	143.5	89.4	125.5	128.3
1948.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	77.6	( <sup>1</sup> )	( <sup>1</sup> )
1949.....	73.8	75.8	135.6	130.3	69.7	94.5	90.8
1950.....	88.5	86.5	113.0	115.6	85.9	97.1	99.3
1951.....	88.0	83.3	116.3	120.0	86.1	100.1	103.3
1952.....	82.0	90.2	121.9	124.7	87.1	106.2	108.6
1953.....	85.4	84.3	117.1	118.6	89.9	105.3	106.6
1954.....	81.6	83.3	122.5	119.4	82.1	100.6	98.0
1955.....	95.6	89.2	104.6	112.1	102.4	107.1	114.8
1956.....	88.8	89.2	112.6	112.1	94.7	106.6	106.2
1957.....	94.3	93.9	106.1	106.5	99.1	105.1	105.5
1958.....	96.6	97.8	103.5	102.3	91.5	94.7	93.6
1959.....	109.2	108.4	91.6	92.2	109.4	100.2	100.9
1960.....	111.3	111.1	89.9	90.0	108.4	97.4	97.6
1961.....	114.9	114.6	87.0	87.2	104.9	91.3	91.5
1962.....	131.0	126.3	76.4	79.2	119.7	91.4	94.8
1963.....	137.9	135.6	72.5	73.7	124.5	90.3	91.8
1964.....	156.0	149.3	64.1	67.0	141.8	90.9	95.0
1965 <sup>2</sup> .....	161.8	153.9	61.8	65.0	151.9	93.9	98.7
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.3	4.2	-4.2	-4.0	3.3	-1.0	-0.9
1957-65 ....	7.3	6.6	-6.8	-6.2	5.8	-1.4	-0.7

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

Source: Output based on data from the Rubber Manufacturers Association, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.



TABLE 80. TIRES AND INNER TUBES  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1947.....	69.3	67.8	144.3	147.5	89.4	129.0	131.9
1948.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	77.6	( <sup>2</sup> )	( <sup>2</sup> )
1949.....	71.5	75.4	139.9	132.7	69.7	97.5	92.5
1950.....	84.6	82.7	118.2	121.0	85.9	101.5	103.9
1951.....	82.8	79.9	120.8	125.1	86.1	104.0	107.7
1952.....	79.3	77.6	126.1	128.9	87.1	109.8	112.3
1953.....	82.6	81.7	121.0	122.5	89.9	108.8	110.1
1954.....	80.8	83.7	123.8	119.5	82.1	101.6	98.1
1955.....	93.9	86.2	106.5	116.0	102.4	109.1	118.8
1956.....	88.2	88.7	113.4	112.8	94.7	107.4	106.8
1957.....	94.1	93.8	106.3	106.7	99.1	105.3	105.7
1958.....	97.5	99.0	102.5	101.0	91.5	93.8	92.4
1959.....	108.4	107.4	92.2	93.1	109.4	100.9	101.9
1960.....	112.1	111.5	89.2	89.7	108.4	96.7	97.2
1961.....	118.0	116.9	84.7	85.5	104.9	88.9	89.7
1962.....	132.1	125.5	75.7	79.7	119.7	90.6	95.4
1963.....	140.2	136.4	71.3	73.3	124.5	88.8	91.3
1964.....	159.3	149.7	62.8	66.8	141.8	89.0	94.7
1965 <sup>3</sup> .....	166.2	154.8	60.2	64.6	151.9	91.4	98.1
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.8	4.5	-4.5	-4.3	3.3	-1.4	-1.2
1957-65 ....	7.7	6.6	-7.1	-6.2	5.8	-1.7	-0.8

