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Volume Author/Editor: Charles A. Bliss

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Chapter Author: Charles A. Bliss

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Appendix IX

Data on Capital Investment reported in the Massachusetts Census of Manufactures, 1928

The schedules used in compiling the 1928 Massachusetts Census of Manufactures called for the amount of capital invested under the following categories: (a) land, buildings, and fixtures; (b) machinery and tools; (c) inventories; (d) cash, accounts receivable, and sundries. The published 1928 report gave figures on total capital, but the data for the subgroups were not tabulated in 1928 or in any other year in which the capital inquiry was made (i.e., even-numbered years). The following excerpt from the 1928 schedule indicates the scope of the inquiry:

“Capital invested: Amount of capital invested—owned and borrowed. The answer [to the inquiry] should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be so stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.”

Since the schedules used in the 1928 Census are filed first, according to region, and second, by industry, the simplest procedure in getting the desired information on subgroups was to have the capital items transcribed on cards and the cards then sorted by industries. The data were tabulated by classifying each item, by industries, according to appropriate size divisions

and finally calculating totals from the resulting frequency distributions. This procedure resulted in some slight loss in accuracy over direct totals, but there was a gain in the time required for the tabulations and in the added information to be derived from the frequency distributions of establishments.

In considering the Massachusetts data, attention must be given the variation in the industrial composition of manufacturing in Massachusetts and in the United States as a whole. The extent of this variation is indicated in Table IXa. The data are drawn from the 1929 federal Census of Manufactures.

Table IXa

Value Added by Major Manufacturing Industries
Massachusetts and the United States, 1929

Industry	Value Added by Manufacture, Massa- chusetts		Percentage of all Industries	
	Millions of dollars	Percentage of national total	Massa- chusetts	United States
Electrical machinery	120.5	9.1	7.0	4.2
Boots and shoes other than rubber	117.6	26.1	6.9	1.4
Cotton goods	108.2	17.3	6.3	2.0
Woolen and worsted goods	96.9	29.9	5.7	1.0
Foundry and machine shops	78.1	4.5	4.6	5.5
Printing and publishing				
Newspaper and periodical	56.3	4.2	3.3	4.2
Book and job	47.3	6.4	2.8	2.3
Paper and woodpulp	44.3	11.3	2.6	1.2
Bread	40.6	5.1	2.4	2.5
Dyeing and finishing textiles	40.1	17.4	2.3	0.7
Rubber goods (other than boots and shoes) incl. rubber tires and tubes	31.8	6.8	1.9	1.5
Cutlery	29.9	46.8	1.7	0.2
Textile machinery	28.7	33.4	1.7	0.3
Leather	28.1	19.6	1.6	0.5
Boots and shoes, rubber	25.1	36.9	1.5	0.2
Total, 15 industries	893.5	10.1	52.3	27.7
All manufactures	1710.7	5.4	100.0	100.0

Table IXb presents for various detailed groups of industries the division of total capital investment for Massachusetts. The estimates have been adjusted, as were the figures in Chapter III,

Table IXb

Capital Investment and Number of Wage Earners, 1928
 Groups of Manufacturing Industries, Massachusetts

