

JOBS INCREASE AT MAJOR COMPANIES

In many cases, **EMPLOYMENT** rose because of acquisitions

CHEMICAL COMPANIES looking to control costs are still keeping a taut rein on the number of people they employ. In the U.S., where government data are available for all employees, the total number of jobs slipped in 2006. But employment figures at major companies around the world tend to show some increase.

In the U.S., average employment last year in the chemical industry, as measured by the Department of Labor, fell for the eighth straight year to 868,700, which is 10,500 fewer employees than in 2005. The number

Without Georgia Gulf, employment at the other 19 companies fell by 3,800 to 259,900.

In Canada, total chemical employment among the four major chemical companies there increased by 1,600 to 15,600. Agrium, though, showed the only increase, rising by 1,900 to 6,600 on the acquisition of Royster-Clark. Of the three other firms, Potash Corp. of Saskatchewan and Methanex were unchanged at 4,900 and 800, respectively, while Nova Chemicals fell by 300 to 3,300.

A sample of 20 chemical companies in Europe split 12 to 8 between those who

acquired BOC, saw total employment increase by 13,300 to 55,500.

Excluding BASF and Linde, total employment among the remaining 18 companies declined by 5,400 to 495,100.

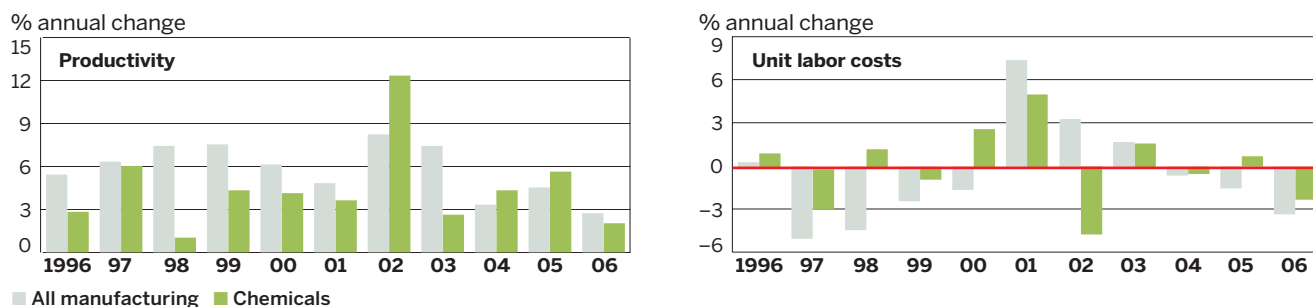
Among the 12 leading Japanese chemical companies, only Dainippon Ink & Chemicals reduced its headcount. All others either kept employment level or added to their workforces.

Overall, aggregate employment at the 12 companies rose about 2.4% to some 226,100 workers. The increase was led by Toray Industries, which added 1,900 to its rolls, bringing the total to 36,600, and by Taiyoo Nippon Sanso, which added 1,000 for a total of 8,300.

In the U.S., chemical industry productivity, or output per workhour, continued to increase. For all chemicals, this measure increased 1.9% to an index of 145.6 (1997 = 100), well below the 2.8% for all manufacturing. The largest increase among the chemical sectors was 7.2% for soaps and

U.S. EFFICIENCY

Growth slowed in U.S. chemical productivity, but unit labor costs resumed their decline



SOURCES: Federal Reserve Board, Bureau of Labor Statistics, C&EN estimates

of hourly production workers dropped by just 700 to 509,300, a minuscule decline compared with the loss of 1,800 workers between 2004 and 2005 or the 30,300 plummet in 2002, the largest drop in the past decade. The only increase in production workers was in the pharmaceutical sector, where hourly workers increased by 5,500 to 149,600.

Among a group of 20 U.S. chemical companies, though, total worldwide year-end employment increased last year. At the end of 2006, however, 12 of the companies had fewer employees than they had at the end of 2005, with four having more employees and an equal number having the same number they had 12 months earlier. Georgia Gulf supplied the growth, increasing the number of its employees by 5,600 to 6,700 as a result of its acquisition of Royal Group Technologies.

added employees and those whose rolls were smaller in 2006 than in 2005. But in the end, total employment at the 20 firms with headquarters in six countries rose by 22,200 to 645,800.

