

# Unit Labor Costs for selected Industries, 1987-97



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Since 1987, unit labor costs have risen for 86 percent of the industries reported in this summary (table 1). Unit labor costs are calculated as the ratio of total labor compensation to real output, or equivalently, as the ratio of hourly compensation to labor productivity (output per hour). When labor productivity increases faster than hourly compensation, unit labor costs decrease. When hourly compensation increases faster than labor productivity, unit labor costs increase.

This report presents unit labor cost data for 173 industries, including 120 manufacturing and 53 mining and service-producing industries. Data for manufacturing industries are presented for the period 1987-96, whereas data for nonmanufacturing industries (except railroads) are presented for the period 1987-97. Table 1 shows the average annual rates of change in unit labor costs, total compensation, output, and output per hour for each of the reported industries. Table 2 presents the annual indexes of unit labor costs by industry.

Unit labor cost and labor productivity series have been calculated for all manufacturing and retail trade industries at the 3- and 4- digit SIC level and for selected 2- 3- and 4-digit industries in mining, transportation, communications and utilities, wholesale trade, finance, and services industries. The published indexes and rates of change in unit labor costs, labor productivity, and related series are available at <http://stats.bls.gov/iprhome.htm> on the BLS website. Unpublished data are available upon request. Requests for information may be sent to [dipsweb@bls.gov](mailto:dipsweb@bls.gov) by e-mail.

## Trends in unit labor costs

From 1987 to 1997, unit labor costs in the overall nonfarm business sector increased at an average annual rate of 2.0 percent; in the manufacturing sector they grew by an average of 0.5 percent. From 1987 to 1996, the period for which detailed manufacturing industry data are available, unit labor costs also increased by 2.0 percent per year in nonfarm business and by 0.6 percent per year in manufacturing.

Data for individual industries reported here show that unit labor costs in manufacturing industries generally grew at a slower rate than unit labor costs for industries outside manufacturing. From 1987 to 1996, unit labor costs declined or grew more slowly than for nonfarm business in 58 percent of the manufacturing industries, but in only 40

percent of the mining and 52 percent of the service-producing industries reported here. Industries where unit labor costs declined or grew more slowly than for nonfarm business covered 56 percent of the employment in manufacturing but only 35 percent of the measured employment in mining and 36 percent in the service producing sector.

The data show a strong relationship between changes in productivity and changes in unit labor costs. Industries with rapidly growing labor productivity generally experienced slow unit labor cost growth. Of the 82 industries where productivity grew by 2.0 percent or more per year, on average, since 1987, only 10 industries (12 percent) experienced average annual unit labor cost growth greater than or equal to 2.0 percent. In contrast, of the 91 industries where labor productivity grew less than 2.0 percent per year, 67 industries (74 percent) had average annual unit labor cost growth greater than or equal to 2.0 percent.

Of the 20 industries with the fastest productivity growth reported here, 15 experienced declining unit labor costs. In fact, a total of 25 industries from all sectors experienced declining unit labor costs since 1987, and all of these industries experienced increases in productivity.

In mining, two industries with rapid productivity growth were able to contain unit labor cost growth during the 1987-97 period. Bituminous coal and lignite mining (SIC 122) actually experienced an average decline in unit labor costs of 3.1 percent per year, whereas in gold and silver ores (SIC 104) unit labor costs remained about the same. Productivity growth in both industries exceeded 4.6 percent per year.

In manufacturing, 17 of the 120 industries in table 1 had declining unit labor costs over the 1987-96 period, and each of these experienced productivity growth. The manufacturing industries with the most rapid declines in unit labor costs were also those with rapid growth in productivity. Unit labor costs fell at an average annual rate of 2.1 percent for women's and children's undergarments (SIC 234) and communications equipment (SIC 366); 1.7 percent for railroad equipment (SIC 374) and metal cans and shipping containers (SIC 341); 1.5 percent for miscellaneous primary metal products (SIC 339); 1.2 percent for blast furnace and basic steel products (SIC 331) and ophthalmic goods (SIC 385); and 1.1 percent for yarn and thread mills (SIC 228) and engines and turbines (SIC 351). All of these industries experienced productivity increases of more than 3.5 percent per year.

Railroad transportation experienced a decline in unit labor costs of 3.0 percent per year and was the only measured transportation industry with declining unit labor costs over the 1987-97 period. This industry also had the fastest productivity growth, at 5.9 percent per year on average, of all the measured transportation industries.

In communications and utilities, unit labor costs declined by 0.8 percent from 1987 to 1997 in telephone communications (SIC 481), as its productivity rose by 4.8 percent per year. In electric utilities (SIC 491,3, pt) unit labor costs increased by only about 0.6 percent per year, whereas productivity grew by 4.2 percent per year.

In retail trade, unit labor costs declined in 4 of the 29 industries over the 1987-97 period. The decline was greatest in variety stores (SIC 533), where unit labor costs declined by 5.4 percent, whereas labor productivity grew at an average annual rate of 9.4 percent per year. A large decrease in unit labor costs, 3.3 percent per year, also occurred in radio, television, computer and music stores (SIC 573), where productivity grew by 8.2 percent per year, on average. Unit labor costs also declined in household appliance stores (SIC 572) and department stores (SIC 531) during the period.

In the measured finance and services industries, only barber shops (SIC 724) experienced a decline in unit labor costs from 1987 to 1997. Unit labor costs declined by 1.4 percent on average in this industry, while productivity grew by 4.4 percent per year, the highest productivity growth in the finance and services group.

### **Methods and data underlying the series**

Unit labor costs, which measure the cost of labor input required to produce one unit of output, are calculated as the ratio of current dollar labor compensation to constant dollar output. The indexes of unit labor costs for each industry are computed by dividing an index of current dollar compensation by an index of constant dollar output.

