
Appendix A

Data Sources

National Data

Unionization rates, weekly earnings, and level of education (12 or fewer years of education and 13 or more years of education) for 1977, 1987, and 1997 by industry for individuals working at least 35 hours a week are from the monthly Current Population Survey (CPS) conducted by the US Census Bureau. For 1977, the data are from the May survey; for 1987 and 1997, they are extracted from the outward rotation files in the monthly surveys of these latter years. Because the top code threshold changes over the time period, median rather than mean weekly earnings are calculated. The earnings data are deflated by the Consumer Price Index and are in 1983 dollars. The industry classification system used for all years and for all data used in the study is a modified version of the 1983 Census Industry Code (CIC), which consists of 137 industries that mostly match 3-digit Standard Industrial Classification (SIC) industries for 1987 but include some 2-digit and 4-digit SIC codes.

Employment Data

Employment data are from the Office of Employment Projections in the Bureau of Labor Statistics (BLS) of the US Department of Labor and are available from BLS at www.bls.gov. Shipments and receipts (in service sectors) are from the Economic Census for 1977, 1987, and 1997 and are

deflated (1987 = 100) with prices from the BLS Office of Employment Projections. Exports and imports of goods for 1977 and 1987 are available from the National Bureau of Economic Research at www.nber.org from a data set assembled by Robert Feenstra. The 1997 export and import figures for goods are from the 1997 Economic Census of the US Census Bureau, Core Business Statistics Series, table 1, Comparative Statistics for the United States (1987 SIC Basic): 1997 and 1992. The concordance steps followed by Feenstra were used to make the 1997 trade data comparable to his 1977 and 1987 figures and then were reclassified to a CIC basis. Exports and imports of services are based on the six-digit input-output tables for 1977, 1987, and 1997 prepared by the Bureau of Economic Analysis in the US Department of Commerce.

Regional Data

The monthly Current Population Survey includes state as well as national data on unionization. The states making up the nine regions are listed in a footnote to table 3.2. Employment data by state and industry are available from BLS at www.bls.gov.

Appendix B

List of Industries in the Database

Code ¹	Industries and SIC code equivalent ²
Primary products	
1. 010, 011	Agricultural production, crops, and livestock (01, 02)
2. 020, 030	Landscape, horticultural, and agricultural services (078)
3. 040	Metal mining (10)
4. 041	Coal mining (12)
5. 042	Oil and gas extraction (13)
6. 050	Nonmetallic mining and quarrying, except fuel (14)
Construction	
7. 060 ^{3,4}	Construction (15, 16, 17)
Manufacturing	
8. 100	Meat products (201)
9. 101	Dairy products (202)
10. 102	Canned, frozen, and preserved fruits and vegetables (203)
11. 110	Grain mill products (204)
12. 111	Bakery products (205)
13. 112	Sugar and confectionery products (206)
14. 120	Beverage industries (208)
15. 121	Miscellaneous food preparations and kindred products (207, 209)
16. 130	Tobacco manufactures (21)
17. 132	Knitting mills (225)
18. 140	Dyeing and finishing textiles, except woollen and knitted goods (226)
19. 141	Carpets and rugs (227)

