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WHOLESALE DISTRIBUTION

(TRADE SERIES)

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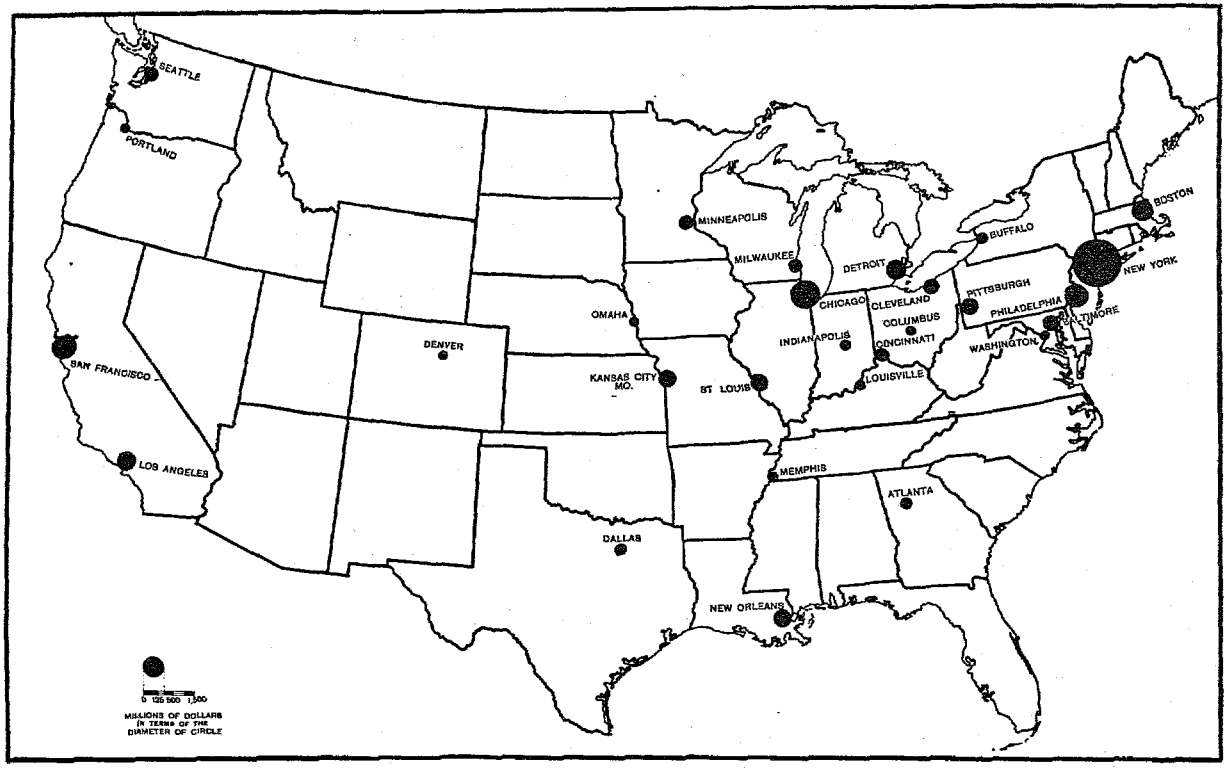
WHOLESALE-GROCERY-TRADE CENTERS IN THE UNITED STATES, 1929



WHOLESALE TRADE IN GROCERIES AND FOOD SPECIALTIES

By NATHANAEL H. ENGLE, *Expert in Marketing*

INTRODUCTION

This is one of a series of trade reports presenting the findings of the first Census of Distribution, which is a part of the Fifteenth Decennial Census of the United States. The statistics were collected in 1930 and cover the wholesale operations for the year 1929. This report was prepared under the general supervision of Robert J. McFall, chief statistician for distribution, and Theodore N. Beckman, expert in charge of wholesale distribution. The statistics were compiled with the assistance of Mr. A. E. Smith.

The data for the Census of Distribution were secured by a field canvass covering the entire continental United States. The canvass was based upon wholesale establishments which are defined, for census purposes, as places of business where goods are sold at wholesale. *No establishments are included in the main part of this study, which deals with wholesaling, unless 50 per cent or more of their sales were made on a wholesale basis.* A wholesale establishment may be a store which sells chiefly to retailers, institutional or industrial consumers, but not to the public; a wholesaling warehouse, an office, or part of an office, as when the office is shared with other similar organizations. The Census of Distribution was taken on the basis of establishments in order to facilitate the canvass and to make it possible to present data by geographic areas. A separate report was required for each establishment, regardless of whether or not it was owned or operated as part of a larger business organization. Wholesale peddlers and others who maintained no place of business were not included in this census.

In preparing this report it was impossible to secure exact correspondence between the statistics here presented and those appearing in the final State series of reports and in the United States Summary of Wholesale Distribution. Differences are, for the most part, minor in character and due to a certain amount of reclassification and regrouping for the purposes of this special trade analysis. The first part of this report is a brief discussion of the scope of ths grocery-manufacturing industry based upon statistics prepared by the Census of Manufactures. The sales channels through which the goods flow, as they leave the manufacturing plants, are next examined. The main part of the bulletin is devoted to an analysis of the wholesale establishments engaged in marketing groceries. A brief summary of grocery retailing concludes the report.

SCOPE OF THE GROCERY INDUSTRY—MANUFACTURING

The grocery trade for purposes of this analysis includes those establishments engaged in the production and distribution of commodities which are generally recognized as grocery items by manufacturers, brokers, wholesale distributors, and retail dealers alike. Many items classified as groceries by the consuming public are excluded from this definition, since they are not handled by grocery manufacturers or wholesalers. For the purposes of the Census of Wholesale

Distribution every schedule was classified on the basis of the major line or lines of merchandise reported or, in the absence of commodity information, on the basis of the kind of business designation appearing on the schedule. The former basis applied only to schedules received from wholesalers operating in cities of 10,000 or more population. Provision was made in the form used in such communities to secure the basis data for a commodity analysis. This information was used to determine the trade or kind of business classification. Wherever an establishment reported over half of its sales in grocery commodities, it was classified in the grocery trade. In a very few cases the grocery-trade classification was used when less than half of the sales were in grocery items but where such items constituted the dominant line of merchandise carried. For all schedules received from communities of less than 10,000 population the designation on the schedule of "grocery trade" or "groceries" was used as the basis for classification since no provision was made on the schedule used in such communities for a breakdown of sales by commodities.

Grocery items or commodities have been selected upon two general bases. First, those items reported by grocery establishments and, second, those items which the advice of leaders in the trade have indicated as properly falling in the grocery group.

In this study the grocery trade is not synonymous with the food trade, although it constitutes an important part of the larger food group. The *specialized meat* trade is excluded from this study, since it is of sufficient importance to warrant separate treatment. The *fresh fruit and vegetable* and *dairy products* trades have been excluded for the same reason. This does not mean that no meat, fruit, or dairy products are included. On the contrary, a number of *commodity items* properly classified in these and other divisions of the food trades are included because there is no hard and fast line of demarcation with respect to commodities handled by *grocery wholesalers*. Indeed, in some sections of the country, reports show that typical service wholesale grocers handle substantial quantities of fresh meats and fresh produce, which is very unusual for most communities. *In general, it may be concluded that groceries and food specialties for this study are chiefly food products which undergo substantial manufacturing operations before entering trade channels and which are commonly considered as grocery items in the trade.* In addition, the *grocery trade also includes a considerable number of nonfood items.* Such products as laundry soap, household cleansers, and bluing are strictly grocery items and are, therefore, included in this study.

As a basis for inquiry into the grocery trade, an examination was first made of the manufacturing or processing of grocery commodities. Thirty-three industries, which produce commodities that are marketed chiefly through grocery-trade channels, were selected from the Census of Manufactures' reports. (See Table 1). These industries operated 47,132 establishments in 1929 and produced or sold [1] goods during that year valued at $7,900,471,000 (f. o. b. factory). There is, to be sure, some duplication in the total volume, due to the inclusion of sales to industrial consumers. Each establishment reported to the Census Bureau the total value of its products manufactured (or sold) during the census year, including, of course, the value of products sold to other manufacturers for use as materials. This duplication occurs mainly *between different industries*, being found to only a very slight extent within any one industry. To illustrate: Flour and cereal products, baking powder, and yeast are sold to the baking industry, and sugar is likewise sold to the confectionery trade. Thus, flour is reported once by flour manufacturers (in the flour industry) and again by bakers

[1] In some manufacturing industries the actual value of products was reported; in others, the value of goods shipped or delivered by manufacturers.

(in the baking industry) as part of the value of bakery products in which it is used. The duplication probably does not exceed 10 per cent of the total value of products, $7,900,471,000, covered by Table 1. Despite this duplication, these statistics have real significance with respect to the relative rank of the different industries. Thus, for example, the breadstuffs industries are seen to be of primary importance, followed in order of rank by canning and preserving, the processing of dairy products (butter, cheese, and condensed and evaporated milk), the sugar industries, the coffee and spice processers, and the confectionery producers. The total for the industries just enumerated amounted to over 77 per cent of the aggregate value of products reported by manufacturers of groceries.

TABLE 1.—SELECTED INDUSTRIES PRODUCING GOODS SOLD THROUGH GROCERY TRADE CHANNELS, UNITED STATES: 1929

INDUSTRY	Number of establishments in the industry	Value of products [1]	Per cent of total
Total	47,132	$7,900,471,000	100.0
Baking powder, yeast, etc	48	52,337,000	0.7
Beverages (fruit, cereal, and carbonated)	5,154	270,324,000	3.4
Bluing	20	1,365,000	----------
Bread aud other bakery products, total	20,785	1,526,111,000	19.3
Bread and other bakery products except biscuits and crackers	20,410	1,251,621,000	15.8
Biscuits	375	274,490,000	3.5
Brooms	407	19,166,000	0.3
Butter	3,527	746,418,000	9.4
Canning and preserving, fish and other sea foods	348	80,849,000	1.0
Canning and preserving, fruits and vegetables	2,997	750,342,000	9.5
Cereal preparations	121	175,223,000	2.2
Cheese	2,758	110,645,000	1.4
Chewing gum	37	60,160,000	0.8
Chocolate and cocoa products	59	119,541,000	1.5
Cleaning and polishing compounds	429	50,780,000	0.6
Coffee and spices, roasting and grinding	928	424,345,000	5.4
Condensed and evaporated milk	535	209,110,000	2.7
Confectionery	2,021	393,270,000	5.0
Corn products (sirup, sugar, oil, starch)	35	165,984,000	2.1
Flavoring extracts and sirups	642	129,086,000	1.6
Flour and other grain-mill products	4,022	1,060,209,000	13.4
Macaroni, spaghetti, etc	353	47,074,000	0.6
Malt	28	23,603,000	0.3
Matches	21	20,351,000	0.3
Nuts, processed	169	49,609,000	0.6
Oleomargarine	41	46,522,000	0.6
Rice, cleaning and polishing	60	48,794,000	0.6
Salt	58	37,869,000	0.5
Shortenings (other than lard), vegetable cooking oils, and salad oils	40	154,553,000	2.0
Soap	282	310,192,000	3.9
Sugar, beet	82	108,553,000	1.4
Sugar, cane—domestic production	70	18,326,000	0.2
Sugar, cane—refining of imported raw	21	507,389,000	6.4
Vinegar and cider	172	10,450,000	0.1
Food preparations, not elsewhere specified	862	171,861,000	2.2

[1] In some manufacturing industries the actual value of products was reported; in others, the value of goods shipped or delivered by manufacturers.

MANUFACTURERS' SALES CHANNELS

In order to understand the marketing sturcture for grocery products it is well to begin with the first step in the distribution process. This step consists of the marketing channels used by manufacturers. As shown below, the various sales channels used by the combined group of grocery producing industries differ greatly in significance. On the returns made by manufacturers to the

Census of Manufactures for 1929, each plant reported the distribution of its sales through the various channels as far as the first step in the distribution process was concerned. In other words, manufacturers indicated how much of their sales during the year was made direct from factory to ultimate consumers, to retailers, to wholesalers, to industrial consumers, and how much was sold through their own retail and/or wholesale branches. They also indicated the amount, if any, that was sold to any of the above through the intervention of agents and brokers. While each manufacturer made his own distinction between wholesale and retail outlets in answering this question, correspondence brought the data into as close agreement as possible with the classifications used in classifying the dealer schedules in the Census of Distribution.

Wholesalers constituted the most important single type of outlet with 41.5 per cent of the total value of products reported. Sales made directly to retailers were second in rank, followed by sales to manufacturers' wholesale branches, sales to industrial consumers, sales to household consumers, and sales to manufacturers' retail branches in the order named. (See Chart I.) In making sales through these channels manufacturers utilized the services of agents and brokers to the amount of 15.3 per cent of the total.

		Per cent
Total value of grocery products distributed	$7,994,433,000	= 100
Sales to wholesalers. (See footnote 5, p. 13)		41.5
Sales to retailers [1]		24.0
Direct sales		13.8
To industrial consumers	8.2	
To household consumers	5.6	
Sales to manufacturers' wholesale branches		16.0
Sales to manufacturers' retail branches		4.1
Sales through agents and brokers (included above)		15.3

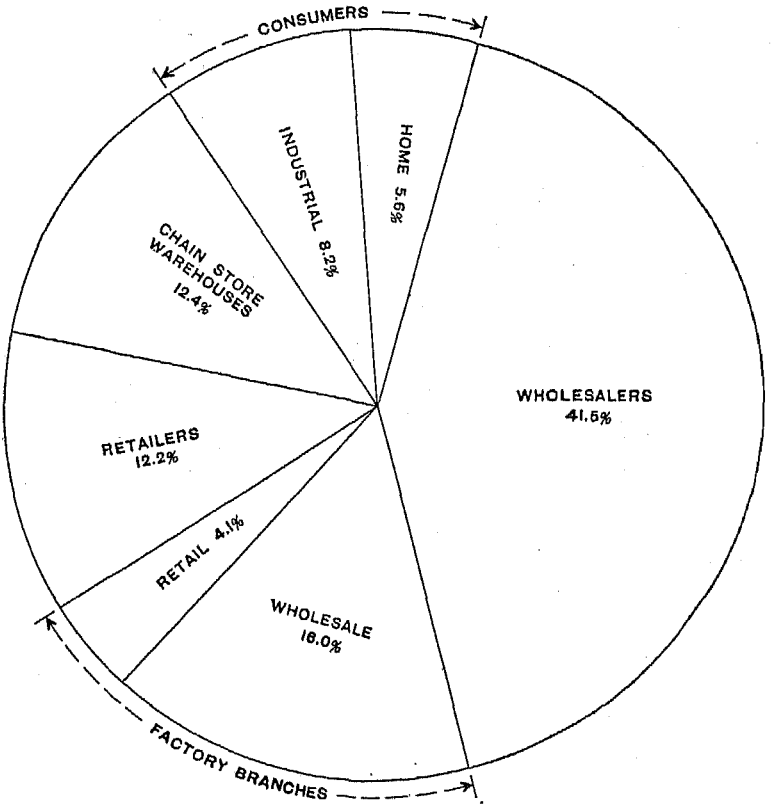
Sales to industrial consumers, although properly constituting a part of wholesale trade in its broader sense, involve, as pointed out above, a certain amount of duplication in the manufacturers' sales statistics where industrial sales are largely sales from one grocery manufacturer to another. If sold to other industries (outside the grocery business) there would be no duplication. Bluing and soap manufacturers, for example, sell to the laundry industry, but for the most part industrial sales of grocery items are made to other parts of the grocery industry. Thus, sugar is sold to the confectionery producers and flour to baking companies. To find the volume of goods flowing into strictly trading channels, by which is meant wholesale and retail establishments engaged in buying and selling, it is necessary to make allowances for the duplication caused by direct sales to industry. Sales to industrial consumers are shown separately in Table 3 and constituted 8.2 per cent of the total value of products distributed by the selected grocery industries. These are treated separately in this report. The direct sales to industry by manufacturers, amounting to 8.2 per cent, do not tell the whole story of duplication, since agents and brokers and other wholesale dealers also sell to industrial consumers merchandise which they purchase from the manufacturer. Nevertheless, on the assumption that the majority of large-scale industrial consumers purchase their supplies and materials directly from the manufacturer, the statistics in Table 3 may be considered as recording the largest percentage of such duplication involved in these statistics. On this assumption, a deduction of sales to industrial consumers amounting to $655,544,000 will leave $7,338,889,000 as the value of

[1] Includes sales to chain-store systems estimated at 12.4 per cent of the total value of grocery products distributed.

grocery products flowing into the specified trading channels, including sales made directly to home consumers.