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output based on data from the Rubber Manufacturers Association, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 81. TIRES AND INNER TUBES  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1947-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS <sup>1</sup> IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
1947.....	79.6	( 77.9)	125.6	(128.4)	89.4	112.3	(114.8)
1948.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	77.6	( <sup>3</sup> )	( <sup>3</sup> )
1949.....	84.1	( 83.0)	118.9	(120.5)	69.7	82.9	( 84.0)
1950.....	106.4	(105.3)	93.9	( 95.0)	85.9	80.7	( 81.6)
1951.....	100.9	( 99.8)	99.1	(100.2)	86.1	85.3	( 86.3)
1952.....	93.8	( 92.5)	106.7	(108.2)	87.1	92.9	( 94.2)
1953.....	97.5	( 96.9)	102.6	(103.2)	89.9	92.2	( 92.8)
1954.....	84.6	( 84.3)	118.1	(118.6)	82.1	97.0	( 97.4)
1955.....	103.0	(103.2)	97.1	( 96.9)	102.4	99.4	( 99.2)
1956.....	91.3	( 91.1)	109.5	(109.7)	94.7	103.7	(103.9)
1957.....	94.7	( 94.7)	105.5	(105.7)	99.1	104.6	(104.7)
1958.....	93.3	( 93.3)	107.2	(107.2)	91.5	98.1	( 98.1)
1959.....	112.4	(112.6)	88.9	( 88.8)	109.4	97.3	( 97.2)
1960.....	108.3	(109.2)	92.3	( 91.6)	108.4	100.1	( 99.3)
1961.....	104.6	(106.7)	95.6	( 93.7)	104.9	100.3	( 98.3)
1962.....	126.5	(129.1)	79.0	( 77.4)	119.7	94.6	( 92.7)
1963.....	130.0	(132.7)	76.9	( 75.3)	124.5	95.8	( 93.8)
1964.....	144.5	(147.1)	69.2	( 68.0)	141.8	98.1	( 96.4)
1965 <sup>4</sup> .....	146.9	(150.1)	68.1	( 66.6)	151.9	103.4	(101.2)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	2.7	(3.0)	-2.7	(-2.9)	3.3	0.5	( 0.3)
1957-65 ....	6.0	(6.4)	-5.7	(-6.0)	5.8	-0.2	(-0.5)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

Source: Output based on data from the Rubber Manufacturers Association, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 82. TOBACCO PRODUCTS-TOTAL<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	49.7	( <sup>2</sup> )	201.0	( <sup>2</sup> )	68.0	136.7	( <sup>2</sup> )
1947.....	68.6	67.7	145.8	147.6	83.8	122.2	123.7
1948.....	72.8	73.3	137.4	136.4	86.9	119.4	118.5
1949.....	73.2	75.2	136.7	133.1	85.3	116.6	113.5
1950.....	78.2	81.2	127.9	123.1	85.7	109.6	105.5
1951.....	81.6	84.0	122.5	119.0	89.4	109.5	106.4
1952.....	84.5	86.2	118.4	116.0	92.9	110.0	107.8
1953.....	82.6	83.9	121.1	119.1	92.5	112.0	110.2
1954.....	83.3	84.4	120.1	118.4	90.1	108.2	106.7
1955.....	83.5	84.2	119.7	118.8	90.9	108.8	108.0
1956.....	88.4	89.4	113.1	111.8	91.5	103.5	102.3
1957.....	92.7	93.7	107.8	106.8	94.4	101.8	100.8
1958.....	100.9	100.7	99.1	99.3	99.8	98.9	99.1
1959.....	106.4	105.7	93.9	94.6	105.7	99.3	100.0
1960.....	113.2	112.9	88.4	88.6	108.3	95.7	95.9
1961.....	118.0	116.8	84.8	85.6	107.7	91.3	92.2
1962.....	121.8	120.3	82.1	83.1	107.9	88.6	89.7
1963.....	128.4	126.9	77.9	78.8	110.3	85.9	86.9
1964.....	133.4	129.5	75.0	77.2	119.4	89.5	92.2
1965 <sup>3</sup> .....	132.5	134.1	75.5	74.5	115.5	87.2	86.1
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	3.9	3.7	-3.7	-3.5	1.9	-1.9	-1.7
1957-65 ....	4.6	4.5	-4.4	-4.3	2.4	-2.1	-2.0