Among the companies, two saw big gains in employment. BASF ended the year with 95,200 employees worldwide, up 14,300 from 2005. The increase came largely from the company's acquisitions of Engelhard and of Degussa's construction materials business in 2006. Although BASF's acquisition of the construction business helped raise its total employment, the number of jobs at Degussa naturally dropped by 10,000 to 35,600.

Industrial gas producer Linde was another company where an acquisition last year made a difference. Linde, which

toiletries, followed by 4.5% for paints, coatings, and adhesives and 3.7% for basic chemicals. The pharmaceutical sector had the lone decline, falling 3.6%.

The increase in productivity yielded a drop in unit labor costs, derived from indexes for hourly wages divided by output per hour. Unit labor costs for the chemical industry declined 2.5% from 2005, but all manufacturing had a larger decline of 3.2%.

The decline in unit labor costs for all chemicals was certainly helped by a 9.9% drop for the soaps and toiletries sector. This was followed by basic chemicals, where unit labor costs were 4.9% below the 2005 average. Unit labor costs rose for just two chemical sectors, pharmaceuticals, up 0.5%, and resins, synthetic rubber, and fibers, up 3.8%.

EMPLOYMENT

OVERALL U.S. EMPLOYMENT

U.S. chemical employment declined for eighth straight year

| THOUSANDS | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | ANNUAL CHANGE | |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|---------|
| | | | | | | | | | | | | 2005-06 | 1996-06 |
| Manufacturing | 17,237 | 17,419 | 17,560 | 17,322 | 17,263 | 16,441 | 15,259 | 14,510 | 14,315 | 14,232 | 14,197 | -0.2% | -1.9% |
| Chemicals | 985 | 987 | 993 | 983 | 980 | 959 | 928 | 906 | 887 | 879 | 869 | -1.2 | -1.2 |
| Basic chemicals | 224 | 219 | 213 | 195 | 188 | 181 | 170 | 162 | 156 | 151 | 148 | -2.4 | -4.1 |
| Resins, synthetic rubber & fibers | 141 | 141 | 140 | 137 | 136 | 126 | 115 | 112 | 110 | 110 | 105 | -4.8 | -2.9 |
| Agricultural chemicals | 47 | 49 | 50 | 51 | 48 | 46 | 45 | 42 | 42 | 41 | 39 | -4.7 | -1.8 |
| Pharmaceuticals | 229 | 236 | 247 | 261 | 274 | 283 | 291 | 292 | 290 | 289 | 292 | 1.4 | 2.5 |
| Paints, coatings & adhesives | 76 | 77 | 78 | 78 | 80 | 75 | 72 | 69 | 68 | 68 | 67 | -1.0 | -1.2 |
| Soaps & toiletries | 127 | 128 | 131 | 131 | 13 | 127 | 121 | 119 | 115 | 116 | 113 | -2.5 | -1.2 |
| Other chemicals | 137 | 137 | 135 | 128 | 127 | 120 | 114 | 111 | 107 | 105 | 105 | -0.1 | -2.6 |

NOTE: Average annual domestic employment. SOURCE: Department of Labor

U.S. COMPANY EMPLOYMENT

Total number of employees rose, largely on Georgia Gulf's acquisition of Royal Group