Sales by grocery manufacturers to the retailing field.—A simple division of sales channels used by manufacturers in reaching their markets is that between *wholesaling* and *retailing* operation in the broadest sense of the terms. Table 2 shows sales to *retailing* or to retail trade and Table 3 sales to *wholesaling* or wholesale trade by the various channels involved (see also Chart II). In Table 2 are included *sales to retailers, sales to manufacturers' retail branches,* and *sales to household or home consumers.*

CHART I.—DISTRIBUTION OF SALES OF 40,431 MANUFACTURING ESTABLISHMENTS PRODUCING GROCERY ITEMS IN 1929



Sales to retailers.—Sales made directly to retailers[2] by manufacturers amounted to nearly 25 per cent of the total for all industries. Over 50 per cent of the total production of the bread and other bakery products industry (exclusive of the biscuits and crackers business) and 34.6 per cent in the latter industry were sold directly to retailers. Four other industries reported sales to retailers in excess of 30 per cent of their totals—brooms, 31.6 per cent; coffee and spices, 36.7 per cent; macaroni, spaghetti, etc., 34.6 per cent; and oleomargarine, 31.9 per cent. Of the

[2] Includes chain-store warehouses. See Chart I and page 18 for an estimate of these sales.

remaining industries, 14 reported sales to retailers of between 10 and 30 per cent of their total sales and 10 reported sales below 10 per cent.

TABLE 2.—SALES TO RETAIL TRADE BY SELECTED INDUSTRIES PRODUCING GROCERY ITEMS, UNITED STATES: 1929

INDUSTRY	Number of establishments distributing sales	Value of products distributed by all types of sales outlets	PER CENT OF VALUE DISTRIBUTED BY ALL TYPES		
			Sales to manufacturers' retail branches	Sales to retailers	Sales to household consumers
Total	40,431	$7,994,433,000	4.1	24.6	5.6
Baking powder, yeast, etc	48	52,337,000	----------	12.2	----------
Beverages	5,154	270,324,000	1.6	61.2	4.5
Biscuits and crackers	375	[1] 278,915,000	3.0	34.6	0.2
Bluing	20	1,365,000	----------	4.5	----------
Bread and other bakery products (except biscuits and crackers)	16,016	[1] 1,186,990,000	11.1	50.8	25.2
Brooms	407	19,166,000	----------	31.6	----------
Butter	3,213	[1] 865,288,000	2.3	22.8	10.2
Canning and preserving (fish and sea foods)	209	[1] 76,280,000	0.4	8.7	0.4
Canning and preserving (fruits and vegetables)	2,997	[1] 744,610,000	2.3	9.5	0.3
Cereal preparations	121	175,223,000	----------	8.8	----------
Cheese	2,352	[1] 120,703,000	1.6	6.7	7.3
Chewing gum	37	[1] 60,160,000	----------	13.7	----------
Chocolate and cocoa products	51	[1] 109,731,000	----------	14.4	----------
Cleaning and polishing compounds	429	[1] 50,989,000	----------	11.6	1.2
Coffee and spices, roasting and grinding	925	[1] 441,081,000	14.9	36.7	0.8
Condensed and evaporated milk	535	[1] 293,035,000	6.0	6.5	3.2
Confectionery	2,021	[1] 399,532,000	9.2	26.8	3.5
Corn products (sirup, sugar, oil, starch)	35	165,984,000	----------	1.2	----------
Flavoring extracts and sirups	642	[1] 130,202,000	3.8	13.9	1.7
Flour and other grain-mill products	2,495	[1] 1,003,612,000	1.4	27.1	----------
Lard substitutes and vegetable oils	40	[1] 152,842,000	----------	1.6	----------
Macaroni, spaghetti, etc	353	47,074,000	----------	34.6	1.6
Malt	28	23,603,000	----------	23.1	----------
Matches	21	20,351,000	----------	4.9	----------
Nuts, processed	169	49,609,000	----------	3.2	0.3
Oleomargarine	41	46,522,000	----------	31.9	----------
Rice (cleaning and polishing)	60	48,794,000	----------	----------	----------
Salt	58	37,869,000	----------	26.3	----------
Soap	282	310,192,000	----------	13.5	0.5
Sugar, beet	82	[1] 98,636,000	----------	----------	----------
Sugar, cane—domestic	70	[1] 17,368,000	----------	0.2	----------
Sugar, cane—refining of imported raw	21	507,389,000	----------	12.1	----------
Vinegar and cider	172	[1] 11,014,000	1.1	12.9	1.1
Food preparations, not elsewhere specified	862	[1] 177,643,000	1.4	17.6	0.9

[1] The value of products distributed is sometimes greater than the value of products manufactured, due to inclusion of merchandise purchased for resale at wholesale. The value of products distributed is sometimes less than the value of products manufactured, due partly to the failure of some establishments to report how their sales were distributed and, in other cases, to addition to plant inventory of a part of the products manufactured during the year.

Manufacturers' retail branches.—The use of manufacturers' retail branches was not extensive among grocery manufacturers. But 4.1 per cent of total sales by all industries were made through such channels. Fourteen industries reported the use of retail branches, but only two of them sold over 10 per cent of their total output through them. The coffee and spice industry was first with 14.9 per cent of sales through owned retail branches. Bread and other bakery products (except biscuits and crackers) was second, with 11.1 per cent of its sales through such outlets. The only remaining industry with substantial volume through manufacturer-owned retail stores was the confectionery business, which reported 9.2 per cent of its sales in that manner.

Direct sales to home consumers.—The final division is direct sales to home consumers, which amounted to 5.6 per cent of the total sales reported by manufacturers. Although half of the industries reported direct sales to ultimate con-

sumers, the volume was negligible for most of them. Only in the *bread and other bakery products* industry were direct sales as high as 25 per cent of total sales and in only two others—*butter* and *cheese*—did the amount of direct sales to home consumers exceed 5 per cent of the total.

Sales by grocery manufacturers to the wholesaling field.—Nearly two-thirds of the total volume of sales reported by manufacturers of grocery products falls in the field of wholesaling.[3] This total was divided between *sales to industrial consumers, sales to manufacturers' wholesale branches,* and *sales to wholesalers.* Sales through the use of *agents and brokers* also belong in the wholesaling category; but since such sales were reported twice, they are not coordinate with the other classifications and are duplicated in the statistics for other sales channels. They are of significance, however, in any analysis of sales channels and are briefly analyzed at this point.

Agents and brokers.—Manufacturers of grocery products employed the services of agents and brokers to assist them in selling 15.3 per cent of their total volume of sales (see Table 3 and Chart II). All but 6 of the 34 industries reported the use of agents and brokers. The beet-sugar industry, with the exception of direct sales of 6.4 per cent to industrial consumers, relied entirely upon agents and brokers, selling the remaining 93.6 per cent through them. Refiners of imported raw cane sugar also used agents and brokers extensively, 69.9 per cent of their sales being so handled. Refineries of domestic cane, in contrast, sold but 38.1 per cent through agents and brokers. The rice cleaning and polishing industries relied upon agents and brokers to sell 64.6 per cent of their total volume. The next largest users of agents and brokers were the canning industries, with 49.0 per cent of the sales by canners of fish and sea foods, and 35.0 per cent of the sales by canners of fruits and vegetables; processers of nuts with 33.1 per cent of sales; and vinegar and cider producers with 28.3 per cent of sales. The 20 remaining industries reported less than 20.0 per cent of their sales through these agencies.

Industrial consumers.—Sales made by manufacturers of grocery products directly to industrial consumers, although, as indicated above, a duplication from the standpoint of total volume of goods manufactured, are not a duplication in wholesaling, but constitute a part of wholesale distribution, since the latter embraces those merchandising transactions in which the buyer contemplates earning a profit from the use or resale of the goods in the same or altered form.

As pointed out before, but 8.2 per cent of the total value of all products in the grocery industry was sold directly to industrial consumers by the manufacturers. This ratio varied from none at all for two industries to 55.9 per cent for refineries of domestic cane sugar. The malt industry was second, reporting 53.8 per cent of its sales directly to industrial consumers. The corn-products industry sold 43.8 per cent to industrial users; the salt industry, 33.1 per cent; and the producers of flour and other grain-mill products, 23.5 per cent. Only four additional industries reported more than 10 per cent of their total sales to industrial consumers: Chocolate and cocoa products, 19.6 per cent; cleaning and polishing compounds, 18.4 per cent; food preparations not elsewhere classified, 11.7 per cent; and vinegar and cider, 10.6 per cent.

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[3] This percentage is increased to over three-quarters of the total when allowance is made for the fact that sales to retailers included sales to chain store warehouses. Chain-store warehouses are the wholesale departments of chains, and it is therefore proper to consider this business as a part of wholesaling. Since the figures were not segregated in the reports, chain-store warehouses' business has been treated under sales to retailers. For an estimate of their business, see Charts I and II.

TABLE 3.—SALES TO WHOLESALERS BY SELECTED INDUSTRIES PRODUCING GROCERY ITEMS, UNITED STATES: 1929

INDUSTRY	Number of establishments distributing sales	Value of products distributed by all types of sales outlets	PER CENT OF VALUE DISTRIBUTED BY ALL TYPES			
			Sales to wholesalers	Sales to manufacturers' wholesale branches	Sales to industrial consumers	Sales through agents and brokers [1]
Total	40,431	$7,994,433,000	41.5	16.0	8.2	15.3
Baking powder, yeast, etc	48	52,337,000	37.9	48.1	1.9	--------
Beverages	5,154	270,324,000	26.4	3.9	2.4	3.7
Biscuits and crackers	375	[2] 278,915,000	8.4	53.4	0.4	1.7
Bluing	20	1,365,000	95.5	--------	--------	--------
Bread and other bakery products (except biscuits and crackers)	16,016	[2] 1,186,990,000	7.4	2.4	3.1	--------
Brooms	407	19,166,000	59.2	0.9	8.3	11.0
Butter	3,213	[2] 865,288,000	39.6	22.5	2.5	--------
Canning and preserving (fish and sea foods)	299	[2] 76,280,000	84.8	3.7	2.0	49.0
Canning and preserving (fruits and vegetables)	2,997	[2] 744,610,000	67.6	16.3	4.0	35.0
Cereal preparations	121	175,223,000	89.7	--------	1.5	11.5
Cheese	2,352	[2] 120,703,000	76.4	--------	8.0	3.5
Chewing gum	37	[2] 60,160,000	86.1	--------	0.2	4.3
Chocolate and cocoa products	51	[2] 109,731,000	66.0	--------	19.6	--------
Cleaning and polishing compounds	429	[2] 50,989,000	58.3	10.4	18.4	19.2
Coffee and spices, roasting and grinding	925	[2] 441,081,000	21.5	22.9	3.2	5.9
Condensed and evaporated milk	535	[2] 293,035,000	42.4	35.9	6.0	9.6
Confectionery	2,021	[2] 399,532,000	54.4	4.8	1.3	12.8
Corn products (sirup, sugar, oil, starch)	35	165,984,000	55.0	--------	43.8	11.5
Flavoring extracts and sirups	642	[2] 130,202,000	62.7	8.0	9.9	14.3
Flour and other grain-mill products	2,495	[2] 1,003,612,000	40.3	7.7	23.5	17.9
Lard substitutes and vegetable oils	40	[2] 152,842,000	13.6	90.9	7.0	5.2
Macaroni, spaghetti, etc	353	47,074,000	54.1	3.1	6.7	17.9
Malt	28	23,603,000	23.1	--------	53.8	--------
Matches	21	20,351,000	24.6	70.4	--------	6.1
Nuts, processed	169	49,609,000	74.0	14.9	7.6	33.1
Oleomargarine	41	46,522,000	53.3	12.6	2.3	10.1
Rice (cleaning and polishing)	60	48,794,000	90.2	3.9	5.9	64.6
Salt	58	37,869,000	37.9	0.9	33.1	5.5
Soap	282	310,192,000	45.5	32.8	7.6	1.7
Sugar, beet	82	[2] 98,636,000	93.9	--------	6.1	93.6
Sugar, cane—domestic	70	[2] 17,368,000	43.9	--------	55.9	38.1
Sugar, cane—refining of imported raw	21	507,389,000	53.3	26.1	8.5	69.9
Vinegar and cider	172	[2] 11,014,000	71.5	2.8	10.6	28.3
Food preparations, not elsewhere classified	862	[2] 177,643,000	44.3	24.2	11.7	9.4

[1] These sales are largely duplicated in sales through wholesalers and other dealers.
[2] The value of products distributed is sometimes greater than the value of products manufactured, due to inclusion of merchandise purchased for resale at wholesale. The value of products distributed is sometimes less than the value of products manufactured, due partly to failure of some establishments to report on how their sales were distributed and, in other cases, to addition to plant inventory of a part of the product manufactured during the year.

Manufacturers' wholesale branches.—Wholesale branches owned by manufacturers accounted for 16.0 per cent of total reported manufacturers' sales of grocery products. Nine industries reported no sales in this group, the presumption being that no wholesale sales branches were maintained. One of the nine industries, however, reported sales through its own retail branches. The largest volume of sales through manufacturers' wholesale branches was 90.9 per cent reported by the lard substitutes and vegetable oils industry. The match industry with 70.4 per cent was second. But one other industry, biscuits and crackers, reported more than 50 per cent of the sales through owned wholesale outlets, and only three others reported sales through such branches in excess of 30.0 per cent. These three were baking powder and yeast,[4] 48.1 per cent; condensed and evaporated milk, 35.9 per cent; and soap, 32.8 per cent.

[4] It should be pointed out that the distribution of sales figures for baking powder and yeast industries are seriously distorted by the fact that they are combined in the Census of Manufacturers statistics. The baking-powder industry, if shown separately, would undoubtedly show a different distribution of sales from that for the yeast industry.