Stage of Manufacture and Ultimate Use of Product	Establishments ¹	Wage Earners	Machinery and Tools per Wage Earner (thousands of dollars)	Total Capital (millions of dollars)	Percentage of Total Capital			
					Land, buildings and fixtures ² and tools	Machinery and tools	Inventory	Cash, accounts receivable, and sundries
<i>Finished goods, total</i>	7,202	327,198	897	1,622.4	27.8	18.1	24.7	29.4
Consumption goods	5,068	229,447	757	1,048.7	27.9	16.6	24.4	31.1
Durable	849	54,052	784	280.6	20.2	15.1	27.5	37.2
Semidurable	1,644	126,895	413	377.6	21.5	13.9	29.7	34.9
Transient, foods	2,007	28,755	1,021	174.5	38.5	16.8	20.6	24.1
Transient, other	568	19,745	2,510	216.0	40.3	22.9	14.4	22.4
Capital goods	1,111	67,669	1,339	424.9	27.5	21.3	25.1	26.1
Construction goods	791	17,645	951	94.6	27.4	17.8	24.3	30.5
Producers' supplies	232	12,437	986	54.2	30.2	22.6	27.3	19.9
<i>Unfinished goods, total</i>	2,704	213,729	1,570	1,330.4	30.2	25.3	22.3	22.2
Consumption goods	1,593	172,574	1,435	912.9	24.3	27.1	26.4	22.2
Durable	354	12,413	902	55.7	31.9	20.1	24.1	23.9
Semidurable	1,056	153,947	1,498	832.4	23.6	27.7	26.7	22.0
Transient	183	6,214	918	24.9	30.7	23.0	21.8	24.5
Capital goods	263	13,719	1,400	68.9	42.3	27.9	18.2	11.6
Construction goods	28	197	1,112	1.9	38.0	11.7	18.7	31.6
Producers' supplies	820	27,239	2,516	346.8	43.4	19.7	12.4	24.5
All industries	9,906	540,927	1,162	2,952.8	28.9	21.3	23.6	26.2

¹ The published total is 9,971 establishments.

² Includes an estimate of the value of rented property.

Table IXc

Capital Investment and Number of Wage Earners, 1928

15 Selected Manufacturing Industries, Massachusetts

(industries are arranged in order of magnitude of value added)

Industry	Wage Earners (thousands of dollars)	Machinery and Tools per Wage Earner (thousands of dollars)	Total Capital (millions of dollars)	Percentage of Total Capital			Cash, accounts receivable, Inventory and sundries
				Land, buildings, and fixtures	Machinery and tools	Inventory	
Electrical machinery	24,788	564	90.9	22.8	15.4	41.1	20.7
Boots and shoes, other than rubber	55,478	153 *	105.7	15.1	8.0	31.1	45.8
Cotton goods	65,192	1,910	350.8	27.8	35.5	20.6	16.1
Woolen and worsted goods	45,248	1,566	260.5	21.2	27.2	20.5	22.1
Foundry and machine shops	19,803	998	109.3	24.9	18.1	26.7	30.3
Printing and publishing							
Newspaper and periodical	14,634	1,497	41.7	38.3	20.2	4.3	37.2
Book and job			40.9	20.8	28.7	19.0	30.9
Paper and wood pulp	12,602	2,086	115.3	31.9	22.8	15.6	29.7
Bread	8,770	891	31.9	52.1	24.5	10.8	12.6
	13,629	1,345	76.8	21.1	23.9	23.3	31.7
Dyeing and finishing textiles							
Rubber goods (except boots and shoes)	10,552	1,180	59.9	22.4	20.8	24.6	32.2
incl. rubber tires and tubes	3,327	1,725	58.3	12.1	9.8	11.7	66.4
Cutlery	10,399	1,474	79.5	18.0	19.3	14.0	48.7
Textile machinery	10,975	336 *	53.5	23.1	6.9	39.9	30.1
Leather							
Boots and shoes, rubber	12,709	721	47.5	20.6	19.3	29.0	31.1

* Undoubtedly an underestimate because of the prevalence of rented machinery.

