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**APPENDIX**  
**TABLES**



TABLE A-1

Daily Wage-Rates in 13 Manufacturing Industries and in Building from the Aldrich Report, Weighted by Employment within the Establishment and by Number Gainfully Occupied Reported Attached to the Industries at the Decennial Censuses; January and July 1860-1890 (current dollars)

Industry	No. of Estab.	1860		1861		1862		1863		1864		1865		1866		1867	
		Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
Weighted average, manufacturing	49	1.18	1.19	1.18	1.16	1.21	1.25	1.27	1.34	1.41	1.54	1.62	1.66	1.70	1.74	1.73	1.76
Agricultural implements	1 <sup>a</sup>	1.36	1.37	1.40	1.39	1.35	1.23	1.34	1.38	1.53	1.85	1.93	2.02	2.06	2.12	2.07	2.16
Ale, beer, porter	1 <sup>b</sup>	1.06	1.04	1.03	1.06	1.05	1.02	1.06	1.15	1.31	1.43	1.44	1.49	1.47	1.51	1.54	1.65
Books and newspapers	3 <sup>c</sup>	1.07	1.16	1.07	1.07	1.14	1.12	1.20	1.27	1.40	1.43	1.42	1.51	1.50	1.63	1.65	1.61
Carriages and wagons	1 <sup>d</sup>	1.22	1.22	1.22	1.22	2.07	2.07	2.05	2.05	2.05	2.07	2.07	2.07	2.08	2.08	2.08	2.08
Cotton manufactures	5 <sup>e</sup>	0.78	0.79	0.79	0.82	0.80	0.86	0.85	0.88	0.95	0.99	1.07	1.14	1.22	1.26	1.29	1.32
Illuminating gas	4 <sup>f</sup>	1.16	1.19	1.16	1.17	1.17	1.17	1.48	1.73	1.73	1.90	2.13	2.08	2.18	2.18	2.23	2.26
Leather	2 <sup>g</sup>	1.27	1.27	1.55	1.45	1.57	1.60	1.73	1.75	1.90	1.92	1.97	2.01	1.98	1.97	1.91	1.91
Lumber	2 <sup>h</sup>	1.03	1.05	1.06	1.06	1.04	1.10	1.15	1.25	1.32	1.38	1.44	1.44	1.42	1.43	1.50	1.54
Metals and metallic goods	19 <sup>i</sup>	1.47	1.47	1.49	1.46	1.49	1.56	1.55	1.68	1.74	1.99	2.13	2.13	2.23	2.25	2.26	2.26
Paper	1 <sup>j</sup>	0.88	0.86	0.84	0.83	0.70	0.72	0.82	0.82	0.86	1.06	1.15	1.22	1.13	1.16	1.16	1.19
Stone	6 <sup>k</sup>	1.49	1.55	1.40	1.39	1.40	1.46	1.50	1.70	1.90	2.24	2.42	2.55	2.60	2.75	2.62	2.96
White lead	1 <sup>l</sup>	1.19	1.19	1.20	1.22	1.24	1.25	1.37	1.39	1.47	1.72	1.76	1.76	1.76	1.76	1.76	1.76
Woolen manufacturers	3 <sup>m</sup>	0.82	0.82	0.86	0.83	0.80	0.81	0.86	0.85	0.96	1.02	1.12	1.14	1.18	1.21	1.15	1.18
Building	21	1.68	1.70	1.64	1.68	1.66	1.78	1.82	1.96	2.09	2.32	2.43	2.66	2.66	2.81	2.80	3.08

table continues on following pages

Table A-1, continued

Industry	1868		1869		1870		1871		1872		1873		1874		1875	
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
Weighted average	1.75	1.77	1.80	1.79	1.80	1.77	1.80	1.82	1.79	1.85	1.85	1.84	1.79	1.80	1.72	1.71
Agricultural implements	2.04	1.91	2.04	2.07	2.04	2.06	1.95	1.93	1.93	1.85	1.93	1.99	2.01	2.02	2.04	2.00
Ale, beer, porter	1.59	1.65	1.65	1.81	1.65	1.67	1.64	1.73	1.60	1.69	1.75	1.80	1.77	1.74	1.70	1.78
Books and newspapers	1.70	1.80	1.88	1.79	1.86	1.74	2.31	2.30	2.19	2.19	2.14	2.01	1.97	2.00	2.07	1.94
Carriages and wagons	2.08	2.08	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27	2.27
Cotton manufactures	1.33	1.31	1.32	1.34	1.36	1.36	1.39	1.42	1.45	1.45	1.46	1.45	1.35	1.38	1.28	1.28
Illuminating gas	2.24	2.27	2.37	2.29	2.38	2.38	2.46	2.31	2.40	2.52	2.72	2.40	2.57	2.35	2.45	2.10
Leather	1.89	1.89	1.90	1.94	1.94	1.94	1.91	1.91	1.93	1.92	1.95	1.95	1.91	1.84	1.76	1.73
Lumber	1.55	1.53	1.59	1.64	1.66	1.68	1.67	1.66	1.67	1.72	1.71	1.72	1.72	1.78	1.74	1.79
Metals and metallic goods	2.25	2.26	2.27	2.26	2.28	2.20	2.20	2.21	2.23	2.25	2.27	2.28	2.25	2.27	2.10	2.10
Paper	1.21	1.21	1.20	1.23	1.20	1.22	1.22	1.32	1.30	1.33	1.34	1.34	1.32	1.36	1.38	1.36
Stone	2.83	3.30	3.10	3.05	2.93	2.91	2.81	3.01	2.85	3.07	2.96	2.99	2.96	2.92	2.89	2.86
White lead	1.78	1.90	1.95	1.95	1.85	1.77	1.79	1.97	1.87	1.84	1.91	1.90	1.83	1.83	1.83	1.74
Woolen manufactures	1.16	1.19	1.29	1.26	1.29	1.30	1.31	1.29	1.24	1.31	1.36	1.34	1.35	1.34	1.34	1.32
Building	2.91	3.09	3.09	3.22	3.09	3.02	2.85	3.02	2.86	2.97	2.86	2.84	2.70	2.84	2.69	2.68

Table A-1, continued

Industry	1876		1877		1878		1879		1880		1881		1882		1883	
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
	Weighted average	1.70	1.65	1.60	1.57	1.54	1.50	1.50	1.47	1.51	1.56	1.55	1.55	1.62	1.63	1.63
Agricultural implements	1.81	1.77	1.64	1.63	1.68	1.64	1.61	1.51	1.55	1.57	1.71	1.71	1.71	1.82	1.71	1.71
Ale, beer, porter	1.65	1.70	1.67	1.71	1.69	1.86	1.80	1.78	1.71	1.73	1.66	1.68	1.67	1.74	1.67	1.68
Books and newspapers	2.04	2.05	2.13	1.98	1.81	1.73	1.70	1.49	1.54	1.49	1.45	1.25	1.35	1.37	1.32	1.45
Carriages and wagons	2.27	2.27	2.27	2.27	2.23	2.23	2.26	2.26	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44
Cotton manufactures	1.29	1.21	1.17	1.17	1.18	1.17	1.15	1.12	1.14	1.18	1.17	1.16	1.19	1.22	1.20	1.18
Illuminating gas	2.33	2.05	2.23	2.02	2.06	1.89	2.00	1.85	1.90	1.94	1.98	1.92	2.03	1.96	1.96	1.97
Leather	1.68	1.70	1.70	1.72	1.73	1.73	1.61	1.58	1.66	1.68	1.69	1.70	1.71	1.73	1.65	1.64
Lumber	1.78	1.78	1.83	1.77	1.78	1.80	1.80	1.68	1.71	1.70	1.75	1.73	1.68	1.65	1.67	1.68
Metals and metallic goods	2.05	2.01	1.90	1.90	1.84	1.77	1.78	1.78	1.89	1.93	1.94	1.96	1.99	2.01	2.07	2.09
Paper	1.43	1.22	1.21	1.14	1.14	1.18	1.21	1.19	1.21	1.30	1.29	1.29	1.29	1.31	1.29	1.31
Stone	2.78	2.68	2.54	2.36	2.25	2.24	2.22	2.04	2.04	2.21	2.20	2.50	2.41	2.68	2.62	2.63
White lead	1.75	1.74	1.73	1.48	1.44	1.43	1.39	1.36	1.27	1.37	1.36	1.39	1.37	1.39	1.38	1.35
Woolen manufactures	1.31	1.32	1.27	1.24	1.22	1.15	1.24	1.23	1.19	1.33	1.27	1.26	1.29	1.34	1.36	1.33
Building	2.37	2.49	2.26	2.30	2.15	2.18	2.13	2.21	2.02	2.25	2.24	2.45	2.45	2.61	2.46	2.61

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Table A-1, concluded

Industry	1884		1885		1886		1887		1888		1889		1890	
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
Weighted average	1.63	1.68	1.61	1.61	1.60	1.63	1.66	1.68	1.67	1.70	1.72	1.74	1.74	1.76
Agricultural implements	1.78	1.72	1.68	1.69	1.75	1.75	1.69	1.69	1.76	1.74	1.76	1.75	1.77	1.77
Ale, beer, porter	1.62	1.68	1.65	1.68	1.66	1.69	1.65	2.09	2.08	2.18	2.11	2.12	2.10	2.12
Books and newspapers	1.57	1.50	1.56	1.48	1.59	1.54	1.66	1.78	1.54	1.65	1.65	1.79	1.81	1.69
Carriages and wagons	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44
Cotton manufactures	1.16	1.18	1.11	1.12	1.12	1.16	1.18	1.19	1.18	1.22	1.23	1.27	1.26	1.28
Illuminating gas	1.99	1.84	1.96	2.01	1.97	2.06	2.03	2.04	1.99	1.98	2.04	1.99	2.08	2.03
Leather	1.65	1.66	1.61	1.62	1.67	1.71	1.65	1.65	1.63	1.63	1.55	1.56	1.58	1.64
Lumber	1.63	1.63	1.63	1.63	1.62	1.63	1.66	1.66	1.67	1.74	1.73	1.75	1.82	1.82
Metals and metallic goods	2.09	2.09	2.00	2.02	1.97	2.00	2.05	2.06	2.08	2.11	2.15	2.14	2.15	2.15
Paper	1.24	1.20	1.28	1.28	1.25	1.29	1.31	1.23	1.30	1.33	1.36	1.29	1.32	1.30
Stone	2.61	2.75	2.63	2.76	2.79	2.79	2.71	2.82	2.75	2.90	2.77	2.99	2.92	3.16
White lead	1.38	1.41	1.44	1.46	1.49	1.46	1.47	1.43	1.42	1.39	1.41	1.43	1.44	1.53
Woolen manufactures	1.34	1.61	1.43	1.34	1.33	1.36	1.44	1.37	1.39	1.37	1.41	1.39	1.38	1.38
Building	2.53	2.59	2.52	2.59	2.61	2.65	2.54	2.63	2.52	2.69	2.61	2.67	2.63	2.73

The only clue to the nature and coverage of these industries and their wage data is to be found in the various occupational classifications in the Aldrich Report.

For description of the method of weighting, see Chapter 2, above. Prices are in greenback currency during the period of inconvertibility.

Source of wage data: Nelson W. Aldrich, *Wholesale Prices, Wages, and Transportation*, Report by Mr. Aldrich from the Committee on Finance, March 3, 1893, 52nd Congress, 2nd Session, Senate Report 1394, Vol. 3, Parts 1-4.

<sup>a</sup> In Massachusetts.

<sup>b</sup> New York.

<sup>c</sup> One, Connecticut; two, New York.

<sup>d</sup> New York.

<sup>e</sup> One gingham establishment, Massachusetts; three cotton goods establishments, Massachusetts; one, New York.

<sup>f</sup> Two, Massachusetts; one, New York; one, Ohio.

<sup>g</sup> Both, Massachusetts.

<sup>h</sup> One, New Hampshire; one, New York.

<sup>i</sup> Three, Connecticut; one, Maryland; four, Massachusetts; one, New Hampshire; one, New Jersey; seven, New York; two, Pennsylvania.

<sup>j</sup> Massachusetts.

<sup>k</sup> Two, Connecticut; one, Maryland; two, New York; one, Pennsylvania.

<sup>l</sup> Pennsylvania.

<sup>m</sup> One, Connecticut; one, Massachusetts; one, Rhode Island.

TABLE A-2

Daily Wage-Rates in Seven Manufacturing Industries with Establishments Reporting from Two or More States, Aldrich Report, Weighted by Employment within the Establishment; January and July 1860-1890 (current dollars)

Industry	No. of Estab.	1860		1861		1862		1863		1864		1865		1866		1867	
		Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
		Books and newspapers															
New York	2	1.07	1.17	1.07	1.07	1.15	1.12	1.21	1.28	1.42	1.44	1.42	1.52	1.49	1.63	1.63	1.59
Connecticut	1	1.05	1.05	1.07	1.07	1.06	1.06	1.08	1.07	1.08	1.24	1.42	1.29	1.58	1.61	1.93	1.85
Cotton and gingham																	
Massachusetts	4	0.83	0.84	0.82	0.85	0.84	0.94	0.92	0.93	0.99	1.03	1.12	1.19	1.29	1.33	1.36	1.38
New York	1	0.68	0.70	0.70	0.73	0.68	0.62	0.63	0.72	0.79	0.83	0.89	0.94	0.93	0.99	1.02	1.08
Illuminating gas																	
Massachusetts	2	0.99	1.00	1.00	1.01	1.02	1.07	1.09	1.24	1.32	1.53	1.64	1.55	1.59	1.76	1.75	1.82
New York	1	1.20	1.24	1.21	1.22	1.21	1.18	1.61	1.90	1.80	1.98	2.28	2.23	2.33	2.34	2.36	2.38
Ohio	1	1.18	1.17	1.17	1.18	1.18	1.29	1.33	1.54	1.97	2.02	2.10	2.13	2.27	1.98	2.27	2.27
Lumber																	
New Hampshire	1	0.49	0.50	0.49	0.50	0.64	0.61	0.88	0.89	0.93	0.96	0.98	0.99	0.99	1.00	1.01	0.97
New York	1	1.09	1.12	1.13	1.13	1.09	1.16	1.18	1.29	1.36	1.43	1.49	1.49	1.47	1.48	1.55	1.60
Metals																	
Connecticut	3	1.46	1.50	1.48	1.47	1.46	1.50	1.53	1.62	1.67	1.94	2.01	2.06	2.09	2.22	2.25	2.30
Maryland	1	1.50	1.50	1.53	1.22	1.34	1.42	1.60	1.74	1.87	2.15	2.33	2.35	2.54	2.46	2.46	2.41
Massachusetts	4	1.54	1.53	1.58	1.52	1.61	1.72	1.55	1.90	1.85	2.06	2.27	2.32	2.40	2.39	2.40	2.43
New Hampshire	1	1.42	1.46	1.44	1.43	1.50	1.46	1.51	1.56	1.65	1.78	1.87	1.72	1.88	1.88	1.86	1.84
New Jersey	1	2.11	2.06	2.01	1.97	1.92	1.96	1.83	1.95	1.96	2.24	2.31	2.36	2.49	2.49	2.53	2.52
New York	7	1.29	1.32	1.32	1.34	1.32	1.39	1.42	1.52	1.61	1.90	2.02	2.04	2.11	2.14	2.16	2.15
Pennsylvania	2	1.47	1.46	1.50	1.48	1.52	1.57	1.63	1.67	1.77	1.99	2.14	2.08	2.22	2.23	2.22	2.20
Stone																	
Connecticut	2	0.83	1.20	1.14	1.10	0.99	1.08	0.99	1.37	1.21	1.61	1.30	1.82	1.45	1.90	1.47	1.95
Maryland	1	1.47	1.57	1.47	1.45	1.54	1.58	1.48	1.63	1.66	2.07	2.24	2.20	2.24	2.24	2.23	2.32
New York	2	1.60	1.55	1.42	1.31	1.42	1.41	1.45	1.66	1.87	2.35	2.45	2.57	2.64	2.77	2.67	3.06
Pennsylvania	1	1.38	1.63	1.42	1.65	1.42	1.68	1.75	1.92	2.20	2.56	2.69	2.79	2.90	3.03	2.90	3.13
Woolens																	
Connecticut	1	0.94	0.93	1.03	1.00	0.96	1.03	1.20	0.98	1.11	1.21	1.46	1.43	1.43	1.52	1.43	1.47
Massachusetts	1	0.72	0.72	0.80	0.75	0.70	0.70	0.78	0.83	0.92	0.99	1.19	1.23	1.27	1.29	1.21	1.24
Rhode Island	1	0.88	0.89	0.89	0.89	0.90	0.90	0.95	0.95	1.02	1.05	1.06	1.09	1.11	1.15	1.18	1.16