Compensation is a measure of the cost to the employer of securing the services of labor. It is defined as payroll plus supplemental payments. Payroll includes salaries, wages,

commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind. Supplemental payments are divided into legally required expenditures and payments for voluntary programs. The legally required expenditures include employers' contributions to Social Security, unemployment insurance taxes, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation, such as the employer portion of private health insurance and pension plans.

For manufacturing industries, annual compensation data are derived from the Annual Survey of Manufactures (ASM) and the quinquennial Census of Manufactures (COM) produced by the Bureau of the Census. These data are reported at the 4-digit SIC level.

For nonmanufacturing industries, annual wage and salary data from the BLS Covered Employment and Wages (ES-202) program are used. Because these data exclude supplemental payments, they are adjusted with ratios of compensation to payroll calculated from the quinquennial census data. The census year ratios are linearly interpolated for the years between censuses, since data to construct ratios are not available for those years. In addition, an imputation is made to account for compensation of the self-employed.

The indexes of industry output used in measuring unit labor costs are, wherever possible, calculated with a Tornqvist formula. This formula aggregates the growth rates of the various industry products between two periods using the products' shares in industry value of production, averaged over the two periods, as weights. More information on how the industry labor productivity, output, and labor input measures are calculated can be obtained from chapter 11 of the *BLS Handbook of Methods*, which can be accessed at [http://stats.bls.gov/pub/hom/homch11\\_a.htm](http://stats.bls.gov/pub/hom/homch11_a.htm) on the BLS website.

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Table 1. Unit labor cost and related series: mining and service producing industries, 1987-97;  
 manufacturing industries, 1987-96

SIC Code	Industry	Average annual percent changes			
		Unit labor costs	Total Compensation	Output	Output per hour <sup>1</sup>
<b>Mining, 1987-97</b>					
102	Copper ores	2.6	7.0	4.2	1.7
104	Gold and silver ores	.0	8.2	8.2	4.7
122	Bituminous coal and lignite mining	-3.1	-1.9	1.2	5.9
131	Crude petroleum and natural gas	2.9	2.0	-.8	2.3
142	Crushed and broken stone	2.3	4.4	2.1	1.4
<b>Manufacturing, 1987-96</b>					
201	Meat products	2.8	5.2	2.3	-.3
202	Dairy products	2.3	2.8	.5	1.7
203	Preserved fruits and vegetables	2.1	3.9	1.7	1.0
204	Grain mill products	1.8	3.1	1.3	.8
205	Bakery products	3.9	3.2	-.7	-.5
206	Sugar and confectionery products	1.7	3.3	1.6	1.3
207	Fats and oils	.8	.8	1.8	1.2
208	Beverages	-.5	1.7	2.2	3.4
209	Miscellaneous food and kindred products	2.0	4.3	2.2	.8
211	Cigarettes	.3	.9	.7	4.4
221	Broadwoven fabric mills, cotton	.0	-.1	-.1	3.6
222	Broadwoven fabric mills, manmade	.6	1.7	1.2	4.7
224	Narrow fabric mills	1.7	3.0	1.3	2.7
225	Knitting mills	-.5	1.7	2.2	4.7
226	Textile finishing, except wool	4.0	2.8	-1.1	-2.5
227	Carpets and rugs	3.2	3.5	.3	.1
228	Yarn and thread mills	-1.1	.0	1.2	4.3
229	Miscellaneous textile goods	2.4	4.6	2.2	2.5
231	Men's and boys' suits and coats	2.6	-4.1	-6.5	-.4
232	Men's and boys' furnishings	.1	-.2	-.3	3.3
233	Women's and misses' outerwear	.3	.8	.5	4.2
234	Women's and children's undergarments	-2.1	-2.7	-.5	6.2
235	Hats, caps, and millinery	4.0	4.7	.7	-2.3
238	Miscellaneous apparel and accessories	1.0	.7	-.3	2.2
239	Miscellaneous fabricated textile products	2.1	4.4	2.3	.7
241	Logging	4.4	2.3	-2.0	-1.7
242	Sawmills and planing mills	2.1	2.5	.4	1.6
243	Millwork, plywood, and structural members	3.7	3.5	-.1	-.9
244	Wood containers	3.7	7.1	3.4	.7
245	Wood buildings and mobile homes	3.6	6.2	2.5	-.3
249	Miscellaneous wood products	2.1	3.8	1.7	1.5
251	Household furniture	2.1	2.8	.8	2.3
252	Office furniture	2.9	2.3	-.6	.7
253	Public building and related furniture	-.4	11.3	11.8	6.7
254	Partitions and fixtures	2.8	4.2	1.4	-.3
259	Miscellaneous furniture and fixtures	2.6	4.3	1.7	1.4

See footnotes at end of table.

Table 1. Unit labor cost and related series: mining and service producing industries, 1987-97;  
 manufacturing industries, 1987-96—Continued