Wholesalers.—Grocery manufacturers reported that they sold 41.5 per cent of their total volume through wholesalers.[5] If sales to industrial consumers be excluded from their total volume, this ratio rises to 45.2 per cent of the remaining total. Wholesalers in either case accounted for a much larger share than any other type of outlet. For example, *over two and a half times as large a volume went through wholesalers as passed through the nearest comparable type, the manufacturers' wholesale branch.* Manufacturers' wholesale branches, moreover, frequently sell to wholesale merchants, sometimes exclusively, but more frequently in addition to their sales to retailers. To the extent which they made such sales, wholesalers were correspondingly more important as a sales outlet for manufacturers.

The degree to which different industries utilize the wholesaler varied as it did in the case of the other outlets above analyzed. One noticeable difference, however, lies in the fact that *every industry sold through wholesalers to some extent.* Only in two cases, *bread and other bakery products* and *biscuits and crackers*, did the industries sell less than 10 per cent through wholesalers and these two sold 7.4 per cent and 8.4 per cent, respectively. The highly perishable nature of the products of these industries no doubt accounts for the relatively small use made of wholesalers. Analyzed, industry by industry, however, it is clear from Table 3 that the wholesaler played a very important role in the distribution of most grocery products.

ESTABLISHMENTS SELLING EXCLUSIVELY BY SPECIFIED CHANNELS

The relative importance of the various sales channels utilized by manufacturers of grocery products is further brought out by considering the number of establishments reporting sales exclusively through a single type of outlet. The following summary shows these differences.

TYPE OF SALES OUTLET	Total number of establishments reporting sales	ESTABLISHMENTS REPORTING SALES EXCLUSIVELY THROUGH A SINGLE TYPE OF OUTLET		Number of industries with some establishments reporting use of single type of sales outlet
		Number of establishments	Per cent of total	
Total	40,431	19,936	49.3	34
Agents and brokers	3,397	1,343	39.5	24
Wholesalers	13,854	3,905	28.2	32
Manufacturers' wholesale branches	2,594	616	23.7	20
Industrial consumers	5,779	1,407	24.3	24
Retailers	18,473	4,120	22.3	26
Manufacturers' retail branches	3,294	1,201	36.5	12
Home consumers	16,116	7,344	45.6	14

Out of a total of 40,431 establishments in the 34 industries reporting information on channels of distribution, 49.3 per cent, or 19,936 establishments, reported use of a single type of sales outlet. *Agents and brokers* were used exclusively by 1,343 establishments in 24 out of the 34 industries. In other words, 39.5 per cent of all establishments using agents and brokers sold their entire output through

[5] Wholesalers, in this sense, include wholesale merchants and jobbers of the typical service type, cash-and-carry wholesalers, wagon distributors, exporters, and other independent wholesale dealers of the merchant variety.

agents and brokers. Similarly, in 32 out of the 34 industries, *wholesalers* were used exclusively by 3,905, or 28.2 per cent, of all establishments selling to wholesalers. Among the other types of selling, *direct sales to home consumers* stands out with 45.6 per cent of all establishments selling directly to home consumers using that method exclusively. Only 14 industries reported such sales, however, and two of them—bread and other bakery products (except biscuits and crackers) and confectionery—accounted for 7,044 out of the 7,344 establishments making exclusive sales to home consumers. The same is true of sales *through manufacturer's owned retail branches*. Thirty-six and a half per cent of all establishments operating retail branches sold exclusively through their branches, although only 12 industries were represented. The same two industries, selling directly to home consumers, bread and other bakery products and confectionery, were responsible for 995 out of the 1,201 establishments in this group.

These statistics are open to the objection that establishments alone do not give a correct picture of the relative importance of the various sales channels. So many establishments operated on such a small scale that the sales of a single large business establishment outweighed a great number of smaller ones. Since sales statistics are not available on this basis, it is necessary to limit the use of these figures or to correlate them with the earlier discussion of sales volume by type of outlet.

It is important to bear in mind another distinction between large and small industries. More capital is required to experiment with distribution channels than to pass the burden of selling to a single type of wholesale or retail outlet. The small-scale producer may, therefore, have to make more use of agents and brokers or of wholesalers than is necessary for the larger business. The exception to this was noted above in the baking and confectionery trades, where, although the scale of operations was not large, it was possible to sell from the plant or from a single small storeroom operated in connection with the plant. Generally speaking, however, it requires considerable capital to set up wholesale branches for the disposal of any substantial portion of a manufacturer's output. Sales to individual retailers on any very extensive scale are likewise costly, since they involve the maintenance of an elaborate sales organization. These factors may explain the relatively small percentage of plants selling exclusively through their own wholesale branches or to retailers, as compared with the larger use of agents, brokers, and wholesalers.

WHOLESALE DISTRIBUTION OF GROCERY COMMODITIES

The foregoing analysis is based upon statistics which were collected and compiled by the Census of Manufactures and the Distribution of Sales section of the Census of Distribution. They were taken from schedules filed by the manufacturers and therefore present the producer's point of view. The remainder of this report will deal with statistics based upon schedules made out by wholesale and retail establishments for the Census of Distribution. The wholesale statistics help to trace the flow of grocery products after they leave the manufacturers. By their use it is possible to pick up the thread where the preceding discussion left it and to follow it through the labyrinth of wholesaling. A final section will complete the distribution picture by examining the retailing structure which carries the goods to the consumer.

Grocery commodities.—The selection of grocery commodities involved the problem of defining the field. As explained in the preceding section, groceries are not synonymous with food products. With few exceptions only processed or manufactured food products are included under groceries. On the other hand, a

number of nonedible commodities are included in the grocery classification. The list of commodities finally chosen was based upon the available information reported in the schedules filed by the wholesale establishments themselves. The following items have been selected from the wholesale schedules.

GROCERY COMMODITIES

- Bakery products.
- Canned goods:
  - Canned fruits.
  - Canned vegetables.
  - Canned fish and sea foods.
  - Canned meats.
  - Other canned goods (not listed elsewhere).
- Confectionery and soft drinks:
  - Candy.
  - Chewing gum.
  - Bottled beverages.
  - Other confectionery.
- Dairy products (processed):
  - Butter.
  - Cheese.
  - Milk, evaporated, condensed, and powdered.
- Fruits and vegetables (dried):
  - Fruits.
  - Vegetables.
- Groceries:
  - Cereal preparations.
  - Coffee—{Green and roasted. Ground and unground.}
  - Extracts and spices.
  - Flour.
  - Nuts (all kinds).
  - Lard, lard substitutes, and cooking fats.
  - Oleomargarine and butter substitutes.
  - Pickles, preserves, jellies, jams, and sauces.
  - Rice.
  - Sugar.
  - Teas.
- Other food products (not specified).
- Nonedible grocery products:
  - Soaps, powders, and cleansers.

The sales of all grocery commodities and for each commodity item are shown, together with the *wholesale trades* of all kinds which handled them and the *types of wholesalers* within the trades. This analysis gives a complete picture or chart of grocery distribution and shows the volume of business in groceries done by non-grocery wholesalers, as well as by the grocery trade proper.

This total volume of grocery commodity sales amounted to $7,659,350,000, a figure which must be accepted as a crude basis for further analysis and subject to much refinement. In the first place, this figure includes grocery commodity sales which were reported by all types of wholesale establishments operating in a number of different kinds of business. Not all of these wholesale establishments were able to report complete statistics on their commodity sales. For example a wholesaler with net sales of $1,000,000 may have had records only of $900,000 on a commodity basis. Total net sales were therefore larger than *total reported commodity sales* and it is necessary to raise the total commodity sales to a comparable figure with net sales. This has been done in the following summary by using the percentage of commodity sales to net sales for each type of wholesale establishment. These percentages, which averaged 91.7 for the entire group, varied from 78.7 to 99.7 per cent for the different types.[6] With such high percentages of commodity coverage reported, it is reasonable to assume that total sales were distributed among the different commodities on much the same basis as the sample.

[6] These percentages were computed from table 13 of the United States Summary for Wholesale Distribution.

SUMMARY OF WHOLESALE DISTRIBUTION OF COMBINED GROCERY COMMODITIES, BY TYPE OF WHOLESALE ESTABLISHMENT—ALL TRADES—UNITED STATES: 1929

TYPE OF WHOLESALER	COMMODITY SALES	
	Reported	Projected total [1]
Total	$7,659,350,000	
Agents and brokers	1,581,773,000	$1,693,122,000
Cash-and-carry wholesalers	82,367,000	99,505,000
Chain-store warehouses	955,587,000	1,027,047,000
Exporters	103,605,000	116,962,000
Importers	218,650,000	236,359,000
Manufacturers' wholesale branches	1,593,163,000	1,602,769,000
Wagon distributors	22,207,000	22,989,000
Wholesale merchants	2,717,722,000	3,397,152,000
All other types [2]	384,276,000	306,189,000

[1] Estimated on the basis of the percentage of commodity coverage reported by each type. The average for the group was 91.7 per cent.
[2] Includes drop shippers, cooperative marketing associations, assemblers of farm products, etc.

A second refinement and one much harder to make arises from the fact of duplication of sales between the various types of wholesalers. This difficulty is the tracing of the flow of distribution from the manufacturers through the various channels to the retailers. The following comparison between statistics reported by manufacturers and those supplied by wholesale establishments illustrates this problem:

COMPARISON OF MANUFACTURERS' SALES AND WHOLESALE SALES OF GROCERY COMMODITIES—UNITED STATES: 1929 [a]

Distribution of manufacturers' sales f. o. b. factory prices		Distribution of sales by wholesale establishments—Estimated total—wholesale prices		
Sales *through* agents and brokers	$1,223,148,000	Sales *by* agents and brokers		$1,693,122,000
Sales *to* wholesalers	3,317,690,000	Sales *by* wholesalers		3,942,797,000
		Cash-and-carry wholesalers	$99,505,000	
		Exporters	116,962,000	
		Wagon distributors	22,989,000	
		Wholesale merchants	3,397,152,000	
		All other wholesalers	306,189,000	
Sales *to* manufacturers' wholesale branches	1,279,109,000	Sales *by* manufacturers' wholesale branches		1,602,769,000
Sales *to* retailers (including chains)	1,966,631,000	Sales *by* chain-store warehouses		1,027,047,000
Sales *to* manufacturers' retail branches	327,772,000			
Sales *to* industrial consumers	655,543,000			
Sales *to* household consumers	447,688,000			
		Sales *by* importers		236,359,000

[a] Commodities are identical as it is possible to secure.

If there were no duplications involved in the foregoing tabulations, the difference between the comparable types would just measure the cost of performing the wholesale marketing functions, including net profits, and transportation costs. It is, therefore, possible to arrive at a close approximation of the extent of duplication by deducting sales at factory prices from sales at wholesale prices for comparable types of wholesalers and comparing the remainder with the wholesalers' operating margin. This margin, with the exception of net profits, may be determined with a fair degree of accuracy. The statistics on operating expenses published by the Census of Wholesale Distribution give the total expenses for

wholesaling, exclusive of net profits, for each type of wholesale establishment. While no official statistics on net profits are available, a number of scientific studies of operating expenses have been made which afford a substantial basis for estimating net profits.

For example, agents and brokers have a gross difference between manufacturers' and wholesale census statistics of $469,974,000, which amounts to 27.8 per cent of net sales at wholesale prices. The total operating expenses of agents and brokers was but 1.8 per cent of net sales and a liberal allowance for net profits is 1.2 per cent, bringing the maximum gross margin up to 3 per cent of net sales at wholesale. On the basis of these facts and estimates, agents and brokers handled approximately $420,000,000 (27.8%−3%=24.8% of their net sales) more than was reported as sales through agents and brokers by the manufacturers. It is possible that some of this consisted of imported merchandise since the imports of grocery commodities as reported to the Department of Commerce were greatly in excess of the total reported to the Census of Distribution by specialized importing houses. Although manufacturers, no doubt, imported directly a large part of the difference, agents and brokers were frequently used as intermediaries. In addition to imports it is probable that goods were sold to industrial consumers by manufacturers who used agents and brokers but failed to keep adequate records of the sales negotiated by them. In some cases, too, agents and brokers served the industrial buyers and received commissions from them, the merchandise being billed directly to the user. To some extent agents and brokers may have resold stocks of wholesale merchants. Finally, agents and brokers engaged to some extent in outright wholesaling activities and may have been classified by the manufacturers as wholesalers. Whatever the explanation, it is reasonable to assume that the sales of agents and brokers consisted of two parts—one, agency or commission business; and the other, straight wholesale purchasing and selling. The extent of each type of selling can only be estimated, but probably the outright wholesaling did not exceed $419,894,000, leaving $1,273,228,000 as agency business, or sales to other types of wholesalers. This latter is, of course, duplicated in the wholesaling totals.

In addition to duplication by agents and brokers, it is known that both wholesalers and manufacturers' wholesale branches sell to other wholesalers, as well as to retailers. The extent of this duplication can be estimated by the same procedure used for agents and brokers. If there were no duplications the sales *to* wholesalers and *to* manufacturers' wholesale branches, at f. o. b. factory prices, as reported by the manufacturers, should differ from the sales reported *by* wholesalers and *by* manufacturers' wholesale branches, at wholesale selling prices, only by the amount of the wholesale margin and transportation costs, a portion of which, doubtless, is included in the reported expense.

By deducting the sales *to* wholesalers from sales *by* wholesalers, a gross margin of 15.8 per cent of net sales is secured. Total operating expenses for wholesale merchants are 9.1 per cent of net sales, which leaves a difference of 6.7 per cent. If it be assumed that net profits accounted for as much as 2.7 per cent, a liberal estimate, there remains approximately 4 per cent of net sales *by* wholesalers which may be looked upon largely as duplication.

The same procedure for manufacturers' wholesale branches shows a gross difference between reported f. o. b. factory sales and sales at wholesale prices of 20.2 per cent of net sales at wholesale. The total expense ratio for manufacturers' wholesale branches was 13.8 per cent, leaving 6.4 per cent, of which, approximately, 4 per cent of net sales must be explained on some other basis. A part of it may be considered as duplication or sales made to other types of wholesale outlets. Changes in inventory between the beginning and end of the year

may be a factor. The fact to be emphasized, however, is that two sets of statistics compiled by two separate investigations, check as closely as these figures do.

One additional refinement in the comparative statistics may be made by an adaptation of the same method. This applies to sales *to* retailers by manufacturers. This figure includes sales *to* grocery chains but does not segregate them. The extent of such sales may be deduced from an examination of the reported sales *by* grocery chain warehouses. In the grocery trade, the operating costs for chain-store warehouses have been reported to the census of distribution. They *average* 3.5 per cent of net sales of merchandise *billed* through the warehouses at wholesale values. (See Table 27.) Since the chains compute their profits on the retail selling values, it is not necessary to estimate net profits on the warehousing operations, but merely to deduct the operating expenses. When this is done, a figure of $992,100,000 is secured which may be called the factory value of goods sold to grocery chains with warehouses. A deduction of this figure from goods sold *to* retailers gives a separate figure for goods sold to all other types of retailers.

The following summary table gives a comparison of the sales of manufacturers and wholesalers which have been refined in accordance with the method just outlined. Sales *by* agents and brokers and *by* importers are shown separately in order to permit an estimate of the volume of domestic grocery commodity sales exclusive of duplication. Sales *through* agents and brokers were reported twice by the manufacturers and, therefore, must be excluded from the totals. The sales *by* agents and brokers, apart from the wholesaling activities above estimated, are shown separately in the wholesale statistics, but are excluded from the total on the ground that they sell largely to other wholesalers. While it is true they also make sales to industrial consumers and to large-scale retailers, particularly the chains, it is impossible to determine the exact extent from the existing statistics. In the grocery trade, much of the business done with retailers by agents and brokers goes through chain-store warehouses which are included in the wholesale statistics.