table continues on following pages



Table A-2, continued

Industry	No. of Estab.	1868		1869		1870		1871		1872		1873		1874		1875	
		Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
<b>Books and newspapers</b>																	
New York	2	1.70	1.80	1.87	1.78	1.86	1.74	2.34	2.32	2.21	2.20	2.15	2.02	1.96	2.00	2.08	1.94
Connecticut	1	1.76	1.78	2.07	1.95	1.86	1.82	1.88	1.91	1.94	1.95	1.96	1.93	2.07	2.06	1.97	1.96
<b>Cotton and gingham</b>																	
Massachusetts	4	1.39	1.37	1.37	1.40	1.43	1.43	1.46	1.50	1.52	1.52	1.53	1.52	1.42	1.45	1.33	1.33
New York	1	1.08	1.08	1.11	1.09	1.06	1.09	1.09	1.09	1.10	1.13	1.11	1.11	1.00	1.04	1.04	1.04
<b>Illuminating gas</b>																	
Massachusetts	2	1.79	1.80	1.85	1.83	1.91	1.86	1.91	1.87	1.89	2.09	2.14	2.15	2.15	1.93	1.95	1.76
New York	1	2.36	2.41	2.55	2.44	2.56	2.57	2.64	2.44	2.60	2.71	3.05	2.52	2.80	2.52	2.70	2.18
Ohio	1	2.26	2.26	2.26	2.26	2.25	2.25	2.43	2.32	2.32	2.39	2.37	2.30	2.35	2.30	2.29	2.19
<b>Lumber</b>																	
New Hampshire	1	1.00	0.97	1.02	1.02	1.00	1.02	1.00	1.00	0.99	0.98	1.00	1.02	1.09	1.01	0.98	0.99
New York	1	1.61	1.59	1.65	1.71	1.73	1.75	1.75	1.74	1.76	1.82	1.82	1.82	1.82	1.91	1.88	1.93
<b>Metals</b>																	
Connecticut	3	2.33	2.30	2.30	2.34	2.44	2.39	2.39	2.34	2.37	2.40	2.48	2.39	2.48	2.45	2.40	2.22
Maryland	1	2.47	2.39	2.48	2.42	2.42	2.42	2.44	2.40	2.42	2.34	2.47	2.47	2.49	2.28	2.27	
Massachusetts	4	2.47	2.40	2.42	2.49	2.51	2.46	2.46	2.55	2.52	2.46	2.51	2.61	2.42	2.44	2.17	2.19
New Hampshire	1	1.75	1.89	2.00	2.04	2.26	1.92	1.87	1.86	1.97	1.74	1.68	1.73	1.82	1.84	1.85	1.68
New Jersey	1	2.56	2.57	2.60	2.60	2.61	2.62	2.62	2.52	2.50	2.46	2.53	2.59	2.60	2.76	2.67	2.72
New York	7	2.13	2.17	2.17	2.18	2.19	2.18	2.20	2.22	2.25	2.28	2.24	2.23	2.14	2.15	2.16	2.07
Pennsylvania	2	2.17	2.21	2.19	2.14	2.12	1.94	1.91	1.93	1.97	2.05	2.09	2.08	2.13	2.13	1.96	1.94
<b>Stone</b>																	
Connecticut	2	1.49	2.12	1.65	2.52	1.66	2.49	1.57	2.45	1.64	2.48	1.52	2.44	1.51	2.17	1.65	1.87
Maryland	1	2.28	2.29	2.31	2.26	2.26	2.26	2.29	2.29	2.30	2.30	2.25	2.25	2.19	2.19	2.23	2.23
New York	2	2.83	3.48	3.25	3.41	3.15	2.90	2.89	3.00	2.87	2.98	2.95	2.86	2.96	2.77	2.88	2.74
Pennsylvania	1	3.30	3.38	3.30	2.45	2.88	3.19	3.08	3.32	3.25	3.60	3.53	3.61	3.50	3.64	3.35	3.53
<b>Woolens</b>																	
Connecticut	1	1.30	1.39	1.46	1.36	1.41	1.37	1.36	1.40	1.15	1.34	1.35	1.37	1.35	1.35	1.31	1.38
Massachusetts	1	1.22	1.25	1.28	1.24	1.28	1.30	1.32	1.28	1.27	1.32	1.40	1.35	1.42	1.38	1.38	1.32
Rhode Island	1	1.16	1.16	1.18	1.22	1.22	1.23	1.23	1.24	1.24	1.24	1.24	1.26	1.16	1.23	1.25	1.25

Table A-2, continued

Industry	No. of Estab.	1876		1877		1878		1879		1880		1881		1882		1883	
		Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
		Books and newspapers															
New York	2	2.05	2.06	2.15	1.99	1.80	1.72	1.70	1.48	1.54	1.49	1.44	1.23	1.32	1.35	1.29	1.43
Connecticut	1	1.91	1.85	1.88	1.88	1.90	1.87	1.65	1.66	1.57	1.60	1.73	1.65	1.80	1.79	1.75	1.74
Cotton and gingham																	
Massachusetts	4	1.35	1.27	1.22	1.22	1.24	1.23	1.20	1.17	1.20	1.22	1.21	1.19	1.22	1.27	1.26	1.22
New York	1	0.94	0.89	0.87	0.90	0.86	0.85	0.88	0.81	0.87	0.99	0.97	0.99	1.02	0.95	0.90	0.96
Illuminating gas																	
Massachusetts	2	1.82	1.65	1.70	1.55	1.56	1.56	1.58	1.59	1.57	1.54	1.53	1.58	1.71	1.73	1.74	1.67
New York	1	2.57	2.15	2.46	2.24	2.32	2.00	2.19	1.89	1.98	2.03	2.11	1.99	2.14	2.01	2.09	2.05
Ohio	1	2.19	2.15	2.15	1.90	1.90	1.90	1.93	1.97	1.97	2.06	2.05	2.05	2.05	2.04	1.87	2.03
Lumber																	
New Hampshire	1	1.00	0.99	0.98	0.93	1.03	1.01	1.02	0.98	0.99	0.96	0.92	0.92	0.93	0.93	0.93	0.93
New York	1	1.93	1.93	2.01	1.95	1.95	1.98	1.98	1.85	1.90	1.89	1.95	1.93	1.86	1.83	1.83	1.85
Metals																	
Connecticut	3	2.30	2.19	2.12	2.08	2.07	1.99	2.00	1.86	2.11	2.16	2.10	2.18	2.23	2.25	2.36	2.36
Maryland	1	2.24	2.09	2.05	2.00	2.04	2.04	1.99	2.00	2.03	2.12	2.30	2.29	2.25	2.30	2.30	2.32
Massachusetts	4	2.21	2.16	1.96	1.96	1.92	1.87	1.89	1.84	1.86	1.86	1.95	1.95	1.93	1.97	1.97	1.98
New Hampshire	1	1.39	1.69	1.60	1.52	1.46	1.39	1.32	1.32	1.34	1.33	1.39	1.34	1.38	1.34	1.35	1.35
New Jersey	1	2.74	2.74	2.82	2.82	2.82	2.82	2.67	2.67	2.69	2.69	2.64	2.64	2.54	2.59	2.74	2.86
New York	7	2.02	1.97	1.86	1.87	1.82	1.62	1.81	1.76	1.80	1.95	1.93	2.00	2.02	2.04	2.07	2.08
Pennsylvania	2	1.82	1.78	1.73	1.67	1.62	1.64	1.62	1.70	1.71	1.74	1.75	1.76	1.83	1.84	1.91	1.93
Stone																	
Connecticut	2	1.45	1.63	1.14	1.54	1.13	1.56	1.04	1.50	1.03	1.43	1.04	1.68	1.14	1.85	1.16	1.83
Maryland	1	2.22	2.22	2.02	2.00	1.90	1.88	1.66	1.70	1.62	1.62	1.66	1.73	1.80	1.99	1.99	2.00
New York	2	2.69	2.66	2.46	2.33	2.31	2.28	2.26	2.11	2.18	2.25	2.30	2.60	2.51	2.68	2.67	2.55
Pennsylvania	1	3.45	3.10	3.17	2.71	2.44	2.39	2.51	2.07	2.03	2.44	2.36	2.64	2.60	2.99	2.97	3.09
Woolens																	
Connecticut	1	1.27	1.26	1.22	1.28	1.27	1.29	1.23	1.25	1.26	1.27	1.30	1.25	1.32	1.41	1.51	1.47
Massachusetts	1	1.35	1.38	1.31	1.25	1.21	1.10	1.25	1.23	1.18	1.41	1.29	1.30	1.31	1.39	1.39	1.35
Rhode Island	1	1.24	1.19	1.19	1.19	1.20	1.19	1.20	1.20	1.19	1.19	1.19	1.19	1.20	1.19	1.22	1.22

table continues on following page

Table A-2. concluded

Industry	No. of Estab.	1884		1885		1886		1887		1888		1889		1890	
		Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
		Books and newspapers													
New York	2	1.56	1.48	1.55	1.46	1.58	1.51	1.64	1.77	1.52	1.63	1.64	1.79	1.80	1.67
Connecticut	1	1.75	1.76	1.68	1.78	1.84	1.81	1.86	1.88	1.83	1.92	1.87	1.84	1.94	1.84
Cotton and gingham															
Massachusetts	4	1.20	1.21	1.16	1.16	1.16	1.21	1.24	1.23	1.22	1.26	1.27	1.30	1.28	1.31
New York	1	0.97	0.97	0.87	0.92	0.88	0.88	0.88	0.92	0.95	0.99	1.01	1.04	1.08	1.11
Illuminating gas															
Massachusetts	2	1.69	1.59	1.66	1.64	1.65	1.59	1.64	1.60	1.63	1.56	1.66	1.62	1.65	1.68
New York	1	2.15	2.08	2.09	2.19	2.12	2.32	2.24	2.27	2.18	2.19	2.25	2.19	2.35	2.26
Ohio	1	1.93	1.55	1.93	1.93	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.91	1.93	1.83
Lumber															
New Hampshire	1	0.92	0.91	0.94	0.93	0.93	0.93	0.92	0.91	0.94	0.93	0.93	0.93	0.93	0.94
New York	1	1.79	1.79	1.79	1.79	1.76	1.77	1.81	1.81	1.82	1.90	1.89	1.91	1.98	1.98
Metals															
Connecticut	3	2.34	2.30	2.23	2.38	2.38	2.55	2.61	2.56	2.58	2.58	2.51	2.47	2.57	2.53
Maryland	1	2.33	2.31	2.33	2.22	2.22	2.22	2.26	2.27	2.24	2.26	2.28	2.28	2.29	2.30
Massachusetts	4	1.98	2.04	2.01	1.91	1.88	1.95	1.98	1.96	1.93	1.97	2.05	2.01	2.04	1.98
New Hampshire	1	1.43	1.44	1.49	1.53	1.47	1.56	1.57	1.51	1.41	1.42	1.50	1.53	1.54	1.62
New Jersey	1	2.80	2.82	2.80	2.79	2.73	2.73	2.73	2.75	2.91	2.91	2.91	2.91	2.91	2.91
New York	7	2.07	2.06	2.01	1.96	1.95	2.02	2.02	2.07	2.09	2.09	2.10	2.06	2.09	2.12
Pennsylvania	2	1.96	1.95	1.79	1.88	1.77	1.76	1.86	1.85	1.88	1.95	2.00	2.02	2.00	2.02
Stone															
Connecticut	2	1.16	1.81	1.15	1.79	1.16	1.94	1.15	1.91	1.16	1.96	1.18	1.94	1.17	2.01
Maryland	1	2.04	2.04	2.05	2.04	2.05	1.99	1.99	2.02	2.12	2.12	2.05	2.07	2.02	2.02
New York	2	2.60	2.77	2.66	2.84	2.88	2.92	2.91	2.98	2.95	3.03	2.97	3.14	3.22	3.53
Pennsylvania	1	3.06	3.06	2.99	2.97	3.13	2.91	2.85	2.88	2.87	3.02	2.91	2.96	2.99	3.03
Woolens															
Connecticut	1	1.45	1.32	1.41	1.37	1.39	1.44	1.62	1.41	1.47	1.45	1.50	1.50	1.58	1.47
Massachusetts	1	1.35	1.85	1.52	1.39	1.37	1.39	1.48	1.41	1.44	1.41	1.46	1.43	1.38	1.41
Rhode Island	1	1.24	1.25	1.24	1.24	1.24	1.25	1.24	1.24	1.24	1.24	1.27	1.26	1.25	1.26

APPENDIX A

TABLE A-3

Daily Wage-Rates in 18 Manufacturing Industries from the Weeks Report, Weighted by Number of Gainfully Occupied Reported Attached to These Industries at the Decennial Censuses; United States, by Regions, Annually 1860-1880 (current dollars)

Industry	No. of Estab.	UNITED STATES									
		1860	1861	1862	1863	1864	1865	1866	1867	1868	1869
Weighted average	67	1.32	1.36	1.53	1.51	1.72	1.82	1.90	1.94	1.92	1.93
Breweries and distilleries <sup>a</sup>	1	1.01	1.01	1.20	1.39	1.73	1.73	2.02	2.02	2.02	1.97
Brickmaking <sup>b</sup>	2	1.18	1.16	1.18	1.33	1.41	1.73	1.96	2.15	2.36	2.24
Carriage and wagon works <sup>c</sup>	2	1.54	1.55	1.45	1.49	1.67	1.85	1.86	1.93	1.95	1.96
Cigars and tobacco <sup>d</sup>	4	1.32	1.26	1.46	1.54	1.61	1.58	1.61	1.61	1.59	1.59
Clothing <sup>e</sup>	3	1.03	1.16	1.29	1.36	1.43	1.46	1.46	1.44	1.40	1.39
Cotton manufactures <sup>f</sup>	5	0.90	0.91	0.91	0.90	1.03	1.18	1.36	1.42	1.38	1.39
Flint and window glass <sup>g</sup>	2	1.46	1.46	1.45	1.63	1.76	1.75	2.49	2.41	2.41	2.42
Flour and grist mills <sup>h</sup>	4	1.73	1.70	1.84	2.14	2.45	2.56	2.69	2.72	2.71	2.68
Furniture <sup>i</sup>	8	1.74	1.74	1.77	1.79	2.19	2.21	2.22	2.23	2.24	2.25
Hardware, cutlery, etc. <sup>j</sup>	4	1.68	1.69	1.74	1.97	2.15	2.23	2.36	2.37	2.35	2.40
Iron blast furnaces, etc. <sup>k</sup>	7	1.29	1.26	1.33	1.60	2.09	2.27	2.20	2.19	2.19	2.27
Machinery <sup>l</sup>	3	1.33	1.42	1.43	1.57	2.02	2.02	2.10	2.17	2.17	2.13
Paper manufactures <sup>m</sup>	7	1.18	1.38	1.40	1.52	1.66	1.48	1.71	1.75	1.76	1.78
Saw and planing mills <sup>n</sup>	7	1.63	1.59	1.60	1.72	1.84	1.99	2.01	2.01	2.02	2.33
Stove foundries, etc. <sup>o</sup>	2	1.78	1.81	1.86	1.64	1.81	2.03	2.26	2.22	2.25	2.20
Tanneries <sup>p</sup>	1	1.34	1.40	1.29	1.53	1.98	2.08	2.19	2.23	2.27	2.26
Tin and sheet iron works <sup>q</sup>	1	1.68	1.93	2.07	2.61	2.86	3.29	3.29	3.39	3.39	3.39
Woolen manufacturers <sup>r</sup>	4	0.96	0.96	1.00	0.98	1.16	1.42	1.50	1.44	1.44	1.46

Examination of the establishment reports suggests that the wages for most of these industries would not have been significantly different if they had been adjusted to take account, on the one hand, of overtime earnings and allowances (in the form of free housing, pasture land, fuel, free merchandise) or, on the other hand, of the cost to the worker of furnishing his own tools and materials or of making payments possibly to helpers and underhands. Some exceptions are indicated in the notes to the following industries: hardware, etc.; saw and planing mills; machinery; blast furnaces, etc.; brick making; cotton manufacturing.