SIC Code	Industry	Average annual percent changes			
		Unit labor costs	Total Compensation	Output	Output per hour <sup>1</sup>
	<b>Manufacturing, 1987-96—Continued</b>				
261	Pulp mills	2.1	3.5	1.3	3.2
262	Paper mills	2.1	2.6	.5	1.3
263	Paperboard mills	3.0	4.2	1.2	1.9
265	Paperboard containers and boxes	2.8	4.5	1.6	.7
267	Miscellaneous converted paper products	2.2	4.0	1.8	1.5
271	Newspapers	6.4	2.7	-3.5	-2.8
272	Periodicals	5.4	5.1	-.4	-1.1
273	Books	4.5	6.0	1.4	.1
274	Miscellaneous publishing	2.9	3.4	.5	-.8
275	Commercial printing	2.3	4.2	1.9	.9
276	Manifold business forms	4.7	.1	-4.4	-3.2
277	Greeting cards	2.8	3.7	.9	-.9
278	Blankbooks and bookbinding	1.7	2.6	.8	1.6
279	Printing trade services	.3	1.6	1.3	2.7
281	Industrial inorganic chemicals	1.7	2.4	.7	1.1
282	Plastics materials and synthetics	1.6	3.6	2.0	2.5
283	Drugs	3.9	7.5	3.4	1.4
284	Soaps, cleaners, and toilet goods	1.9	4.1	2.2	2.2
285	Paints and allied products	2.6	3.2	.6	2.4
286	Industrial organic chemicals	5.4	5.0	-.4	-.2
287	Agricultural chemicals	2.1	3.9	1.7	1.2
289	Miscellaneous chemical products	2.0	3.0	.9	1.1
291	Petroleum refining	2.4	3.8	1.3	4.0
295	Asphalt paving and roofing materials	.9	2.6	1.7	1.5
299	Miscellaneous petroleum and coal products	4.0	4.5	.5	-1.6
301	Tires and inner tubes	1.0	3.8	2.8	3.7
305	Hose and belting and gaskets and packing	2.0	5.4	3.3	.8
306	Fabricated rubber products, n.e.c.	.8	3.8	2.9	2.1
308	Miscellaneous plastics products, n.e.c.	1.5	6.3	4.8	2.5
314	Footwear, except rubber	2.2	-2.5	-4.6	2.6
321	Flat glass	-.5	.4	.8	.5
322	Glass and glassware, pressed or blown	.8	1.2	.4	2.2
323	Products of purchased glass	1.6	6.1	4.4	2.5
324	Cement, hydraulic	.7	2.1	1.4	2.8
325	Structural clay products	2.2	2.6	.4	2.0
326	Pottery and related products	1.7	4.7	2.9	2.0
327	Concrete, gypsum, and plaster products	2.3	3.4	1.0	.8
329	Miscellaneous nonmetallic mineral products	1.8	3.1	1.3	1.2
331	Blast furnace and basic steel products	-1.2	2.4	3.7	4.9
332	Iron and steel foundries	1.0	3.0	2.0	1.6
333	Primary nonferrous metals	3.2	4.2	1.0	1.2
335	Nonferrous rolling and drawing	3.3	3.2	-.1	.4
336	Nonferrous foundries (castings)	1.6	4.6	3.0	2.3

See footnotes at end of table.

Table 1. Unit labor cost and related series: mining and service producing industries, 1987-97;  
 manufacturing industries, 1987-96—Continued

SIC Code	Industry	Average annual percent changes			
		Unit labor costs	Total Compensation	Output	Output per hour <sup>1</sup>
<b>Manufacturing, 1987-96</b>					
339	Miscellaneous primary metal products	-1.5	4.5	6.1	4.6
341	Metal cans and shipping containers	-1.7	-1.0	.7	5.0
342	Cutlery, handtools, and hardware	1.6	2.9	1.2	1.8
343	Plumbing and heating, except electric	1.3	2.5	1.2	1.9
344	Fabricated structural metal products	2.2	3.7	1.5	.7
345	Screw machine products, bolts, etc.	1.9	4.2	2.2	1.1
346	Metal forgings and stampings	.4	3.3	2.8	1.4
347	Metal services, n.e.c.	.5	5.3	4.8	2.7
348	Ordnance and accessories, n.e.c.	1.5	-5.1	-6.6	-1.5
349	Miscellaneous fabricated metal products	2.1	4.8	2.7	.9
351	Engines and turbines	-1.1	1.5	2.6	3.6
352	Farm and garden machinery	.8	5.1	4.3	3.5
353	Construction and related machinery	-.2	3.5	3.8	2.4
354	Metalworking machinery	1.5	4.6	3.0	1.5
355	Special industry machinery	.2	5.4	5.3	3.4
356	General industrial machinery	1.8	4.4	2.6	1.1
358	Refrigeration and service machinery	.3	3.9	3.6	1.5
359	Industrial machinery, n.e.c.	.9	6.7	5.7	4.0
361	Electric distribution equipment	1.9	3.6	1.7	4.2
362	Electrical industrial apparatus	.4	3.9	3.5	4.9
363	Household appliances	.6	2.2	1.6	2.7
364	Electric lighting and wiring equipment	1.6	2.7	1.1	1.8
366	Communications equipment	-2.1	4.8	7.1	7.4
369	Miscellaneous electrical equipment and supplies	-.5	1.0	1.5	2.3
371	Motor vehicles and equipment	1.7	4.0	2.2	.4
372	Aircraft and parts	2.3	-.7	-2.9	1.3
373	Ship and boat building and repairing	2.1	.4	-1.6	.1
374	Railroad equipment	-1.7	6.5	8.4	4.3
375	Motorcycles, bicycles, and parts	4.5	14.6	9.7	2.4
376	Guided missiles, space vehicles, parts	.7	-5.6	-6.2	2.7
381	Search and navigation equipment	1.8	-2.4	-4.1	4.0
382	Measuring and controlling devices	-.5	3.7	4.2	4.6
384	Medical instruments and supplies	1.6	8.0	6.2	3.8
385	Ophthalmic goods	-1.2	5.4	6.7	7.3
386	Photographic equipment & supplies	.2	.4	.2	2.9
391	Jewelry, silverware, and plated ware	1.9	1.5	-.5	.4
393	Musical instruments	5.3	4.9	-.4	-2.6
394	Toys and sporting goods	1.8	5.8	4.0	2.0
395	Pens, pencils, office, and art supplies	1.4	4.9	3.5	4.2
396	Costume jewelry and notions	1.4	1.7	.3	4.0
399	Miscellaneous manufactures	2.2	4.7	2.5	1.4

See footnotes at end of table.