Thousands of Dollars	All Manufactures	Consumption Goods	Capital Goods	Durable Goods	Electrical Machinery	Boots and Shoes, other than Rubber ²	Cotton Goods	Foundry and Machine Shops
<i>Land, Buildings, and Fixtures (unadjusted for rented property)</i>								
0.1- 10.0	47	49	39	43	29	47	5	34
10.1- 20.0	12	11	13	14	13	11	3	13
20.1- 30.0	7	6	8	8	4	6	3	10
30.1- 40.0	5	5	5	6	4	7	3	5
40.1- 50.0	3	3	4	4	6	5	1	5
50.1- 100.0	10	10	11	10	9	13	13	14
100.1- 500.0	12	12	15	12	26	9	33	16
500.1-1000.0	2	2	3	2	4	1	18	2
1000.1-1500.0	1	1	1	..	..	1	8	1
1500.1-2000.0	..	..	..	..	2	..	4	..
Over 2000.0	1	1	1	1	3	..	9	..
Total	100	100	100	100	100	100	100	100
<i>Inventory</i>								
0	4	4	4	4	1	2	..	2
0.1- 10.0	47	48	41	42	20	20	5	43
10.1- 20.0	11	10	10	14	6	13	4	12
20.1- 30.0	6	5	7	7	9	8	4	9
30.1- 40.0	4	3	5	5	9	8	2	5
40.1- 50.0	3	3	3	4	6	6	2	3
50.1- 100.0	9	9	12	10	13	13	12	12
100.1- 500.0	12	13	12	11	25	24	35	12
500.1-1000.0	2	3	3	2	6	4	22	1
1000.1-1500.0	1	1	1	1	..	..	7	..
1500.1-2000.0	..	..	1	..	1	1	4	1
Over 2000.0	1	1	1	..	4	1	3	..
Total	100	100	100	100	100	100	100	100
<i>Cash, Accounts Receivable, and Sundries</i>								
0	7	8	6	5	2	1	2	2
0.1- 10.0	41	42	38	38	23	18	5	34
10.1- 20.0	11	10	11	13	6	10	5	13
20.1- 30.0	7	7	9	9	6	6	5	9
30.1- 40.0	5	4	6	7	10	5	4	7
40.1- 50.0	3	3	3	3	3	5	5	4
50.1- 100.0	9	9	12	10	16	14	13	14
100.1- 500.0	13	13	11	11	26	34	41	13

Thousands of Dollars	All Manufactures	Consumption Goods	Capital Goods	Durable Goods	Electrical Machinery	Boots and Shoes, other than Rubber ²	Cotton Goods	Foundry and Machine Shops
500.1-1000.0	2	2	2	2	4	4	8	3
1000.1-1500.0	1	1	1	1	3	1	7	1
1500.1-2000.0	..	..	1	..	..	1	1	..
Over 2000.0	1	1	..	1	1	1	4	..
Total	100	100	100	100	100	100	100	100

Machinery and Tools

0	5	6	3	4	2	6	14	3
0.1- 10.0	51	53	44	50	28	46	4	41
10.1- 20.0	11	10	13	14	14	18	..	15
20.1- 30.0	7	7	8	8	4	13	6	7
30.1- 40.0	4	4	6	5	10	6	3	10
40.1- 50.0	3	2	4	3	2	3	1	5
50.1- 100.0	7	6	8	7	19	4	3	8
100.1- 500.0	8	8	11	7	15	4	24	9
500.1-1000.0	2	1	2	2	3	..	12	1
1000.1-1500.0	1	1	1	..	1	..	19	1
1500.1-2000.0	..	1	..	..	1	..	4	..
Over 2000.0	1	1	..	..	1	..	10	..
Total	100	100	100	100	100	100	100	100

Machinery and Tools per Wage Earner

0 - .050	9	11	5	6	1	20	14	5
.051- 1.050	60	62	60	65	71	79	25	62
1.051- 5.050	28	24	33	27	25	1	52	31
5.051-10.050	2	2	2	2	3	..	7	2
Over 10.050	1	1	1	..	..	..	2	..
Total	100	100	100	100	100	100	100	100

Total no. of establishments	5295	3448	810	2067	69	186	113	296
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¹ The extreme range in the values shown has dictated the use of irregular class intervals. Breaks in the class intervals are indicated by additional spacing. The entries in the table are not individual establishments, but percentages of the total number of establishments given at the foot of the table.

² The estimate of value of machinery for the boot and shoe industry is low because the value of rented property was not reported.