COMPARISON OF MANUFACTURERS' REPORTED SALES AND ESTIMATED SALES BY WHOLESALE ESTABLISHMENTS, EXCLUSIVE OF DUPLICATION—UNITED STATES: 1929

TYPE OF SALES OUTLET	Manufacturers' sales f. o. b. factory prices	Estimated sales by wholesale establishments, exclusive of duplication
Total (exclusive of agents and brokers)	$7,994,433,000	[1] $7,007,043,000
Subtotal to wholesaling	6,244,442,000	[1] 6,770,684,000
Wholesalers (including exporters)	3,317,690,000	3,785,085,000
Manufacturers' wholesale branches	1,279,109,000	1,538,658,000
Chain systems	992,100,000	1,027,047,000
Industrial consumers	655,543,000	
Subtotal to retailing	1,749,991,000	
Retailers, nonchain	974,531,000	
Manufacturers' retail branches	327,772,000	
Household consumers	447,688,000	
Agents and brokers	1,223,148,000	[2] 1,273,228,000 [3] 419,894,000
Importers		236,359,000
Total estimated duplication		[4] 1,495,051,000

[1] Includes estimated wholesaling activities of agents and brokers of $419,894,000.
[2] Agency basis.
[3] Wholesaling basis.
[4] Includes estimated sales by agents and brokers, manufacturers' sales branches, and wholesalers to other types of wholesale establishments or to each other.

An attempt has been made in Chart II to depict graphically the information analyzed in the foregoing sections of the report, and in addition to indicate the final steps in the distribution process. The following statistics have been used in making the chart.

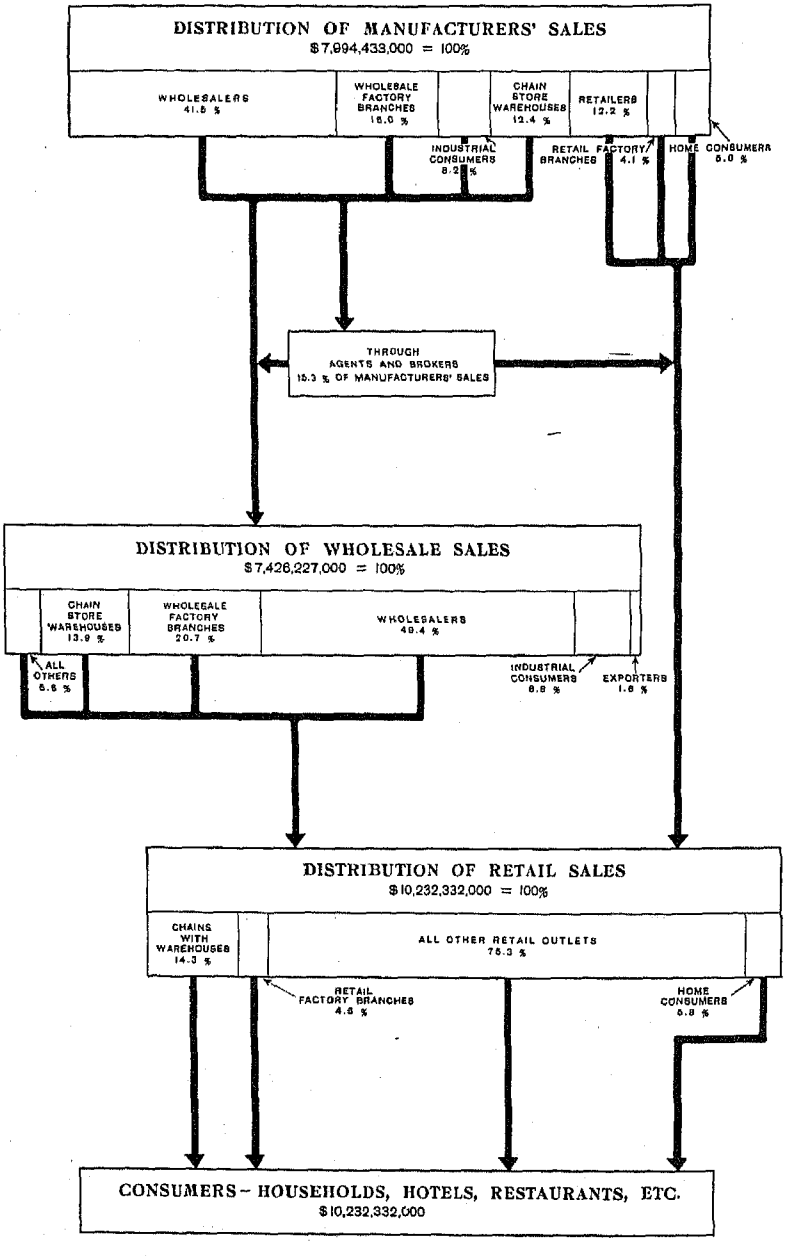
FLOW OF GROCERY COMMODITIES THROUGH CHANNELS OF DISTRIBUTION

	Per cent
Distribution of manufacturers' sales—$7,994,433,000	100
Sales to—	
Wholesalers	41.5
Manufacturers' wholesale branches	16.0
Industrial consumers	8.2
Chain-store warehouses	12.4
Retailers	12.2
Manufacturers' retail branches	4.1
Home consumers	5.6
Through agents and brokers	15.3
Distribution of wholesale sales—$7,426,227,000 at wholesale	100
Sales by—	
Wholesalers	49.4
Manufacturers' wholesale branches	20.7
Chain-store warehouses	13.9
Industrial consumers	8.8
Exporters	1.6
All other	5.6
Distribution of retail sales—$10,232,832,000 at retail	100
Sales by—	
Chains through warehouses	14.3
Manufacturers' retail branches	4.6
Home consumers	5.8
All other retail outlets	75.3

A word of explanation is necessary, since some estimates are included. The first block at the top of the chart shows the total volume of grocery commodities in the hands of the manufacturers and the various channels through which they sold, together with the percentage of total sales flowing through each channel. Immediately under the first block is a smaller block indicating the amount of business going through the hands of agents and brokers. This business is duplicated in the first block since agents and brokers were utilized in reaching some of the other outlets.

The flow of goods from the manufacturer is divided into two major groups sales to wholesale trade and sales to retail trade. These groups are shown by the two separate blocks, one above the other, occupying the center of the chart. The wholesaling block shows the total wholesale value and the division of wholesale sales among the different types. The relative importance of the different types of wholesale outlets is shown in percentages. The retail block immediately below shows the total retail value of grocery commodities distributed. A further subdivision gives the percentage of sales of grocery commodities made by chain stores through warehouses, by manufacturers' retail branches, direct sales to home consumers from the factory, and by all other retail stores. *It should be emphasized that these figures are not the sales made by grocery stores, but the grocery commodity sales made by all types of retail outlets, including hotels, restaurants, and institutions. Moreover, the total includes sales made directly to household and institutional consumers by both manufacturers and wholesalers.* These

CHART II.—FLOW OF GROCERY PRODUCTS THROUGH DISTRIBUTION CHANNELS



figures are based upon the wholesale value of grocery commodities, plus a mark-up for the various types of retail outlets, which is believed to be adequate to cover transportation costs. The operating expense figures used in computing the mark-up were based upon the retail census statistics, plus an estimated net profit based upon statistical studies of retailing by other scientific research agencies. The proportion of retail sales going through the various outlets are based upon the manufacturers' and wholesalers' reports.[7]

WHOLESALE DISTRIBUTION OF GROCERY COMMODITIES, DETAILED ANALYSIS

Extent of commodity coverage.—Detailed statistics are presented in Tables 4 and 5, which show each of the commodity items listed in the preceding section. A word of explanation regarding the commodity items may prove helpful to a study of this table. The commodity statistics are based upon the wholesale schedules collected by the Census of Distribution. These schedules provided for commodity information on *two bases*. For those establishments which could report only *major commodity groups* such as *canned goods, groceries,* or *confectionery and soft drinks,* space was provided on the schedules in a separate column. For those establishments which were able to give *detailed statistics,* a second column was provided. Thus, some establishments reported the volume of *canned goods sales* only as a total, while others reported sales of *canned fruits, canned vegetables,* and *other canned goods* separately. Some establishments kept no record of commodity sales and hence could make no report at all on such items. The latter point has already been discussed in the preceding section, where commodity coverage was explained. It will be recalled that less than 10 per cent of the total net sales were reported by establishments which kept no commodity records. This is merely another way of saying that total reported commodity sales are slightly over 90 per cent complete. This percentage, however, applies only to the *major commodity groups such as canned goods and groceries.* The detailed commodity items were not reported as completely. The extent of the discrepancy can be easily determined from Table 4. Canned goods is the first *major commodity group* appearing in Table 4, which also shows *detailed commodity items.* A total of $1,187,879,000 in canned goods was reported by all wholesale establishments. Since the total commodity coverage was 91.7 per cent of total net sales on the average, it may be assumed the above figure constituted 91.7 per cent of total canned goods sales.[8]

The first detailed item under the major commodity line is called *canned goods, not itemized.* This item of $163,072,000 constituted 13.73 per cent of total canned goods sales, leaving 86.27 per cent of total canned goods which were reported separately in detail. In other words, the commodity coverage for *detailed canned goods* items, such as canned fruit and canned vegetables, was 86.27 per cent of total canned goods sales. Similarly, for confectionery and soft drinks, the *detailed commodity* coverage was 63.29 per cent of the total. The following summary gives these percentages for the three major groups, as well as percentages of total commodity sales for the detailed items.

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[7] The final figure for grocery commodity sales may be checked by comparing with the retail statistics. See final section of this report.

[8] This grand total includes a certain amount of duplication due to sales by agents and brokers, which has been fully explained above.

COMMODITY COVERAGE FOR DETAILED COMMODITY ITEMS

DETAILED COMMODITY ITEMS FALLING IN FOLLOWING GROUPS	Per cent of commodity group sales	Per cent of total net sales
Canned goods	86.27	79.11
Confectionery and soft drinks	63.29	58.04
Groceries	85.32	78.22

On the basis of these percentages it is possible to compute the total sales of each of the detailed commodity items. Since there is considerable duplication involved in the sales of agents and brokers, however, the calculations for wholesale trade of domestic goods should be based upon Table 5, which omits sales by agents and brokers and sales by importers as well.

To illustrate, take the commodity item "canned fruits." Table 5 should be consulted to determine the net reported commodity sales of canned fruit. This figure was $205,522,000. Since this item was reported only to the extent of 86.27 per cent of all canned-goods sales, $205,522,000 is an underestimate of the actual sales of canned fruit. Furthermore, since all commodity sales were reported for but 91.7 per cent of total net sales, the actual sales of canned fruit must have been even larger. To determine just how much larger, take 86.27 per cent of 91.7 per cent, or 79.11 per cent, as the base. In other words, the *reported commodity sales* of canned fruit, exclusive of duplication were $205,522,000 or 79.11 per cent of the total. The estimated total volume of canned-fruit sales at wholesale was therefore $260,000,000. The same procedure for canned vegetables gives an estimated total of $307,000,000. These totals may be compared with the statistics of production shown in Tables 1, 2, and 3.

Commodity sales, by types of wholesalers.—Tables 4 and 5 are shown separately to prevent a misrepresentation of total commodity sales and to facilitate comparison by individual items with Tables 2 and 3. Such comparison, however, should be made with the greatest caution and should allow for the discrepancies discussed in the comparative analysis of the manufacturers' total sales with the wholesale statistics.

From Tables 4 and 5 it is possible to measure the relative importance of each type of wholesale outlet for all grocery commodities combined and for each grocery item. Table 4 shows separately the sales by agents and brokers and by importers. Table 5 excludes sales by agents and brokers and by importers and shows the relative importance of seven types of wholesale establishments as outlets for the various grocery items.

Table 4 shows that agents and brokers accounted for 20.65 per cent of total reported commodity sales and importers for 2.86 per cent. Table 5 shows that wholesale merchants accounted for 46.39 per cent of commodity sales, exclusive of those made by agents and brokers and importers, or 35.4 per cent of total reported commodity sales. Manufacturers' wholesale branches handled 20.8 per cent of total reported commodity sales, or 27.19 per cent of sales reported by other than brokers and importers. These percentages are for the totals only. The individual commodity items show wide variation from the totals.

Commodity sales, by kind of business.[9]—In addition to giving the types of wholesale establishments which handled grocery commodities, the statistics in Tables 4 and 5 show the lines of trade in which the various types of wholesalers operated. Thus, Table 4 shows that the grocery trade handled 99.5 per cent

[9] The terms "kind of business," "line of trade," and "trade group," or just "trade," are used interchangeably in this report.

of the *bakery commodities* and 99.3 per cent of the *canned vegetables*. For *confectionery and soft drinks not itemized*, 12.81 per cent were handled by wholesale establishments specializing in the confectionery and soft-drink trade; 69.69 per cent by wholesale establishments in the grocery trade; 8.23 per cent by tobacco and tobacco products trade; and 7.69 per cent by wholesale establishments in the drug and drug sundries trade. *It is thus possible to determine from Tables 4 and 5 for all grocery commodities and for specific grocery items the total volume of sales at wholesale prices; the lines of trade which handled them and the relative importance of each trade as an outlet for grocery commodities, together with the types of wholesale establishments and the relative value of each type as an outlet for grocery commodities in all trades and for individual trades.*

By using the *percentage of commodity coverage*, it is possible to project the figures for reported commodity sales to a fairly accurate estimate of the total, as illustrated above for canned fruits and vegetables. These projected totals, when adjusted to eliminate the duplication of agents and brokers and other types of wholesale establishments which sell to wholesalers, may be compared with the statistics in Tables 2 and 3 to trace the flow of a particular commodity item from the producer through the wholesaling process.