| THOUSANDS | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Air Products & Chemicals | 15.2 | 16.4 | 16.7 | 17.4 | 17.5 | 17.8 | 17.2 | 18.5 | 19.9 | 20.2 | 20.7 |
| Albemarle | 2.8 | 2.7 | 2.7 | 2.6 | 2.5 | 3.0 | 3.0 | 3.0 | 3.7 | 3.7 | 3.6 |
| Cabot | 4.7 | 4.8 | 4.8 | 4.5 | 4.5 | 4.3 | 4.5 | 4.4 | 4.3 | 4.4 | 4.3 |
| Cambrex | 1.3 | 1.8 | 1.8 | 1.9 | 1.9 | 2.1 | 2.2 | 1.9 | 1.9 | 1.9 | 1.9 |
| Chemtura (a) | 5.7 | 5.6 | 5.4 | 8.6 | 8.3 | 7.3 | 6.8 | 5.5 | 4.8 | 6.6 | 6.2 |
| Cytec Industries (b) | 5.0 | 5.2 | 5.1 | 4.9 | 4.8 | 4.5 | 4.3 | 4.5 | 4.5 | 7.3 | 6.7 |
| Dow Chemical (c) | 40.3 | 42.9 | 39.0 | 39.2 | 41.9 | 52.7 | 50.0 | 46.4 | 43.2 | 42.4 | 42.6 |
| DuPont | 97.0 | 98.0 | 101.0 | 94.0 | 93.0 | 79.0 | 79.0 | 81.0 | 60.0 | 60.0 | 59.0 |
| Eastman Chemical | 17.5 | 16.1 | 15.9 | 14.7 | 14.6 | 15.8 | 15.7 | 15.0 | 12.0 | 12.0 | 11.0 |
| H.B. Fuller | 5.9 | 6.0 | 6.0 | 5.4 | 5.2 | 4.9 | 4.6 | 4.5 | 4.5 | 4.0 | 3.7 |
| Georgia Gulf (d) | 1.0 | 1.1 | 1.1 | 1.4 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.1 | 6.7 |
| W.R. Grace | 17.4 | 6.3 | 6.6 | 6.3 | 6.3 | 6.4 | 6.4 | 6.3 | 6.4 | 6.4 | 6.4 |
| Hercules | 7.1 | 6.2 | 12.4 | 11.4 | 9.8 | 9.7 | 5.1 | 5.1 | 5.0 | 4.7 | 4.4 |
| Lubrizol (e) | 4.4 | 4.3 | 4.3 | 4.1 | 4.4 | 4.5 | 5.2 | 5.0 | 7.8 | 7.5 | 6.7 |
| NewMarket Corp. (f) | 1.8 | 1.5 | 1.5 | 1.5 | 1.5 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| PPG Industries | 31.3 | 31.9 | 32.5 | 33.8 | 35.6 | 34.9 | 34.1 | 32.9 | 31.8 | 30.8 | 32.2 |
| Praxair | 25.3 | 25.4 | 24.8 | 24.1 | 23.4 | 24.3 | 25.0 | 25.4 | 27.0 | 27.3 | 27.0 |
| Rohm and Haas | 11.6 | 11.6 | 11.3 | 21.5 | 18.5 | 18.2 | 17.6 | 17.3 | 16.7 | 16.5 | 15.8 |
| Solutia (g) | ne | 8.8 | 8.7 | 10.6 | 10.2 | 9.2 | 7.3 | 6.3 | 5.7 | 5.4 | 5.1 |
| Stepan | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 | 1.5 |
| TOTAL EMPLOYEES (h) | 296.6 | 297.9 | 303.0 | 309.3 | 306.6 | 302.4 | 291.8 | 286.8 | 262.9 | 264.8 | 266.6 |

NOTE: Data are not restated for acquisitions, divestitures, or similar developments. a Crompton and Great Lakes Chemical merged in 2005 to form Chemtura; earlier figures are from Crompton. b Acquired Service Specialties in 2005. c Merged in 2001 with Union Carbide. d Acquired Royal Group in 2006. e Acquired Noveon in 2004. f Formerly Ethyl Corp. g Spun off from Monsanto in 1997. h For companies reporting. ne = nonexistent. SOURCE: Company data

CANADA EMPLOYMENT

Agrium's acquisition of Royster-Clark raised the number of employees

| THOUSANDS | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Agrium (a) | 4.4 | 4.4 | 4.5 | 4.5 | 4.0 | 4.0 | 4.8 | 4.7 | 4.6 | 4.7 | 6.6 |
| Methanex | 0.9 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 |
| Nova Chemicals | 3.4 | 3.4 | 3.3 | 4.7 | 4.7 | 4.6 | 4.3 | 4.3 | 4.1 | 3.6 | 3.3 |
| Potash Corp. | 4.5 | 5.7 | 5.7 | 5.5 | 5.3 | 5.0 | 5.2 | 4.9 | 4.9 | 4.9 | 4.9 |
| TOTAL EMPLOYEES (b) | 13.2 | 14.3 | 14.4 | 15.5 | 14.8 | 14.4 | 15.1 | 14.6 | 14.5 | 14.0 | 15.6 |

a Purchased Royster-Clark in 2006. b For companies reporting. SOURCE: Company data