<sup>1</sup> Includes industries 211, 212, and 213 in the Standard Industrial Classification.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 83. TOBACCO PRODUCTS--TOTAL<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>2</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	49.8	53.3	200.7	187.5	68.0	136.5	127.5
1947.....	67.3	66.6	148.6	150.1	83.8	124.5	125.8
1948.....	71.5	72.2	139.9	138.6	86.9	121.6	120.4
1949.....	71.9	74.1	139.2	134.9	85.3	118.7	115.1
1950.....	77.0	80.4	129.9	124.4	85.7	111.3	106.6
1951.....	80.8	83.5	123.8	119.8	89.4	110.7	107.1
1952.....	83.5	85.5	119.8	117.0	92.9	111.3	108.7
1953.....	82.0	83.5	121.9	119.8	92.5	112.9	110.8
1954.....	82.3	83.5	121.5	119.8	90.1	109.5	107.9
1955.....	82.6	83.2	121.1	120.1	90.9	110.1	109.2
1956.....	87.4	88.6	114.4	112.9	91.5	104.7	103.3
1957.....	91.9	92.8	108.8	107.7	94.4	102.7	101.7
1958.....	100.0	100.7	99.1	99.3	99.8	98.9	99.1
1959.....	107.4	106.6	93.1	93.9	105.7	98.4	99.2
1960.....	114.4	114.0	87.4	87.7	108.3	94.7	95.0
1961.....	120.1	118.9	83.3	84.1	107.7	89.7	90.6
1962.....	124.7	123.2	80.2	81.2	107.9	86.5	87.6
1963.....	130.8	129.3	76.4	77.3	110.3	84.3	85.3
1964.....	134.9	130.3	74.1	76.5	119.4	88.5	91.3
1965 <sup>3</sup> .....	134.5	136.7	74.3	73.2	115.5	85.8	84.5
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.1	3.9	-4.0	-3.8	1.9	-2.1	-1.9
1957-65 ....	4.9	4.8	-4.7	-4.6	2.4	-2.4	-2.3

<sup>1</sup> Includes industries 211, 212, and 213 in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 84. TOBACCO PRODUCTS-TOTAL<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>2</sup>	OUTPUT <sup>3</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>2</sup>
1939.....	49.2	( <sup>4</sup> )	203.4	( <sup>4</sup> )	68.0	138.3	( <sup>4</sup> )
1947.....	84.6	( 82.7)	118.1	(120.9)	83.8	99.0	(101.3)
1948.....	89.6	( 87.5)	111.6	(114.3)	86.9	97.0	( 99.3)
1949.....	89.7	( 88.5)	111.5	(113.0)	85.3	95.1	( 96.4)
1950.....	92.6	( 91.8)	107.9	(109.0)	85.7	92.5	( 93.4)
1951.....	91.5	( 90.4)	109.3	(110.6)	89.4	97.7	( 98.9)
1952.....	96.3	( 94.9)	103.9	(105.4)	92.9	96.5	( 97.9)
1953.....	89.6	( 89.0)	111.6	(112.3)	92.5	103.2	(103.9)
1954.....	95.5	( 95.1)	104.7	(105.1)	90.1	94.3	( 94.7)
1955.....	95.2	( 95.2)	105.1	(105.1)	90.9	95.5	( 95.5)
1956.....	100.4	(100.2)	99.6	( 99.8)	91.5	91.1	( 91.3)
1957.....	103.1	(102.9)	97.0	( 97.1)	94.4	91.6	( 91.7)
1958.....	100.2	(100.2)	99.8	( 99.8)	99.8	99.6	( 99.6)
1959.....	97.1	( 97.2)	103.0	(102.9)	105.7	108.9	(108.8)
1960.....	102.8	(102.6)	97.3	( 97.5)	108.3	105.4	(105.6)
1961.....	99.3	( 99.2)	100.7	(100.8)	107.7	108.5	(108.6)
1962.....	97.4	( 96.6)	102.7	(103.5)	107.9	110.8	(111.7)
1963.....	107.3	(106.5)	93.2	( 93.9)	110.3	102.9	(103.6)
1964.....	119.8	(118.3)	83.5	( 84.5)	119.4	99.7	(100.9)
1965 <sup>5</sup> .....	113.3	(112.6)	88.2	( 88.8)	115.5	101.9	(102.6)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.3	(1.4)	-1.3	(-1.4)	1.9	0.6	(0.5)
1957-65 ....	1.8	(1.6)	-1.8	(-1.6)	2.4	0.6	(0.7)