TABLE 4.—GROSS COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE—INCLUDING AGENTS AND BROKERS AND IMPORTERS—UNITED STATES: 1929

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL SALES (in thousands of dollars)		Agents and brokers, per cent of total sales [2]	Importers, per cent of total sales [2]	Wholesalers and other wholesale establishments, per cent of total sales [2]
	Amount	Per cent of total [1]			
Total reported commodity sales	**$7,659,350**	**100.00**	**20.65**	**2.86**	**76.49**
BAKERY PRODUCTS	403,655	5.27	0.76	0.13	99.11
Confectionery and soft-drink trade	720	0.18	1.11	--------	98.89
Food-products (not elsewhere specified) trade	1,316	0.33	0.76	--------	99.24
Grocery and food-specialty trade	401,540	99.48	0.75	0.14	99.11
Tobacco and tobacco-products (except leaf) trade	48	0.01	--------	--------	100.00
Miscellaneous trades	31	(X)	48.39	--------	51.61
CANNED GOODS	1,187,879	15.51	32.88	1.45	65.67
Canned goods not itemized	163,072	13.73	25.97	0.40	73.63
Confectionery and soft-drink trade	7	(X)	--------	--------	100.00
Food-products (not elsewhere specified) trade	2,482	1.52	6.77	--------	93.23
Grocery and food-specialty trade	153,638	94.22	26.80	0.40	72.80
Miscellaneous trades	6,945	4.26	14.50	0.52	84.98
Canned fish and sea foods	168,442	14.18	43.47	6.07	50.46
Confectionery and soft-drink trade	5	(X)	--------	20.00	80.00
Farm-products (not elsewhere specified) trade	457	0.28	--------	--------	100.00
Food-products (not elsewhere specified) trade	4,724	2.80	4.34	11.07	84.59
Grocery and food-specialty trade	163,121	96.84	44.71	5.95	49.34
Tobacco and tobacco-products (except leaf) trade	24	0.01	--------	--------	100.00
Miscellaneous trades	111	0.07	67.57	--------	32.43

[1] The percentages in this column are designed to show three different relationships: (1) the relation which a major commodity group bears to the total commodity sales; (2) the relation which a detailed commodity item bears to the major commodity group; and (3) the per cent of commodity business done by a given trade. To illustrate, the item *canned goods* is a major commodity group. The commodity sales of canned goods is $1,187,879,000, which is 15.5 per cent of total commodity sales. Under the item *Canned goods* appears the item *Canned goods not itemized*. This item accounted for 13.7 per cent, not of total commodity sales, but of total *Canned goods* sales. Similarly, the item *Canned fruit* made up 25.9 per cent of all canned-goods sales. Under the detailed commodity item *Canned fruit*, appears first the *Confectionery and soft drink trade*. This trade sold $1,076,000 of canned fruit, which was 0.4 per cent of all canned fruit sales reported. The *Food products* trade accounted for 1.9 per cent and the *Grocery* trade 97.6 per cent of all sales reported for canned fruit.

[2] The percentages in these columns refer to the total in the first column. Thus, *agents and brokers* handled 20.65 per cent of the total reported commodity sales of $7,659,350,000; *importers* handled 2.86 per cent; and other wholesale establishments handled 76.49 per cent. Similarly, for *bakery products*, agents and brokers handled 0.76 per cent of all bakery product sales; importers handled 0.13 per cent; and other wholesalers, the remainder.

TABLE 4.—GROSS COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE—INCLUDING AGENTS AND BROKERS AND IMPORTERS—UNITED STATES: 1929—Continued

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL SALES (in thousands of dollars)		Agents and brokers, per cent of total sales	Importers, per cent of total sales	Wholesalers and other wholesale establishments, per cent of total sales
	Amount	Per cent of total			
CANNED GOODS—Continued.					
Canned fruits	$307,099	25.85	32.72	0.35	66.93
Confectionery and soft-drink trade	1,076	0.35	1.12	0.09	98.79
Food-products (not elsewhere specified) trade	5,947	1.94	6.81	--------	93.19
General-merchandise trade	24	0.01	--------	--------	100.00
Grocery and food-specialty trade	299,829	97.63	33.37	0.36	66.27
Miscellaneous trades	223	0.07	8.97	--------	91.03
Canned meats	68,929	5.80	15.12	0.42	84.46
Confectionery and soft-drink trade	210	0.30	--------	13.33	86.67
Food-products (not elsewhere specified) trade	18,441	26.76	3.50	--------	96.50
General-merchandise trade	9	0.01	--------	--------	100.00
Grocery and food-specialty trade	50,246	72.90	19.45	0.54	80.01
Tobacco and tobacco-products (except leaf) trade	16	0.02	--------	--------	100.00
Miscellaneous trades	7	0.01	--------	--------	100.00
Canned vegetables	385,060	32.42	36.13	0.72	63.15
Confectionery and soft-drink trade	163	0.04	18.40	1.23	80.37
Farm-products (not elsewhere specified) trade	271	0.07	--------	--------	100.00
Food-products (not elsewhere specified) trade	2,021	0.52	11.38	--------	88.62
General-merchandise trade	24	0.01	--------	--------	100.00
Grocery and food-specialty trade	382,229	99.27	36.32	0.73	62.95
Tobacco and tobacco-products (except leaf) trade	279	0.07	--------	--------	100.00
Miscellaneous trades	73	0.02	68.49	--------	31.51
Other canned goods	95,277	8.02	26.23	2.25	71.52
Confectionery and soft-drink trade	914	0.96	0.44	0.22	99.34
Food-products (not elsewhere specified) trade	6,544	6.87	4.02	--------	95.98
Grocery and food-specialty trade	87,338	91.67	28.29	2.47	69.24
Tobacco and tobacco-products (except leaf) trade	62	0.06	--------	--------	100.00
Miscellaneous trades	419	0.44	3.10	--------	96.90
CONFECTIONERY AND SOFT DRINKS	506,267	6.61	4.34	0.39	95.27
Confectionery and soft drinks, not itemized	185,816	36.71	2.31	0.54	97.15
Confectionery and soft-drink trade	23,806	12.81	2.08	0.08	97.84
Drug and drug sundries trade	14,293	7.69	0.76	--------	99.24
Food-products (not elsewhere specified) trade	681	0.36	0.44	--------	99.56
Grocery and food-specialty trade	129,482	69.69	2.85	0.52	96.63
Paper and paper-products trade	348	0.19	--------	35.63	64.37
Tobacco and tobacco-products (except leaf) trade	15,298	8.23	--------	--------	100.00
Miscellaneous trades	1,908	1.03	0.52	10.22	89.26
Bottled beverages	112,446	22.21	5.04	0.62	94.34
Confectionery and soft-drink trade	73,551	65.41	0.98	0.01	99.01
Drug and drug-sundries trade	151	0.13	--------	60.93	39.07
Food-products (not elsewhere specified) trade	3,397	3.02	3.00	--------	97.00
Grocery and food-specialty trade	34,272	30.48	14.14	1.79	84.07
Tobacco and tobacco-products (except leaf) trade	1,057	0.94	--------	--------	100.00
Miscellaneous trades	18	0.02	--------	--------	100.00
Candy	113,974	22.51	5.21	0.17	94.62
Confectionery and soft-drink trade	32,883	28.85	8.69	--------	91.31
Drug and drug-sundries trade	2,333	2.04	--------	--------	100.00
Dry-goods and apparel trade	239	0.22	10.46	--------	89.54
Food-products (not elsewhere specified) trade	2,767	2.43	3.40	--------	96.60
General-merchandise trade	340	0.30	1.18	1.18	97.64
Grocery and food-specialty trade	37,219	32.66	7.76	0.50	91.74
Paper and paper-products trade	101	0.09	--------	--------	100.00
Tobacco and tobacco-products (except leaf) trade	37,604	32.99	--------	--------	100.00
Miscellaneous trades	488	0.42	14.75	0.41	84.84
Chewing gum	19,184	3.78	4.43	--------	95.57
Confectionery and soft-drink trade	8,244	42.97	5.97	--------	94.03
Food products (not elsewhere specified) trade	608	3.17	0.99	--------	99.01
Grocery and food-specialty trade	9,238	48.16	3.82	--------	96.18
Paper and paper-products trade	7	0.04	--------	--------	100.00
Tobacco and tobacco-products (except leaf) trade	1,087	5.66	--------	--------	100.00
Other confectionery	74,846	14.79	6.94	0.12	92.94
Confectionery and soft-drink trade	34,574	46.19	8.46	--------	91.54
Drug and drug-sundries trade	3,810	5.09	0.08	--------	99.92
Food-products (not elsewhere specified) trade	2,215	2.96	24.38	--------	75.62
General-merchandise trade	462	0.62	--------	0.22	99.78
Grocery and food-specialty trade	23,292	31.12	7.16	0.36	92.48

TABLE 4.—GROSS COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE—INCLUDING AGENTS AND BROKERS AND IMPORTERS—UNITED STATES: 1929—Continued

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL SALES (in thousands of dollars)		Agents and brokers, per cent of total sales	Importers, per cent of total sales	Wholesalers and other wholesale establishments, per cent of total sales
	Amount	Per cent of total			
CONFECTIONERY AND SOFT DRINKS—Continued.					
Other confectionery—Continued.					
Machinery, equipment, and supplies (except electrical) trade	$1,340	1.79	4.55		95.45
Paper and paper-products trade	52	0.07			100.00
Tobacco and tobacco-products (except leaf) trade	8,972	11.99			100.00
Miscellaneous trades	129	0.17			100.00
FRUITS AND VEGETABLES, DRIED	250,517	3.27	33.95	2.88	63.17
Fruits, dried	144,487	57.68	34.07	4.99	60.94
Confectionery and soft-drink trade	265	0.18			100.00
Food-products (not elsewhere specified) trade	12,667	8.77	39.05		60.95
Grocery and food-specialty trade	130,844	90.56	33.84	5.51	60.65
Tobacco and tobacco-products (except leaf) trade	10	(X)			100.00
Miscellaneous trades	701	0.49			100.00
Vegetables, dried	106,030	42.32	33.78	0.01	66.21
Confectionery and soft-drink trade	5	(X)			100.00
Farm-products (not elsewhere specified) trade	103	0.09			100.00
Farm-supplies (except machinery and equipment) trade	2,190	2.07	0.55		99.45
Food-products (not elsewhere specified) trade	6,966	6.57	19.65		80.35
Grocery and food-specialty trade	96,576	91.08	35.58	0.01	64.41
Tobacco and tobacco-products (except leaf) trade	15	0.02			100.00
Miscellaneous trades	175	0.17	42.86		57.14
GROCERIES (EXCEPT CANNED GOODS)	4,758,837	62.15	21.64	4.11	74.35
Groceries not itemized	698,613	14.68	6.91	1.03	92.07
Confectionery and soft-drink trade	84	0.01			100.00
Food-products (not elsewhere specified) trade	2,735	0.39	1.94		98.06
General-merchandise trade	831	0.12		26.11	73.89
Grocery and food-specialty trade	611,127	87.48	7.89	0.79	91.32
Tobacco and tobacco-products (except leaf) trade	126	0.02			100.00
Miscellaneous trades	83,710	11.98		2.49	97.51
Cereal preparations	228,949	4.81	8.74	0.33	90.93
Confectionery and soft-drink trade	2,991	1.31	0.30		99.70
Farm-products (not elsewhere specified) trade	361	0.16			100.00
Food-products (not elsewhere specified) trade	919	0.40	3.37	5.12	91.51
Grocery and food-specialty trade	222,124	97.02	8.77	0.33	90.90
Machinery, equipment, and supplies (except electrical) trade	51	0.02			100.00
Tobacco and tobacco-products (except leaf) trade	143	0.06			100.00
Miscellaneous trades	2,360	1.03	20.00		80.00
Coffee	516,512	10.85	32.49	21.30	46.21
Confectionery and soft-drink trade	41	0.01	14.63		85.37
Food-products (not elsewhere specified) trade	1,995	0.39	1.25		98.75
Grocery and food-specialty trade	514,206	99.57	32.63	21.30	45.98
Tobacco and tobacco-products (except leaf) trade	57	0.01			100.00
Miscellaneous trades	123	0.02			100.00
Extracts and spices	72,425	1.52	16.74	17.08	66.18
Confectionery and soft-drink trade	1,627	2.25	1.66		98.34
Food-products (not elsewhere specified) trade	440	0.61	16.36		83.64
Grocery and food-specialty trade	70,085	96.76	17.15	17.65	65.20
Miscellaneous trades	273	0.38	1.83		98.17
Flour	474,374	9.97	14.62	0.54	84.84
Confectionery and soft-drink trade	190	0.04			100.00
Farm-products (not elsewhere specified) trade	7,888	1.66			100.00
Farm-supplies (except machinery and equipment) trade	4,211	0.89	15.10		84.90
Food-products (not elsewhere specified) trade	838	0.18	2.86		97.14
General-merchandise trade	1,208	0.26	47.60	14.90	37.50
Grocery and food-specialty trade	413,153	87.09	16.48	0.49	83.03
Tobacco and tobacco-products (except leaf) trade	67	0.01			100.00
Miscellaneous trades	46,819	9.87	0.07	0.73	99.20
Lard, lard substitutes, and cooking fats	340,134	7.15	8.48	1.82	89.70
Confectionery and soft-drink trade	98	0.03		91.84	8.16
Food-products (not elsewhere specified) trade	143,498	42.19	1.26		98.74
Grocery and food-specialty trade	195,748	57.56	13.44	3.12	83.44
Miscellaneous trades	790	0.22	98.93		1.07

TABLE 4.—GROSS COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE—INCLUDING AGENTS AND BROKERS AND IMPORTERS—UNITED STATES: 1929—Continued

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL SALES (in thousands of dollars)		Agents and brokers, per cent of total sales	Importers, per cent of total sales	Wholesalers and other wholesale establishments, per cent of total sales
	Amount	Per cent of total			
GROCERIES—Continued.					
Nuts, all kinds	$113,389	2.38	32.74	12.31	54.95
Confectionery and soft-drink trade	1,713	1.52	4.14		95.86
Food-products (not elsewhere specified) trade	6,540	5.77	11.47	0.34	88.19
Grocery and food-specialty trade	105,105	92.69	34.54	13.26	52.20
Tobacco and tobacco-products (except leaf) trade	26	0.02			100.00
Miscellaneous trades	5	(X)	40.00		60.00
Oleomargarine and butter substitutes	65,194	1.36	2.35	0.06	97.59
Food-products (not elsewhere specified) trade	23,316	35.77	1.52		98.48
Grocery and food-specialty trade	41,850	64.20	2.82	0.10	97.08
Miscellaneous trades	28	0.03			100.00
Pickles, preserves, jams, and jellies	141,379	2.97	14.82	2.54	82.64
Confectionery and soft-drink trade	948	0.67		0.64	99.36
Drug and drug-sundries trade	28	0.01		7.15	92.85
Food-products (not elsewhere specified) trade	7,251	5.13	2.09		97.91
Grocery and food-specialty trade	132,863	93.99	15.65	2.70	81.65
Miscellaneous trades	289	0.20	1.74		98.26
Rice	50,287	1.06	30.59	5.39	64.02
Confectionery and soft-drink trade	4	0.01	100.00		
Farm-products (not elsewhere specified) trade	3,150	6.26	52.92		47.08
Food-products (not elsewhere specified) trade	2,731	5.43	15.48		84.52
Grocery and food-specialty trade	44,355	88.22	30.00	6.11	63.89
Miscellaneous trades	47	0.08	14.90		85.10
Sugar	1,129,932	23.75	45.79	1.20	53.01
Confectionery and soft-drink trade	299	0.02	18.72		81.28
Food-products (not elsewhere specified) trade	6,281	0.55	11.25		88.75
Grocery and food-specialty trade	1,122,805	99.38	45.98	1.22	52.80
Tobacco and tobacco-products (except leaf) trade	217	0.02			100.00
Miscellaneous trades	330	0.03	79.09		20.91
Teas	78,175	1.64	11.33	15.48	73.19
Confectionery and soft-drink trade	4	0.01			100.00
Food-products (not elsewhere specified) trade	697	0.89			100.00
Grocery and food-specialty trade	76,450	97.79	11.62	15.83	72.55
Miscellaneous trades	1,024	1.31			100.00
Other groceries	849,474	17.86	9.63	0.65	89.72
Confectionery and soft-drink trade	3,973	0.47	0.70	0.07	99.23
Drug and drug-sundries trade	441	0.05			100.00
Farm-supplies (except machinery and equipment) trade	2,425	0.29	14.18		85.82
Food-products (not elsewhere specified) trade	8,223	0.97	5.66	0.13	94.21
Grocery and food-specialty trade	834,103	98.19	9.72	0.70	89.58
Tobacco and tobacco-products (except leaf) trade	123	0.01	20.33		79.67
Miscellaneous trades	186	0.02	27.95	0.53	71.52
MILK, EVAPORATED, CONDENSED, AND PROCESSED	197,351	2.57	19.24	0.35	80.41
Confectionery and soft-drink trade	21	0.01			100.00
Food-products (not elsewhere specified) trade	26,906	13.63	14.04	1.37	84.59
Grocery and food-specialty trade	170,411	86.36	20.07	0.19	79.74
Tobacco and tobacco-products (except leaf) trade	5	(X)			100.00
Miscellaneous trades	8	(X)			100.00
SOAPS, POWDERS, AND CLEANSERS	354,844	4.62	3.79	0.02	96.19
Automotive trade	50	0.01			100.00
Confectionery and soft-drink trade	1,953	0.55			100.00
Drug and drug-sundries trade	8,551	2.41	10.80	0.70	88.50
Farm-products (not elsewhere specified) trade	7,479	2.11			100.00
Farm-supplies (except machinery and equipment) trade	456	0.14	98.24		1.76
Food-products (not elsewhere specified) trade	36,038	10.16	0.15		99.85
General-merchandise trade	156	0.04		2.56	97.44
Grocery and food-specialty trade	285,925	80.58	4.13	0.03	95.84
Machinery, equipment, and supplies (except electrical) trade	8,259	2.33	1.82	0.03	98.15
Paper and paper-products trade	348	0.09			100.00
Petroleum and petroleum-products trade	15	(X)			100.00
Tobacco and tobacco-products (except leaf) trade	229	0.06			100.00
Miscellaneous trades	5,385	1.52	1.48	0.35	98.17