EUROPE EMPLOYMENT

Total employment reversed trend and grew in 2006

| THOUSANDS | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Air Liquide (France) | 27.8 | 27.6 | 28.6 | 29.0 | 30.3 | 30.8 | 30.8 | 31.9 | 35.9 | 35.9 | 36.9 |
| Akzo Nobel (Netherlands) | 68.0 | 85.9 | 68.9 | 70.7 | 69.8 | 70.4 | 60.7 | 64.6 | 61.5 | 61.3 | 61.9 |
| Arkema (France) (a) | ne | ne | ne | ne | ne | ne | ne | ne | 18.6 | 17.7 | 17.0 |
| BASF (Germany) | 105.6 | 105.0 | 105.9 | 104.6 | 103.3 | 92.5 | 89.4 | 87.2 | 82.0 | 80.9 | 95.2 |
| Bayer (Germany) | 142.2 | 144.6 | 145.1 | 120.4 | 122.1 | 116.9 | 122.6 | 94.9 | 93.3 | 93.7 | 106 |
| Ciba Specialty Chemicals (Switzerland) (b) | ne | 21.4 | 24.5 | 20.1 | 20.3 | 19.7 | 19.0 | 18.7 | 19.3 | 19.1 | 14.1 |
| Clariant (Switzerland) (c) | 32.5 | 30.9 | 29.3 | 29.0 | 31.5 | 28.9 | 27.8 | 27.0 | 24.8 | 23.4 | 21.7 |
| Degussa (Germany) | 26.0 | 25.7 | na | 62.5 | 62.9 | 53.4 | 47.6 | 46.6 | 44.6 | 45.6 | 35.6 |
| DSM (Netherlands) | 18.4 | 17.5 | 23.0 | 21.8 | 21.8 | 21.5 | 18.5 | 26.1 | 24.5 | 22.8 | 22.2 |
| Givaudan (Switzerland) (d) | ne | ne | ne | 4.9 | 5.1 | 5.3 | 5.8 | 6.0 | 5.9 | 5.9 | 6.1 |
| ICI (U.K.) | 64.0 | 69.5 | 60.6 | 53.6 | 45.9 | 39.8 | 38.0 | 36.2 | 33.8 | 32.5 | 31.1 |
| Kemira (Finland) | 10.6 | 10.4 | 10.8 | 10.7 | 9.6 | 10.2 | 10.4 | 10.5 | 9.7 | 7.7 | 9.3 |
| Lanxess (Germany) (e) | ne | ne | ne | ne | ne | ne | ne | 20.5 | 19.7 | 18.3 | 16.5 |
| Linde (Germany) (f) | 30.7 | 32.1 | 33.4 | 35.6 | 47.1 | 46.4 | 46.0 | 46.2 | 41.4 | 42.2 | 55.5 |
| Lonza (Switzerland) (g) | ne | ne | 5.7 | 5.7 | 4.6 | 6.2 | 6.2 | 5.7 | 5.7 | 6.0 | 6.1 |
| Merck (Germany) | 28.7 | 28.9 | 28.9 | 32.7 | 33.5 | 34.3 | 34.5 | 34.2 | 28.9 | 29.1 | 30.0 |
| Rhodia (France) (h) | 29.1 | 25.1 | 24.5 | 24.8 | 29.4 | 26.9 | 24.5 | 23.0 | 20.6 | 19.4 | 17.1 |
| Solvay (Belgium) | 35.4 | 34.4 | 33.1 | 32.8 | 32.3 | 29.4 | 30.3 | 30.1 | 29.3 | 28.7 | 29.3 |
| Syngenta (Switzerland) (i) | ne | ne | ne | 23.5 | 21.0 | 20.5 | 20.0 | 19.1 | 19.5 | 19.0 | 19.5 |
| Wacker (Germany) (j) | ne | ne | ne | ne | ne | ne | ne | ne | 14.7 | 14.4 | 14.7 |
| TOTAL EMPLOYEES (k) | 619.0 | 659.0 | 622.3 | 682.4 | 690.5 | 653.1 | 632.1 | 628.5 | 633.7 | 623.6 | 645.8 |