Nearly all payments were in cash; payments in kind or in store orders were very exceptional. These exceptions are indicated in the notes to the following industries: tin and sheet iron; saw and planing mills; boots and shoes; cigars and tobacco; and blast furnaces, etc. However, according to the Weeks Report, "the small proportion of works paying in truck probably arises from the fact that the establishments from which wage schedules were received were selected establishments. If reports had been received from all establishments in the states named, it is probable that a larger proportion of truck payment would have been shown in some industries than appears in the reports."

Source: *Report on the Statistics of Wages in Manufacturing Industries . . .*, by Joseph D. Weeks, 1880 Census, Vol. xx, p. xxiii.

The typical workday was 10 hours, though there were many deviations. Some industries had a longer day in summer than in winter; others had an irregular workday, the worker being expected to stay until his job was finished; others worked less than 10 hours, while still others worked a 12-hour shift, seven days a week. These departures from a 10-hour day are indicated in the notes to the following industries: furniture; flour and grist mills; saw and planing mills; flint and window glass; iron blast furnaces, etc.; breweries and distilleries; woolen manufacturing; and cotton manufacturing. However, there was very little reduction in length of workday over the twenty years 1860-80.

For description of the method of weighting see Chapter 2, above.

## APPENDIX A

TABLE A-3, *continued*

<i>Industry</i>	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Weighted average	1.92	1.95	1.95	1.97	1.87	1.84	1.79	1.75	1.72	1.72	1.77
Breweries and distilleries	1.97	1.82	1.82	1.73	1.73	1.73	1.82	1.82	1.82	2.02	2.02
Brickmaking	2.30	2.27	2.23	2.17	2.09	1.95	1.84	1.73	1.64	1.53	1.68
Carriage and wagon works	1.96	1.95	1.94	1.92	1.79	1.70	1.67	1.66	1.64	1.80	1.86
Cigars and tobacco	1.58	1.57	1.53	1.50	1.49	1.47	1.46	1.46	1.46	1.46	1.48
Clothing	1.38	1.35	1.33	1.37	1.37	1.37	1.42	1.45	1.48	1.47	1.46
Cotton manufactures	1.42	1.49	1.49	1.51	1.48	1.41	1.37	1.32	1.30	1.24	1.29
Flint and window glass	2.47	2.47	2.48	2.48	2.48	2.48	2.48	2.49	2.33	2.33	2.33
Flour and grist mills	2.69	2.68	2.63	2.62	2.46	2.49	2.34	2.30	2.19	2.20	2.19
Furniture	2.24	2.25	2.25	2.24	2.21	2.24	2.23	2.21	2.21	2.22	2.23
Hardware, cutlery, etc.	2.41	2.41	2.42	2.35	2.20	2.21	2.17	2.12	2.12	2.12	2.24
Iron blast furnaces, etc.	2.27	2.23	2.35	2.32	2.01	1.87	1.70	1.63	1.58	1.58	1.83
Machinery	2.13	2.26	2.27	2.26	2.24	2.21	2.13	2.01	1.95	1.87	1.96
Paper manufactures	1.85	1.90	1.95	1.96	1.95	1.81	1.91	1.90	1.83	1.84	1.70
Saw and planing mills	2.10	2.32	2.31	2.47	2.43	2.38	2.38	2.34	2.32	2.30	2.41
Stove foundries, etc.	2.30	2.25	2.25	2.23	2.19	2.18	1.96	1.82	1.54	1.80	1.90
Tanneries	2.26	2.25	2.27	2.27	2.19	2.18	2.04	2.00	2.00	1.96	1.93
Tin and sheet iron works	3.18	3.18	3.18	3.46	2.25	2.25	2.25	2.25	2.43	2.29	2.29
Woolen manufactures	1.52	1.51	1.53	1.52	1.45	1.43	1.35	1.31	1.29	1.29	1.32

<sup>a</sup> None of the great establishments of the country returned their schedules. Workday ranged from 12 to 15½ hours in breweries, 12 hours in distilleries. There were no reports of any hours changed during 1860-80, but the workweek could scarcely have been much longer in 1860 than it was at the time of the report, in 1880. (P. 23.)

<sup>b</sup> Frequent opportunities for extra earnings ("without exception"); estimates of manufacturers on extra earnings for overtime vary from 10 to 25 or 50 percent; overtime was paid at regular price. Hours vary from summer to winter and also vary widely even among employees of the same establishments; the average for non-pieceworkers was 10 per day. Nothing was said about any hour reductions during 1860-80. (Pp. 27-34.)

<sup>c</sup> Includes manufacture of all grades of carriages and wagons. The usual hours were 10 per day, some establishments reporting shorter hours in winter, longer hours during spring and summer. The few firms giving historical information on hours reported no change since 1860 or since reports began. (Pp. 410-426.)

<sup>d</sup> Includes manufacture of cigarettes and smoking and plug tobacco. No allowances except free tobacco and cigars. Wages generally paid in cash, but in one southern firm employing colored labor, a large portion of wages were paid in provisions, firewood, etc. When paid in kind, rates were much higher. Hours ranged from 8 to 10 in cigar shops, averaged 10 in fine cut and plug tobacco. The three firms giving historical information on hours reported no change in normal hours during 1860-80. (Pp. 39-40.)

<sup>e</sup> Based on very few returns, since most firms seemed disinclined to give information on wages because their rates were so low. Hours varied between 10 and 13 depending on occupation, establishment, or time of year. The one firm giving information on hours changes over time indicated no change in hours during 1860-80. (Pp. 51-53.)

<sup>f</sup> "Very satisfactory" returns of wages, including returns from some of the oldest and best known mills in the nation. Includes manufacture of sheetings, shirtings, gingham, dress goods, cretonnes, jeans, tickings, sacks, quilts, thread, yarn, etc. Opportunities for extra earnings were seldom available to strictly cotton-mill employees—because of the expense of operating mills with only a few hands—but they were often available to cloth room or repair work employees or to others during peak season demand. Many firms provided housing or board at reduced rates; some gave free garden land or pasture. The overwhelming majority of firms reported hours unchanged at 11 per day throughout 1860-80, but there was some reduction in the number working more than 11 hours and a substantial increase in the number working fewer than 11 hours. (Pp. 327-328.)

APPENDIX A  
TABLE A-3, *continued*

<i>Industry</i>	<i>No. of Estab.</i>	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	
WESTERN STATES												
Weighted average	25	1.74	1.85	1.93	2.11	2.29	2.39	2.42	2.44	2.43	2.43	
Breweries and distilleries	1	1.01	1.01	1.20	1.39	1.73	2.02	2.02	2.02	2.02	1.97	
Carriage and wagon works	1	1.56	1.56	1.40	1.35	1.46	1.67	1.67	1.75	1.77	1.77	
Cigars and tobacco	2	1.60	1.59	2.21	2.56	2.87	2.89	3.04	3.16	3.18	3.26	
Clothing	1	2.33	2.86	3.10	3.41	3.41	3.41	3.31	3.23	3.23	3.23	
Flour and grist mills	4	1.73	1.70	1.84	2.14	2.45	2.56	2.69	2.72	2.71	2.68	
Furniture	6	2.00	2.00	2.04	2.09	2.10	2.12	2.14	2.16	2.16	2.17	
Iron blast furnaces, etc.	1	1.60	1.60	1.60	1.89	2.74	2.76	2.73	2.56	2.61	2.72	
Machinery	2	1.38	1.48	1.53	1.77	1.95	2.06	2.17	2.13	2.08	2.08	
Paper	1	1.04	1.04	1.04	1.27	1.39	1.46	1.54	1.54	1.40	1.22	
Saw and planing mills	3	1.45	1.46	1.48	1.76	2.02	2.31	2.34	2.32	2.33	2.32	
Stove foundries, etc.	1	1.59	1.78	1.97	2.06	2.17	2.19	2.19	2.06	1.97	1.94	
Tanneries	1	1.34	1.40	1.29	1.53	1.98	2.08	2.19	2.23	2.27	2.26	
Woolen manufactures	1	1.26	1.33	1.49	1.53	1.76	1.88	1.91	1.92	1.79	1.78	
		1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Weighted average	2.42	2.45	2.45	2.48	2.32	2.32	2.29	2.26	2.25	2.27	2.03	
Breweries and distilleries	1.97	1.82	1.82	1.73	1.73	1.73	1.82	1.82	1.82	2.02	2.02	
Carriage and wagon works	1.77	1.77	1.77	1.77	1.60	1.50	1.48	1.48	1.52	1.73	1.73	
Cigars and tobacco	3.24	3.20	3.03	2.91	2.88	2.80	2.78	2.82	2.80	2.80	2.85	
Clothing	3.23	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	
Flour and grist mills	2.69	2.68	2.63	2.62	2.46	2.49	2.34	2.30	2.19	2.20	2.19	
Furniture	2.16	2.18	2.17	2.15	2.08	2.05	2.04	1.99	1.99	2.02	2.02	
Iron blast furnaces, etc.	2.76	2.63	2.85	2.83	2.31	2.27	2.05	1.91	1.90	1.79	2.19	
Machinery	2.18	2.19	2.19	2.19	1.97	1.86	1.78	1.76	1.73	1.72	1.85	
Paper	1.09	1.09	1.09	1.09	1.09	1.09	1.11	1.11	1.24	1.24	1.25	
Saw and planing mills	2.31	2.64	2.63	2.88	2.79	2.71	2.73	2.66	2.64	2.60	2.76	
Stove foundries, etc.	1.92	1.94	1.95	1.95	1.81	1.78	1.78	1.78	1.92	1.94	1.94	
Tanneries	2.26	2.25	2.27	2.27	2.19	2.18	2.04	2.00	1.99	1.96	1.93	
Woolen manufactures	1.79	1.79	1.86	1.82	1.82	1.82	1.75	1.75	1.75	1.75	1.76	

<sup>a</sup> Includes manufacture of lamp chimneys, and druggists' and chemists' flint ware; does not include the re-working of glass. Production restricted by the trade unions. In window glass, since the men were paid by quality of glass produced, it was not possible to tell how much they made until glass had been inspected. During the delay, sometimes consuming several weeks, the men were advanced market money, and final settlements were made at end of the "fire"—usually in June. A few plants report payment by workers to underhands. Hours typically 10 per day, varying from 9 to 12. Those few firms giving historical information on hours reported little or no change in length of normal workday during 1860-80. (Pp. 78-102.)

<sup>b</sup> Some schedules gave wages for one year and stated that these rates had been paid for many years without change. Hours vary with supply of water and kind of work, ranging generally between 10 and 12. Two 12-hour shifts were reported in many mills, except wheat and flour. The few firms giving historical information on hours reported little or no change in length of workday during 1860-80. (Pp. 54-56.)

APPENDIX A  
TABLE A-3, *continued*

<i>Industry</i>	<i>No. of Estab.</i>	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	
EASTERN STATES												
Weighted average	37	1.23	1.28	1.32	1.39	1.62	1.71	1.80	1.82	1.83	1.83	
Brickmaking	2	1.18	1.16	1.18	1.33	1.41	1.73	1.96	2.15	2.36	2.24	
Carriage and wagon works	1	1.44	1.49	1.63	1.99	2.33	2.35	2.35	2.35	2.35	2.35	
Cigars and tobacco	1	1.35	1.35	1.35	1.35	1.46	1.46	1.58	1.58	1.60	1.60	
Clothing	2	0.97	1.08	1.20	1.25	1.33	1.35	1.35	1.34	1.29	1.27	
Cotton manufactures	5	0.90	0.91	0.91	0.90	1.03	1.18	1.36	1.42	1.38	1.39	
Flint and window glass	2	1.46	1.46	1.45	1.63	1.76	1.75	2.49	2.41	2.41	2.42	
Furniture	2	1.55	1.55	1.56	1.56	2.27	2.27	2.28	2.28	2.30	2.30	
Hardware, cutlery	4	1.68	1.69	1.74	1.97	2.15	2.23	2.36	2.37	2.35	2.40	
Iron blast furnaces, etc.	6	1.26	1.20	1.28	1.54	1.94	2.15	2.07	2.09	2.08	2.15	
Machinery	1	1.33	1.40	1.41	1.54	2.03	2.01	2.08	2.18	2.19	2.14	
Paper	5	1.19	1.38	1.41	1.52	1.66	1.49	1.73	1.76	1.77	1.79	
Saw and planing mills	1	1.73	1.73	1.73	1.68	1.59	1.59	1.59	1.59	1.75	1.75	
Stove foundries, etc.	1	1.82	1.82	1.82	1.46	1.64	1.96	2.30	2.30	2.39	2.38	
Tin and sheet iron	1	1.68	1.93	2.07	2.61	2.86	3.29	3.29	3.39	3.39	3.39	
Woolen manufactures	3	0.94	0.94	0.97	0.95	1.13	1.39	1.48	1.41	1.43	1.44	
		1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Weighted average		1.84	1.87	1.88	1.88	1.81	1.78	1.73	1.68	1.66	1.62	1.68
Brickmaking		2.30	2.27	2.23	2.17	2.09	1.95	1.84	1.73	1.64	1.53	1.68
Carriage and wagon works		2.36	2.36	2.34	2.30	2.30	2.29	2.27	2.27	2.08	2.08	2.41
Cigars and tobacco		1.64	1.64	1.67	1.67	1.67	1.67	1.58	1.54	1.54	1.54	1.54
Clothing		1.26	1.24	1.22	1.27	1.28	1.28	1.33	1.37	1.40	1.39	1.39
Cotton manufactures		1.42	1.49	1.49	1.51	1.48	1.41	1.37	1.32	1.30	1.24	1.29
Flint and window glass		2.47	2.47	2.48	2.48	2.48	2.48	2.48	2.49	2.33	2.33	2.33
Furniture		2.30	2.30	2.32	2.31	2.30	2.39	2.39	2.39	2.39	2.39	2.40
Hardware, cutlery		2.41	2.41	2.42	2.35	2.20	2.21	2.17	2.12	2.12	2.12	2.24
Iron blast furnaces, etc.		2.13	2.11	2.22	2.18	1.93	1.75	1.61	1.55	1.49	1.53	1.73
Machinery		2.13	2.27	2.29	2.27	2.31	2.31	2.24	2.09	2.02	1.92	2.00
Paper		1.86	1.92	1.98	1.99	1.97	1.82	1.94	1.93	1.86	1.87	1.71
Saw and planing mills		1.75	1.75	1.75	1.75	1.78	1.78	1.75	1.78	1.78	1.75	1.78
Stove foundries, etc.		2.48	2.42	2.42	2.40	2.43	2.45	2.09	1.85	1.82	1.68	1.87
Tin and sheet iron		3.18	3.18	3.18	3.46	2.25	2.25	2.25	2.25	2.43	2.29	2.29
Woolen manufactures		1.51	1.49	1.51	1.50	1.43	1.42	1.34	1.29	1.28	1.27	1.31

<sup>1</sup> Includes furniture of all kinds, cabinetwork, and wooden ware. A great deal of this was piece-work. Shorter in winter than in summer. A frequency distribution on length of workday revealed that the overwhelming majority of firms kept hours unchanged at 10 per day during 1860-80, but there was a small increase in the number reporting less than 10 hours. (Pp. 433-434.)

