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Volume Author/Editor: Charles L. Merwin

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Chapter Author: Charles L. Merwin

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COVERAGE AND GEOGRAPHIC REPRESENTATIVENESS OF THE SAMPLES

The continuing corporations analyzed in Chapters 2 and 3 of this study constitute only small proportions of the total number of small manufacturing corporations operating in the five selected industries. It is impossible to ascertain precisely the coverage of our samples, in number of companies and in volume of business, but rough estimates can be made.

In calculating the total number and the volume of business of the small corporations (assets less than \$250,000) in these five industries two bodies of data have been used. The first is the Treasury Department's annual Statistics of Income; since 1931 this has supplied an asset size breakdown of all corporations, but its basis of classification is major industrial divisions, not the narrow industrial groups represented in the present study. The second is the Biennial Census of Manufactures, published by the Department of Commerce; this classifies establishments by industrial groups as narrow as those followed here, but it does not show an asset size breakdown and it defines establishments as operating rather than ownership units, making no distinction between corporate and non-corporate enterprises.1/

Tables B-1 to B-5, showing the derivation of sample coverage estimates for each of the five industries, pertain to 1935, the last year of the 1926-36 period for which a Census of Manufactures is available. For furniture, stone-clay and machine tool these estimates have been derived by eliminating from the census classification of narrow industrial groups those establishments with assets over \$250,000; this is done by applying percentages derived from Statistics of Income asset-size breakdowns for the major industrial divisions which include these particular lines of business. In making the computations numerous and important assumptions were necessary, especially in regard to the baking and men's

clothing industries, where unincorporated enterprises are predominant. The assumptions need not, however, be explained in detail; they are clear from the procedures outlined in the following tables.

In estimating the geographic representativeness of the samples it has been assumed that in our five industries corporations have the same geographic distribution as all establishments, corporate and non-corporate, and that the proportion of companies with assets of less than \$250,000 is about the same from one region of the country to another.

The 1927 Biennial Census of Manufactures gives the number of establishments in each state, for each of the following industries, corresponding roughly to those represented in the samples: baking products other than biscuits and crackers; clothing, men's, youths' and boys' (except work clothing); furniture, including store and office fixtures; clay products (other than pottery) and non-clay refractories; machine tools. In Appendix A it was mentioned that for purposes of sample selection the states were arbitrarily classified in five major regions. When the sample companies, and the establishments listed in the census, are classified according to these regional divisions it is found that the two geographical distributions correspond fairly closely, as can be seen from Table B-6. In view of the assumptions that underlie this comparison the differences shown between the two distributions are not large.

Table B-1 - 81 BAKING CORPORATIONS
Derivation of Sample Coverage, in
Number and in Volume of Business

<u>Datum a/</u>	<u>In</u> <u>No.</u>	<u>In Vol. of</u> <u>Business b/</u>
1. Corporations manufacturing "bakery and confectionery products" c/	3,788	\$1,352
2. Small corporations in percent of total "food and kindred products" corporations c/	82%	14%
3. Small corporations in (1) (est.; 1 x 2)	3,106	\$189
4. Establishments manufacturing "bread and other bakery products" except "biscuits and crackers," in percent of "bread and other bakery products" plus "confectionery" d/	92%	70%
5. Small corporations manufacturing bakery products except biscuits and crackers (est.; 3 x 4)	2,858	\$132
6. Identical 1926-36 sample	81	\$13.4
7. Sample coverage in 1935 (est.; 6 ÷ 5)	2.3%	10.2%

a/ A "small" corporation is regarded as one with less than \$250,000 in total assets.

b/ Dollar figures in millions.

c/ From Treasury Department, Statistics of Income for 1935, Part 2 (Washington 1938).

d/ From Department of Commerce, Biennial Census of Manufactures, 1935 (Washington 1938).

Table B-2 - 46 MEN'S CLOTHING CORPORATIONS
Derivation of Sample Coverage, in
Number and in Volume of Business

<u>Datum a/</u>	<u>In No.</u>	<u>In Vol. of Business b/</u>
1. Establishments manufacturing "men's, youths' and boys' clothing n.e.c." c/	2,981	\$615
2. Small corporations in percent of total "clothing and apparel" corporations d/	92%	53%
3. Small establishments in (1) (est.; 1 x 2)	2,743	\$326
4. Corporations manufacturing "custom-made, factory-made, coats, underwear, millinery, and clothing n.e.c." e/ in percent of establishments in "cutting-up industries" c/	53% f/	75% f/
5. Corporations in (3) (est.; 3 x 4)	1,454	\$245
6. Identical 1926-36 sample	46	\$8.6
7. Sample coverage in 1935 (est.; 6 ÷ 5)	3.2%	3.5%

a/ A "small" corporation is regarded as one with less than \$250,000 in total assets.

b/ Dollar figures in millions.

c/ From Department of Commerce, Biennial Census of Manufactures, 1935 (Washington 1938); n.e.c. is "not elsewhere classified."

d/ From Treasury Department, Statistics of Income for 1936, Part 2 (Washington 1939). In the years before 1936 the narrowest industrial group which includes men's clothing companies and for which the asset-size breakdown is available in this source is "textiles and their products."

e/ From Treasury Department, Statistics of Income for 1935, Part 2 (Washington 1938).

f/ These percentages are regarded as pertaining to the incorporated establishments in the men's clothing industry; but they constitute a weak link in the derivation of these coverage estimates, since they assume that the Statistics of Income and Census industries are identical and that the incorporated enterprises comprise only one establishment each.