Table 1. Unit labor cost and related series: mining and service producing industries, 1987-97;  
 manufacturing industries, 1987-96—Continued

SIC Code	Industry	Average annual percent changes			
		Unit labor costs	Total Compensation	Output	Output per hour <sup>1</sup>
<b>Transportation, 1987-97</b>					
4011	Railroad transportation	-3.0 <sup>3</sup>	-0.1 <sup>3</sup>	3.0 <sup>3</sup>	5.9 <sup>3</sup>
4213	Trucking, except local	1.8	5.2	3.4	2.8
431	U.S. postal service <sup>2</sup>	3.3	5.2	1.9	.8
4512,13,22(PTS)	Air transportation	.9	5.3	4.4	1.1
<b>Communications and utilities, 1987-97</b>					
481	Telephone communications	-.8	4.9	5.8	4.8
483	Radio and television broadcasting	3.9	4.7	.8	.1
484	Cable and other pay TV services	5.8	9.4	3.4	-1.7
491,2,3	Gas and electric utilities	1.0	2.8	1.8	3.6
491,3(PT)	Electric utilities	.6	3.0	2.5	4.2
492,3(PT)	Gas utilities	2.7	2.3	-.4	1.8
<b>Retail Trade, 1987-97</b>					
521	Lumber and other building materials dealers	.9	5.8	4.9	2.2
523	Paint, glass, and wallpaper stores	.9	2.9	2.0	2.8
525	Hardware stores	2.1	3.4	1.3	1.5
526	Retail nurseries, lawn and garden supply stores	2.3	4.3	2.0	1.8
531	Department stores	-.3	4.7	5.0	2.3
533	Variety stores	-5.4	-2.4	3.1	9.4
539	Miscellaneous general merchandise stores	1.3	6.3	4.9	5.2
541	Grocery stores	4.1	4.2	.1	-1.2
542	Meat and fish (seafood) markets	3.4	.4	-2.9	-1.0
546	Retail bakeries	3.4	5.0	1.6	-.2
551	New and used car dealers	2.9	4.9	1.9	.7
553	Auto and home supply stores	2.4	5.2	2.7	.9
554	Gasoline service stations	2.0	3.3	1.2	1.5
561	Men's and boy's wear stores	.3	.5	.2	3.4
562	Women's clothing stores	.9	.3	-.6	3.0
565	Family clothing stores	.7	7.3	6.5	3.7
566	Shoe stores	.2	2.2	2.0	3.7
569	Miscellaneous apparel and accessory stores	1.4	8.0	6.4	2.5
571	Furniture and homefurnishings stores	.9	4.4	3.5	2.3
572	Household appliance stores	-1.5	.7	2.2	4.1
573	Radio, television, computer, and music stores	-3.3	9.3	13.1	8.2
581	Eating and drinking places	4.5	5.8	1.3	-.6
591	Drug and proprietary stores	3.3	5.3	2.0	1.3
592	Liquor stores	2.9	1.8	-1.1	.8
593	Used merchandise stores	1.6	8.1	6.4	2.0
594	Miscellaneous shopping goods stores	1.5	5.4	3.8	2.2
596	Nonstore retailers	.7	6.6	5.8	4.0
598	Fuel dealers	3.0	2.4	-.5	.6
599	Retail stores, n.e.c.	.1	5.3	5.2	3.3

See footnotes at end of table.

Table 1. Unit labor cost and related series: mining and service producing industries, 1987-97;  
 manufacturing industries, 1987-96—Continued

SIC Code	Industry	Average annual percent changes			
		Unit labor costs	Total Compensation	Output	Output per hour <sup>1</sup>
	<b>Finance and services, 1987-97</b>				
602	Commercial banks	2.6	4.7	2.1	3.0
701	Hotels and motels	4.0	6.6	2.5	.8
721	Laundry, cleaning, and garment services	2.7	4.4	1.7	.8
722	Photographic studios, portrait	.3	6.1	5.8	3.1
723	Beauty shops	3.3	5.6	2.3	.9
724	Barber shops	-1.4	-1.9	-.5	4.4
726	Funeral services and crematories	4.7	6.1	1.3	.1
753	Automotive repair shops	2.2	5.6	3.2	1.5
783	Motion picture theaters	2.6	4.8	2.1	.1

n.a.=not available

n.e.c.=not elsewhere classified

<sup>1</sup> Output per employee hour is measured in all cases except: (1) output per employee is used for SIC 4213 and SIC 4512,13,22 (pts); and (2) output per hour of all persons is used for all trade and services industries except SIC 531 and SIC 551. All persons includes self-employed and unpaid family workers as well as employees.

<sup>2</sup> Employee hours in SIC 431 are based on the number of full-time equivalent (FTE) years, as reported in the U.S. Postal Service budget. FTE employee years are computed by dividing total hours of full-time, part-time, and intermittent workers by the number of hours in a standard work year. The output and hours for SIC 431 reflect the Federal fiscal year.

<sup>3</sup> 1987-96.

Table 2. Unit labor cost indexes by industry, 1988-97

[1987 = 100]