a Spun off from Total in 2006; prior figures are pro forma. **b** Spun off from Novartis in 1997. **c** Spun off from Sandoz in 1995; merged with Hoechst Specialty Chemicals in 1997. **d** Spun off from Roche in 2000; prior figures are pro forma. **e** Spun off from Bayer in January 2005; prior figures are pro forma. **f** Acquired BOC in 2006. **g** Became an independent, publicly traded company in 1999; prior figures are pro forma. **h** Spun off from Rhône-Poulenc in 1998; prior figures are pro forma. **i** Formed from agrochemicals businesses of Zeneca and Novartis; became an independent company in 2000; prior figures are pro forma. **j** Became a publicly traded company in 2005. **k** For companies reporting. **ne** = nonexistent.

JAPAN EMPLOYMENT

Headcount increased at most companies, most sharply at Taiyo Nippon Sanso and Toray

| THOUSANDS | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Asahi Kasei | 26.7 | 27.8 | 29.3 | 26.6 | 26.7 | 26.2 | 25.7 | 25.0 | 23.8 | 23.0 | 23.7 |
| Dainippon Ink & Chemicals | 25.9 | 24.9 | 25.7 | 31.0 | 30.3 | 28.4 | 27.0 | 26.5 | 26.8 | 25.6 | 25.4 |
| JSR Corp. (a) | na | na | na | 4.4 | 4.4 | 4.4 | 4.3 | 4.3 | 4.4 | 4.6 | 4.7 |
| Kaneka | na | na | na | 6.6 | 7.0 | 6.7 | 6.7 | 6.6 | 6.6 | 7.3 | 7.4 |
| Mitsubishi Chemical | na | na | na | 33.5 | 33.0 | 38.6 | 37.6 | 33.5 | 33.3 | 33.0 | 33.4 |
| Mitsui Chemicals (b) | ne | 13.6 | 12.6 | 11.7 | 12.8 | 13.2 | 12.7 | 12.3 | 12.2 | 12.5 | 12.5 |
| Shin-Etsu Chemical | 18.9 | 19.2 | 18.4 | 18.8 | 19.4 | 16.5 | 16.6 | 17.4 | 18.2 | 18.9 | 19.2 |
| Showa Denko | 8.9 | 13.6 | 13.5 | 12.5 | 13.2 | 12.0 | 10.9 | 10.6 | 11.2 | 11.1 | 11.2 |
| Sumitomo Chemical | 16.3 | 15.9 | 15.8 | 17.5 | 17.4 | 17.0 | 17.9 | 19.0 | 20.2 | 24.2 | 24.7 |
| Taiyo Nippon Sanso (c) | 1.8 | 1.7 | na | 7.0 | 6.3 | 5.5 | 4.8 | 4.6 | 7.1 | 7.3 | 8.3 |
| Teijin | 17.3 | 17.6 | 17.2 | 22.0 | 22.3 | 24.0 | 23.3 | 20.6 | 19.0 | 18.8 | 19.1 |
| Toray | 33.8 | 32.9 | 34.3 | 35.5 | 35.7 | 34.9 | 33.8 | 32.9 | 33.7 | 34.7 | 36.6 |
| TOTAL EMPLOYEES (d) | 149.6 | 167.2 | 173.9 | 218.9 | 227.2 | 225.7 | 219.7 | 211.7 | 216.4 | 220.9 | 226.1 |

NOTE: Fiscal year ends March 31 for all companies except Showa Denko, for which it ends Dec. 31. **a** JSR Corp. initiated a consolidated headcount in 1999. **b** Formed in 1997 from the merger of Mitsui Toatsu and Mitsui Petrochemical. **c** Nippon Sanso changed its name to Taiyo Nippon Sanso in 2004 when it acquired Taiyo Toyo Sanso. **d** For companies reporting. **na** = not available. **ne** = nonexistent.