<sup>1</sup> Includes manufacture of building and marine hardware, hammers, saws, cutlery. Some extra earnings for overtime at certain seasons; no allowances except where houses and gardens are provided cheaper than going rates; few expenses for furnishing own tools or for spoiling work. Over the entire period 1860-80, hours of labor were remarkably uniform—at 10 hours in all but two establishments. (Pp. 154-155.)

\* Also rolling mills and nail factories. Iron blast furnaces include furnaces using anthracite, bituminous or charcoal fuel. Most of wage rates quoted were for furnace labor. Rolling mills and

## APPENDIX A

TABLE A-3 *continued*

Industry	No. of												
	Estab.	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869		
SOUTHERN STATES													
Weighted average	5	0.99					1.07	0.98	0.98	0.98	0.98		
Cigars and tobacco	1	0.83					0.83	0.83	0.83	0.83	0.83		
Paper	1	0.85					0.57	0.92	0.92	0.99	0.95		
Saw and planing mills	2	1.13					1.37	1.17	1.17	1.17	1.17		
			1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Weighted average	1.07	1.08	1.08	1.09	1.14	1.15	1.15	1.16	1.16	1.14	1.15	1.15	1.17
Cigars and tobacco	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Paper	0.98	1.06	1.07	1.10	0.98	1.05	1.02	1.00	1.00	0.89	0.88	0.97	0.97
Saw and planing mills	1.38	1.38	1.38	1.38	1.50	1.49	1.49	1.49	1.49	1.47	1.47	1.47	1.50

nail factories include mills which convert pig iron into various forms of wrought iron. At some furnaces a system of bounties was paid when output was over a certain number of tons per day. At many furnaces in remote areas and in some rolling mills and nail factories, free housing, free fuel, and free land for gardening was allowed. Among charcoal furnaces quite a number of deductions were made for tools, power, and lights. Among rolling mills and nail factories, much of the skilled work was paid for at a certain contract price per ton, out of which the head workman paid his assistant; for instance, puddlers and heaters pay their helpers, rollers their assistants, nailers their machine feeders. These tonnage or keg rates have a very interesting history, for in many sections of the country a sliding scale system prevailed through much of the period. Under this system the rate rose and fell in accordance with the selling price of iron—though there was a certain minimum below which the rate was not supposed to fall. The arrangement was subject to frequent breakdown as a result of failure to agree on the proper rate. These quotations were not proportionally numerous when the wages of all rolling mill labor are considered, and have been omitted from the averages of daily wages. Cash payments were the rule, but many blast furnaces and rolling mills in remote areas maintained stores and permitted workers to trade on credit of their earnings—some as an accommodation to workers, others as a profit-making device. Many firms reported they had abandoned payment in store-orders as they were too bothersome. Hours were 12 per day at blast furnaces; hours per day at rolling mills were very irregular—where stated they tended to be 10 hours. The wages for some trades, e.g. blast engineers, were quoted on a weekly basis; where this was done they were converted to a daily basis on the assumption of a 7-day week. Only two firms gave information on whether hours had changed in the past. One indicated no change, the other a drop from 10 to 9 hours in 1876. (Pp. 110-111; 197-204.)

<sup>1</sup> Includes machine shops and manufacture of locomotives, engines, woodworking machines, machine tools, and sewing machines. Frequent overtime earnings, some at time and a quarter or time and a half. The 10-hour day was almost universal in this industry in 1880. Two firms reported 9 hours in winter. A number of firms gave information on the history of hours, two firms reporting a temporary reduction to 7½ hours during part of the depression of the 1870's, but the great majority reported no change. (Pp. 168-196.)

<sup>m</sup> Includes manufacture of many grades of book, news, writing, envelope, wall, colored, wrapping, and manila papers; also of straw-, leather-, and cardboard. Four men normally work 12 hours a day; day men usually 10 hours. In several establishments giving hours of labor for 1845 and 1850 hours worked were unchanged up to 1880. (Pp. 264-265.)

<sup>n</sup> Includes also working of lumber into house, bridge, and car building materials, boxes, barrels, and staves. Some establishments are only saw mills. Widely varying opportunities for overtime, on the whole these were not very great. Allowances depend on locality; include free homes, gardens, and, in rural localities, board. Cost to men of furnishing own tools was not more than 1 percent of wages paid; some instances of payment in kind in South and West. Typical hours 10-12 in summer, 8-10 in winter. Several firms reported reduction of hours during 1860-80; one reported an increase. (Pp. 460-461.)



## APPENDIX A

TABLE A-3 *concluded*

<sup>o</sup> Includes stove, car wheel, and general foundries. Little or no extra allowances were mentioned except for a 5 percent year-end bonus in the case of one stove foundry firm and some occasional "prize money" for working full time. Ten hours was the normal workday in all establishments, but there was a shorter workday in winter and a longer one in summer in some establishments. The three establishments giving historical information on hours reported no appreciable change in average workday during the periods covered by this report. (Pp. 135-136, 139-140, 149.)

<sup>p</sup> Includes manufacture of sole, harness, and belting leather, with some kip, calf, glove, and buck. A frequency distribution of normal hours worked per day in firms at five-year intervals indicates no change during 1860-80, with the overwhelming majority of firms reporting a 10-hour day during that period. (Pp. 307-308).

<sup>q</sup> Includes canning tin, copper, sheet iron work; plumbing and gas fittings; pump, refrigerator and filter manufacturing. (Pp. 233-234.)

<sup>r</sup> "Very complete" wage tabulations, covering small and large establishments. Opportunities for extra earnings through overtime existed for some classes of employees at mills with seasonal output, but little overtime as a rule prevailed at the large establishments. Low rents on housing and cheap boarding rates were allowed at many mills and may have a material effect on wage comparisons. No payments were made to underhands or for tools. Hours were typically 10-11 per day. A frequency distribution of hours worked at quinquennial dates for 1860 to 1880 showed that nearly half of all firms reported 11 hours throughout 1860-80, and another very large group reported 10 hours during this period. However, the proportion of firms reporting more than 11 hours tended to decline and the proportion reporting less than 11 hours increased substantially during the twenty year period. (Pp. 374-376.)

TABLE A-4

Daily Wage-Rates in 10 "Manufacturing" Occupations and 4 "Building" Occupations from Bulletin 18 of the Department of Labor, Weighted by Number Reported Attached to the Occupations at the Decennial Censuses; United States, by Regions, Annually 1870-1880 (current dollars)

Occupation	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
UNITED STATES											
Weighted average, 10 manufacturing occupations	2.05	2.01	2.04	2.04	1.97	1.93	1.90	1.77	1.71	1.69	1.72
Blacksmiths	2.74	2.81	2.82	2.81	2.77	2.70	2.64	2.58	2.55	2.51	2.53
Boilermakers	2.52	2.49	2.51	2.54	2.50	2.44	2.45	2.42	2.34	2.40	2.38
Compositors	3.10	3.11	3.09	3.11	3.05	3.04	3.09	3.00	2.83	2.82	2.84
Cabinetmakers	2.47	2.37	2.36	2.32	2.30	2.23	2.19	2.15	2.11	2.12	2.16
Iron molders	3.06	2.96	2.97	2.94	2.71	2.57	2.41	2.35	2.32	2.23	2.41
Laborers	1.75	1.70	1.73	1.74	1.68	1.66	1.64	1.47	1.41	1.41	1.43
Machinists	2.70	2.62	2.62	2.66	2.63	2.54	2.45	2.43	2.35	2.31	2.37
Stonecutters	3.61	3.59	4.12	3.86	3.44	3.22	2.92	2.66	2.64	2.54	2.65
Patternmakers, iron works	3.08	3.03	3.04	3.09	3.09	3.05	2.99	2.94	3.19	2.91	2.77
Teamsters	1.96	1.97	1.99	1.98	1.99	1.97	1.98	1.96	1.95	1.93	1.96
Weighted average, 4 building occupations	2.97	3.02	3.03	2.96	2.85	2.78	2.67	2.54	2.46	2.47	2.55
Bricklayers and masons	3.51	3.72	3.83	3.64	3.31	3.31	3.11	2.87	2.76	2.83	2.85
Carpenters and joiners	2.88	2.91	2.88	2.86	2.78	2.67	2.59	2.45	2.35	2.37	2.45
Painters, house	2.69	2.68	2.77	2.64	2.53	2.57	2.48	2.44	2.42	2.36	2.50
Plumbers	3.31	3.29	3.13	3.11	3.08	3.13	3.11	3.08	3.06	2.93	3.05
Weighted average, 14 occupations	2.29	2.27	2.28	2.26	2.17	2.13	2.07	1.94	1.87	1.86	1.90

table continues on following pages

Table A-4, continued

Occupation	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890
Weighted average, 10 manufacturing occupations	1.80	1.87	1.89	1.90	1.87	1.89	1.92	1.92	1.91	1.93
Blacksmiths	2.59	2.60	2.62	2.67	2.58	2.62	2.70	2.68	2.63	2.63
Boilermakers	2.37	2.60	2.55	2.55	2.45	2.45	2.48	2.53	2.51	2.50
Compositors	2.85	2.85	2.84	2.93	2.92	2.89	2.90	2.89	2.88	2.88
Cabinetmakers	2.31	2.30	2.30	2.29	2.28	2.33	2.30	2.33	2.33	2.33
Iron molders	2.62	2.52	2.59	2.59	2.48	2.51	2.57	2.55	2.51	2.54
Laborers	1.49	1.57	1.59	1.58	1.56	1.56	1.57	1.56	1.56	1.56
Machinists	2.43	2.55	2.49	2.58	2.47	2.49	2.54	2.54	2.54	2.52
Stonemasons	3.03	3.10	3.22	3.34	3.18	3.28	3.35	3.43	3.48	3.57
Patternmakers, iron works	2.83	2.89	2.89	2.99	2.84	2.90	2.96	3.00	2.93	3.01
Teamsters	1.95	1.96	1.98	1.92	1.95	1.98	1.98	1.99	1.93	2.01
Weighted average, 4 building occupations	2.72	2.81	2.88	2.92	2.89	2.89	2.90	2.92	2.91	2.94
Bricklayers and masons	3.24	3.46	3.51	3.63	3.63	3.61	3.71	3.68	3.72	3.88
Carpenters and joiners	2.60	2.67	2.70	2.73	2.68	2.67	2.65	2.67	2.66	2.67
Painters, house	2.59	2.64	2.81	2.81	2.79	2.82	2.86	2.87	2.83	2.83
Plumbers	3.10	3.06	3.22	3.24	3.26	3.31	3.38	3.38	3.39	3.37
Weighted average, 14 occupations	2.00	2.07	2.11	2.13	2.11	2.13	2.16	2.17	2.17	2.19

Table A-4, continued

Occupation	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
WESTERN CITIES											
Weighted average, 10 manufacturing occupations	2.06	2.06	2.12	2.15	2.01	1.98	1.93	1.86	1.81	1.79	1.83
Blacksmiths	2.85	2.82	2.86	2.89	2.86	2.92	2.80	2.71	2.70	2.66	2.64
Boilermakers	2.91	2.88	2.90	2.98	2.96	2.87	2.80	2.74	2.79	2.75	2.75
Compositors	3.24	3.31	3.29	3.32	3.30	3.35	3.32	3.29	3.02	3.04	3.05
Cabinetmakers	2.50	2.30	2.21	2.29	2.29	2.19	2.22	2.29	2.26	2.14	2.26
Iron molders	3.24	3.28	3.27	3.25	2.89	2.78	2.64	2.48	2.46	2.38	2.56
Laborers	1.75	1.75	1.83	1.87	1.73	1.69	1.64	1.59	1.54	1.52	1.56
Machinists	3.00	3.00	2.96	2.97	2.81	2.76	2.64	2.54	2.50	2.44	2.53
Stonemasons	3.30	3.33	4.29	3.33	3.22	3.11	2.99	2.68	2.58	2.59	2.70
Patternmakers, iron works	3.09	3.14	3.14	3.13	2.99	2.98	2.91	2.79	2.74	2.79	2.73
Teamsters	1.98	2.00	2.03	2.05	1.95	1.96	2.00	2.00	1.95	1.94	1.97
Weighted average, 4 building occupations	2.83	3.00	3.01	2.90	2.71	2.67	2.68	2.64	2.54	2.49	2.47
Bricklayers and masons	3.42	3.99	4.05	3.64	3.31	3.15	3.42	3.15	3.21	3.22	3.30
Carpenters and joiners	2.77	2.88	2.85	2.84	2.65	2.63	2.63	2.60	2.42	2.37	2.30
Painters, house	2.47	2.48	2.67	2.46	2.37	2.33	2.33	2.33	2.29	2.20	2.26
Plumbers	3.50	3.44	3.11	3.18	3.32	3.35	3.27	3.30	3.30	3.27	3.23
Weighted average, 14 occupations	2.25	2.29	2.33	2.32	2.17	2.13	2.10	2.03	1.96	1.93	1.96

Table A-4, continued

Occupation	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890
Weighted average, 10 manufacturing occupations	1.89	1.92	1.93	1.92	1.90	1.92	1.94	1.95	1.96	1.96
Blacksmiths	2.74	2.73	2.69	2.71	2.67	2.67	2.68	2.70	2.71	2.70
Boilermakers	2.71	2.80	2.76	2.79	2.77	2.60	2.59	2.66	2.65	2.65
Compositors	3.00	3.01	2.99	2.99	2.99	2.97	2.97	2.95	2.95	2.96
Cabinetmakers	2.20	2.18	2.09	2.06	2.06	2.23	2.16	2.17	2.17	2.19
Iron molders	2.70	2.71	2.74	2.73	2.61	2.59	2.73	2.74	2.61	2.65
Laborers	1.60	1.63	1.64	1.61	1.59	1.59	1.59	1.58	1.59	1.58
Machinists	2.61	2.64	2.66	2.66	2.61	2.60	2.66	2.66	2.68	2.66
Stonemasons	2.99	3.14	3.25	3.23	3.12	3.42	3.50	3.61	3.61	3.79
Patternmakers, iron works	2.83	2.84	2.83	2.83	2.81	2.82	2.75	2.80	2.76	2.82
Teamsters	1.98	1.97	1.94	1.95	1.93	2.00	2.01	2.01	2.01	2.02
Weighted average, 4 building occupations	2.67	2.72	2.80	2.81	2.78	2.76	2.78	2.78	2.75	2.74
Bricklayers and masons	3.70	3.74	3.93	3.93	4.07	3.95	4.14	4.09	4.18	4.20
Carpenters and joiners	2.47	2.51	2.56	2.60	2.52	2.51	2.49	2.49	2.43	2.42
Painters, house	2.40	2.53	2.58	2.56	2.54	2.53	2.53	2.57	2.55	2.49
Plumbers	3.36	3.08	3.35	3.34	3.33	3.45	3.48	3.45	3.45	3.46
Weighted average, 14 occupations	2.05	2.10	2.12	2.13	2.11	2.12	2.15	2.16	2.16	2.16

Table A-4, continued

Occupation	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
E A S T E R N C I T I E S											
Weighted average, 10 manufacturing occupations	2.07	2.00	2.00	1.99	1.96	1.91	1.88	1.71	1.65	1.63	1.66
Blacksmiths	2.65	2.81	2.79	2.76	2.73	2.58	2.55	2.51	2.45	2.40	2.46
Boilermakers	2.27	2.25	2.29	2.29	2.26	2.21	2.26	2.25	2.12	2.23	2.20
Compositors	3.03	3.01	3.00	3.00	2.92	2.88	2.99	2.86	2.73	2.71	2.74
Cabinetmakers	2.44	2.40	2.41	2.32	2.30	2.24	2.15	2.07	2.02	2.09	2.09
Iron molders	2.97	2.81	2.81	2.79	2.61	2.46	2.29	2.27	2.23	2.14	2.31
Laborers	1.77	1.68	1.68	1.67	1.66	1.63	1.62	1.39	1.32	1.32	1.33
Machinists	2.63	2.50	2.51	2.56	2.57	2.47	2.38	2.39	2.29	2.26	2.31
Stonecutters	3.90	3.82	3.98	4.16	3.68	3.31	2.84	2.63	2.68	2.47	2.59
Patternmakers, iron works	3.07	2.99	2.99	3.07	3.11	3.06	3.02	2.99	3.34	2.94	2.78
Teamsters	1.97	1.96	1.98	1.95	2.03	1.98	1.98	1.95	1.96	1.94	1.96
Weighted average, 4 building occupations	3.07	3.06	3.06	3.00	2.92	2.86	2.67	2.50	2.43	2.47	2.63
Bricklayers and masons	3.58	3.61	3.74	3.66	3.33	3.43	2.97	2.73	2.52	2.62	2.60
Carpenters and joiners	2.98	2.95	2.92	2.88	2.89	2.71	2.57	2.37	2.32	2.39	2.59
Painters, house	2.83	2.81	2.84	2.75	2.66	2.73	2.59	2.52	2.52	2.48	2.67
Plumbers	3.27	3.26	3.14	3.10	3.01	3.07	3.06	3.03	2.99	2.83	3.01
Weighted average, 14 occupations	2.33	2.27	2.27	2.24	2.19	2.13	2.06	1.89	1.82	1.81	1.86

