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## CHAPTER XVIII

### MERCHANDISING AS RELATED TO ENTIRE REALIZED INCOME

#### **Estimating the Volume of Sales at Wholesale and Retail.**

Of the processes of estimation giving rise to the figures presented in this volume, one of the most difficult and laborious was that of approximating the total values of goods sold respectively by wholesalers and by retailers. Since the Federal government has never taken a census of trade, these estimates must rest upon highly scattered sources. The chief sources from which the information concerning the various items have been gleaned are indicated in the footnotes to Tables CXXIX and CXXX.

A large proportion of the value of all goods sold is included in the broad category designated as "manufactured articles." The method used in estimating the total value of sales falling in this category is as follows: The detailed list of articles reported upon by the United States *Census of Manufactures* has been checked over item by item, and those items have been set aside which appear to represent articles in such a form as to be ready for use by the consumer. To the sum of the values of such articles, has been added another sum representing the aggregate of fractional estimates of the values of other classes of items, part of which were presumably in form suitable for consumption and part of which were not in this form. To the figures thus obtained, a margin has been added to allow for the wholesalers' profit and for freight and other expenses required for moving the goods from the manufacturer to the retailer.

In the case of practically all the items entered in the various columns of Table CXXIX, it has been necessary to make numerous guesses concerning fractions of total products actually passing into the hands of retailers and also concerning margins obtained by various classes of dealers other than retailers. In most cases, the data so derived represent merely rough approximations. It is believed that the final figures show much more accurately the relative changes from year to year than they do the absolute total values of goods sold. Since all figures are expressed in terms of dollars current in the various years, the absolute changes are not

TABLE CXXIX

ESTIMATED TOTAL VALUE<sup>a</sup> OF  
 THE VARIOUS CLASSES OF COMMODITIES  
 SOLD BY WHOLESALERS TO RETAILERS  
 (MILLIONS OF DOLLARS)

YEAR	All Classes of Commodities	CLASS OF COMMODITY											
		Eggs <sup>b</sup>	Natural Ice	Poultry <sup>b</sup>	Fish	Flowers and Shrubs	Fruits and Vegetables <sup>b</sup>	Dairy Products <sup>b</sup>	Wood for Fuel	Anthracite Coal <sup>c</sup>	Bituminous Coal <sup>c</sup>	Kerosene, Gasoline, Lubricating Oil <sup>c</sup>	Manufactured Articles <sup>d</sup>
1909	\$ 7,960	\$146	\$115	\$ 83	\$ 51	\$45	\$263	\$ 533	\$14	\$129	\$157	\$ 110	\$6,315
1910	8,747	160	140	88	54	43	278	557	16	135	176	120	6,980
1911	8,655	157	139	76	52	37	331	541	16	146	169	134	6,858
1912	9,270	166	158	78	52	43	349	589	17	142	191	163	7,322
1913	9,417	162	181	86	51	41	333	610	18	156	201	251	7,328
1914	9,273	164	128	83	57	36	330	613	17	154	187	267	7,235
1915	8,622	182	78	76	69	42	356	653	17	151	187	290	6,521
1916	9,549	203	118	92	81	50	440	756	21	156	274	482	6,875
1917	13,397	257	191	97	99	67	729	993	34	190	488	677	9,573
1918	16,831	301	228	128	102	77	679	1,253	32	221	423	959	12,428
1919	18,454	369	118	132	150	87	799	1,555	30	243	362	1,111	13,498
1920	25,302	353	246	132	174	107	980	1,538	37	269	473	1,644	19,348
1921	18,395	285	135	74	132	83	664	1,121	34	303	387	1,437	13,740
1922	19,306	258	143	107	122	102	703	1,160	33	189	474	1,635	14,380
1923	22,105	272	121	118	118	112	687	1,390	43	328	539	1,689	16,688
1924	20,983	261	68	138	108	107	642	1,359	34	334	351	1,840	15,740
1925	23,416	309	93	140	113	118	764	1,492	31	235	391	2,220	17,510
1926	22,721*												
1927	21,371*												
1928	21,193*												

<sup>a</sup> Estimated on the basis of published material found in hundreds of books and documents and from interviews with numerous individuals.

<sup>b</sup> Based mainly upon various reports of the U. S. Department of Agriculture and from the *Census of Agriculture*.

<sup>c</sup> Based upon reports of the U. S. Geological Survey and the U. S. Bureau of Mines.

<sup>d</sup> Based in Census years upon the U. S. *Census of Manufactures*.

\* Preliminary estimate.

particularly significant, but it is possible to compare the trend of the sales in one group of commodities with the trend of sales in another.