SIC Code	Title	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<b>Mining</b>											
102	Copper ores	110.5	105.7	110.1	119.5	115.3	114.6	109.9	127.2	141.1	129.6
104	Gold and silver ores	104.0	100.1	97.8	97.0	91.7	88.6	90.7	100.1	113.2	100.5
122	Bituminous coal and lignite mining	93.0	89.6	90.7	88.6	85.4	83.4	79.2	78.2	74.7	72.8
131	Crude petroleum and natural gas	105.6	111.4	117.9	122.8	128.6	128.2	123.5	121.5	124.4	133.3
142	Crushed and broken stone	105.6	111.8	114.2	119.5	120.1	120.7	117.2	127.2	127.6	125.0
<b>Manufacturing</b>											
201	Meat products	102.2	108.1	114.3	117.6	115.3	117.1	121.2	121.8	128.7	n.a.
202	Dairy products	99.2	106.1	109.0	112.5	112.6	114.5	117.3	117.5	122.5	n.a.
203	Preserved fruits and vegetables	103.5	107.6	111.6	110.0	116.7	114.8	116.0	116.7	120.7	n.a.
204	Grain mill products	104.8	105.4	105.8	110.5	115.8	114.6	115.1	110.3	117.0	n.a.
205	Bakery products	109.6	117.3	119.9	128.5	135.1	136.6	134.3	135.9	141.3	n.a.
206	Sugar and confectionery products	100.6	105.4	108.8	115.5	115.7	117.9	121.1	118.0	116.6	n.a.
207	Fats and oils	103.1	102.2	97.5	95.5	101.8	103.8	105.3	100.1	107.8	n.a.
208	Beverages	98.5	98.7	96.1	99.5	98.6	100.9	98.8	96.1	95.4	n.a.
209	Miscellaneous food and kindred products	101.7	105.3	108.7	113.6	115.9	110.9	118.0	120.1	119.3	n.a.
211	Cigarettes	98.6	100.6	102.2	112.8	116.9	132.9	102.6	98.6	102.4	n.a.
221	Broadwoven fabric mills, cotton	102.6	107.2	104.3	109.9	101.2	101.0	104.8	101.5	99.6	n.a.
222	Broadwoven fabric mills, manmade	105.9	109.8	112.7	110.2	121.4	118.1	109.4	108.8	105.2	n.a.
224	Narrow fabric mills	96.9	102.5	105.0	102.5	108.8	108.7	109.3	113.8	116.0	n.a.
225	Knitting mills	105.3	100.1	107.4	97.2	103.3	101.1	98.7	98.6	95.3	n.a.
226	Textile finishing, except wool	108.9	110.3	113.8	114.3	122.4	119.4	134.9	136.4	142.4	n.a.
227	Carpets and rugs	104.6	108.0	109.8	119.5	114.2	118.6	128.1	130.0	132.5	n.a.
228	Yarn and thread mills	101.2	102.0	99.9	96.1	94.7	92.0	92.8	91.1	90.3	n.a.
229	Miscellaneous textile goods	101.9	105.7	107.7	114.6	141.2	121.8	126.0	124.7	123.4	n.a.
231	Men's and boys' suits and coats	106.9	118.9	128.4	134.8	139.1	129.3	122.1	124.6	125.5	n.a.
232	Men's and boys' furnishings	107.0	111.9	115.6	114.5	116.4	117.1	113.8	109.4	100.7	n.a.
233	Women's and misses' outerwear	102.4	105.8	107.2	106.8	106.0	108.1	103.2	105.3	102.5	n.a.
234	Women's and children's undergarments	100.0	111.5	112.3	106.6	102.2	102.2	92.3	88.7	82.2	n.a.
235	Hats, caps, and millinery	102.9	101.8	113.1	109.2	114.5	124.0	129.6	130.8	142.4	n.a.
238	Miscellaneous apparel and accessories	106.0	113.0	116.9	120.1	122.3	112.5	107.5	108.6	108.9	n.a.
239	Miscellaneous fabricated textile products	106.0	102.8	103.5	108.1	114.1	111.1	111.7	115.0	120.1	n.a.
241	Logging	110.1	114.3	123.3	125.7	125.3	138.1	141.0	144.8	146.8	n.a.
242	Sawmills and planing mills	104.3	105.7	107.3	106.9	114.9	129.8	125.2	123.1	120.3	n.a.
243	Millwork, plywood, and structural members	106.8	109.6	111.7	116.1	123.8	128.7	129.9	136.5	138.2	n.a.
244	Wood containers	99.9	106.3	107.0	108.2	117.4	129.8	131.9	136.0	138.2	n.a.
245	Wood buildings and mobile homes	106.7	111.1	114.5	117.0	119.9	120.7	124.4	130.9	137.6	n.a.
249	Miscellaneous wood products	103.9	105.7	109.2	111.2	111.3	111.7	112.7	116.2	121.0	n.a.
251	Household furniture	105.0	107.0	110.8	113.1	116.0	113.6	116.3	118.7	120.2	n.a.
252	Office furniture	109.4	111.6	117.3	122.4	118.7	122.1	122.2	128.4	129.8	n.a.
253	Public building and related furniture	94.1	100.2	100.5	103.6	98.6	95.7	98.7	94.2	96.5	n.a.
254	Partitions and fixtures	105.7	107.1	111.2	113.7	116.3	117.3	113.7	118.4	127.7	n.a.
259	Miscellaneous furniture and fixtures	101.2	103.4	105.9	113.6	117.4	121.3	124.7	119.7	126.0	n.a.
261	Pulp mills	106.5	108.4	119.0	113.1	106.6	110.5	105.1	116.8	120.8	n.a.

See footnotes at end of table.



Table 2. Unit labor cost indexes by industry, 1988-97—Continued  
 [1987 = 100]