<sup>1</sup> Includes industries 211, 212, and 213 in the Standard Industrial Classification.

<sup>2</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>3</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>4</sup> Not available.

<sup>5</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 85. TOBACCO-CIGARS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	46.1	( <sup>1</sup> )	217.1	( <sup>1</sup> )	82.6	179.3	( <sup>1</sup> )
1947.....	55.3	53.8	180.9	185.8	86.0	155.6	159.8
1948.....	59.1	58.6	169.2	170.5	88.9	150.4	151.6
1949.....	59.4	60.0	168.4	166.6	86.2	145.2	143.6
1950.....	63.7	67.0	157.1	149.2	85.5	134.3	127.6
1951.....	66.4	68.7	150.6	145.5	89.3	134.5	129.9
1952.....	70.4	71.8	142.1	139.2	93.4	132.7	130.0
1953.....	70.9	70.9	141.1	141.1	95.1	134.2	134.2
1954.....	73.7	74.3	135.6	134.6	93.8	127.2	126.3
1955.....	73.7	74.9	135.6	133.6	93.2	126.4	124.5
1956.....	80.7	82.6	123.9	121.1	92.8	115.0	112.4
1957.....	86.8	88.2	115.2	113.4	94.8	109.2	107.5
1958.....	102.7	102.3	97.4	97.8	99.6	97.0	97.4
1959.....	112.6	111.0	88.8	90.1	105.6	93.8	95.1
1960.....	123.8	122.7	80.8	81.5	107.7	87.0	87.8
1961.....	132.2	130.0	75.7	76.9	102.3	77.4	78.7
1962.....	140.6	139.2	71.1	71.8	102.9	73.2	73.9
1963.....	151.1	149.8	66.2	66.8	103.5	68.5	69.1
1964.....	177.1	166.6	56.5	60.0	134.6	76.0	80.8
1965 <sup>2</sup> .....	175.9	173.4	56.9	57.7	121.7	69.2	70.2
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	7.0	6.7	-6.5	-6.3	1.9	-4.8	-4.6
1957-65 ....	9.0	8.5	-8.3	-7.8	3.1	-5.4	-5.0

<sup>1</sup> Not available.

<sup>2</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 86. TOBACCO-CIGARS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>1</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	45.4	48.0	220.3	208.4	82.6	182.0	172.1
1947.....	54.0	52.6	185.1	190.2	86.0	159.2	163.6
1948.....	57.9	57.4	172.8	174.1	88.9	153.6	154.8
1949.....	58.2	59.0	171.8	169.6	86.2	148.1	146.2
1950.....	62.5	66.0	160.1	151.6	85.5	136.9	129.6
1951.....	65.2	67.7	153.4	147.8	89.3	137.0	132.0
1952.....	68.8	70.4	145.4	142.1	93.4	135.8	132.7
1953.....	70.2	70.3	142.4	142.3	95.1	135.4	135.3
1954.....	72.7	73.3	137.5	136.5	93.8	129.0	128.0
1955.....	72.9	74.0	137.2	135.1	93.2	127.9	125.9
1956.....	79.9	81.8	125.1	122.2	92.8	116.1	113.4
1957.....	86.0	87.5	116.2	114.2	94.8	110.2	108.3
1958.....	103.0	102.5	97.1	97.6	99.6	96.7	97.2
1959.....	113.4	111.7	88.2	89.5	105.6	93.1	94.5
1960.....	124.4	123.4	80.4	81.1	107.7	86.6	87.3
1961.....	134.3	132.2	74.5	75.7	102.3	76.2	77.4
1962.....	142.7	141.7	70.1	70.6	102.9	72.1	72.6
1963.....	152.7	151.5	65.5	66.0	103.5	67.8	68.3
1964.....	175.9	155.0	56.8	60.6	134.6	76.5	81.6
1965 <sup>2</sup> .....	176.9	174.9	56.5	57.2	121.7	68.8	69.6
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	7.2	6.9	-6.7	-6.5	1.9	-5.0	-4.8
1957-65 ....	9.1	8.6	-8.3	-7.9	3.1	-5.5	-5.1