TABLE 5.—NET COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE AND BY TYPE OF WHOLESALE ESTABLISHMENT—UNITED STATES: 1929

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL COMMODITY SALES, EXCLUSIVE OF SALES BY AGENTS AND BROKERS AND IMPORTERS		PER CENT OF TOTAL COMMODITY SALES BY TYPE OF WHOLESALE ESTABLISHMENTS [2]						
	Amount (in $000)	Per cent of total [1]	Cash-and-carry	Chain-store warehouses	Exporters	Manufacturers' sales branches	Wagon distributors	Wholesale merchants	All other types [3]
Reported commodity sales	**$5,858,927**	**100.00**	**1.41**	**16.31**	**1.77**	**27.19**	**0.38**	**46.39**	**6.55**
BAKERY PRODUCTS	400,053	6.83	0.18	16.93	0.01	68.60	1.17	12.52	0.59
Confectionery and soft-drink trade	712	0.18	------	0.14	------	73.45	4.07	7.87	14.47
Food-products (not elsewhere specified) trade	1,306	0.33	1.45	28.79	------	51.99	------	17.77	------
Grocery and food-specialty trade	397,971	99.48	0.18	16.92	0.01	68.65	1.17	12.50	0.57
Tobacco and tobacco-products (except leaf) trade	48	0.01	2.08	------	------	------	------	93.75	4.17
Miscellaneous trades	16	(X)	------	31.25	------	------	6.25	62.50	------
CANNED GOODS	780,091	13.31	2.15	12.34	1.50	5.45	0.05	71.90	6.61
Canned goods not itemized	120,083	15.39	1.44	5.78	------	0.20	(X)	77.69	14.89
Confectionery and soft drink trade	7	0.01	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	2,314	1.93	------	2.20	------	5.53	------	70.66	21.61
Grocery and food-specialty trade	111,860	93.15	1.52	6.06	------	------	(X)	79.52	12.90
Miscellaneous trades	5,902	4.91	0.34	1.86	------	1.85	------	45.78	50.17
Canned fish and sea foods	84,999	10.90	2.76	10.84	8.12	2.90	0.08	69.34	5.96
Confectionery and soft-drink trade	4	(X)	------	------	------	------	------	50.00	50.00
Farm-products (not elsewhere specified) trade	457	0.54	------	------	------	------	------	------	100.00
Food-products (not elsewhere specified) trade	3,996	4.70	0.98	3.90	1.60	2.23	------	90.97	0.32
Grocery and food-specialty trade	80,482	94.69	2.86	11.25	8.50	2.96	0.09	68.64	5.70
Tobacco and tobacco-products (except leaf) trade	24	0.03	------	------	------	------	------	100.00	------
Miscellaneous trades	36	0.04	------	------	------	------	------	100.00	------
Canned fruits	205,522	26.35	1.99	12.54	2.16	5.33	(X)	69.73	8.25
Confectionery and soft-drink trade	1,063	0.52	------	------	------	35.84	------	64.16	------
Food-products (not elsewhere specified) trade	5,542	2.70	1.62	4.20	------	79.19	------	14.45	0.54
General-merchandise trade	24	0.01	------	------	100.00	------	------	------	------
Grocery and food-specialty trade	198,690	96.67	2.02	12.85	2.22	3.11	(X)	71.31	8.49
Miscellaneous trades	203	0.10	0.99	------	------	------	------	70.44	28.57
Canned meats	58,209	7.46	1.42	6.96	0.07	29.86	0.42	60.98	0.29
Confectionery and soft-drink trade	182	0.31	------	------	------	98.90	------	1.10	------
Food-products (not elsewhere specified) trade	17,795	36.57	------	------	------	82.14	0.95	16.47	0.44
General-merchandise trade	9	0.02	------	------	100.00	------	------	------	------
Grocery and food-specialty trade	40,200	69.06	2.05	10.08	0.08	6.43	0.18	80.95	0.23
Tobacco and tobacco-products (except leaf) trade	16	0.03	------	------	------	------	------	81.25	18.75
Miscellaneous trades	7	0.01	------	------	------	------	------	100.00	------
Canned vegetables	243,148	31.17	2.34	18.78	0.07	2.79	(X)	71.88	4.14
Confectionery and soft-drink trade	131	0.05	------	------	------	73.28	------	26.72	------
Farm-products (not elsewhere specified) trade	271	0.11	------	------	------	------	------	------	100.00

[1] The percentages in this column are designed to show three different relationships: (1) The relation which a major commodity group bears to the total commodity sales; (2) the relation which a detailed commodity item bears to the major commodity group; and (3) the per cent of commodity business done by a given trade. See example in footnote 1, Table 4, p. 23.

[2] The percentages in these columns refer to the total in the first column. Thus, cash-and-carry wholesalers accounted for 1.5 per cent of the total for all commodities and for 0.2 per cent of total *Bakery-products sales*.

[3] Includes drop shippers, cooperative marketing associations, and assemblers of farm products.

TABLE 5.—NET COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE AND BY TYPE OF WHOLESALE ESTABLISHMENT—UNITED STATES: 1929—Continued

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL COMMODITY SALES, EXCLUSIVE OF SALES BY AGENTS AND BROKERS AND IMPORTERS		PER CENT OF TOTAL COMMODITY SALES BY TYPE OF WHOLESALE ESTABLISHMENTS						
	Amount (in $000)	Per cent of total	Cash-and-carry	Chain-store warehouses	Exporters	Manufacturers' sales branches	Wagon distributors	Wholesale merchants	All other types
CANNED GOODS—Continued.									
Canned vegetables—Continued.									
Food-products (not elsewhere specified) trade	$1,791	0.74	5.42	11.00	------	17.81	------	59.91	5.86
General-merchandise trade	24	0.01	------	------	100.00	------	------	------	------
Grocery and food-specialty trade	240,629	98.97	2.32	18.90	0.06	2.64	(X)	72.05	4.03
Tobacco and tobacco-products (except leaf) trade	279	0.11	------	------	------	------	------	97.95	2.15
Miscellaneous trades	23	0.01	------	------	------	------	------	100.00	------
Other canned goods	68,130	8.73	3.10	6.73	0.16	6.86	0.14	80.96	2.05
Confectionery and soft-drink trade	908	1.33	------	------	------	9.03	------	90.97	------
Food-products (not elsewhere specified) trade	6,281	9.22	------	0.02	------	55.82	------	41.62	2.54
Grocery and food-specialty trade	60,473	88.76	3.49	7.58	0.18	1.12	0.16	85.42	2.05
Tobacco and tobacco-products (except leaf) trade	62	0.09	------	------	------	20.97	------	79.03	------
Miscellaneous trades	406	0.60	------	------	------	98.77	------	1.23	------
CONFECTIONERY AND SOFT DRINKS	482,310	8.23	2.27	7.70	0.24	11.42	1.19	72.10	5.08
Confectionery and soft drinks not itemized	180,500	37.42	2.74	2.41	0.29	4.54	0.11	87.23	2.08
Confectionery and soft-drink trade	23,293	12.90	1.47	0.14	------	0.12	0.80	97.02	0.45
Drug and drug-sundries trade	14,184	7.86	------	17.21	0.53	18.87	------	63.39	------
Food-products (not elsewhere specified) trade	678	0.38	------	------	------	0.44	------	99.56	------
Grocery and food-specialty trade	125,120	69.32	0.92	1.05	0.32	4.35	(X)	90.36	3.00
Paper and paper-products trade	224	0.12	------	------	------	------	------	100.00	------
Tobacco and tobacco-products (except leaf) trade	15,298	8.48	22.58	3.70	------	0.25	0.05	73.39	0.03
Miscellaneous trades	1,703	0.94	------	------	2.41	------	------	40.93	56.66
Bottled beverages	106,068	21.99	1.03	10.16	0.02	20.82	0.80	64.39	2.78
Confectionery and soft-drink trade	72,826	68.66	0.12	0.01	------	28.91	1.15	66.58	3.23
Drug and drug-sundries trade	59	0.06	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	3,295	3.11	------	0.61	------	8.32	------	91.07	------
Grocery and food-specialty trade	28,813	27.16	2.93	37.81	0.08	2.43	0.04	55.12	2.09
Tobacco and tobacco-products (except leaf) trade	1,057	1.00	15.71	------	------	4.54	------	79.75	------
Miscellaneous trades	18	0.01	------	------	------	------	11.11	88.89	------
Candy	107,843	22.36	2.61	2.79	0.39	11.58	3.61	63.74	15.28
Confectionery and soft-drink trade	30,027	27.84	1.13	0.03	------	20.44	12.30	11.99	54.11
Drug and drug-sundries trade	2,333	2.16	------	------	------	98.89	------	1.11	------
Dry-goods and apparel trade	214	0.20	------	------	1.87	------	------	98.13	------
Food-products (not elsewhere specified) trade	2,673	2.48	------	------	------	9.47	0.04	90.49	------
General-merchandise trade	332	0.31	------	22.29	35.84	------	------	41.87	------
Grocery and food-specialty trade	34,145	31.66	5.35	8.18	0.83	9.91	0.20	74.82	0.71
Paper and paper products trade	101	0.09	------	------	------	------	------	100.00	------
Tobacco and tobacco-products (except leaf) trade	37,604	34.87	1.73	0.27	------	1.07	0.33	96.60	------
Miscellaneous	414	0.39	------	7.25	3.62	------	------	89.13	------
Chewing gum	18,333	3.80	6.71	6.51	0.31	1.73	1.75	82.66	0.33
Confectionery and soft-drink trade	7,752	42.28	2.84	3.20	------	1.26	3.85	88.21	0.55
Food-products (not elsewhere specified) trade	602	3.28	------	------	------	4.65	------	95.35	------
Grocery and food-specialty trade	8,885	48.47	9.80	10.30	0.63	2.10	0.14	76.94	0.09
Paper and paper-products trade	7	0.04	------	------	------	------	------	100.00	------
Tobacco and tobacco-products (except leaf) trade	1,087	5.93	12.79	2.12	------	0.37	0.92	82.88	0.92
Other confectionery	69,566	14.43	1.26	25.58	0.20	17.27	0.71	54.78	0.20
Confectionery and soft-drink trade	31,650	45.50	1.66	0.22	------	26.92	1.21	69.79	0.20
Drug and drug-sundries trade	3,807	5.47	------	52.17	0.05	46.73	------	1.05	------
Food-products (not elsewhere specified) trade	1,675	2.41	0.06	------	0.18	19.70	2.51	77.55	------

TABLE 5.—NET COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE AND BY TYPE OF WHOLESALE ESTABLISHMENT—UNITED STATES: 1929—Continued

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL COMMODITY SALES, EXCLUSIVE OF SALES BY AGENTS AND BROKERS AND IMPORTERS		PER CENT OF TOTAL COMMODITY SALES BY TYPE OF WHOLESALE ESTABLISHMENTS						
	Amount (in $000)	Per cent of total	Cash-and-carry	Chain-store warehouses	Exporters	Manufacturers' sales branches	Wagon distributors	Wholesale merchants	All other types
CONFECTIONERY AND SOFT DRINKS—Con.									
Other confectionery—Continued.									
General-merchandise trade	$461	0.06	------	10.85	17.57	------	------	56.62	14.96
Grocery and food-specialty trade	21,541	30.96	1.42	72.71	0.23	2.57	0.14	22.86	0.07
Machinery, equipment, and supplies (except electrical) trade	1,279	1.84	------	------	------	51.06	------	48.94	------
Paper and paper-products trade	52	0.07	5.77	------	------	------	------	94.23	------
Tobacco and tobacco-products (except leaf) trade	8,972	12.90	0.45	0.27	------	2.00	0.38	96.90	------
Miscellaneous trades	129	0.19	------	------	------	------	------	100.00	------
FRUITS AND VEGETABLES (DRIED)	158,254	2.70	0.92	5.40	5.21	12.34	(X)	69.16	6.97
Fruits, dried	88,050	55.64	1.10	4.78	6.21	20.19	(X)	64.02	3.70
Confectionery and soft-drink trade	265	0.30	------	------	------	90.94	------	9.06	------
Food-products (not elsewhere specified) trade	7,721	8.77	3.91	0.32	------	0.70	------	94.61	0.46
Grocery and food-specialty trade	79,353	90.12	0.84	5.27	6.77	21.27	(X)	61.79	4.06
Tobacco and tobacco-products (except leaf) trade	10	0.01	------	------	------	------	------	100.00	------
Miscellaneous trades	701	0.80	------	------	14.27	85.59	------	0.14	------
Vegetables, dried	70,204	44.36	0.70	6.17	3.95	2.50	------	75.61	11.07
Confectionery and soft-drink trade	5	0.01	------	------	------	------	------	100.00	------
Farm-products (not elsewhere specified) trade	103	0.15	------	------	------	------	------	100.00	------
Farm-supplies (except machinery and equipment) trade	2,178	3.10	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	5,597	7.97	0.95	------	------	------	------	99.05	------
Grocery and food-specialty trade	62,206	88.61	0.71	6.96	4.30	2.82	------	72.72	12.49
Tobacco and tobacco-products (except leaf) trade	15	0.02	------	------	------	------	------	100.00	------
Miscellaneous trades	100	0.14	------	------	100.00	------	------	------	------
GROCERIES (EXCEPT CANNED GOODS)	3,538,316	60.39	1.41	20.42	2.11	25.14	0.31	42.36	8.25
Groceries not itemized	643,189	18.18	1.82	21.20	0.61	6.86	0.06	47.44	22.01
Confectionery and soft-drink trade	84	0.01	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	2,682	0.42	0.04	18.49	------	------	------	81.47	------
General-merchandise trade	614	0.10	------	8.14	71.82	------	------	20.04	------
Grocery and food-specialty trade	558,059	86.76	2.10	24.28	0.59	7.91	0.07	54.01	11.04
Tobacco and tobacco-products (except leaf) trade	126	0.02	------	------	------	------	------	96.83	3.17
Miscellaneous trades	81,624	12.69	------	0.31	0.22	------	------	1.47	98.00
Cereal preparations	208,183	5.88	2.33	4.43	0.26	44.34	0.50	47.20	0.94
Confectionery and soft-drink trade	2,982	1.44	------	------	------	72.77	------	22.37	4.86
Farm-products (not elsewhere specified) trade	361	0.17	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	841	0.40	------	6.42	------	0.24	------	93.34	------
Grocery and food-specialty trade	201,917	96.99	2.40	4.17	0.27	44.64	0.52	47.11	0.89
Machinery, equipment, and supplies (except electrical) trade	51	0.02	------	------	------	------	------	100.00	------
Tobacco and tobacco-products (except leaf) trade	143	0.07	------	------	------	6.29	------	93.71	------
Miscellaneous trades	1,888	0.91	------	39.72	------	------	------	60.28	------
Coffee	238,666	6.75	1.44	4.05	4.85	28.66	0.46	55.29	5.25
Confectionery and soft-drink trade	35	0.01	------	2.86	------	------	------	97.14	------
Food-products (not elsewhere specified) trade	1,970	0.83	49.09	------	------	9.70	0.51	39.99	0.71
Grocery and food-specialty trade	236,481	99.09	1.05	4.09	4.90	28.84	0.46	55.38	5.28
Tobacco and tobacco-products (except leaf) trade	57	0.02	------	------	------	------	------	56.14	43.86
Miscellaneous trades	123	0.05	------	------	------	------	------	100.00	------