SIC Code	Title	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<b>Manufacturing</b>											
262	Paper mills	98.6	102.4	105.6	114.4	116.8	119.0	113.4	109.6	120.5	n.a.
263	Paperboard mills	102.5	107.6	113.2	115.7	116.5	119.8	121.6	124.2	130.8	n.a.
265	Paperboard containers and boxes	103.0	107.2	110.3	112.4	114.0	115.3	117.1	125.1	128.1	n.a.
267	Miscellaneous converted paper products	102.2	106.1	110.4	112.9	117.6	117.3	114.5	116.5	121.5	n.a.
271	Newspapers	107.5	116.2	129.7	143.1	154.1	157.2	159.8	168.1	174.8	n.a.
272	Periodicals	104.5	113.4	125.4	134.8	145.7	153.4	161.9	161.6	161.1	n.a.
273	Books	107.4	113.0	119.2	125.3	139.4	135.9	135.4	142.1	149.1	n.a.
274	Miscellaneous publishing	104.0	112.4	114.9	116.2	105.1	111.7	109.3	118.7	129.0	n.a.
275	Commerical printing	101.5	105.5	108.6	111.7	114.4	117.4	116.4	119.0	123.0	n.a.
276	Manifold business forms	107.0	109.9	111.8	115.9	120.9	122.9	129.9	139.4	151.1	n.a.
277	Greeting cards	104.2	109.4	123.7	124.3	115.1	120.8	125.3	125.2	127.8	n.a.
278	Blankbooks and bookbinding	103.4	107.8	114.5	122.2	120.6	119.5	118.8	120.3	116.6	n.a.
279	Printing trade services	101.5	102.7	100.5	101.0	105.7	105.0	103.9	103.9	102.7	n.a.
281	Industrial inorganic chemicals	99.5	105.8	110.8	120.8	121.5	116.8	119.6	115.9	116.6	n.a.
282	Plastics materials and synthetics	105.0	111.3	116.6	123.0	120.6	119.9	118.2	119.1	115.1	n.a.
283	Drugs	103.9	117.4	123.1	125.0	125.3	134.4	133.7	140.7	141.6	n.a.
284	Soaps, cleaners, and toilet goods	103.5	112.2	112.1	117.0	123.2	118.8	115.9	114.1	118.1	n.a.
285	Paints and allied products	102.5	106.8	106.2	110.8	122.4	115.9	120.0	129.6	126.2	n.a.
286	Industrial organic chemicals	96.0	97.6	108.7	121.0	127.6	136.5	131.1	140.6	160.7	n.a.
287	Agricultural chemicals	100.6	106.5	109.2	110.9	113.6	112.2	120.2	121.0	120.7	n.a.
289	Miscellaneous chemical products	104.8	111.1	114.9	121.3	123.1	117.7	123.7	124.2	119.8	n.a.
291	Petroleum refining	101.5	105.7	112.3	122.6	124.7	127.4	130.3	128.8	124.0	n.a.
295	Asphalt paving and roofing materials	105.4	104.7	107.1	116.4	110.9	106.8	110.9	111.5	108.4	n.a.
299	Miscellaneous petroleum and coal products	105.2	111.6	119.7	129.8	131.4	131.4	133.0	140.5	142.0	n.a.
301	Tires and inner tubes	103.8	110.4	114.3	124.0	122.5	119.7	119.8	114.2	109.0	n.a.
305	Hose and belting and gaskets and packing	106.1	113.1	113.4	123.5	116.0	117.1	114.8	117.0	119.3	n.a.
306	Fabricated rubber products, n.e.c.	97.5	102.1	101.1	105.9	107.2	104.3	103.1	102.9	107.6	n.a.
308	Miscellaneous plastics products, n.e.c.	104.8	109.0	111.7	115.3	115.2	113.9	110.0	113.6	114.3	n.a.
314	Footwear, except rubber	103.7	109.2	114.0	116.2	109.3	113.3	113.2	117.0	122.0	n.a.
321	Flat glass	105.4	105.4	108.1	111.0	102.9	99.1	98.9	99.2	96.0	n.a.
322	Glass and glassware, pressed or blown	100.6	102.1	104.5	107.6	110.6	112.9	109.3	109.1	107.0	n.a.
323	Products of purchased glass	103.7	107.9	111.2	112.1	111.4	111.5	111.9	119.8	115.8	n.a.
324	Cement, hydraulic	99.7	95.4	103.0	104.0	104.3	98.1	98.9	104.2	106.7	n.a.
325	Structural clay products	102.9	109.3	110.6	118.7	121.7	124.8	118.5	120.7	121.3	n.a.
326	Pottery and related products	103.0	106.1	112.7	117.6	112.7	113.1	112.6	117.5	116.4	n.a.
327	Concrete, gypsum, and plaster products	101.8	103.3	107.1	114.8	117.3	117.4	119.5	121.2	123.1	n.a.
329	Miscellaneous nonmetallic mineral products	98.4	104.8	112.8	116.3	114.3	113.8	114.6	117.9	117.3	n.a.
331	Blast furnace and basic steel products	94.1	99.9	102.7	108.3	105.3	97.0	94.5	95.7	89.5	n.a.
332	Iron and steel foundries	99.3	103.7	108.4	114.1	114.8	111.8	109.7	110.0	109.9	n.a.
333	Primary nonferrous metals	94.4	103.6	113.1	113.4	125.4	117.9	126.2	121.5	132.7	n.a.
335	Nonferrous rolling and drawing	110.5	122.5	126.8	132.6	129.3	130.3	126.9	135.5	134.1	n.a.
336	Nonferrous foundries (castings)	100.6	108.3	113.6	116.4	117.8	116.7	112.0	117.2	115.6	n.a.
339	Miscellaneous primary metal products	99.9	109.9	106.0	114.6	104.7	107.9	96.2	81.1	87.1	n.a.
341	Metal cans and shipping containers	99.9	99.6	95.1	96.0	97.8	96.6	96.0	89.5	85.9	n.a.
342	Cutlery, handtools, and hardware	105.5	105.2	113.8	120.4	122.6	122.3	114.1	117.9	115.7	n.a.

See footnotes at end of table.