<sup>1</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>2</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 87. TOBACCO-CIGARS  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>1</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>	OUTPUT <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>1</sup>
	(INDEXES, 1957-59 = 100)						
1939.....	56.3	( <sup>3</sup> )	177.6	( <sup>3</sup> )	82.6	146.7	( <sup>3</sup> )
1947.....	77.2	( 75.5)	129.5	(132.4)	86.0	111.4	(113.9)
1948.....	80.3	( 78.4)	124.5	(127.6)	88.9	110.7	(113.4)
1949.....	78.4	( 77.4)	127.5	(129.1)	86.2	109.9	(111.3)
1950.....	83.7	( 82.8)	119.5	(120.7)	85.5	102.2	(103.2)
1951.....	86.0	( 85.0)	116.2	(117.7)	89.3	103.8	(105.1)
1952.....	97.9	( 96.5)	102.1	(103.6)	93.4	95.4	( 96.8)
1953.....	79.4	( 78.9)	125.9	(126.8)	95.1	119.7	(120.6)
1954.....	89.0	( 88.7)	112.4	(112.8)	93.8	105.4	(105.8)
1955.....	86.4	( 86.5)	115.8	(115.6)	93.2	107.9	(107.7)
1956.....	91.9	( 91.7)	108.8	(109.1)	92.8	101.0	(101.2)
1957.....	97.3	( 97.2)	102.7	(102.8)	94.8	97.4	( 97.5)
1959.....	99.2	( 99.2)	100.8	(100.8)	99.6	100.4	(100.4)
1959.....	103.3	(103.4)	96.8	( 96.7)	105.6	102.2	(102.1)
1960.....	116.8	(115.6)	85.6	( 86.5)	107.7	92.2	( 93.2)
1961.....	111.0	(108.9)	90.1	( 91.8)	102.3	92.2	( 93.9)
1962.....	118.8	(114.7)	84.2	( 87.2)	102.9	86.6	( 89.7)
1963.....	134.8	(130.4)	74.2	( 76.7)	103.5	76.8	( 79.4)
1964.....	194.8	(187.5)	51.3	( 53.3)	134.6	69.1	( 71.8)
1965 <sup>4</sup> .....	162.9	(157.4)	61.4	( 63.5)	121.7	74.7	( 77.3)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	4.1	(4.0)	-3.9	(+3.8)	1.9	-2.1	(-2.0)
1957-65 ....	8.0	(7.4)	-7.4	(-6.9)	3.1	-4.6	(-4.0)

<sup>1</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Not available.

<sup>4</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.