Table A-4, continued

Occupation	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890
Weighted average, 10 manufacturing occupations	1.75	1.84	1.84	1.90	1.87	1.88	1.90	1.90	1.90	1.92
Blacksmiths	2.50	2.51	2.58	2.66	2.52	2.60	2.74	2.68	2.58	2.58
Boilermakers	2.22	2.35	2.45	2.42	2.30	2.38	2.43	2.46	2.43	2.40
Compositors	2.77	2.76	2.77	2.90	2.88	2.85	2.87	2.86	2.84	2.83
Cabinetmakers	2.36	2.37	2.42	2.42	2.40	2.39	2.38	2.42	2.44	2.41
Iron molders	2.57	2.41	2.49	2.51	2.40	2.47	2.46	2.42	2.45	2.47
Laborers	1.40	1.54	1.56	1.56	1.55	1.54	1.54	1.53	1.52	1.55
Machinists	2.36	2.52	2.43	2.56	2.41	2.44	2.50	2.49	2.48	2.46
Stonecutters	3.07	3.07	3.20	3.46	3.25	3.19	3.25	3.32	3.41	3.43
Patternmakers, iron works	2.82	2.91	2.91	3.07	2.86	2.94	3.07	3.10	3.02	3.11
Teamsters	1.94	1.98	2.02	1.92	1.97	1.98	1.97	1.99	2.01	2.02
Weighted average, 4 building occupations	2.79	2.91	2.98	3.03	3.00	3.01	3.04	3.05	3.06	3.11
Bricklayers and masons	3.00	3.33	3.30	3.50	3.40	3.44	3.51	3.49	3.49	3.73
Carpenters and joiners	2.72	2.83	2.85	2.88	2.85	2.84	2.82	2.85	2.88	2.89
Painters, house	2.72	2.74	2.99	2.98	2.97	3.03	3.10	3.10	3.06	3.10
Plumbers	3.02	3.07	3.19	3.23	3.26	3.27	3.35	3.38	3.39	3.35
Weighted average, 14 occupations	1.97	2.08	2.11	2.16	2.14	2.16	2.18	2.19	2.19	2.23

Table A-4, continued

Occupation	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
SOUTHERN CITIES											
Weighted average, 10 manufacturing occupations	1.82	1.81	1.79	1.78	1.74	1.91	1.89	1.70	1.68	1.67	1.67
Blacksmiths	2.77	2.77	2.77	2.77	2.58	2.45	2.45	2.45	2.45	2.45	2.45
Boilermakers	3.63	3.64	3.61	3.63	3.63	3.61	3.65	3.63	3.64	3.60	3.50
Compositors	3.33	3.29	3.27	3.25	3.23	3.22	2.79	3.05	2.81	2.81	2.82
Cabinetmakers	3.50	3.00	3.33	3.00	3.25	3.38	3.38	3.33	3.08	3.08	2.88
Iron molders	3.44	3.25	3.30	3.25	3.42	3.25	2.88	2.88	2.87	2.75	2.75
Laborers	1.50	1.50	1.50	1.50	1.50	1.75	1.75	1.51	1.50	1.50	1.50
Machinists	2.40	2.89	2.83	2.72	2.63	2.54	2.29	2.32	2.34	2.29	2.30
Stonecutters	3.91	3.87	3.83	3.79	3.40	3.24	3.16	2.90	2.91	2.92	2.93
Patternmakers, iron works	4.25	3.83	3.88	4.00	4.00	4.00	3.00	3.00	3.00	2.92	3.00
Teamsters	1.71	1.83	1.84	1.83	1.80	1.83	1.80	1.80	1.76	1.73	1.73
Weighted average, 4 building occupations	2.64	2.68	2.79	2.77	2.53	2.56	2.52	2.36	2.30	2.24	2.24
Bricklayers and masons	3.08	3.38	3.42	3.40	2.92	2.88	2.84	2.84	2.84	2.73	2.84
Carpenters and joiners	2.60	2.60	2.69	2.70	2.55	2.60	2.55	2.31	2.23	2.19	2.15
Painters, house	2.27	2.27	2.54	2.41	1.88	1.88	1.88	2.00	2.00	1.87	2.00
Plumbers	2.91	2.89	2.92	2.91	2.94	2.94	2.91	2.93	2.89	2.93	2.57
Weighted average, 14 occupations	2.06	2.06	2.06	2.04	1.94	2.06	2.03	1.84	1.81	1.79	1.78



Table A-4, concluded

Occupation	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890
Weighted average, 10 manufacturing occupations	1.67	1.67	1.68	1.68	1.69	1.70	1.89	1.90	1.89	1.73
Blacksmiths	2.45	2.45	2.46	2.46	2.46	2.47	2.47	2.48	2.48	2.48
Boilermakers	3.00	3.00	3.00	3.00	2.63	2.63	2.64	2.60	2.64	2.63
Compositors	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.81	2.81
Cabinetmakers	2.88	2.88	2.55	2.88	3.06	2.75	2.53	2.67	2.63	2.83
Iron molders	2.75	2.80	2.88	2.80	2.75	2.57	2.88	2.88	2.88	2.88
Laborers	1.50	1.50	1.50	1.50	1.50	1.50	1.75	1.75	1.75	1.50
Machinists	2.29	2.04	2.04	2.07	2.08	2.08	2.06	2.08	2.08	2.08
Stonecutters	2.96	3.00	2.96	2.93	2.93	2.93	2.93	2.93	2.93	2.93
Patternmakers, iron works	3.00	3.00	3.00	3.00	3.00	2.88	3.00	3.00	3.00	2.88
Teamsters	1.71	1.69	1.71	1.72	1.72	1.82	1.86	1.87	1.76	1.75
Weighted average, 4 building occupations	2.33	2.35	2.40	2.45	2.44	2.33	2.28	2.34	2.33	2.42
Bricklayers and masons	2.96	2.99	3.17	3.17	3.18	3.20	2.98	2.99	3.07	3.22
Carpenters and joiners	2.25	2.27	2.32	2.31	2.29	2.14	2.17	2.25	2.22	2.35
Painters, house	2.00	2.00	2.00	2.39	2.39	2.39	2.11	2.10	2.10	1.95
Plumbers	2.64	2.60	2.32	2.34	2.33	2.33	2.31	2.26	2.35	2.34
Weighted average, 14 occupations	1.81	1.82	1.84	1.86	1.87	1.86	1.99	2.02	2.01	1.93

## SOUTHERN CITIES

Based on the data of twelve large United States cities comprising: eastern cities, Baltimore, Boston, New York, Philadelphia, Pittsburgh; western cities, Chicago, Cincinnati, St. Louis, St. Paul, San Francisco; southern cities, Richmond, New Orleans.

For explanation of the method of weighting, see Chapter 2, above.

Data for the greenback period up to 1879 were converted in this

study into greenback currency, as originally reported by the establishment. The Department of Labor had converted these into gold on the basis of the currency value of gold given in the *American Almanac* and published in Bulletin 18. These conversion rates were used to reconvert the data into the currency value of wages.

Source of wage data: *Bulletin of the Department of Labor*, No. 18, September 1898, ed. Carroll D. Wright, pp. 665-682.

TABLE A-5  
Hourly Wages of Five Skilled Occupations and of Laborers, Various Manufacturing Establishments,  
Aldrich Report, January and July 1860-1890 (current dollars)

Occupation	No. of Estab.	1860		1861		1862		1863		1864		1865		1866		1867		1868		1869			
		Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July		
Blacksmiths	11	0.180	0.178	0.176	0.174	0.189	0.195	0.206	0.224	0.239	0.269	0.281	0.280	0.288	0.290	0.298	0.303	0.303	0.302	0.303	0.303	0.306	
Carpenters	2	.182	.182	.184	.181	.185	.185	.203	.216	.249	.266	.281	.292	.297	.314	.319	.356	.330	.355	.355	.355	.358	
Engineers	6	.148	.148	.147	.149	.149	.150	.158	.165	.167	.187	.203	.204	.204	.214	.215	.220	.221	.225	.225	.225	.228	
Machinists	14	.158	.158	.160	.162	.159	.161	.169	.174	.189	.221	.231	.233	.245	.251	.259	.261	.263	.258	.260	.260	.260	
Painters	1	.125	.125	.125	.125	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	
Average <sup>a</sup>	34	.164	.163	.163	.164	.169	.172	.181	.191	.204	.232	.244	.245	.253	.259	.265	.270	.270	.270	.270	.271	.273	
Laborers <sup>b</sup>		.098	.097	.097	.097	.097	.097	.111	.130	.130	.148	.148	.152	.152	.153	.153	.154	.154	.154	.154	.156	.156	
		1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	
Blacksmiths		.298	.304	.306	.307	.308	.317	.324	.326	.324	.322	.314	.312	.306	.287	.283	.276	.275	.275	.264	.260	.253	
Carpenters		.361	.410	.413	.413	.416	.415	.414	.412	.400	.400	.400	.383	.385	.314	.315	.300	.286	.275	.273	.273	.272	
Engineers		.232	.227	.231	.231	.234	.249	.250	.254	.250	.250	.243	.243	.239	.232	.235	.229	.224	.217	.207	.200	.200	
Machinists		.264	.260	.261	.259	.261	.266	.260	.268	.264	.264	.254	.249	.240	.243	.226	.223	.219	.223	.219	.213	.213	
Painters		.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	.175	
Average <sup>a</sup>		.272	.275	.277	.276	.278	.286	.286	.290	.286	.286	.278	.274	.268	.257	.250	.244	.241	.237	.232	.232	.226	
Laborers <sup>b</sup>		.156	.157	.157	.159	.159	.159	.159	.158	.158	.154	.154	.149	.149	.142	.142	.137	.137	.137	.135	.135	.135	
		1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890
Blacksmiths		.254	.259	.266	.269	.270	.269	.268	.274	.275	.276	.267	.268	.269	.276	.277	.274	.275	.273	.273	.271	.271	
Carpenters		.267	.276	.275	.279	.279	.320	.316	.316	.313	.313	.305	.305	.301	.340	.348	.350	.320	.320	.320	.325	.322	
Engineers		.201	.208	.208	.209	.209	.218	.219	.219	.226	.227	.221	.221	.227	.231	.232	.232	.234	.234	.244	.244	.244	
Machinists		.216	.227	.230	.236	.241	.242	.243	.243	.244	.242	.235	.233	.233	.232	.233	.236	.237	.239	.239	.243	.243	
Painters		.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	
Average <sup>a</sup>		.230	.238	.241	.245	.247	.251	.251	.253	.255	.255	.247	.247	.246	.251	.254	.254	.254	.254	.254	.257	.257	
Laborers <sup>b</sup>		.135	.140	.143	.143	.147	.146	.146	.145	.144	.144	.149	.149	.150	.150	.150	.150	.150	.150	.150	.150	.151	

Source: Compiled by the National Bureau of Economic Research, from the Aldrich Report.

<sup>a</sup> Weighted by number of establishments; unweighted within each occupation.

<sup>b</sup> Laborers in twenty establishments excluding those engaged in public works.

APPENDIX A

TABLE A-6  
Daily Wages of Five Skilled Occupations and of Laborers, Occurring in Various Manufacturing Establishments, Weeks Report, Annually 1860-1880 (current dollars)

<i>Occupation</i>	<i>No. of Estab.</i>	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	
Blacksmiths	26	1.64	1.65	1.77	2.07	2.42	2.61	2.74	2.69	2.73	2.73	
Carpenters	10	1.65	1.80	1.97	2.09	2.58	2.68	2.77	2.75	2.67	2.68	
Engineers	25	1.61	1.65	1.72	1.87	2.19	2.33	2.44	2.38	2.35	2.40	
Machinists	15	1.61	1.66	1.77	2.05	2.28	2.56	2.73	2.73	2.66	2.66	
Painters	9	1.62	1.64	1.76	2.02	2.25	2.31	2.40	2.47	2.52	2.61	
Average <sup>a</sup>	85	1.62	1.67	1.78	2.00	2.33	2.50	2.62	2.59	2.58	2.60	
Laborers <sup>b</sup>		1.03	1.04	1.08	1.20	1.39	1.48	1.53	1.53	1.51	1.53	
		1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Blacksmiths		2.68	2.66	2.69	2.70	2.52	2.41	2.32	2.27	2.23	2.21	2.31
Carpenters		2.64	2.57	2.59	2.52	2.42	2.42	2.12	2.06	2.03	2.05	2.15
Engineers		2.47	2.38	2.53	2.50	2.40	2.33	2.17	2.11	2.06	2.08	2.17
Machinists		2.67	2.72	2.72	2.73	2.53	2.47	2.34	2.29	2.29	2.35	2.45
Painters		2.67	2.67	2.70	2.68	2.60	2.35	2.20	2.09	2.04	2.08	2.21
Average <sup>a</sup>		2.61	2.58	2.64	2.62	2.48	2.39	2.24	2.18	2.15	2.16	2.26
Laborers <sup>b</sup>		1.52	1.50	1.52	1.52	1.43	1.39	1.33	1.28	1.26	1.27	1.32

Source: Compiled by the National Bureau of Economic Research, from the Weeks Report.

<sup>a</sup> Weighted by number of establishments; unweighted within each occupation.

<sup>b</sup> Laborers in seventy-eight establishments.