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Code ¹	Industries and SIC code equivalent ²
20. 142	Yarn, thread, and fabric mills (221–224, 228)
21. 150	Miscellaneous textile mills
22. 151	Apparel and accessories, except knit (231–238)
23. 152	Miscellaneous fabricated textile products (239)
24. 160	Pulp, paper, and paperboard mills (261–263)
25. 161	Miscellaneous paper and pulp products (267)
26. 162	Paperboard containers and boxes (265)
27. 171	Newspaper, publishing, and printing (271)
28. 172	Printing, publishing, and allied industries, except newspapers (272–279)
29. 180	Plastics, synthetics, and resins (282)
30. 181	Drugs (283)
31. 182	Soaps and cosmetics (284)
32. 190	Paints, varnishes, and related products (285)
33. 191	Agricultural chemicals (287)
34. 192	Industrial and miscellaneous chemicals (281, 286, 289)
35. 200	Petroleum refining (291)
36. 201	Miscellaneous petroleum and coal products (295, 299)
37. 210, 211	Tires, inner tubes, other rubber products, and plastic footwear and belting (302–306)
38. 212	Miscellaneous plastic products (308)
39. 220	Leather tanning and finishing (311)
40. 221	Footwear, except rubber and plastic (313, 314)
41. 222	Leather products, except footwear (315–317, 319)
42. 230	Logging (241)
43. 231	Sawmills, planing mills, and millwork (242, 243)
44. 232	Wood buildings and mobile homes, miscellaneous wood products (245, 244, 249)
45. 242	Furniture and fixtures (25)
46. 250	Glass and glass products (321–323)
47. 251	Cement, concrete, gypsum, and plaster products (324, 327)
48. 252	Structural clay products (325)
49. 261	Pottery and related products (326)
50. 262	Miscellaneous nonmetallic mineral and stone products (328, 329)
51. 270	Blast furnaces, steelworks, rolling and finishing mills (331)
52. 271	Iron and steel foundries (332)
53. 272	Primary aluminum industries (3334, part 334, 3353–3355, 3363, 3365)
54. 280	Other primary metal industries (3331, 3339, part 334, 3351, 3356, 3357, 3364, 3366, 3369, 339)
55. 281	Cutlery, hand tools, and general hardware (342)
56. 282	Fabricated structural metal products (344)
57. 290	Screw machine products (345)
58. 291	Metal forgings and stampings (346)
59. 292	Ordnance (292)

Code ¹	Industries and SIC code equivalent ²
60. 300	Miscellaneous fabricated metal products (341, 343, 347, 349)
61. 310	Engines and turbines (351)
62. 311	Farm machinery and equipment (352)
63. 312	Construction and material-handling machines (353)
64. 320	Metalworking machinery (354)
65. 321	Office and accounting machines (3578, 3579)
66. 322	Computers and related equipment (3571–3577)
67. 331	Machinery, except electrical, n.e.c. ⁵ (355, 356, 358, 359)
68. 340	Household appliances (363)
69. 341	Radio, TV, and communication equipment (365, 366)
70. 342	Electrical machinery, equipment, and supplies, n.e.c. ⁵ (361, 362, 364, 367, 369)
71. 351	Motor vehicles and motor vehicle equipment (371)
72. 352	Aircraft and parts (372)
73. 360	Ship- and boat-building and repairing (373)
74. 361	Railroad locomotives and equipment (374)
75. 361, 392	Guided missiles, space vehicles, and parts; not specified manufacturing industries (376)
76. 370	Cycles and miscellaneous transportation equipment (375, 379)
77. 371	Scientific and controlling instruments (381, 382 except 3827)
78. 372	Medical, dental, and optical instruments and supplies (3827, 384, 385)
79. 380	Photographic equipment and supplies (386)
80. 381.	Watches, clocks, and clockwork-operated devices (387)
81. 390, 391	Toys, amusements, and sporting goods (394); miscellaneous manufacturing industries (39 except 394)
Services	
82. 400	Railroads (40)
83. 401, 402 ^{3,4}	Bus services and urban transit (41 except 412); taxicab services (412)
84. 410, 411 ^{3,4}	Trucking services (421, 423); warehousing and storage (422)
85. 412	US Postal Service (43)
86. 420	Water transportation (44)
87. 421	Air transportation (45)
88. 422 ^{3,4}	Pipelines, except natural gas (46)
89. 432 ^{3,4}	Services incidental to transportation (47)
90. 440 ^{3,4}	Radio and television broadcasting and cable (483, 484)
91. 441,442 ^{3,4}	Telephone communications (481); telegraph and miscellaneous communication services (482, 489)
92. 450	Electric power and light (491)
93. 451,452 ⁴	Gas and steam supply systems (492, 496); electric and gas, and other combinations (493)
94. 470 ^{3,4}	Water supply and irrigation (494, 497)
95. 471 ^{3,4}	Sanitary services (495)