TABLE 5.—NET COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE AND BY TYPE OF WHOLESALE ESTABLISHMENT—UNITED STATES: 1929—Continued

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL COMMODITY SALES, EXCLUSIVE OF SALES BY AGENTS AND BROKERS AND IMPORTERS		PER CENT OF TOTAL COMMODITY SALES BY TYPE OF WHOLESALE ESTABLISHMENTS						
	Amount (in $000)	Per cent of total	Cash-and-carry	Chain-store warehouses	Exporters	Manufacturers' sales branches	Wagon distributors	Wholesale merchants	All other types
GROCERIES—Continued.									
Extracts and spices	$47,934	1.35	1.29	5.24	0.93	10.93	0.13	78.59	2.89
Confectionery and soft-drink trade	1,600	3.34	------	------	------	81.00	------	19.00	------
Food-products (not elsewhere specified) trade	368	0.77	7.34	0.54	------	44.29	------	47.83	------
Grocery and food-specialty trade	45,698	95.34	1.20	5.49	0.98	8.28	0.13	80.80	3.03
Miscellaneous trades	268	0.55	------	------	------	------	------	99.25	0.75
Flour	402,481	11.37	0.52	27.44	6.20	15.89	0.04	46.26	3.56
Confectionery and soft-drink trade	190	0.05	------	------	------	------	------	95.79	4.21
Farm-products (not elsewhere specified) trade	7,888	1.96	------	------	91.21	------	------	8.79	------
Farm-supplies (except machinery and equipment) trade	3,575	0.89	------	0.34	------	41.99	------	54.79	2.88
Food-products (not elsewhere specified) trade	814	0.20	------	0.49	------	------	------	99.51	------
General-merchandise trade	453	0.11	------	------	91.39	------	------	8.39	0.22
Grocery and food-specialty trade	343,049	85.23	0.61	20.64	4.34	18.21	0.05	53.06	3.09
Tobacco and tobacco-products (except leaf) trade	67	0.02	------	------	------	------	------	100.00	------
Miscellaneous trades	46,445	11.54	------	86.35	6.09	------	------	0.77	7.79
Lard, lard substitutes, and cooking fats	305,074	8.62	0.38	9.83	7.40	58.80	0.02	20.71	2.86
Confectionery and soft-drink trade	8	(X)	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	141,696	46.45	------	0.40	10.37	79.91	0.01	7.96	1.35
Grocery and food-specialty trade	163,320	53.53	0.71	18.01	4.84	40.50	0.03	31.75	4.16
Miscellaneous trades	50	0.02	------	------	------	------	------	70.00	30.00
Nuts, all kinds	62,310	1.76	0.64	4.69	0.04	5.53	0.11	70.94	18.05
Confectionery and soft-drink trade	1,642	2.64	------	38.55	------	30.82	0.49	30.14	------
Food-products (not elsewhere specified) trade	5,768	9.26	0.21	0.03	------	1.80	------	86.13	11.74
Grocery and food-specialty trade	54,871	88.06	0.70	4.17	0.04	5.16	0.11	70.55	19.27
Tobacco and tobacco-products (except leaf) trade	26	0.04	------	------	------	------	------	100.00	------
Miscellaneous trades	3	(X)	------	------	------	------	33.33	66.67	------
Oleomargarine and butter substitutes	63,620	1.80	0.46	1.90	0.98	46.48	2.45	34.96	12.77
Food products (not elsewhere specified) trade	22,963	36.09	0.07	------	0.58	80.02	------	19.23	0.10
Grocery and food-specialty trade	40,629	63.86	0.68	2.97	1.21	27.56	3.82	43.82	19.94
Miscellaneous trades	28	0.05	------	------	------	------	21.43	78.57	------
Pickles, preserves, jams, and jellies	116,829	3.30	1.17	9.44	0.45	26.00	3.88	57.63	1.43
Confectionery and soft-drink trade	942	0.81	------	------	------	76.85	1.17	21.98	------
Drug and drug-sundries trade	26	0.02	------	100.00	------	------	------	------	------
Food-products (not elsewhere specified) trade	7,099	6.07	------	0.55	------	76.88	1.04	21.53	------
Grocery and food-specialty trade	108,478	92.86	1.26	10.11	0.48	22.30	3.87	60.45	1.53
Miscellaneous trades	284	0.24	------	------	2.82	------	88.02	7.75	1.41
Rice	32,187	0.91	1.89	3.28	1.81	8.04	0.03	83.28	1.67
Farm-products (not elsewhere specified) trade	1,483	4.61	------	------	------	------	------	66.08	33.92
Food-products (not elsewhere specified) trade	2,308	7.17	------	2.78	------	------	------	97.22	------
Grocery and food-specialty trade	28,356	88.10	2.14	3.49	2.06	9.12	0.04	83.04	0.11
Miscellaneous trades	40	0.12	------	------	------	------	------	90.00	10.00
Sugar	599,006	16.93	1.91	12.47	0.97	34.70	(X)	48.35	1.60
Confectionery and soft-drink trade	243	0.04	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	5,574	0.93	------	6.90	------	0.64	------	92.46	------
Grocery and food-specialty trade	592,903	98.98	1.93	12.55	0.99	35.04	(X)	47.88	1.61
Tobacco and tobacco-products (except leaf) trade	217	0.04	------	------	------	------	------	41.94	58.06
Miscellaneous trades	69	0.01	------	------	------	------	------	100.00	------

TABLE 5.—NET COMMODITY SALES OF GROCERY ITEMS, BY COMMODITIES AND LINES OF TRADE AND BY TYPE OF WHOLESALE ESTABLISHMENT—UNITED STATES: 1929—Continued

[(X) *indicates that the percentage is less than 0.005*]

COMMODITY AND LINE OF TRADE	TOTAL COMMODITY SALES, EXCLUSIVE OF SALES BY AGENTS AND BROKERS AND IMPORTERS		PER CENT OF TOTAL COMMODITY SALES BY TYPE OF WHOLESALE ESTABLISHMENTS						
	Amount (in $000)	Per cent of total	Cash-and-carry	Chain-store warehouses	Exporters	Manufacturers' sales branches	Wagon distributors	Wholesale merchants	All other types
GROCERIES—Continued.									
Teas	$57,184	1.62	1.98	5.62	(X)	11.89	0.04	73.36	7.11
Confectionery and soft-drink trade	4	(X)	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	697	1.22	80.92	5.73	------	------	------	13.35	------
Grocery and food-specialty trade	55,459	97.00	1.02	5.72	(X)	12.25	0.04	73.64	7.33
Miscellaneous trades	1,024	1.78	------	------	------	------	------	100.00	------
Other groceries	761,653	21.53	1.39	43.36	0.36	20.42	0.26	24.23	9.98
Confectionery and soft-drink trade	3,942	0.52	1.32	------	------	88.34	0.07	10.27	------
Drug and drug-sundries trade	441	0.06	------	61.22	------	------	------	38.78	------
Farm-supplies (except machinery and equipment) trade	2,081	0.27	------	------	------	------	------	99.47	0.53
Food-products (not elsewhere specified) trade	7,746	1.01	------	10.34	------	35.00	0.13	54.53	------
Grocery and food-specialty trade	747,212	98.11	1.41	44.07	0.35	20.00	0.26	23.75	10.16
Tobacco and tobacco-products (except leaf) trade	98	0.01	------	------	------	------	------	93.87	6.13
Miscellaneous trades	133	0.02	------	------	------	33.08	9.03	57.89	------
MILK, EVAPORATED, CONDENSED, AND POWDERED	158,680	2.71	1.26	4.20	4.16	49.60	0.15	39.29	1.34
Confectionery and sofe-drink trade	21	0.01	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	22,760	14.34	0.36	------	------	63.30	1.04	26.00	9.30
Grocery and food-specialty trade	135,886	85.64	1.42	4.90	4.86	47.31	------	41.50	0.01
Tobacco and tobacco-products (except leaf) trade	5	(X)	------	------	------	------	------	100.00	------
Miscellaneous trades	8	0.01	------	------	25.00	------	------	75.00	------
SOAPS, POWDERS, AND CLEANSERS	341,223	5.83	0.20	4.89	0.34	68.42	0.02	25.85	0.28
Automotive trade	50	0.01	------	------	------	100.00	------	------	------
Confectionery and soft-drink trade	1,953	0.57	------	0.05	------	------	------	99.95	------
Drug and drug-sundries trade	7,568	2.22	------	------	2.80	93.06	------	0.02	4.12
Farm-products (not elsewhere specified) trade	7,479	2.19	------	------	------	100.00	------	------	------
Farm-supplies (except machinery and equipment) trade	8	(X)	------	------	------	------	------	100.00	------
Food-products (not elsewhere specified) trade	35,985	10.55	------	------	------	97.30	------	2.70	------
General-merchandise trade	152	0.04	------	------	5.26	------	------	92.10	2.64
Grocery and food-specialty trade	274,044	80.32	0.25	6.06	0.02	65.48	0.02	27.94	0.23
Machinery, equipment, and supplies (except electrical) trade	8,106	2.38	------	0.18	------	54.80	0.02	45.00	------
Paper and paper-products trade	348	0.10	------	------	------	------	------	100.00	------
Petroleum and petroleum-products trade	15	(X)	------	------	------	------	------	100.00	------
Tobacco and tobacco-products (except leaf) trade	229	0.07	0.43	------	------	------	------	99.57	------
Miscellaneous trades	5,286	1.55	------	0.81	16.82	0.43	0.02	81.92	------

WHOLESALE ESTABLISHMENTS SPECIALIZING IN GROCERIES AND FOOD SPECIALTIES

General summary.—The discussion immediately preceding may be called the *commodity* approach to the wholesale marketing of grocery products. It was based upon the schedules filed by *all* classes of wholesale establishments, regardless of the line of trade in which they specialized, provided only that they carried

some grocery commodities. This section begins what may be termed an institutional examination of the marketing process for groceries, since the emphasis shifts to the wholesale establishments or the business institutions whose principal function is to sell grocery products. *The following analysis will, therefore, be confined to wholesale establishments which operated primarily in the grocery and food specialty business*, although they frequently handled other commodities in addition to grocery items.

There were, in the United States in 1929, a total of 13,618 grocery and food-specialty trade houses reporting sales of $9,118,641,283, or 13.6 per cent of the total volume of wholesale trade in the United States. Of this total, $8,475,198,000, or nearly 93 per cent, was reported on a commodity basis, and consisted of $6,919,976,000 in grocery and food-specialty items, and $1,555,222 in other commodities. It will be recalled that the total sales of grocery commodities made by all wholesale establishments in all lines of trade amounted to $7,659,350,000. (See Table 4.) The establishments specializing in the grocery trade which are now under consideration accounted for $6,919,976,000, or over 90 per cent of all grocery commodities. These establishments have been subdivided in accordance with classifications set up by the Census of Wholesale Distribution. The various types of wholesale establishments have been distinguished from each other primarily on a functional basis. They include agents and brokers, who operate chiefly *between* manufacturers and wholesalers; cash-and-carry wholesalers, who apply the familiar retailing practice to grocery wholesaling; chain-store warehouses, the wholesale departments of grocery chains; exporters, importers, manufacturers' wholesale branch houses; wagon distributors or wholesalers who combine selling and delivering by utilizing salesmen-drivers and making deliveries from the trucks; and wholesale merchants of the full-service variety, both general line and specialty houses. The following tabulation illustrates the distribution, by type of wholesale establishment, between grocery *commodity* sales and sales by *institutions* specializing in the grocery trade.

RELATION OF GROCERY COMMODITY SALES TO GROCERY TRADE SALES

[Values in thousands of dollars]

TYPE OF ESTABLISHMENT	Grocery-commodity sales through all trades	GROCERY AND FOOD SPECIALTY TRADE		
		Grocery-commodity sales	Reported sales, all commodities	Total net sales
Total	$7,659,350	$6,919,976	$8,475,198	$9,118,641
Agents and brokers	1,581,773	1,548,456	1,745,002	1,751,994
Cash-and-carry wholesalers	82,367	74,064	100,941	101,188
Chain store warehouses	955,587	904,652	1,447,553	1,457,408
Exporters	103,605	75,953	84,609	85,831
Importers	218,650	214,154	251,235	252,177
Manufacturers' sales branches	1,593,163	1,303,474	1,455,938	1,480,102
Wagon distributors	22,207	15,818	18,710	18,999
Wholesale merchants	2,717,722	2,433,242	2,968,245	3,562,313
All other types	384,276	350,163	402,965	408,569

A total of 21 different types of wholesaling was found to exist in the grocery trade. Table 6 shows detailed statistics on number of establishments and net sales for 18 of these types, and number of establishments only for the remaining 3. For nine of the types which have outstanding importance, either because of the volume of business involved or because of their recent development, the number of establishments, net sales, employees, salaries and wages, total expenses, and stocks on hand are given. Thus general-line wholesale merchants, agents and

brokers, manufacturers' sales branches, chain-store warehouses, and specialty-line wholesalers are shown separately because of the large volume of business handled. Together, these five types accounted for 90.5 per cent of the total. Cash-and-carry wholesalers and wagon distributors have been set up separately, due to the popular interest expressed in them during recent years, rather than because of the volume they have achieved. Exporters and importers are of special interest to students of foreign trade and are shown separately on that account.