APPENDIX A

TABLE A-7  
Daily and Hourly Wage-Rates by Sex, Age, Industry, and Number of Employees,  
First Annual Report, 1885  
(wage rates in current dollars)

Industry	AVERAGE DAILY WAGE-RATES				AVERAGE HOURLY WAGE-RATES				Average Hours Per Day
	Adult		Children and Youths	Total	Adult		Children and Youths	Total	
	Males	Females			Males	Females			
Agricultural implements	1.86		0.69	1.84	0.187		0.069	0.185	9.95
Arms and ammunition	2.02			2.02	0.202			0.202	10.00
Artisans' tools	1.59		1.12	1.55	0.159		0.112	0.155	10.00
Boots and shoes	2.05	1.24	0.75	1.71	0.206	0.125	0.076	0.172	9.93
Boxes	2.26	0.65	0.64	1.07	0.226	0.065	0.064	0.107	10.00
Bricks	1.49		0.50	1.47	0.149		0.050	0.147	10.00
Brooms	1.47			1.47	0.147			0.147	10.00
Carpetings	1.51	1.19	0.62	1.27	0.150	0.118	0.061	0.126	10.10
Carriages and wagons	2.00	1.15	0.77	1.95	0.200	0.115	0.077	0.195	10.00
Clocks and watches	2.00	1.60		1.87	0.200	0.160		0.187	10.00
Clothing	1.72	0.91	0.58	1.18	0.169	0.090	0.057	0.116	10.15
Cooking and heating apparatus	2.28		0.72	1.92	0.228		0.072	0.192	10.00
Cotton compressing	1.70			1.70	0.170			0.170	10.00
Cotton goods	1.26	0.87	0.48	0.88	0.115	0.079	0.044	0.080	10.97
Engraving and printing	3.36			3.36	0.305			0.305	11.00
Food preparations	1.86		0.77	1.80	0.158		0.066	0.153	11.75
Furniture	1.59		0.58	1.50	0.161		0.059	0.152	9.88
Glass	2.98	1.85	0.62	2.18	0.307	0.191	0.064	0.225	9.70
Jute goods	1.55	0.85	0.58	0.93	0.152	0.084	0.057	0.091	10.17
Leather	1.92	1.35	0.70	1.84	0.189	0.133	0.069	0.181	10.17
Liquors and beverages	2.01			2.01	0.173			0.173	11.63
Lumber	1.58			1.58	0.150			0.150	10.50
Machines and machinery	2.12		0.69	2.01	0.212		0.069	0.201	10.00
Metals and metallic goods	1.80		0.74	1.76	0.168		0.069	0.164	10.70
Musical instruments and materials	2.10	1.50	0.69	1.98	0.210	0.150	0.069	0.198	10.00
Oils and illuminating fluids	1.55			1.55	0.155			0.155	10.00
Paper	1.64	0.96	0.73	1.43	0.140	0.082	0.062	0.122	11.75

table continues on following pages

APPENDIX A

TABLE A-7, *continued*

<i>Industry</i>	AVERAGE DAILY WAGE-RATES				AVERAGE HOURLY WAGE-RATES				<i>Average Hours Per Day</i>
	<i>Adult Males</i>	<i>Adult Females</i>	<i>Children and Youths</i>	<i>Total</i>	<i>Adult Males</i>	<i>Adult Females</i>	<i>Children and Youths</i>	<i>Total</i>	
Print works	1.66	0.91	0.66	1.30	0.163	0.090	0.065	0.128	10.17
Railroad construction	1.68		0.61	1.62	0.168		0.061	0.162	10.00
Rubber	1.70	1.10	1.04	1.41	0.170	0.110	0.104	0.141	10.00
Silk	2.27	1.31	0.87	1.52	0.220	0.127	0.084	0.147	10.33
Stone	2.18			2.18	0.218			0.218	10.00
Tobacco	1.33	0.85	0.53	0.97	0.135	0.086	0.054	0.099	9.83
Vessels	1.77		0.70	1.74	0.177		0.070	0.174	10.00
Wooden goods	1.90		0.74	1.64	0.190		0.074	0.164	10.00
Woolen goods	1.49	1.00	0.62	1.21	0.140	0.094	0.058	0.113	10.67
Miscellaneous	1.96	0.81	1.04	1.49	0.193	0.080	0.102	0.147	10.15
Weighted averages <sup>a</sup>									
All manufacturing	1.79			1.44	0.174			0.140	
Industries with females	1.71	1.00			0.168	0.096		0.161	
Industries with children	1.79		0.59		0.174		0.057		
Industries represented in Aldrich Report	1.70			1.37				0.129	10.62

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TABLE A-7, *concluded*

<i>Industry</i>	NUMBER OF ESTABLISHMENTS	NUMBER OF EMPLOYEES			<i>Total</i>
		<i>Adult Males</i>	<i>Adult Females</i>	<i>Children and Youths</i>	
Agricultural implements	20	5,843		84	5,927
Arms and ammunition	1	437			437
Artisans' tools	1	91		8	99
Boots and shoes	48	4,900	2,567	517	7,984
Boxes	3	112	287	31	430
Bricks	5	461		8	469
Brooms	5	359			359
Carpetings	10	6,213	4,404	1,674	12,291
Carriages and wagons	12	1,404	45	27	1,476
Clocks and watches	2	781	395		1,176
Clothing	21	1,289	1,299	551	3,139
Cooking and heating apparatus	25	4,736		1,407	6,143
Cotton compressing	1	26			26
Cotton goods	48	7,211	12,056	6,596	25,863
Engraving and printing	1	77			77
Food preparations	28	1,543		94	1,637
Furniture	8	1,332		127	1,459
Glass	29	2,580	27	1,327	3,934
Jute goods	3	161	301	213	675
Leather	12	869	28	52	949
Liquors and beverages	11	493			493
Lumber	7	834			834
Machines and machinery	15	2,357		203	2,560
Metals and metallic goods	66	20,026		736	20,762
Musical instruments and materials	7	1,802	18	159	1,979
Oils and illuminating fluids	3	193			193
Paper	16	1,220	500	32	1,752
Print works	6	1,355	176	670	2,201
Railroad construction	5	559		31	590
Rubber	4	1,169	944	118	2,231
Silk	6	419	1,138	107	1,664
Stone	1	194			194
Tobacco	36	3,005	1,751	2,035	6,791
Vessels	5	2,576		62	2,638
Wooden goods	3	283		81	364
Woolen goods	38	4,933	2,379	1,564	8,876
Miscellaneous	7	694	356	176	1,226
Total	519	82,537	28,671	18,690	129,898
Industries with females		40,117	28,671		
Industries with children		79,143		18,690	
Industries in Aldrich Report		46,246			71,394

Source: *The First Annual Report of the Commissioner of Labor* (March 1886), p. 226.

\* Computed in this study.

APPENDIX A

TABLE A-8  
Hourly Wage-Rates by Sex, Age, Industry, and Number of Employees,  
Dewey Report, 1890

Industry	Median Hourly Wages (current dollars)						
	Males 16 and over	Females 16 and over	Males Under 16	Females Under 16	Total Males	Total Females	Total
Agricultural implements	0.160		0.050		0.159		0.159
Breweries	.210		a		.210 <sup>a</sup>	0.060	.200 <sup>a</sup>
Candy					.130	.050	.080
Car and railroad shops	.200				.200		.200
Carpet mills	.150	0.090	.060	.050	.137	.081	.120
Chemicals	.140				.140		.140
Cigars	.210	.110			.210	.110	.180
Clothing	.200	.070		a	.200	.070 <sup>a</sup>	.120 <sup>a</sup>
Collars and cuffs		.080		.050		.072	.070
Cotton mills	.110	.090	a	a	.110 <sup>a</sup>	.090 <sup>a</sup>	.100 <sup>a</sup>
Distilleries	.150				.150		.150
Dyeing and finishing	.120	.100	.060		.118	.100	.120
Flour mills	.200				.200		.200
Foundries and metal working	.170	.070	.060		.168	.070	.160
Furniture	.160		a		.160 <sup>a</sup>		.160 <sup>a</sup>
Glass	.170	.060	.060		.135	.060	.130
Iron and steel mills	.150	.080	.050		.149	.080	.150
Knitting mills	.130	.080		.050	.130	.075	.100
Lumber and planing mills	.140		.070		.138		.138
Paper mills	.140	.080			.140	.080	.130
Pianos	.160		a		.160 <sup>a</sup>		.160 <sup>a</sup>
Potteries and brickyards	.210				.212	.090	.190
Printing	.290	.080	.050		.280	.080	.260
Rubber	.150	.110			.150	.110	.150
Shipyards	.210				.210		.210
Shoes	.190	.100	a	a	.190 <sup>a</sup>	.100 <sup>a</sup>	.170 <sup>a</sup>
Slaughtering	.170				.170		.170
Tanneries	.150	.060	.050		.149	.060	.150
Tobacco	.090		a		.090 <sup>a</sup>	.050	.080 <sup>a</sup>
Wagons and carriages	.160		.050		.158		.158
Woolen mills	.120	.100	.050	.050	.115	.094	.100
Weighted averages of medians							
All industries	.167			.050 <sup>a</sup>	.165 <sup>a</sup>	.084 <sup>a</sup>	.153 <sup>a</sup>
Industries with females	.163	.090					
Industries with male children	.163		.058 <sup>a</sup>				

table continues on following page

APPENDIX A

TABLE A-8, *concluded*

Industry	Number of Employees						
	Males 16 and over	Females 16 and over	Males Under 16	Females Under 16	Total Males	Total Females	Total
Agricultural implements	4,093		41		4,134		4,134
Breweries	3,123		24 <sup>a</sup>		3,123 <sup>a</sup>	311	3,434 <sup>a</sup>
Candy					375	573	948
Car and railroad shops	6,131				6,131		6,131
Carpet mills	763	272	126	80	889	352	1,241
Chemicals	3,307				3,307		3,307
Cigars	697	254			697	254	951
Clothing	737	1,263		160 <sup>a</sup>	737	1,263 <sup>a</sup>	2,000 <sup>a</sup>
Collars and cuffs		198		73		271	271
Cotton mills	2,880	3,877	392 <sup>a</sup>	231 <sup>a</sup>	2,880 <sup>a</sup>	3,877 <sup>a</sup>	6,757 <sup>a</sup>
Distilleries	123				123		123
Dyeing and finishing	1,777	213	63		1,840	213	2,053
Flour mills	1,026				1,026		1,026
Foundries and metal working	23,170	617	479		23,649	617	24,266
Furniture	2,936		106 <sup>a</sup>		2,936 <sup>a</sup>		2,936 <sup>a</sup>
Glass	2,774	188	1,271		4,045	188	4,233
Iron and steel mills	16,835	37	97		16,932	37	16,969
Knitting mills	280	284		57	280	341	621
Lumber and planing mills	2,227		80		2,307		2,307
Paper mills	897	224			897	224	1,121
Pianos	825		21 <sup>a</sup>		825 <sup>a</sup>		825 <sup>a</sup>
Potteries and brickyards	691				691	137	828
Printing	3,082	374	131		3,213	374	3,587
Rubber	995	99			995	99	1,094
Shipyards	4,691				4,691		4,691
Shoes	1,372	362	139 <sup>a</sup>	90 <sup>a</sup>	1,372 <sup>a</sup>	362 <sup>a</sup>	1,734 <sup>a</sup>
Slaughtering	9,076				9,076		9,076
Tanneries	2,546	18	17		2,563	18	2,581
Tobacco	1,232		215 <sup>a</sup>		1,232 <sup>a</sup>	278	1,510 <sup>a</sup>
Wagons and carriages	2,056		42		2,098		2,098
Woolen mills	3,585	3,639	296	475	3,881	4,114	7,995
Total	103,927	11,919	2,643 <sup>a</sup>	685 <sup>a</sup>	106,945 <sup>a</sup>	13,903 <sup>a</sup>	120,848 <sup>a</sup>

Source: Census of 1900, *Employees and Wages*, by Davis R. Dewey.

<sup>a</sup> Where median wage was less than five cents per hour, the median was not reported and the number employed at that wage was not included in totals and averages.



APPENDIX A

TABLE A-9

Average Annual Earnings of Manufacturing Wage Earners in 17 Industries; United States, by Regions; Census, Decennial Years Ending May 31, 1860-1890 (current dollars)

Industry	United States				New England				Middle Atlantic <sup>a</sup>			
	1860	1870	1880	1890	1860	1870	1880	1890	1860	1870	1880	1890
Foundry and machine shop production	392	573	454	559	395	565	468	569	364	575	451	572
Carriages and wagons	362	387	411	508	392	488	481	603	347	398	420	525
Liquors, malt	358	543	465	685	407	527	472	745	331	622	480	755
Agricultural implements	342	481	388	466	338	457	411	488	320	485	372	475
Iron and steel, rolling mills	341	570	436	542	402	530	394	490	334	561	442	542
Liquors, distilled	324	394	410	467	464	492	424	512	437	364	420	565
Glass	322	496	378	465	308	429	405	405	325	497	380	467
Cigars and cigarettes	317	349	346	419	334	420	407	486	312	337	366	404
Flour and grist mills	315	249	298	383	286	240	341	437	309	248	303	410
Leather	312	411	403	501	357	510	428	526	302	430	393	488
Lumber sawed	298	267	215	289	289	263	184	287	268	265	192	266
Iron and Steel, blast furnaces	285	453	304	437	301	714	338	488	284	465	342	434
Paper	254	398	349	427	254	413	354	442	240	390	332	428
Woolen goods	232	336	299	340	240	360	314	333	234	331	295	337
Cotton goods	196	288	244	302	205	303	253	325	188	276	233	320
Brick and tile	195	249	203	285	146	241	193	281	206	296	232	314
Chewing and smoking tobacco	189	239	196	233	-	-	-	-	238	280	298	338
The 17 Industries:												
Median	315	394	349	437	321	448	400	487	309	364	366	434
Weighted mean	277	363	325	412	251	359	308	393	286	399	357	464
Simple mean	296	393	341	430	320	435	367	464	296	401	350	449
All manufacturing (excluding men's clothing, and boots and shoes)	297	384	345	427								

table continues on following page

APPENDIX A

TABLE A-9, *concluded*

Industry	South <sup>a</sup>				Central <sup>b</sup>				Pacific			
	1860	1870	1880	1890	1860	1870	1880	1890	1860	1870	1880	1890
Foundry and machine shop production	408	600	360	504	378	529	445	529	1,667	1,188	650	807
Carriages and wagons	336	300	306	427	341	351	394	478	924	684	634	721
Liquors, malt	392	464	406	581	335	481	451	614	854	572	468	846
Agricultural implements	326	327	266	377	361	488	440	461	842	615	508	757
Iron and steel, rolling mills	281	584	343	407	391	606	458	564	-	-	-	-
Liquors, distilled	232	190	243	236	322	432	422	475	833	413	486	310
Glass	300	147	330 <sup>c</sup>	384	298	621	376	458	-	-	-	-
Cigars and cigarettes	342	488	251	478	289	332	349	408	928	287	270	410
Flour and grist mills	240	122	163	204	336	322	356	425	867	549	543	619
Leather	253	160	236	308	305	349	429	521	653	404	554	641
Lumber, sawed	242	222	173	269	276	268	240	283	700	433	341	458
Iron and steel, blast furnaces	212	353	231	401	318	459	287	482	-	-	-	-
Paper	348	389	273	315	270	382	365	403	357	650	533	621
Woolen goods	179	189	169	242	253	273	231	275	555	408	393	246
Cotton goods	146	188	164	194	194	261	222	249	-	-	-	-
Brick and tile	177	185	144	226	185	207	194	264	375	205	246	372
Chewing and smoking tobacco	178	146	127	170	212	327	254	307	-	-	-	-
Median	253	222	243	315	305	351	365	458	838	491	496	620
Weighted mean, all manufacturing	233	223	183	280	304	358	335	409	790	475	448	528
Simple mean	270	297	246	337	298	393	348	423	796	534	469	567

Source: Censuses of Manufactures, 1860-1890. The coverage of the industries in each year is as nearly the same as it was possible to make it.

<sup>a</sup> Delaware, Maryland, and West Virginia are included in the Middle Atlantic states.

<sup>b</sup> Kentucky is included in the Central states.

<sup>c</sup> Data on wage earners in glass manufactures not given separately for the southern states in 1890; estimated on the basis of the 1890 country-wide ratio between wages of wage earners and of all employees in glass manufacturing.