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Code ¹	Industries and SIC code equivalent ²
96. 500–571 ^{3,4}	Wholesale trade (50, 51)
97. 580–691, ex. 641 ^{3,4}	Retail trade (52–59 except 58)
98. 641 ^{3,4}	Eating and drinking places (58)
99. 700–710 ex. 702 ^{3,4}	Banking and finance (60, 62, 67)
100. 702 ^{3,4}	Credit institutions, n.e.c. ⁵ (61)
101. 711	Insurance (63,64)
102. 712 ^{3,4}	Real estate (65)
103. 721	Advertising (731)
104. 722 ^{3,4}	Services to dwellings and other buildings (734)
105. 731 ³	Personnel supply services (736)
106. 732 ³	Computer and data-processing services (737)
107. 740 ^{3,4}	Detective and protective services (7381, 7382)
108. 741	Business services, n.e.c. ⁵ (732, 733, 735, 7382–7389)
109. 742 ^{3,4}	Automotive rental and leasing (751)
110. 750 ^{3,4}	Automotive parking and car washes (752, 7542)
111. 751 ^{3,4}	Automotive repair and related services (753, 7549)
112. 752, 760	Electrical and miscellaneous repair shops (76)
113. 761 ^{3,4}	Personal services, private households (88)
114. 762, 770 ^{3,4}	Hotels, motels, and lodging places (701, 702, 703, 704)
115. 771, 790 ^{3,4}	Laundry, cleaning, and garment services (721 except part 7219)
116. 772 ^{3,4}	Beauty shops (723)
117. 780 ^{3,4}	Barber shops (724)
118. 781, 782, 791 ^{3,4}	Funeral services and crematories (726); shoe repair shops (725): dressmaking shops; miscellaneous personal services (722, 729)
119. 800	Theaters and motion pictures (781–783, 792)
120. 801 ^{3,4}	Video tape rental (784)
121. 802, 810 ^{3,4}	Bowling centers (793); miscellaneous entertainment and recreational services (791, 794, 799)
122. 812 ^{3,4}	Offices and clinics of physicians (801, 803)
123. 820, 821, 822, 820 ^{3,4}	Offices and clinics of dentists (802), chiropractors (8041), optometrists (8042), and health practitioners, n.e.c. ⁵ (8043, 8049)
124. 831 ^{3,4}	Hospitals (806)
125. 832, 840 ^{3,4}	Nursing and personal care facilities (805); health services, n.e.c. ⁵ (807,808, 809)
126. 841 ³	Legal services (81)
127. 842, 850 ³	Elementary and secondary schools (821); colleges and universities (822)
128. 851, 852 860 ^{3,4}	Vocational schools (824); libraries (823); and educational services, n.e.c. ⁵ (829)
129. 861 ^{3,4}	Job training and rehabilitation services (833)

Code ¹	Industries and SIC code equivalent ²
130. 862, 863, 870 ^{3,4}	Child day care services and family child care homes (835); residential care facilities, without nursing (836)
131. 871 ^{3,4}	Social services, n.e.c. ⁵ (832, 839)
132. 872 ^{3,4}	Museums, art galleries, and zoos (84)
133. 873, 880, 881 ^{3,4}	Membership organizations, labor unions, religious organizations (86)
134. 882	Engineering, architectural, and surveying services (871)
135. 890	Accounting, auditing, and bookkeeping services (871)
136. 891,892, 893 ³	Research, development, and testing services (873); management and public relations services (874); miscellaneous professional and related services (899)
137. 900–932 ^{3,4}	Public administration (91–97)

1. 1983 Industry Classification Codes (3-digit) of Current Population Survey.

2. 1987 Standard Industrial Classification Code.

3. Excluded from 1977–87 regression data set.

4. Excluded from 1987–97 regression data set.

5. n.e.c. = not elsewhere classified.