Table 2. Unit labor cost indexes by industry, 1988-97—Continued

[1987 = 100]

SIC Code	Title	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<b>Manufacturing</b>											
343	Plumbing and heating, except electric	103.3	105.9	114.5	123.6	130.7	130.1	119.2	130.3	112.6	n.a.
344	Fabricated structural metal products	105.7	109.9	115.3	118.6	120.6	118.5	115.3	117.9	121.4	n.a.
345	Screw machine products, bolts, etc.	102.1	109.1	115.8	118.7	120.9	118.9	114.7	114.5	118.9	n.a.
346	Metal forgings and stampings	102.1	108.2	116.2	124.6	114.5	109.3	107.0	105.8	104.0	n.a.
347	Metal services, n.e.c.	101.9	104.1	106.1	113.6	108.9	105.4	102.5	103.7	104.7	n.a.
348	Ordnance and accessories, n.e.c.	102.4	104.2	119.3	126.2	124.0	134.3	110.6	110.2	114.6	n.a.
349	Miscellaneous fabricated metal products	101.4	107.6	112.4	117.0	119.6	117.5	116.4	119.1	120.0	n.a.
351	Engines and turbines	97.2	95.1	102.6	105.0	112.2	98.9	97.4	96.8	90.7	n.a.
352	Farm and garden machinery	96.4	100.2	97.7	107.3	114.7	108.3	102.5	102.2	107.5	n.a.
353	Construction and related machinery	94.3	98.5	100.3	109.4	113.2	106.0	100.0	96.3	98.2	n.a.
354	Metalworking machinery	98.3	99.3	107.0	114.9	116.8	114.3	108.5	109.6	114.7	n.a.
355	Special industry machinery	98.2	99.2	105.5	110.9	116.4	113.2	109.8	103.4	101.5	n.a.
356	General industrial machinery	100.1	105.3	109.4	113.2	120.3	118.9	115.9	115.6	117.0	n.a.
358	Refrigeration and service machinery	96.1	99.4	108.1	113.0	112.0	107.9	104.4	104.1	102.7	n.a.
359	Industrial machinery, n.e.c.	96.2	104.4	108.7	111.4	113.2	113.0	108.3	108.6	108.3	n.a.
361	Electric distribution equipment	98.7	104.3	107.9	112.7	113.5	112.0	110.6	114.9	118.4	n.a.
362	Electrical industrial apparatus	98.3	99.5	106.5	111.7	111.9	105.0	105.1	101.6	103.5	n.a.
363	Household appliances	97.2	102.8	103.4	103.1	103.1	98.8	97.5	105.0	105.3	n.a.
364	Electric lighting and wiring equipment	102.2	106.7	112.4	119.9	115.2	117.1	113.3	116.4	115.0	n.a.
366	Communications equipment	100.9	110.4	101.5	104.1	98.3	94.1	87.2	82.3	82.5	n.a.
369	Miscellaneous electrical equipment & supplies	98.2	102.1	107.6	106.6	103.2	95.7	93.4	97.2	95.4	n.a.
371	Motor vehicles and equipment	99.9	104.2	111.7	122.9	120.1	120.2	116.6	119.1	116.4	n.a.
372	Aircraft and parts	101.9	101.5	111.5	106.1	114.7	116.8	128.6	127.9	122.3	n.a.
373	Ship and boat building and repairing	100.8	102.1	107.0	119.3	123.0	121.9	120.8	122.4	120.3	n.a.
374	Railroad equipment	89.3	80.3	85.1	90.0	91.6	85.6	80.2	80.0	85.5	n.a.
375	Motorcycles, bicycles, and parts	106.1	98.2	110.1	116.1	128.6	126.0	146.1	143.8	148.6	n.a.
376	Guided missiles, space vehicles, parts	102.8	102.4	103.3	113.4	115.5	108.5	107.5	108.8	106.3	n.a.
381	Search and navigation equipment	105.5	113.4	111.6	113.1	112.0	109.7	113.9	117.0	117.0	n.a.
382	Measuring and controlling devices	98.8	103.6	107.1	110.0	112.0	112.7	105.5	98.0	95.6	n.a.
384	Medical instruments and supplies	99.9	105.8	106.6	110.4	114.7	115.0	119.1	119.0	115.5	n.a.
385	Ophthalmic goods	92.0	85.0	98.0	102.8	105.4	106.0	96.7	94.2	89.5	n.a.
386	Photographic equipment & supplies	95.9	98.5	104.1	108.0	105.6	98.4	90.9	98.3	102.3	n.a.
391	Jewelry, silverware, and plated ware	107.7	109.0	118.4	123.5	128.0	132.1	119.5	118.4	118.7	n.a.
393	Musical instruments	107.1	115.3	118.4	126.5	132.3	141.1	140.5	146.3	159.3	n.a.
394	Toys and sporting goods	100.4	103.3	110.3	111.8	117.7	115.4	117.9	119.9	117.0	n.a.
395	Pens, pencils, office, and art supplies	95.7	97.8	97.5	105.6	112.6	117.4	109.0	113.0	113.3	n.a.
396	Costume jewelry and notions	103.8	102.5	97.9	109.7	111.2	110.3	106.1	105.9	113.3	n.a.
399	Miscellaneous manufactures	99.1	105.3	108.3	109.2	115.3	115.5	114.6	121.2	121.3	n.a.
<b>Transportation</b>											
4011	Railroads	97.3	95.0	93.2	92.4	86.7	84.8	81.6	80.1	75.9	n.a.
4213	Trucking, except local	108.8	112.3	115.0	112.9	112.9	111.3	111.4	116.7	114.6	119.2
431	U.S. postal service	109.1	115.2	117.6	124.1	131.5	132.7	132.5	138.4	139.1	137.8
4512,13,22 (PTS)	Air transportation	105.3	113.4	110.5	114.4	114.4	113.7	111.0	110.2	109.1	109.0

See footnotes at end of table.