EMPLOYMENT

U.S. PRODUCTION WORKERS

Decline in the number of chemical plant workers continued

| THOUSANDS | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | ANNUAL CHANGE | |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|---------|
| | | | | | | | | | | | | 2005-06 | 1996-06 |
| Manufacturing | 12,532 | 12,673 | 12,729 | 12,524 | 12,428 | 11,677 | 10,768 | 10,190 | 10,072 | 10,060 | 10,168 | 1.1% | -2.1% |
| Chemicals | 595 | 593 | 601 | 595 | 588 | 562 | 532 | 525 | 520 | 510 | 509 | -0.1 | -1.5 |
| Basic chemicals | 139 | 137 | 136 | 126 | 122 | 115 | 104 | 100 | 95 | 86 | 83 | -3.0 | -5.0 |
| Resins, synthetic rubber & fibers | 98 | 99 | 98 | 96 | 96 | 89 | 81 | 78 | 75 | 71 | 70 | -0.6 | -3.3 |
| Agricultural chemicals | 33 | 33 | 34 | 34 | 32 | 30 | 30 | 29 | 29 | 29 | 29 | -1.7 | -1.3 |
| Pharmaceuticals | 118 | 116 | 123 | 129 | 132 | 132 | 128 | 133 | 139 | 144 | 150 | 3.8 | 2.4 |
| Paints, coatings & adhesives | 40 | 40 | 40 | 41 | 42 | 39 | 38 | 37 | 40 | 41 | 39 | -3.4 | -0.1 |
| Soaps & toiletries | 80 | 81 | 84 | 85 | 82 | 80 | 76 | 77 | 74 | 73 | 73 | 0.6 | -1.0 |
| Other chemicals | 88 | 88 | 87 | 83 | 82 | 77 | 75 | 72 | 69 | 67 | 65 | -2.4 | -2.9 |

NOTE: Average annual domestic employment. SOURCE: Department of Labor

U.S. PAY

Resins, rubber, and fiber workers gained the largest increases

| | HOURLY EARNINGS | | | | WEEKLY EARNINGS | | | |
|-----------------------------------|-----------------|---------|---------|---------|-----------------|----------|----------|----------|
| | 2003 | 2004 | 2005 | 2006 | 2003 | 2004 | 2005 | 2006 |
| Manufacturing | \$15.74 | \$16.15 | \$16.56 | \$16.80 | \$635.99 | \$658.59 | \$673.37 | \$690.83 |
| Chemicals | 18.50 | 19.17 | 19.67 | 19.60 | 783.95 | 819.73 | 831.76 | 833.59 |
| Basic chemicals | 22.12 | 23.15 | 23.80 | 23.20 | 988.97 | 1,036.01 | 1,038.71 | 1,033.10 |
| Resins, synthetic rubber & fibers | 17.87 | 18.24 | 19.03 | 19.88 | 747.84 | 800.73 | 844.01 | 869.34 |
| Agricultural chemicals | 18.41 | 18.93 | 20.87 | 21.04 | 837.14 | 865.68 | 947.49 | 978.58 |
| Pharmaceuticals | 19.77 | 20.90 | 21.31 | 21.34 | 850.39 | 891.99 | 894.35 | 891.26 |
| Paints, coatings & adhesives | 16.01 | 16.26 | 16.31 | 16.05 | 656.44 | 684.66 | 676.16 | 676.40 |
| Soaps & toiletries | 14.16 | 14.73 | 15.37 | 15.04 | 564.19 | 588.27 | 610.99 | 605.40 |
| Other chemicals | 17.02 | 17.16 | 17.15 | 16.72 | 694.18 | 708.42 | 702.37 | 695.48 |

NOTE: For production workers in domestic employment. SOURCE: Department of Labor

U.S. PRODUCTIVITY

All chemical sectors except pharmaceuticals saw an increase in productivity ...