APPENDIX A

TABLE A-10  
 Manufacturing and Building Wages Adjusted for Changes in Living Cost; Annually  
 1860-1890

		MANUFACTURING						BUILDING			
		<i>Aldrich</i>		<i>Weeks</i>		<i>Bulletin 18</i>		<i>Aldrich</i>		<i>Bulletin 18</i>	
<i>Cost of Living</i>	<i>1860=100</i>	<i>Current</i>	<i>1860</i>	<i>Current</i>	<i>1860</i>	<i>Current</i>	<i>1860</i>	<i>Current</i>	<i>1860</i>	<i>Current</i>	<i>1860</i>
		<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
1860	100	1.19	1.19	1.32	1.32			1.69	1.69		
1861	101	1.17	1.16	1.36	1.35			1.66	1.64		
1862	114	1.23	1.08	1.53	1.34			1.72	1.51		
1863	140	1.31	.94	1.51	1.08			1.89	1.35		
1864	177	1.48	.84	1.72	.97			2.21	1.25		
1865	176	1.64	.93	1.82	1.03			2.55	1.45		
1866	168	1.72	1.02	1.90	1.13			2.74	1.63		
1867	159	1.75	1.10	1.94	1.22			2.94	1.85		
1868	154	1.76	1.14	1.92	1.25			3.00	1.95		
1869	147	1.80	1.22	1.93	1.31			3.16	2.15		
1870	141	1.79	1.27	1.92	1.36	2.05	1.45	3.06	2.17	2.97	2.11
1871	136	1.81	1.33	1.95	1.43	2.01	1.48	2.93	2.15	3.02	2.22
1872	135	1.82	1.35	1.95	1.44	2.04	1.51	2.92	2.16	3.03	2.24
1873	133	1.85	1.39	1.97	1.48	2.04	1.53	2.85	2.14	2.96	2.23
1874	129	1.80	1.40	1.87	1.45	1.97	1.53	2.77	2.15	2.85	2.21
1875	123	1.72	1.40	1.84	1.50	1.93	1.57	2.69	2.19	2.78	2.26
1876	119	1.68	1.41	1.79	1.50	1.90	1.60	2.43	2.04	2.67	2.24
1877	119	1.59	1.34	1.75	1.47	1.77	1.49	2.28	1.92	2.54	2.13
1878	111	1.52	1.37	1.72	1.55	1.71	1.54	2.17	1.95	2.46	2.22
1879	109	1.49	1.37	1.72	1.58	1.69	1.55	2.17	1.99	2.47	2.27
1880	110	1.54	1.40	1.77	1.61	1.72	1.56	2.14	1.95	2.55	2.32
1881	110	1.56	1.42			1.80	1.64	2.35	2.14	2.72	2.47
1882	110	1.59	1.45			1.87	1.70	2.53	2.30	2.81	2.55
1883	108	1.63	1.51			1.89	1.75	2.54	2.35	2.88	2.67
1884	106	1.66	1.57			1.90	1.79	2.56	2.42	2.92	2.75
1885	103	1.61	1.56			1.87	1.82	2.56	2.49	2.89	2.81
1886	101	1.62	1.60			1.89	1.87	2.63	2.60	2.89	2.86
1887	102	1.67	1.64			1.92	1.88	2.59	2.54	2.90	2.84
1888	102	1.69	1.66			1.92	1.88	2.61	2.56	2.92	2.86
1889	99	1.73	1.75			1.91	1.93	2.69	2.72	2.91	2.94
1890	98	1.75	1.79			1.93	1.97	2.68	2.73	2.94	3.00

Source: Wage data, Tables A-1 through A-4; cost of living, Tables B-1, -2.

APPENDIX A

TABLE A-11

Average Hourly Wages in Manufacturing Adjusted for Changes in Living Cost; Annually 1860-1890

	<i>Money Hourly Wages, Cents</i>	<i>Cost of Living, 1890=100</i>	<i>Real Hourly Wages 1890 Cents</i>		<i>Money Hourly Wages, Cents</i>	<i>Cost of Living, 1890=100</i>	<i>Real Hourly Wages 1890 Cents</i>
1860	9.5	102	9.3	1875	14.0	126	11.1
1861	9.7	103	9.4	1876	13.7	121	11.3
1862	10.6	116	9.1	1877	13.2	121	10.9
1863	10.7	143	7.5	1878	12.8	113	11.3
1864	12.2	181	6.7	1879	12.6	111	11.4
1865	13.4	180	7.4	1880	13.0	112	11.6
1866	13.8	171	8.1	1881	13.5	112	12.1
1867	14.1	162	8.7	1882	13.8	112	12.3
1868	14.2	157	9.0	1883	14.2	110	12.9
1869	14.4	150	9.6	1884	14.4	108	13.3
1870	14.5	144	10.1	1885	14.1	105	13.4
1871	14.7	139	10.6	1886	14.3	103	13.9
1872	14.8	138	10.7	1887	14.9	104	14.3
1873	15.0	136	11.0	1888	15.0	104	14.4
1874	14.4	132	10.9	1889	15.1	101	15.0
				1890	15.3	100	15.3

Source: Tables 13, A-8, A-10, B-1, and B-2.

Method: The Aldrich and Weeks-Bulletin 18 series on daily wages were averaged and adjusted to the level of average daily wages in 1890 in the Dewey Report. These were divided by the Aldrich series on average daily hours of work for 13 industries.

APPENDIX A

TABLE A-12

Wages of Skilled and Laboring Occupations Adjusted for Changes in Living Cost;  
Annually 1860-1890

	FIVE SKILLED OCCUPATIONS				LABORERS			
	<i>Aldrich Data</i>		<i>Weeks Data</i>		<i>Aldrich Data</i>		<i>Weeks Data</i>	
	<i>Current Dollars</i>	<i>1860 Dollars</i>	<i>Current Dollars</i>	<i>1860 Dollars</i>	<i>Current Dollars</i>	<i>1860 Dollars</i>	<i>Current Dollars</i>	<i>1860 Dollars</i>
1860	0.164	0.164	1.62	1.62	0.098	0.098	1.03	1.03
1861	0.164	0.162	1.67	1.65	0.097	0.096	1.04	1.03
1862	0.171	0.150	1.78	1.56	0.097	0.085	1.08	0.95
1863	0.186	0.133	2.00	1.43	0.111	0.079	1.20	0.86
1864	0.218	0.123	2.33	1.32	0.130	0.073	1.39	0.79
1865	0.245	0.139	2.50	1.42	0.148	0.084	1.48	0.84
1866	0.256	0.152	2.62	1.56	0.152	0.090	1.53	0.91
1867	0.268	0.169	2.59	1.63	0.153	0.096	1.53	0.96
1868	0.270	0.175	2.58	1.68	0.154	1.000	1.51	0.98
1869	0.272	0.185	2.60	1.77	0.156	1.061	1.53	1.04
1870	0.274	0.194	2.61	1.85	0.156	1.106	1.52	1.08
1871	0.277	0.204	2.58	1.90	0.157	1.154	1.50	1.10
1872	0.282	0.209	2.64	1.96	0.159	1.177	1.52	1.13
1873	0.288	0.217	2.62	1.97	0.159	1.195	1.52	1.14
1874	0.286	0.222	2.48	1.92	0.158	1.225	1.43	1.11
1875	0.276	0.224	2.39	1.94	0.154	1.252	1.39	1.13
1876	0.263	0.221	2.24	1.88	0.149	1.252	1.33	1.12
1877	0.247	0.208	2.18	1.83	0.142	1.193	1.28	1.08
1878	0.239	0.215	2.15	1.94	0.137	1.234	1.26	1.14
1879	0.228	0.209	2.16	1.98	0.135	1.239	1.27	1.17
1880	0.234	0.213	2.26	2.05	0.135	1.227	1.32	1.20
1881	0.243	0.221			0.140	1.272		
1882	0.249	0.226			0.143	1.300		
1883	0.252	0.233			0.147	1.360		
1884	0.255	0.241			0.146	1.377		
1885	0.247	0.240			0.145	1.407		
1886	0.249	0.247			0.144	1.426		
1887	0.254	0.249			0.149	1.460		
1888	0.255	0.250			0.150	1.470		
1889	0.255	0.258			0.150	1.515		
1890	0.257	0.262			0.151	1.540		

APPENDIX A

TABLE A-13

Annual Earnings of Factory Wage Earners (Census), Adjusted for Changes in Living Cost; United States, by Industry and Region, Decennial Years Ending May 31, 1860-1890 (1860 dollars)

	1860	1870	1880	1890
Cost of living <sup>a</sup>	100	144	109.5	98.5
Foundry and machine shop	392	398	415	567
Carriages and wagons	362	269	375	516
Liquors, malt	358	377	425	695
Agricultural implements	342	334	354	473
Iron and steel, rolling mills	341	396	398	550
Liquors, distilled	324	274	374	474
Glass	322	344	345	472
Cigars and cigarettes	317	242	316	425
Flour and grist mills	315	173	272	389
Leather	312	285	368	509
Lumber, sawed	298	185	196	293
Iron and steel, blast furnaces	285	315	278	444
Paper	254	276	319	433
Woolen goods	232	233	273	345
Cotton goods	196	200	223	307
Brick and tile	195	173	185	289
Chewing and smoking tobacco	189	166	179	236
Weighted means, 17 industries:				
United States	277	252	297	418
New England	251	249	281	399
Middle Atlantic	286	277	326	471
South	233	155	167	284
Central	304	249	306	415
Pacific	790	330	409	536
United States: all manufacturing	297	267	315	433

<sup>a</sup> Since the decennial years covered the twelve months ending May 31, the cost of living index for each decennial year was the average of that year and the preceding year.

APPENDIX B

TABLE B-1  
The Hoover Consumer Price Index for the United States during 1860-1880  
(1860=100)

	<i>All Items</i>	<i>Food</i>	<i>Clothing</i>	<i>Rent</i>	<i>Fuel and Light</i>	<i>Other</i>
Weight	100.0	54.8	18.0	16.9	7.9	2.4
1860	100	100	100	100	100	100
1861	101	99	110	95	103	102
1862	114	108	143	101	112	105
1863	140	131	197	113	136	115
1864	177	168	261	130	155	141
1865	176	172	238	134	159	147
1866	168	172	194	138	152	146
1867	159	167	166	135	140	144
1968	154	165	148	138	133	144
1869	147	152	148	141	132	145
1870	141	143	141	142	126	143
1871	136	138	128	144	125	142
1872	135	138	126	144	122	141
1873	133	136	122	139	120	142
1874	129	135	115	133	114	141
1875	123	129	105	129	110	140
1876	119	124	104	123	106	138
1877	119	127	99	123	98	138
1878	111	114	95	124	93	135
1879	109	111	94	122	92	134
1880	110	111	94	127	95	133

Source: Ethel D. Hoover, "Prices in the Nineteenth Century," *Trends in the American Economy in the Nineteenth Century*, Studies in Income and Wealth, Vol. 24 (in press).

APPENDIX B

TABLE B-2

A new Consumer Price Index for the United States during 1880-1890,  
Prepared in This Study for Linkage with the Hoover Index

	1880=100,		1860=100				
	<i>All Items</i>	<i>All Items</i>	<i>Food</i>	<i>Clothing</i>	<i>Rent</i>	<i>Fuel and Light</i>	<i>Other<sup>a</sup></i>
Weights		100.0	42.5	14.0	13.0	5.3	25.2
1880	100	110	111	94	127	95	133
1881	100	110	111	95	127	93	132
1882	100	110	111	93	127	93	133
1883	98	108	110	91	126	89	130
1884	96	106	105	88	126	89	128
1885	94	103	103	86	126	86	125
1886	92	101	102	85	126	86	121
1887	93	102	102	85	124	91	121
1888	93	102	102	86	124	92	121
1889	90	99	98	84	124	92	120
1890	89	98	99	82	124	88	114

Source and method: Chapter 4, above, and Appendix Table B-3.

<sup>a</sup> Combines housefurnishings and miscellaneous.



TABLE B-3  
A New Consumer Price Index Constructed from Retail Price Data for Food, Clothing, Housing, Fuel and Light,  
and Other Cost of Living Items, 1880-1890

	Number of Unit Quotations	Percent of Family Expense	Index (1880=100)															
			1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890					
Food		42.50	100	100	100	99	95	93	92	92	92	92	88	88	89			
Beef, roasting	lb.	3.95	100	100	100	103	106	109	109	96	91	93	88	93	91			
Beef, steak	lb.	3.95	100	100	100	97	98	97	97	90	97	89	89	85	83			
Pork, fresh	lb.	2.18	100	100	100	100	100	100	103	94	91	88	88	85	79			
Pork, bacon	lb.	0.38	100	100	100	100	103	96	94	93	90	93	92	89	82			
Pork, corned	lb.	0.38	100	100	100	101	101	102	96	95	93	96	92	93	92			
Pork, ham	lb.	0.38	100	100	100	108	106	106	101	100	87	92	84	92	87			
Codfish, dried	lb.	0.57	100	103	106	109	109	109	109	96	91	93	88	93	91			
Eggs	doz.	1.60	100	100	100	100	100	100	103	94	91	88	88	85	79			
Milk	qt.	2.89	100	100	100	100	103	96	94	93	90	93	92	89	85			
Butter	lb.	5.60	100	100	100	101	101	102	96	95	93	96	92	93	92			
Cheese	lb.	0.34	100	100	100	108	106	106	101	100	87	92	84	92	87			
Lard	lb.	1.02	100	100	100	108	106	106	101	100	87	92	84	92	87			
Tea, Oolong	lb.	0.87	100	96	93	90	89	89	88	86	81	82	80	79	83			
Coffee, Rio roasted	lb.	1.35	100	100	96	94	94	94	91	89	101	100	100	103	103			
Coffee, Rio green	lb.	4	100	100	98	98	94	94	94	91	94	97	94	92	92			
Sugar, granulated	lb.	9	100	97	96	92	83	79	74	75	78	77	71	71	71			
Sugar, coffee	lb.	5	100	98	100	97	89	89	85	87	86	81	78	78	78			
Molasses, New Orleans	gal.	8	100	99	98	97	93	93	88	89	88	89	88	87	87			
Molasses, Puerto Rico	gal.	6	100	99	102	98	98	92	89	90	90	90	88	88	91			
Syrup	gal.	8	100	99	99	98	89	90	89	90	89	90	90	84	83			
Flour: wheat, superfine	lb.	7	100	96	96	94	88	87	83	82	85	75	77	77	77			
Flour: wheat, family	lb.	5	100	92	92	100	81	81	79	79	86	73	77	77	77			
Rye	lb.	6	100	100	96	96	98	90	90	90	89	88	86	86	86			
Corn meal	lb.	7	100	96	93	87	86	95	85	85	90	84	80	80	80			
Rice	lb.	8	100	97	98	96	96	92	93	89	90	88	88	88	88			
Beans	lb.	6	100	108	100	98	97	89	90	95	91	90	88	88	88			
Potatoes	bu.	5	100	106	101	97	101	95	92	101	95	92	101	95	117			

table continues on following pages

Table B-3, continued

Unit Quotations	Number of Quotations	Percent of Family Expense	1880 Price	Index (1880=100)										
				1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890
Clothing				100	101	99	97	94	91	90	90	91	89	87
Men's suits	1	14.00	12.92	100	97	117	108	113	99	102	101	106	111	96
Overalls	1	1.41	0.70	100	106	100	97	100	99	99	100	110	99	99
Dresses, cloth for				100	108	100	90	86	82	79	79	79	77	77
Gingham	7	0.84	0.111	100	108	100	90	86	82	79	79	79	77	77
Shirting checks	8	0.84	0.161	100	95	96	91	90	86	86	87	87	86	84
Boots and shoes				100	100	101	95	87	93	90	91	89	90	76
Leather boots	2	0.70	3.44	100	100	101	95	87	93	90	91	89	90	76
Gum boots	2	0.14	3.35	100	96	96	94	93	85	82	82	81	81	72
Shoes	1	0.70	1.59	100	101	107	108	109	107	104	108	109	106	103
Shoe repair	1	0.70	0.65	100	100	100	100	89	100	100	100	100	100	108
Miscellaneous				100	99	102	99	95	93	90	89	89	89	90
Flannel cloth	12	3.63	0.156	100	99	102	99	95	93	90	89	89	89	90
Denim cloth	7	3.63	0.193	100	101	87	91	84	81	79	81	78	76	76
Rent				100	100	100	99	99	99	99	99	98	98	98
Four rooms	4	6.50	2.62											
Six rooms	4	6.50	2.84											
Fuel and light				100	98	98	94	94	91	90	96	97	97	93
Coal	3	2.40	2.83	100	98	100	92	94	92	88	100	100	100	88
Wood	5	2.40	6.10	100	99	98	97	95	93	95	97	99	101	103
Kerosene	6	0.50	0.195	100	96	88	88	85	78	76	72	69	68	67
House furnishings				100	98	97	95	94	88	85	85	84	84	84
Woolen blankets	3	1.13	6.17	100	100	100	100	99	95	95	93	92	91	88
Carpets, ingrain	11	1.13	1.25	100	96	91	91	93	85	79	76	78	74	78
Sheeting, 4-4	8	0.57	0.101	100	102	101	95	90	85	84	88	79	89	88
Sheeting, 9-4	8	0.57	0.300	100	95	101	94	90	84	80	81	84	83	84

Table B-3, concluded

Miscellaneous	Unit	Number of Quotations	Percent of Family Expense	Index (1880 = 100)											
				1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	
Tobacco	lb.	1	21.80	100	99	100	99	96	96	95	92	92	92	91	86
Insurance, fire	\$1000	1	2.68	100	98	109	100	94	96	84	84	81	83	84	77
Newspapers	daily paper	8	0.80	100	91	73	95	69	75	82	108	94	94	97	98
Stamps	oz.	3	2.50	100	100	104	92	88	88	86	84	88	88	76	74
Soap	bar	6	0.57	100	100	100	82	82	45	45	45	45	45	45	45
Starch	lb.	6	2.28	100	100	100	103	103	97	97	97	93	93	90	90
R. R. fares	pass. mile	5	2.28	100	98	98	98	93	93	83	83	80	83	85	83
Physicians' fees	office call	1	2.28	100	100	100	100	100	100	100	100	100	100	100	100
		1	8.41	100	100	100	100	100	100	100	100	100	100	100	90

Source: Retail Prices:

Retail grocers in New York City and Brooklyn, *Tenth Annual Report of the Bureau of Statistics of Labor of the State of New York* (for 1892), I, pp. 277-284. (Only two stores specified the month to which prices referred.) Country stores in central Pennsylvania and in Chester County—groceries, kerosene, cloth, and boots—from *Annual Report of the Secretary of Internal Affairs of the Commonwealth of Pennsylvania* (for 1890), Part III, "Industrial Statistics," XVIII, A-44 to -47. Prices quoted from January, April, July, and October of each year. Also for groceries, clothing, miscellaneous items, T. M. Adams, *Prices Paid by Vermont Farmers for Goods and Services*. . . , Bulletin 507—Supplement (University of Vermont and State Agricultural College), February 1944, pp. 41-66.