**Table 2. Unit labor cost indexes by industry, 1988-97—Continued**

[1987 = 100]

SIC Code	Title	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<b>Communications and utilities</b>											
481	Telephone communications	96.1	95.4	98.1	97.6	99.4	96.3	94.8	92.5	88.0	92.2
483	Radio and television broadcasting	97.1	97.0	108.9	107.1	109.3	114.5	116.6	124.0	138.6	146.4
484	Cable and other pay TV services	101.2	101.4	113.0	125.1	134.3	142.9	152.5	162.4	170.8	176.4
491,2,3	Gas and electric utilities	97.5	99.0	104.7	109.3	115.2	112.3	114.6	110.8	108.6	110.7
491,3(PT)	Electric utilities	97.6	98.2	101.5	105.2	110.7	109.6	109.4	105.4	103.3	105.6
492,3(PT)	Gas utilities	97.1	101.3	115.8	123.8	131.0	121.7	133.5	131.1	128.2	130.0
<b>Retail Trade</b>											
521	Lumber and other building materials dealers	103.5	109.1	107.3	112.0	111.9	107.9	103.7	109.3	108.6	109.7
523	Paint, glass, and wallpaper stores	102.8	108.0	109.0	120.7	115.7	111.7	103.4	106.0	103.2	109.5
525	Hardware stores	97.5	96.8	103.5	114.5	113.3	114.7	110.1	116.9	117.5	123.5
526	Retail nurseries, lawn and garden supply stores	100.7	112.5	138.6	137.8	125.8	119.7	112.6	116.2	104.3	125.0
531	Department stores	100.1	103.4	110.8	111.2	111.0	106.5	102.4	101.5	98.0	96.6
533	Variety stores	104.0	100.9	81.7	85.5	85.8	76.3	75.5	68.3	61.4	57.7
539	Miscellaneous general merchandise stores	144.5	138.5	134.4	137.1	133.8	116.9	111.0	110.1	111.1	113.7
541	Grocery stores	103.5	110.9	117.0	125.3	130.9	131.6	132.9	137.6	142.5	149.9
542	Meat and fish (seafood) markets	105.3	117.6	120.8	135.7	131.2	126.9	131.2	136.5	141.6	139.7
546	Retail bakeries	112.5	128.7	126.4	128.6	139.0	149.6	147.1	148.1	160.0	139.4
551	New and used car dealers	100.6	102.5	102.1	105.2	109.5	115.5	121.8	127.0	131.1	133.2
553	Auto and home supply stores	103.7	109.7	111.6	120.3	125.5	124.7	119.5	117.8	119.6	127.0
554	Gasoline service stations	101.1	102.4	109.5	113.5	112.6	110.9	111.6	112.1	118.5	122.4
561	Men's and boy's wear stores	100.9	101.1	104.0	103.9	108.1	106.9	106.2	110.7	107.4	102.9
562	Women's clothing stores	105.3	109.1	114.4	115.5	112.9	111.0	114.1	111.4	106.1	109.0
565	Family clothing stores	101.8	106.2	112.3	114.0	118.6	116.0	111.2	104.5	101.2	107.2
566	Shoe stores	102.6	97.3	100.3	107.9	110.7	112.5	104.9	103.3	98.6	101.6
569	Miscellaneous apparel and accessory stores	102.9	107.1	123.9	156.2	150.7	138.3	129.8	110.2	108.7	115.3
571	Furniture and homefurnishings stores	105.4	105.5	108.3	111.1	110.5	111.6	112.5	111.4	106.2	109.3
572	Household appliance stores	110.1	113.2	114.7	113.7	110.3	109.6	107.6	96.2	97.8	86.3
573	Radio, television, computer, and music stores	95.4	105.3	104.9	102.8	100.8	86.5	77.4	71.8	71.0	71.3
581	Eating and drinking places	102.6	108.4	111.9	118.9	124.4	125.5	131.3	137.6	145.5	155.4
591	Drug and proprietary stores	105.6	110.3	115.6	122.2	132.7	132.5	137.6	139.6	139.0	137.8
592	Liquor stores	107.6	105.7	106.9	110.8	115.4	128.7	136.3	132.9	126.1	132.8
593	Used merchandise stores	100.4	106.3	114.7	120.6	111.4	112.0	114.3	120.6	114.4	117.1
594	Miscellaneous shopping goods stores	104.5	107.8	111.8	114.6	122.7	118.9	116.7	115.4	116.0	116.4
596	Nonstore retailers	103.8	103.8	106.8	110.4	106.4	108.2	103.6	113.9	108.2	107.2
598	Fuel dealers	109.1	118.5	137.3	138.5	145.4	136.3	130.9	116.7	120.8	133.8
599	Retail stores, n.e.c.	97.0	106.2	98.7	112.6	109.9	104.4	100.6	104.9	101.3	100.6
<b>Finance and services</b>											
602	Commercial banks	102.0	104.5	106.7	110.5	116.1	115.1	117.3	118.2	123.7	129.2
701	Hotels and motels	107.6	117.2	124.9	127.3	123.6	128.5	127.9	132.5	138.9	148.1
721	Laundry, cleaning, and garment services	106.7	109.1	112.2	119.0	124.5	126.2	123.4	124.9	125.8	130.3
722	Photographic studios, portrait	102.6	111.8	115.1	116.7	118.2	114.6	105.0	98.2	103.1	102.8
723	Beauty shops	108.7	107.4	116.4	121.0	122.3	130.0	129.2	131.3	135.6	138.3

See footnotes at end of table.

**Table 2. Unit labor cost indexes by industry, 1988-97—Continued**

[1987 = 100]

SIC Code	Title	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
724	Barber shops	99.0	102.1	118.7	119.8	109.0	107.5	108.0	114.1	98.2	86.5
726	Funeral services and crematories	104.2	112.2	127.7	134.6	125.9	137.0	135.6	147.7	160.1	158.0
753	Automotive repair shops	99.6	100.0	108.4	119.9	117.7	121.4	115.5	111.7	121.7	124.7
783	Motion picture theaters	100.8	97.9	97.1	102.4	115.7	117.6	115.5	118.2	124.6	129.4

n.a.=not available

n.e.c.=not elsewhere classified