Table B-3 - 66 FURNITURE CORPORATIONS
Derivation of Sample Coverage, in
Number and in Volume of Business

<u>Datum a/</u>	<u>In No.</u>	<u>In Vol. of Business b/</u>
1. Establishments manufacturing "household furniture" c/	2,118	\$326
2. Small corporations in percent of total "forest products" corporations d/	78%	32%
3. Small establishments in (1) (est.; 1 x 2)	1,652	\$104
4. Identical 1926-36 sample	66	\$8
5. Sample coverage in 1935 (est.; 4 ÷ 3)	4.0%	7.7%

a/ A "small" corporation is regarded as one with less than \$250,000 in total assets.

b/ Dollar figures in millions.

c/ From Department of Commerce, Biennial Census of Manufactures, 1935 (Washington 1938).

d/ From Treasury Department, Statistics of Income for 1935, Part 2 (Washington 1938).

Table B-4 - 70 STONE AND CLAY CORPORATIONS
Derivation of Sample Coverage, in
Number and in Volume of Business

<u>Datum a/</u>	<u>In No.</u>	<u>In Vol. of Business b/</u>
1. Establishments manufacturing "clay products (other than pottery)," "concrete products" and "marble, granite, slate, and other stone, cut and shaped" c/	3,659	\$192
2. Small corporations in percent of total "stone, clay and glass products" corporations d/	79%	22%
3. Small establishments in (1) (est.; 1 x 2)	2,891	\$42
4. Identical 1926-36 sample	70	\$2.8
5. Sample coverage in 1935 (est.; 4 ÷ 3)	2.4%	6.7%

a/ A "small" corporation is regarded as one with less than \$250,000 in total assets.

b/ Dollar figures in millions.

c/ From Department of Commerce, Biennial Census of Manufactures, 1935 (Washington 1938). This industrial classification is perhaps too broad, and may cause the resulting coverage estimates to be conservative; actually, the great bulk of the companies in the identical 1926-36 sample belong in the category "clay products (other than pottery)," of which there were only 1,031 establishments in 1935, with a value of product aggregating 90 million dollars.

d/ From Treasury Department, Statistics of Income for 1935, Part 2 (Washington 1938). Corporations with assets of 10 million dollars or more were eliminated before the computation of these proportions, on the assumption that such large corporations were confined primarily to the glass, cement and pottery industries, groups not represented by the present sample. Failure to eliminate these big companies would result in an impossible sample coverage estimate with respect to volume of business.

Table B-5 - 118 MACHINE TOOL CORPORATIONS
Derivation of Sample Coverage, in
Number and in Volume of Business

<u>Datum a/</u>	<u>In No.</u>	<u>In Vol. of Business b/</u>
1. Establishments manufacturing "machine tools" and "machine-tool accessories and machinists' precision tools" c/	990	\$219
2. Small corporations in percent of total "metal and its products" corporations d/	78%	20%
3. Small establishments in (1) (est.; 1 x 2)	772	\$43.8
4. Identical 1926-36 sample	118	\$8.8
5. Sample coverage in 1935 (est.; 4 ÷ 3)	15%	20%

a/ A "small" corporation is regarded as one with less than \$250,000 in total assets.

b/ Dollar figures in millions.

c/ From Department of Commerce, Biennial Census of Manufactures, 1935 (Washington 1938).

d/ From Treasury Department, Statistics of Income for 1935, Part 2 (Washington 1938). Corporations with assets of \$10,000,000 or more were eliminated before the computation of these proportions, on the assumption that such large corporations were mainly the big steel and machinery companies, groups not represented by the present sample. Failure to eliminate these big companies would result in an impossible sample coverage estimate with respect to volume of business.

Table B-6 - SAMPLE CORPORATIONS IN FIVE INDUSTRIES: Percentage Distribution, Compared with That of All Establishments in These Industries, by Region a/

<u>Industry</u>	<u>New</u> <u>Eng.</u>	<u>East</u>	<u>Mid.</u> <u>West</u>	<u>South</u>	<u>West</u>	<u>To-</u> <u>tal</u>
<u>Baking</u>						
Sample (81 cos.)	17%	28%	35%	12%	8%	100%
All establishments	10	32	37	10	11	100
<u>Men's clothing</u>						
Sample (46 cos.)	10	60	26	2	2	100
All establishments	6	72	18	2	2	100
<u>Furniture</u>						
Sample (66 cos.)	16	26	34	17	7	100
All establishments	9	30	38	12	11	100
<u>Stone-clay</u>						
Sample (70 cos.)	11	14	45	21	9	100
All establishments	5	25	36	23	11	100
<u>Machine tool</u>						
Sample (118 cos.)	19	14	64	1	2	100
All establishments	22	19	56	1	2	100
<u>TOTALS</u>						
Sample (381 cos.)	15	29	40	10	6	100
All establishments	9	36	35	10	10	100

a/ For sample corporations based on Table A-1 in Appendix A; for "all establishments" based on Department of Commerce, Biennial Census of Manufactures, 1927 (Washington 1930). The states included in each region are listed in Appendix A, footnote 5.