Rents, Leavenworth (Kansas), Boston, and St. Louis: For 1880, all from the Weeks Report on retail prices, pp. 104-107. Leavenworth, 1889, from *Seventh Annual Report*, Kansas Bureau of Labor Statistics, p. 198. Boston, 1890, from Massachusetts *Report on the Statistics of Labor*, 1890, pp. 481, 491. St. Louis, 1890, from Missouri Bureau of Labor Statistics *Twelfth Annual*

Report. . . for the year ending November 5, 1890, pp. 414-515. Meat prices for 1880, 1885, and 1890: *Thirty-first Annual Report of the Massachusetts Bureau of Statistics of Labor*, March 1901, pp. 529-547 and passim; *Eighteenth Annual Report of the Commissioner of Labor* (for 1903), II, pp. 667-686 and passim.

Newspapers in eight cities: *Baltimore American*, *Boston Morning Journal*, *Charleston (S. C.) News-Courier*, *Memphis Ledger*, *Harford Courant*, *New York Herald*, *Chicago Tribune*, and *Philadelphia Inquirer* (from files of the Library of Congress).

Postage rate per ounce for first class letters: Average of non-local letters and carrier office drop letters, with additional weight given to postal cards, *United States Domestic Postage Rates, 1789-1936*, Post Office Department, Publication 15, pp. 22-23. Expenditure Weights:

*Eighteenth Annual Report of the Commissioner of Labor*, Cost of Living and Retail Prices of Food, p. 648; Nelson W. Aldrich, *Retail Prices and Wages*, Report by Mr. Aldrich from the Committee on Finance, July 19, 1892, 52nd Congress, 1st Session, Senate Report 986, Parts I and III, pp. xlii-xliii, 2090-2097.

TABLE C-1

Employment in 13 Manufacturing Industries from the Aldrich Report, January and July 1860-1890  
(number of persons)

Industry	1860		1861		1862		1863		1864		1865		1866	
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
Agricultural implements	9	8	8	7	7	8	7	12	13	12	13	17	21	17
Ale, beer, porter	39	40	44	44	37	43	36	39	40	40	33	28	41	32
Books and newspapers	116	98	121	119	113	116	112	121	124	143	160	159	153	158
Carriages and wagons	14	14	14	14	14	14	15	15	15	14	14	14	20	20
Cotton manufactures	1,351	1,338	1,297	1,216	1,149	969	895	912	1,071	1,153	1,128	1,310	1,497	1,446
Illuminating gas	460	477	510	496	501	459	365	341	440	363	337	320	338	326
Leather	46	46	46	45	41	41	41	41	44	44	47	47	42	42
Lumber	35	34	43	46	35	34	29	29	33	33	37	44	41	39
Metals and metallic goods	846	891	830	964	977	916	873	966	1,121	1,239	1,188	1,117	1,185	1,214
Paper	41	41	39	39	38	38	37	37	34	35	35	35	35	34
Stone	228	445	214	273	160	269	80	459	350	458	300	463	481	593
White lead	17	19	20	19	19	18	13	13	11	8	5	9	12	11
Woolen manufactures	178	182	169	181	207	237	225	244	246	227	235	227	250	273
The 13 manufacturing industries	3,380	3,633	3,355	3,463	3,298	3,162	2,728	3,229	3,542	3,769	3,532	3,790	4,116	4,205

table continues on following pages

Table C-1, continued

Industry	1867		1868		1869		1870		1871		1872		1873		1874	
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
Agricultural implements	20	13	19	21	18	22	27	25	28	32	33	37	34	34	31	27
Ale, beer, porter	36	26	33	28	32	29	39	30	32	36	38	44	52	45	50	47
Books and newspapers	170	177	178	203	166	178	182	152	150	188	186	203	167	142	149	142
Carriages and wagons	20	20	20	20	24	24	24	24	24	24	24	24	24	24	24	24
Cotton manufactures	1,534	1,543	1,550	1,593	1,590	1,573	1,665	1,613	1,699	1,743	1,677	1,733	1,754	1,692	1,615	1,629
Illuminating gas	363	335	382	354	434	414	515	461	509	563	588	546	398	355	449	396
Leather	41	41	52	52	55	56	76	76	68	68	67	67	76	76	77	77
Lumber	42	38	37	36	43	45	40	43	40	41	42	36	38	38	36	31
Metals and metallic goods	1,252	1,163	1,054	1,096	1,074	1,148	1,117	1,105	1,075	1,142	1,199	1,260	1,183	1,210	1,098	1,079
Paper	33	34	31	33	33	33	33	33	33	32	31	31	31	31	31	31
Stone	902	552	509	552	601	826	860	642	659	759	216	809	575	682	449	563
White lead	10	11	9	10	10	10	9	10	10	10	8	8	7	8	12	12
Woolen manufactures	257	251	244	253	245	255	293	297	307	311	340	315	310	311	335	325
The 13 manufacturing industries	4,680	4,204	4,118	4,251	4,325	4,613	4,880	4,511	4,634	4,949	4,449	5,113	4,649	4,648	4,356	4,383

Table C-1, continued

Industry	1875		1876		1877		1878		1879		1880		1881		1882	
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
	Agricultural implements	27	28	27	24	22	24	23	24	22	24	33	32	44	34	36
Ale, beer, porter	56	51	52	46	53	48	49	51	62	53	58	55	54	48	57	46
Books and newspapers	158	148	149	160	184	180	187	177	197	184	199	193	204	191	192	183
Carriages and wagons	24	24	24	24	24	24	30	30	34	34	40	40	40	40	40	40
Cotton manufactures	1,621	1,634	1,625	1,767	1,721	1,740	1,744	1,803	1,835	1,869	1,847	1,888	1,960	2,007	2,166	2,143
Illuminating gas	435	402	357	281	320	287	302	274	303	274	315	294	353	333	376	349
Leather	72	72	76	76	75	75	79	80	81	81	84	84	93	93	91	91
Lumber	30	24	27	31	25	25	29	23	20	26	22	22	26	26	30	29
Metals and metallic goods	998	1,026	980	955	962	938	1,043	976	962	1,040	1,167	1,527	1,688	1,776	1,849	1,804
Paper	31	31	29	29	29	29	28	29	28	27	29	28	27	25	25	25
Stone	513	514	216	533	472	563	329	539	409	644	555	697	526	732	624	767
White lead	12	12	11	12	13	12	14	15	19	25	26	20	23	22	31	31
Woolen manufactures	331	345	322	341	353	367	357	379	342	329	342	364	358	355	350	370
The 13 manufacturing industries	4,308	4,311	3,895	4,279	4,253	4,312	4,214	4,400	4,314	4,610	4,717	5,244	5,396	5,682	5,867	5,919

table continues on following page

Table C-1, concluded

Industry	1883		1884		1885		1886		1887		1887		1889		1890	
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Jan.	July
Agricultural implements	36	55	44	51	35	36	35	36	42	40	26	27	40	39	40	32
Ale, beer, porter	52	55	68	58	68	58	65	59	67	46	59	39	52	48	52	52
Books and newspapers	196	171	198	166	172	171	190	165	207	188	168	163	197	158	177	157
Carriages and wagons	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Cotton manufactures	2,058	2,076	1,987	1,988	1,960	2,003	1,999	2,033	2,099	2,251	2,301	2,249	2,311	2,300	2,232	2,325
Illuminating gas	458	356	424	270	437	366	427	348	415	354	441	403	420	373	432	395
Leather	95	95	92	92	71	71	74	74	92	92	87	87	83	83	68	68
Lumber	28	28	29	30	32	31	30	30	30	28	24	26	26	26	23	23
Metals and metallic goods	1,839	1,589	1,661	1,537	1,500	1,259	1,355	1,450	1,519	1,542	1,488	1,384	1,459	1,517	1,571	1,652
Paper	27	27	29	31	28	26	29	28	27	30	27	25	25	26	25	27
Stone	634	755	587	708	572	646	470	839	629	555	588	579	569	568	507	689
White lead	31	38	28	26	23	19	17	18	22	23	23	29	25	23	25	17
Woolen manufactures	389	376	388	367	371	376	390	435	421	433	421	426	429	449	445	441
The 13 manufacturing industries	5,883	5,661	5,575	5,364	5,309	5,102	5,121	5,555	5,610	5,622	5,693	5,477	5,676	5,650	5,637	5,918

TABLE C-2

Employment of Manufacturing Wage Earners in 17 Industries; United States, by Regions, Decennial Years Ending May 31, 1860-1890  
(thousands of persons)

Industry	United States			New England			Middle Atlantic <sup>a</sup>					
	1860	1870	1880	1890	1860	1870	1880	1890	1860	1870	1880	1890
Foundry and machine shop production	41.2	83.5	145.4	231.6	9.9	18.9	29.9	43.4	17.4	36.0	67.9	95.4
Carriages and wagons	37.1	54.9	52.9	132.3	7.7	8.0	6.4	15.1	14.0	18.7	14.4	37.6
Liquors, malt	6.4	12.4	26.2	30.3	0.2	0.4	1.7	1.1	3.1	5.4	12.2	12.3
Agricultural implements	14.8	25.3	39.6	38.8	1.6	1.9	2.4	1.6	5.1	8.0	9.8	7.7
Iron and steel, rolling mills	20.0	47.1	96.1	134.9	1.3	3.2	7.8	5.7	13.9	33.1	60.1	91.9
Liquors, distilled	5.6	5.1	6.5	4.7	0.1	0.1	0.2	0.1	1.4	1.1	0.7	0.6
Glass	9.0	15.8	24.2	45.0	2.0	2.4	1.0	0.5	6.4	11.8	18.0	30.2
Cigars and cigarettes	8.0	26.0	53.3	87.1	1.4	2.1	2.3	3.7	4.8	13.6	28.9	49.6
Flour and grist mills	27.7	58.5	58.4	47.3	1.5	3.0	2.1	1.6	8.6	15.1	11.6	8.6
Leather	26.1	35.2	34.9	42.6	5.5	8.3	9.6	9.6	13.6	17.5	16.0	22.2
Lumber, sawed	75.9	150.0	148.0	266.7	8.9	18.1	15.1	22.1	19.4	37.1	31.0	35.8
Iron and steel, blast furnaces	15.9	27.6	41.7	32.9	0.8	0.6	0.9	0.1	9.4	14.5	19.5	18.5
Paper	10.9	18.8	24.4	28.4	5.4	7.3	11.0	11.4	4.0	8.0	7.6	8.7
Woolen goods	41.4	80.1	86.5	76.9	25.6	42.9	47.9	40.3	11.6	23.7	28.1	23.5
Cotton goods	122.0	135.4	172.5	218.9	81.4	94.5	127.2	147.4	29.1	29.0	28.4	31.8
Brick and tile	21.4	43.5	66.4	104.2	2.1	5.3	4.6	6.8	10.4	19.6	22.2	31.6
Chewing and smoking tobacco	18.9	21.8	32.8	29.8	-	-	-	-	1.4	5.6	7.1	3.1
The 17 industries <sup>a</sup>												
Total	502.3	841.0	1,109.8	1,552.4	155.4	217.3	270.1	310.5	173.6	297.8	383.5	509.1
1860=100	100	167	221	309	100	140	174	200	100	172	221	293
All manufacturing (excluding men's clothing, and boots and shoes)	884.7	1,617.2	2,268.2	3,245.5								
All manufacturing	1,122.5	1,861.2	2,562.8	3,613.5								

table continues on following page



Table C-2, concluded

Industry	South <sup>a</sup>			Central <sup>b</sup>			Pacific			
	1860	1870	1880	1860	1870	1880	1860	1870	1880	1890
	Foundry and machine shop production	4.4	3.7	5.2	9.0	23.4	38.8	9.0	23.4	38.8
Carriages and wagons	5.8	3.7	3.1	7.6	23.5	27.8	8.7	23.5	27.8	68.7
Liquors, malt	0.1	0.2	0.2	1.0	5.7	10.3	2.6	5.7	10.3	14.4
Agricultural implements	1.0	0.6	1.4	1.5	14.6	25.3	7.1	14.6	25.3	27.4
Iron and steel, rolling mills	2.0	1.3	3.0	3.9	9.3	24.6	2.8	9.3	24.6	32.3
Liquors, distilled	0.6	0.4	0.3	0.4	3.2	5.1	3.2	3.2	5.1	3.4
Glass	0.2	-	-	-	0.3	1.6	0.3	1.6	4.8	13.3
Cigars and cigarettes	0.2	0.8	3.9	10.8	7.7	14.4	1.6	7.7	14.4	19.9
Flour and grist mills	5.0	15.4	14.4	10.1	23.7	28.2	11.0	23.7	28.2	25.1
Leather	2.9	2.5	1.8	1.5	6.2	6.4	3.7	6.2	6.4	7.5
Lumber, sawed	16.1	18.4	23.2	56.5	67.9	69.1	28.4	67.9	69.1	134.8
Iron and steel, blast furnaces	1.7	2.7	5.1	6.6	9.7	15.8	4.0	9.7	15.8	7.7
Paper	0.4	0.4	0.4	0.3	3.0	5.3	1.1	3.0	5.3	7.0
Woolen goods	1.7	1.8	1.3	3.2	10.6	7.7	2.3	10.6	7.7	8.0
Cotton goods	9.7	9.6	17.8	34.3	1.7	2.6	1.6	1.7	2.6	3.6
Brick and tile	2.8	2.9	8.6	13.7	15.0	28.8	5.7	15.0	28.8	43.8
Cheating and smoking tobacco	13.6	9.2	17.8	16.5	6.7	7.1	3.8	6.7	7.1	9.6
The 17 industries <sup>d</sup>	68.8	73.6	107.5	176.9	233.5	322.1	96.9	233.5	322.1	501.1
Total	100	107	156	257	241	332	100	241	332	517
1860=100										

Source: Censuses of Manufactures, 1860-1890; see notes to Table A-9, above.

<sup>a</sup> Delaware, Maryland, and West Virginia are included in the Middle Atlantic states.

<sup>b</sup> Kentucky is included in the Central states.

<sup>c</sup> Less than fifty workers.  
<sup>d</sup> Employment totals for regions will not add exactly to total for the United States, because of very small amount of manufacturing in Mountain states which were excluded. Employment for industries may not add to the total for all 17, because of rounding error.