TABLE 88. TOBACCO--CIGARETTES, CHEWING AND SMOKING TOBACCO, AND SNUFF<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 ALL EMPLOYEES, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	ALL EMPLOYEE	ALL EMPLOYEE MAN-HOUR	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS	OUTPUT	ALL EMPLOYEES	ALL EMPLOYEE MAN-HOURS
1939.....	53.0	( <sup>2</sup> )	188.8	( <sup>2</sup> )	55.3	104.4	( <sup>2</sup> )
1947.....	84.7	94.1	118.0	118.9	82.2	97.0	97.7
1948.....	89.1	90.2	112.3	110.9	85.5	96.0	94.8
1949.....	89.6	92.6	111.6	108.0	85.1	95.0	91.9
1950.....	94.9	96.4	105.3	103.7	86.4	91.0	89.6
1951.....	99.9	101.0	100.1	99.0	90.5	90.6	89.6
1952.....	100.5	101.5	99.5	98.5	93.2	92.7	91.8
1953.....	95.3	97.4	105.0	102.6	90.6	95.1	93.0
1954.....	92.9	94.0	107.7	106.4	87.1	93.8	92.7
1955.....	93.4	92.9	107.1	107.6	89.3	95.6	96.1
1956.....	95.8	95.6	104.4	104.6	90.8	94.8	95.0
1957.....	98.1	98.2	101.9	101.8	94.3	96.1	96.0
1958.....	99.6	99.6	100.4	100.4	100.0	100.4	100.4
1959.....	102.2	102.0	97.8	98.0	105.7	103.4	103.6
1960.....	106.0	106.5	94.4	93.9	108.4	102.3	101.8
1961.....	108.6	108.6	92.1	92.1	110.7	101.9	101.9
1962.....	110.2	109.2	90.8	91.6	110.4	100.2	101.1
1963.....	114.8	114.0	87.1	87.7	113.7	99.0	99.7
1964.....	111.4	110.8	89.7	90.3	111.1	99.7	100.3
1965.....	110.8	114.5	90.3	87.3	111.8	100.9	97.6
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.4	1.3	-1.4	-1.3	1.9	0.5	0.6
1957-65 ....	1.8	2.0	-1.8	-1.9	2.0	0.1	0.0

<sup>1</sup> Includes industries 211 and 213 in the Standard Industrial Classification.

<sup>2</sup> Not available.

<sup>3</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 89. TOBACCO--CIGARETTES, CHEWING AND SMOKING TOBACCO, AND SNUFF<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 PRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	PRODUCTION WORKER	PRODUCTION WORKER MAN-HOUR	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS	OUTPUT <sup>2</sup>	PRODUCTION WORKERS	PRODUCTION WORKER MAN-HOURS
1939.....	54.6	58.3	183.2	171.4	55.3	101.3	94.8
1947.....	84.2	83.8	118.7	119.3	82.2	97.6	98.1
1948.....	88.3	89.8	113.2	111.3	85.5	96.8	95.2
1949.....	88.7	92.1	112.7	108.6	85.1	95.9	92.4
1950.....	94.5	96.2	105.8	103.9	86.4	91.4	89.8
1951.....	100.2	101.7	99.8	98.3	90.5	90.3	89.0
1952.....	101.0	102.3	99.0	97.7	93.2	92.3	91.1
1953.....	95.1	97.5	105.2	102.5	90.6	95.3	92.9
1954.....	92.3	93.5	108.4	107.0	87.1	94.4	93.2
1955.....	92.6	92.2	108.0	108.5	89.3	96.4	96.9
1956.....	94.8	94.6	105.5	105.7	90.8	95.8	96.0
1957.....	97.2	97.3	102.9	102.8	94.3	97.0	96.9
1958.....	99.4	99.5	100.6	100.5	100.0	100.6	100.5
1959.....	103.2	103.0	96.9	97.1	105.7	102.4	102.6
1960.....	107.2	107.8	93.3	92.8	108.4	101.1	100.6
1961.....	110.6	110.5	90.4	90.5	110.7	100.1	100.2
1962.....	113.2	112.0	88.3	89.3	110.4	97.5	98.6
1963.....	117.2	116.3	85.3	86.0	113.7	97.0	97.8
1964.....	113.6	112.8	88.0	88.7	111.1	97.8	98.5
1965 <sup>3</sup> .....	112.9	117.1	88.6	85.4	111.8	99.0	95.5
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	1.6	1.5	-1.5	-1.5	1.9	0.3	0.4
1957-65 ....	2.2	2.4	-2.2	-2.3	2.0	-0.2	-0.4

<sup>1</sup> Includes industries 211 and 213 in the Standard Industrial Classification.