| PRODUCTIVITY (a), 1997 = 100 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | ANNUAL CHANGE |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| | | | | | | | | | | | | 2005-06 |
| Manufacturing | 94.2 | 100.0 | 107.3 | 115.2 | 122.1 | 127.8 | 138.2 | 148.3 | 153.1 | 159.8 | 164.2 | 2.8% |
| Chemicals | 94.4 | 100.0 | 100.9 | 105.1 | 109.3 | 113.1 | 126.9 | 130.1 | 135.5 | 142.9 | 145.6 | 1.9 |
| Basic chemicals | 92.2 | 100.0 | 99.5 | 116.9 | 118.5 | 113.8 | 134.5 | 145.4 | 167.1 | 188.3 | 195.2 | 3.7 |
| Resins, synthetic rubber & fibers | 94.1 | 100.0 | 105.6 | 109.0 | 109.2 | 109.3 | 123.2 | 125.3 | 130.1 | 141.2 | 144.7 | 2.5 |
| Agricultural chemicals | 95.8 | 100.0 | 98.6 | 88.9 | 93.4 | 94.0 | 101.1 | 106.3 | 110.3 | 116.6 | 118.1 | 1.3 |
| Pharmaceuticals | 93.3 | 100.0 | 101.4 | 98.7 | 99.5 | 104.7 | 111.8 | 110.6 | 107.8 | 107.4 | 103.5 | -3.6 |
| Paints, coatings & adhesives | 100.0 | 100.0 | 100.0 | 97.7 | 97.3 | 104.9 | 105.4 | 110.2 | 102.6 | 104.4 | 109.1 | 4.5 |
| Soaps & toiletries | 96.3 | 100.0 | 95.1 | 90.4 | 99.5 | 102.8 | 123.1 | 117.7 | 135.6 | 151.0 | 161.8 | 7.2 |

... as unit labor costs fell for all sectors except polymers and pharmaceuticals

| UNIT LABOR COSTS (b), 1997 = 100 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | ANNUAL CHANGE |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| | | | | | | | | | | | | 2005-06 |
| Manufacturing | 105.2 | 100.0 | 95.7 | 93.3 | 91.9 | 98.7 | 102.0 | 103.7 | 103.2 | 101.8 | 98.5 | -3.2% |
| Chemicals | 103.1 | 100.0 | 101.2 | 100.2 | 102.8 | 107.6 | 102.7 | 104.3 | 103.7 | 104.1 | 101.5 | -2.5 |
| Basic chemicals | 104.6 | 100.0 | 106.3 | 99.8 | 107.1 | 121.2 | 114.7 | 112.8 | 107.9 | 111.6 | 106.1 | -4.9 |
| Resins, synthetic rubber & fibers | 103.2 | 100.0 | 98.5 | 100.0 | 105.4 | 119.3 | 118.1 | 120.6 | 117.5 | 118.2 | 122.7 | 3.8 |
| Agricultural chemicals | 101.1 | 100.0 | 101.0 | 116.2 | 129.6 | 151.5 | 159.8 | 148.4 | 145.4 | 152.1 | 150.4 | -1.1 |
| Pharmaceuticals | 101.7 | 100.0 | 95.5 | 93.4 | 93.8 | 89.6 | 84.7 | 89.4 | 93.9 | 94.0 | 94.5 | 0.5 |
| Paints, coatings & adhesives | 99.7 | 100.0 | 102.5 | 104.7 | 107.6 | 115.5 | 124.5 | 126.8 | 123.3 | 122.1 | 117.2 | -4.0 |
| Soaps & toiletries | 103.3 | 100.0 | 106.3 | 117.3 | 122.3 | 123.0 | 109.3 | 112.8 | 104.7 | 100.9 | 90.9 | -9.9 |

a Productivity is output per workhour, calculated by dividing indexes for production by indexes for workhours of production employees. b Unit labor costs are calculated by dividing indexes for hourly wages by indexes for output per workhour. SOURCES: Federal Reserve Board, Department of Labor, C&EN estimates