Table CXXX has been derived from Table CXXIX by multiplying the amounts in Table CXXIX by ratios believed to represent the relationship between the retail price and the wholesale price. Much effort has been expended in collecting data concerning

TABLE CXXX

ESTIMATED TOTAL VALUE<sup>a</sup> OF  
THE VARIOUS CLASSES OF COMMODITIES SOLD BY  
RETAIL MERCHANTS TO THEIR CUSTOMERS  
(MILLIONS OF DOLLARS)

YEAR	All Classes of Com- mod- ities	CLASS OF COMMODITY							
		Fresh Meat <sup>a</sup>	Canned Meat <sup>b</sup>	Fruits and Vege- tables <sup>c</sup>	Dairy Prod- ucts <sup>b</sup>	Eggs <sup>d</sup>	Nat- ural Ice	Flowers and Shrubs	Poul- try <sup>e</sup>
1909	\$18,300	\$1,112	\$ 522	\$ 523	\$ 994	\$253	\$161	\$ 99	\$132
1910	20,039	1,296	522	579	1,077	272	198	95	134
1911	20,124	1,423	648	714	1,107	269	197	81	126
1912	21,266	1,511	573	708	1,118	283	226	95	127
1913	22,135	1,626	697	690	1,146	295	259	89	135
1914	21,790	1,659	705	689	1,188	295	183	80	131
1915	21,501	1,609	613	754	1,254	317	110	93	123
1916	23,714	1,724	799	896	1,385	344	164	111	141
1917	37,871	2,407	992	1,679	2,097	511	318	181	183
1918	40,703	2,891	1,258	1,312	2,289	522	328	181	209
1919	43,233	2,902	1,268	1,462	2,655	582	156	191	200
1920	45,031	2,224	1,317	1,393	2,160	456	252	186	159
1921	41,048	2,806	1,043	1,381	2,019	468	172	181	118
1922	43,878	2,629	1,077	1,500	2,350	426	204	227	180
1923	51,240	2,780	1,285	1,420	2,459	456	172	250	196
1924	48,540	2,854	1,228	1,334	2,460	431	96	236	215
1925	53,487	3,073	1,372	1,472	2,627	463	131	258	221
1926	54,925*								
1927	56,888*								
1928	57,867*								

<sup>a</sup> Estimated on the basis of material published in hundreds of books and documents and upon interviews with numerous individuals.

<sup>b</sup> Based upon the *Census of Agriculture*, the *Census of Manufactures*, and upon various reports of the U. S. Department of Agriculture.

<sup>c</sup> Based upon the *Census of Agriculture* and various reports of the U. S. Dept. of Agriculture.

<sup>d</sup> Based upon reports of the U. S. Geological Survey and the U. S. Bureau of Mines.

<sup>e</sup> Based largely upon the *Census of Manufactures*, and upon the reports of the U. S. Bureau of Forestry.

<sup>f</sup> Based upon the *Census of Manufactures*, and upon the reports of the National Automobile Chamber of Commerce.

<sup>g</sup> Based mainly upon the reports of the U. S. Bureau of Internal Revenue and prices of tobacco collected from various sources.

<sup>h</sup> Based primarily upon data from *Census of Manufactures* and ratios of retail to wholesale prices collected from numerous sources.

<sup>i</sup> The totals here presented are materially larger than the estimates made by Dr. Paul H. Nystrom. The primary reasons for the discrepancy is that our estimates include a large number of items which he apparently did not take into account, as, for example, ice, flowers and plants, coal, building materials, and farm machinery.

\* Preliminary estimate.

such ratios. For the years since 1915, it is believed that the ratios are not widely in error, but, for the earlier years of the period, information is so scanty that the ratios represent nothing but con-

TABLE CXXX—Continued

ESTIMATED TOTAL VALUE<sup>a</sup> OF  
THE VARIOUS CLASSES OF COMMODITIES SOLD BY  
RETAIL MERCHANTS TO THEIR CUSTOMERS  
(MILLIONS OF DOLLARS)

YEAR	CLASS OF COMMODITY									
	Fish	Wood for Fuel <sup>a</sup>	Anthra- cite Coal <sup>d</sup>	Bitu- minous Coal <sup>d</sup>	Nat- ural Gas <sup>d</sup>	Kero- sene, Gaso- line, Lubri- cating Oil <sup>d</sup>	Lum- ber <sup>e</sup>	Auto- mo- biles and Trucks <sup>f</sup>	To- bacco <sup>g</sup>	Other Man- ufac- tured Goods <sup>h</sup>
1909	\$ 69	\$33	\$429	\$225	\$ 37	\$ 125	\$ 859	\$ 212	\$1,042	\$11,474
1910	74	35	453	254	41	137	757	285	977	12,852
1911	70	37	487	245	44	154	667	325	774	12,756
1912	70	37	461	272	51	186	765	471	785	13,528
1913	70	40	525	280	51	277	722	551	926	13,754
1914	77	40	519	275	57	297	770	569	935	13,321
1915	109	39	507	271	62	325	942	812	901	12,660
1916	117	42	515	316	67	525	890	1,315	992	13,372
1917	147	68	813	540	97	892	1,382	1,894	1,484	22,185
1918	144	66	776	553	91	1,106	1,091	1,608	1,568	24,710
1919	197	60	784	416	88	1,192	1,606	2,279	1,787	25,408
1920	178	60	754	441	86	1,385	2,931	2,001	1,591	27,456
1921	201	73	976	489	110	1,538	994	1,572	1,731	25,177
1922	197	58	606	553	128	1,769	1,870	2,300	1,778	26,026
1923	182	87	1,050	692	144	1,851	2,631	3,384	1,905	30,295
1924	163	76	1,001	521	154	1,997	1,751	2,967	1,942	29,114
1925	169	63	698	562	151	2,379	2,371	3,628	2,013	31,838