<sup>2</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>3</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce.

TABLE 90. TOBACCO--CIGARETTES, CHEWING AND SMOKING TOBACCO, AND SNUFF<sup>1</sup>  
 OUTPUT PER MAN-HOUR, UNIT LABOR REQUIREMENTS, AND RELATED DATA,  
 NONPRODUCTION WORKERS, 1939-65

(INDEXES, 1957-59 = 100)

YEAR	OUTPUT PER--		UNIT LABOR REQUIREMENTS IN TERMS OF--		RELATED DATA		
	NON- PRODUCTION WORKER	NON- PRODUCTION WORKER MAN-HOUR <sup>2</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>2</sup>	OUTPUT <sup>3</sup>	NON- PRODUCTION WORKERS	NON- PRODUCTION WORKER MAN-HOURS <sup>2</sup>
1939.....	41.5	( <sup>4</sup> )	241.0	( <sup>4</sup> )	55.3	133.3	( <sup>4</sup> )
1947.....	89.7	( 87.8)	111.4	(113.9)	82.2	91.6	( 93.6)
1948.....	96.3	( 94.0)	103.9	(106.4)	85.5	88.8	( 91.0)
1949.....	98.6	( 97.4)	101.4	(102.7)	85.1	86.3	( 87.4)
1950.....	99.7	( 98.5)	100.3	(101.5)	86.4	86.7	( 87.7)
1951.....	96.3	( 95.1)	103.9	(105.2)	90.5	94.0	( 95.2)
1952.....	95.9	( 94.5)	104.3	(105.8)	93.2	97.2	( 98.6)
1953.....	97.0	( 95.3)	103.1	(103.9)	90.6	93.4	( 94.1)
1954.....	99.3	( 98.9)	100.7	(101.1)	87.1	87.7	( 88.1)
1955.....	101.2	(101.4)	98.8	( 98.7)	89.3	88.2	( 88.1)
1956.....	106.4	(106.2)	93.9	( 94.2)	90.8	85.3	( 85.5)
1957.....	107.0	(106.9)	93.4	( 93.5)	94.3	88.1	( 88.2)
1958.....	100.9	(100.9)	99.1	( 99.1)	100.0	99.1	( 99.1)
1959.....	93.7	( 93.8)	106.7	(106.6)	105.7	112.8	(112.7)
1960.....	95.7	( 95.8)	104.5	(104.4)	108.4	113.3	(113.2)
1961.....	93.7	( 94.1)	106.7	(106.2)	110.7	118.1	(117.6)
1962.....	88.2	( 88.2)	113.3	(113.3)	110.4	125.1	(125.1)
1963.....	96.3	( 96.4)	103.9	(103.8)	113.7	118.1	(118.0)
1964.....	94.2	( 94.0)	106.1	(106.4)	111.1	117.9	(118.2)
1965 <sup>5</sup> .....	94.7	( 94.8)	105.5	(105.5)	111.8	118.0	(117.9)
AVERAGE ANNUAL RATES (PERCENT)							
1947-65 ....	-0.1	( 0.0)	0.1	(0.0)	1.9	2.0	(1.9)
1957-65 ....	-1.2	(-1.2)	1.2	(1.2)	2.0	3.2	(3.2)

<sup>1</sup> Includes industries 211 and 213 in the Standard Industrial Classification.

<sup>2</sup> The figures shown in parentheses are subject to a wider margin of error than are other measures for this industry because of the method for estimating nonproduction worker man-hours.

<sup>3</sup> The measures of output used in this table represent the total production of the industry resulting from all employees and do not represent the specific output of any single group of employees.

<sup>4</sup> Not available.

<sup>5</sup> Preliminary.

Source: Output based on data from the Internal Revenue Service, U.S. Department of the Treasury, and the Bureau of the Census, U.S. Department of Commerce. Employment and hours based on data from the Bureau of the Census, U.S. Department of Commerce, and the Bureau of Labor Statistics, U.S. Department of Labor.