sidered guesses. In Table CXXX, a number of items appear which are not included in Table CXXIX. These items consist of articles which, in the main, are sold directly by manufacturers or producers to retailers.

**Values of Goods Sold at Wholesale and Retail.**

It is believed that the estimates recorded in the various columns of Table CXXX represent general tendencies in the sales of different groups of commodities at retail, and that the aggregate of all retail sales is not very widely in error. For recent years, our preliminary estimates of total sales have been compared with the index numbers of total wholesale and total retail sales prepared by the Federal

TABLE CXXXI

ROUGH ESTIMATES OF THE PERCENTAGES OF  
ENTIRE REALIZED INCOME PAID TO RETAILERS  
AND OF REAL VALUE OF SALES PER CAPITA

Year	Value of Retail Sales Current Dollars <sup>a</sup> (Millions)	Entire Realized Income <sup>b</sup> (Millions)	Per Cent of Realized Income Paid to Retailers	Index of Prices of Direct Goods <sup>c</sup> (All Classes)	Real Value of Sales (Millions)	Population of United States <sup>d</sup> (Thousands)	Real Value of Sales per Capita
1909	\$18,300	\$29,605	61.81	.95255	\$19,212	90,508	\$212
1910	20,039	31,430	63.76	.97643	20,523	92,422	222
1911	20,124	31,858	63.17	.96973	20,752	93,837	221
1912	21,266	33,977	62.59	.98097	21,679	95,249	228
1913	22,135	35,723	61.96	1.0000	22,135	97,111	228
1914	21,790	35,647	61.13	1.0077	21,623	98,974	218
1915	21,501	37,205	57.79	1.0070	21,352	100,390	213
1916	23,714	43,288	54.78	1.0913	21,730	101,787	213
1917	37,871	51,331	73.78	1.2858	29,453	103,234	285
1918	40,703	60,408	67.38	1.5175	26,822	104,377	257
1919	43,233	65,949	65.56	1.7571	24,605	105,007	234
1920	45,031	73,999	60.85	1.9801	22,742	106,422	214
1921	41,048	63,371	64.77	1.6926	24,251	108,370	224
1922	43,878	65,925	66.56	1.5829	27,720	109,742	253
1923	51,240	74,337	67.58	1.5977	32,071	111,478	288
1924	48,540	77,135	62.93	1.6024	30,292	113,466	267
1925	53,487	81,931	65.28	1.6517	32,383	115,004	282
1926	54,925*	85,548*	64.20*	1.6617	33,053*	116,442*	284*
1927	56,888*	88,205*	64.50*	1.6195*	35,127*	117,980*	298*
1928	57,867*	89,419*	64.71*			119,440*	

<sup>a</sup> See Table CXXX.

<sup>b</sup> See Table VIII.

<sup>c</sup> Derived from figures presented in Table VII.

<sup>d</sup> See Table I.

\* Preliminary estimate.

Reserve Board, and the trends have been adjusted to accord with the indices prepared by this agency.

### Relation of Retail Sales to Entire Realized Income.

Table CXXXI is devoted to showing the relation between the estimated value of retail sales and the entire realized income of all inhabitants. The fourth column of this table indicates that the percentage of the entire realized income of the people of the United States which they pay out to retailers has fluctuated from year to

year but has shown no very marked trend in either an upward or downward direction. These estimates indicate that the percentage of realized income so expended was relatively low in 1915 and 1916, unusually high in 1917, 1918, and 1923, and moderately low in 1920. It appears that, as a rule, between three-fifths and two-thirds of the realized income of the people of the nation is paid over the counter to retailers.

#### **Per Capita Sales in Dollars of 1913.**

The sixth column of Table CXXXI shows the estimated total value of retail sales, when all figures are reduced to terms of 1913 dollars. Sales measured on this basis, increased more than 80 per cent between 1909 and 1927, most of the increase taking place after 1916. Sales per capita, similarly measured, are seen to have remained practically stationary between 1909 and 1916, to have risen to a very high peak in 1917, and to have fallen back to the old level in 1920. After that date, they advanced sharply, and thereafter remained on a level much higher than that characterizing the pre-war period—the per capita figure for 1927 being approximately 40 per cent greater than the per capita figure for 1909.