Since the agents and brokers sell primarily to other types of wholesale establishments, their sales are to a great extent duplicated in the total. This fact has given rise to a misunderstanding of the true significance of statistics for agents and brokers and why they have been included in the total. The reason is simple. Agents and brokers are wholesale middlemen who perform valuable marketing functions. They maintain places of business, hire employees, and occasionally provide some storage for merchandise. No picture of the wholesaling processes would be complete which omitted so important an element. It is, therefore, quite proper to include them in the wholesaling statistics. When tracing the *flow of commodity sales*, however, it is essential to set aside all duplicate steps in the marketing process and, for that reason, agents and brokers were treated separately in the earlier sections of this report. For the purposes of the following analysis, the statistics for agents and brokers are included in the totals, but are shown separately, just as are the other distinctive types of wholesale establishments, to permit more detailed treatment.

The 13,618 wholesale establishments gave employment to 187,766 people, enough to populate a city larger than Richmond, Va. Of the total number of employees, 51,114 were salesmen, 7,591 executives, and the remaining 129,061 office, warehouse, and general employees. The wage bill paid by all wholesale establishments in the grocery and food-specialty trade amounted to the substantial sum of $320,105,203. Total operating expenses, inclusive of salaries and wages but exclusive of net profits, were $677,246,376. Nearly as large a sum, $600,806,000, was invested in inventory or stocks on hand at the end of the year. (See Table 6.)

General-line wholesale merchants, with 4,776 establishments and 29.2 per cent of the total volume of business, ranked first among the different types of establishments. They had 44.2 per cent of all employees engaged in the wholesale grocery trade and paid out 42.0 per cent of all salaries and wages, a fact indicating slightly lower average wages than the total. Wholesale merchants in this class carried 58.9 per cent of all stocks on hand in the grocery trade. Since general line wholesalers maintain warehouses for carrying surplus goods as one of their major marketing functions, this fact is not surprising.

Second in rank from the standpoint of sales volume were the agents and brokers, with 1,851 establishments and $1,751,994,000 in sales. As pointed out above, agents and brokers are not strictly comparable with the other types, since they operate largely on a plane between producers and other wholesalers. They sell chiefly to wholesale merchants and chain-store warehouses and to a lesser degree to the retail trade. They are, nevertheless, an important part of the wholesaling structure in the grocery and food-specialty trade, which is attested by the fact that they gave employment to 7,514 people and paid out $17,766,000 in salaries and wages. The emphasis of agents and brokers is upon the selling function, as is indicated by the fact that well over one-third of all their employees were salesmen. They also operated on a relatively very small cost. Although accounting for 19.2 per cent of all sales at wholesale in the grocery business, their

total expenses amounted to but 5.1 per cent of all expenses and averaged 2 per cent of their net sales. Stocks on hand were negligible with agents and brokers, which shows that very little storage of merchandise was necessary in the brokerage business.

TABLE 6.—SUMMARY OF WHOLESALE GROCERY AND FOOD-SPECIALTY TRADE STATISTICS, BY TYPE OF ESTABLISHMENT—UNITED STATES: 1929

[Money values in thousands of dollars]

ITEM	Total number or amount	AGENTS AND BROKERS		CASH-AND-CARRY WHOLESALERS		CHAIN STORE WAREHOUSES	
		Number or amount	Per cent of total	Number or amount	Per cent of total	Number or amount	Per cent of total
Number of establishments	13,618	1,851	13.6	362	2.7	234	1.7
Net sales	$9,118,641	$1,751,994	19.2	$101,188	1.1	$1,457,408	16.0
Total employees	187,766	7,514	4.0	1,414	0.8	16,819	8.9
Salesmen	51,114	2,803	5.5	281	0.5	----------	------
Executives	7,591	682	9.0	99	1.3	462	6.1
All other employees	129,061	4,029	3.1	1,034	0.8	16,357	12.6
Total salaries and wages	$320,105	$17,766	5.5	$2,212	0.7	$24,195	7.5
Total expenses	$677,246	$34,260	5.1	$4,563	0.7	$50,795	7.5
Stocks on hand, Dec. 31, 1929, at cost [2]	$600,806	$10,881	1.8	$9,286	1.6	$61,971	10.3

ITEM	EXPORTERS		IMPORTERS		MANUFACTURERS' SALES BRANCHES		WHOLESALE MERCHANTS (general line)	
	Number or amount	Per cent of total	Number or amount	Per cent of total	Number or amount	Per cent of total	Number or amount	Per cent of total
Number of establishments	66	0.5	335	2.5	2,315	17.0	4,776	35.1
Net sales	$85,831	0.9	$252,177	2.8	$1,480,162	16.2	$2,660,450	29.2
Total employees	698	0.4	3,833	2.1	39,059	20.8	83,048	44.2
Salesmen	185	0.4	1,035	2.0	19,592	38.3	15,809	30.9
Executives	51	0.7	278	3.7	1,081	14.2	3,411	44.9
All other employees	462	0.4	2,520	2.0	18,386	14.2	63,828	49.5
Total salaries and wages	$1,378	0.4	$7,782	2.4	$72,233	22.7	$134,356	42.0
Total expenses	$3,563	0.5	$16,686	2.5	$201,558	29.7	$241,648	35.6
Stocks on hand, Dec. 31, 1929, at cost [2]	$2,265	0.4	$17,965	3.0	$59,959	10.0	$354,142	58.9

Footnotes at end of table.

TABLE 6.—SUMMARY OF WHOLESALE GROCERY AND FOOD-SPECIALTY TRADE STATISTICS, BY TYPE OF ESTABLISHMENT—UNITED STATES: 1929—*Continued*

[Money values in thousands of dollars]

ITEM	WHOLESALE MERCHANTS (specialty)		WAGON DISTRIBUTORS		ALL OTHER TYPES [1]	
	Number or amount	Per cent of total	Number or amount	Per cent of total	Number or amount	Per cent of total
Number of establishments	3,149	23.1	178	1.3	352	2.5
Net sales	$901,863	9.9	$18,999	0.2	$408,569	4.5
Total employees	25,023	13.3	924	0.5	9,434	5.0
Salesmen	7,821	15.4	553	1.1	3,035	5.9
Executives	1,296	17.1	45	0.6	186	2.4
All other employees	15,906	12.3	326	0.3	6,213	4.8
Total salaries and wages	$43,877	13.7	$1,660	0.5	$14,645	4.6
Total expenses	$91,787	13.6	$2,929	0.4	$29,458	4.4
Stocks on hand, Dec. 31, 1929, at cost [2]	$71,044	11.8	$670	0.1	$12,623	2.1

[1] Includes 113 assemblers and country buyers with net sales of $14,425,591; 117 wholesaling manufacturers, $32,348,365; 31 district and general sales offices, $137,797,528; 28 cooperative marketing associations, $24,317,610; 19 purchasing agents and resident buyers, $125,531,513; 19 drop shippers, $5,768,346; 14 distributing warehouses, $7,583,984; 4 export agents, $284,361; 3 import agents, $693,902; 2 cooperative sales agencies; 1 auction company; and 1 mail-order wholesaler.

[2] This figure must not be confused with stock turn, which can not be computed from census figures, due to lack of information on net profits. Computation of stock turn requires that inventory and sales figures be on the same basis, either cost or selling price. Census figures for inventory are on a cost basis which is not comparable with net sales figures. Lack of net profit information and, hence, of gross margins prevents the conversion of sales and inventory figures to the same basis. Furthermore, stock-turn computation should use average inventory figures which are lacking here.

Manufacturers' sales branches and chain-store warehouses were close rivals, with 16.2 per cent and 16.0 per cent, respectively, of the total volume of business. Both of these types of wholesale establishments are of great interest, not only because of the large share of the business which they handled but also because they emphasize the fact that wholesaling is an essential part of the marketing process. Manufacturers who have attempted to reduce the number of links in the marketing chain have found it necessary to set up their own establishments for performing the wholesaling functions. Chain-store systems, which have attempted the same thing but have started from the retail end, have also found it essential to organize wholesale departments. These facts are important to an understanding of the distinction existing between *wholesaling* and *wholesalers*. *Wholesalers* may be eliminated by integrated marketing devices but not *wholesaling*. These substitute systems must perform the *wholesaling* functions.

General-line wholesalers, chain-store warehouses, and manufacturers' wholesale branches differ largely in the degree in which the various marketing functions are performed. Some idea of these differences are revealed by the statistics in Table 6. Chain-store warehouses, for example, had no salesmen, whereas wholesale merchants had 30.9 per cent of all salesmen engaged in wholesaling, and manufacturers' sales branches had 38.3 per cent. The latter operated but 17.0 per cent of all wholesale establishments and had but 16.2 per cent of total sales and yet required 38.3 per cent of all salesmen. General-line wholesalers, in contrast, had 35.1 per cent of all establishments, 29.2 per cent of all sales, and 30.9 per cent of all salesmen, or, in other words, were able to sell more goods with fewer salesmen. One reason for this is the fact that manufacturers use their salesmen in more than an order-taking capacity. Much of their work is promotional or missionary. Wholesalers profit in part from such activities just as they do from advertising by the manufacturers.

Next in importance, as measured by sales volume, are the wholesale merchants engaged in the specialty grocery field. Included in this group of 3,149 establishments are wholesalers of coffee, specialists in the flour business, bakery-products wholesalers, and other dealers who specialized in a limited line of grocery or food-specialty items. The wholesalers in this classification accounted for nearly 10 per cent of the total volume of grocery and food-specialty sales.[10]

The remaining types together accounted for less than 10 per cent of the total volume of business. In order of their sales they ranked as follows: Importers, district and general sales offices, purchasing agents and resident buyers, cash-and-carry wholesalers, exporters, wholesaling manufacturers, cooperative marketing associations, wagon distributors, assemblers and country buyers, distributing warehouses, drop shippers, import agents, export agents, cooperative sales agencies, auction companies, and mail-order wholesalers.[11] Of this group, special interest attaches to two types—cash-and-carry wholesalers and wagon distributors.

Cash-and-carry wholesalers, which were so classified only when more than 50 per cent of their sales were on a cash-and-carry basis, accounted for but $101,188,058 in sales. This figure by no means measures the total volume of cash-and-carry business, however, since many of the wholesale merchants operate cash-and-carry departments. It is, nevertheless, noteworthy that this newer phase of specialization in wholesaling has not succeeded in making as much headway as might be expected from the discussion it has received. The reason may lie in the fact that few retailers can afford to call for their own merchandise.[12]

Wagon distributors are another of the newer types. They numbered 178 in 1929, with net sales of less than $19,000,000, a relatively small amount. It may be that this movement, which has become of so much popular interest in food-trade circles, has made more progress since the census was taken. However, a partial explanation of the small number of establishments may be due to definition and classification. Wagon distributors, for census purposes, include only those establishments which maintained places of business. Many of the small-scale wagon distributors were doubtless omitted from the census simply because no separate place of business was operated. Thus, a truck kept in the driver's garage at his home was not included in the census. Moreover, many manufacturer-owned outlets operated like wagon distributors. These have all been classified on the basis of ownership as manufacturers' sales branches. Finally, it should be emphasized that the census definition of *wagon distributor* does not mean *truck*. Many wagon distributors operated fleets of trucks from a single establishment. Each of these establishments has been counted as a single wagon distributor regardless of how many trucks it operated.

There were 66 establishments, with sales of nearly $86,000,000, engaged in the foreign trade which specialized in the exportation of grocery items. Here, again, it should be noted that this figure does not include all exports but only those transactions made by separate wholesale establishments selling the major part, usually 50 per cent or more, of their total volume in foreign markets. Manufacturers who exported directly from the factory are not included. Neither are the export sales of wholesale merchants, importers, and other types of wholesale establishments. There were also 335 establishments engaged in foreign trade which reported over half of their business to lie in the field of importing. The

[10] Typical examples of specialty grocery houses are shown in the Appendix. See also Table 7 for a detailed analysis of the lines of specialization.

[11] For explanation of these types of wholesale establishments see Bulletin Distribution No. W.-100—Wholesale Distribution, Definitions and Classifications.

[12] One of the leading wholesale grocers, who himself operates a number of cash-and-carry houses in addition to his regular business, states as his belief that it is much more costly from the social point of view for a large number of retailers to send their own trucks to a cash-and-carry warehouse than it is for a wholesaler to send one truck out with the goods required by a number of retailers.

same cautions apply to these establishments. The $252,177,340 volume reported by specialized importers of grocery products does not measure the entire amount of imports. Many other types of wholesale establishments engaged in importing but did not specialize in it.

In this analysis, and indeed throughout this report, every effort has been made to keep the separate types of wholesale establishments as nearly homogeneous as possible. For the sake of statistical comparison, it is essential that only similar establishments be grouped together. For that reason, no establishments have been classified as agents and brokers, cash-and-carry wholesalers, exporters, importers, wholesale merchants, or any other type unless the bulk of the business (usually 50 per cent or more) was transacted in accordance with the definition established for each type. The extent to which different types of wholesale establishments engaged in other types of activities or performed multiple types of operations is shown below.

Multiple types of wholesaling.—It has long been realized that there is a certain amount of overlapping in the type of functions performed by wholesale distributors of grocery products. Brokers, for example, are known to engage in other than strictly brokerage business, frequently selling to retailers in competition with their customers, the wholesale merchants. The latter in turn engage in brokerage or commission business at times, and again, as is shown elsewhere in this bulletin, compete with their retail customers by selling direct to the home consumers.

Such activities are frequently condemned by the trade. For example, the trade-practice rules of the national grocery industry subscribed to by representative brokers, manufacturers, wholesalers, and retailers, contain the following reference to brokers, "The industry recognizes as beneficial to the grocery trade the work of the duly qualified food brokers, but condemns the practice of others than bona fide brokers acting in that capacity and receiving brokerage commissions." [13]

The wholesale questionnaires used in taking the Census of Distribution provided for an inquiry into the degree and the extent of the differentiation in functions performed by wholesale establishments. Obviously, occasional departures from standard practices would not be reported. In the grocery trade 489 establishments, with net sales of $535,865,249, reported that they engaged in two or more distinct types of wholesaling activity, together with the extent of such business. Included in this group were wholesale merchants, brokers and agents, importers, exporters, cash-and-carry wholesalers, wagon distributors, drop shippers, and a few miscellaneous types. These constituted but a small per cent of all establishments engaged in wholesale grocery distribution. While they include all establishments reporting these practices, it is probable that all which actually engaged in such practices did not answer this inquiry.

The overlapping of activities varied considerably among the different types of wholesalers reporting. Some 257 establishments which were primarily wholesale merchants reported more than a single type of operations. Only 28 of this group reported as many as three different types of functional activity, the other 229 establishments confining their operations to various combinations of one additional activity with that of wholesale merchant. The most frequent combination was that of wholesale merchant and cash-and-carry wholesaling, with 68 establishments reporting such overlapping activities. Brokerage and commission business was combined with straight wholesaling in 55 cases and 53 combined importing with wholesaling. Other combinations included wholesaling and drop-shipment business, 22 establishments; wholesaling and wagon distribution, 19 establishments; wholesaling and exporting, 7 establishments. For all of the

[13] Federal Trade Commission press release Mar. 14, 1932.

wholesale merchants so reporting, over two-thirds of the business was merchant wholesaling, the auxiliary activities being confined to approximately 30 per cent of net sales.

Of the 78 brokers reporting multiple types of wholesaling, 37 engaged to some extent in straight merchant wholesaling, 24 were importers as well as brokers, 6 were also exporters. The others reported a larger variety of combined functions. Twenty-four of the 28 cash-and-carry wholesalers also engaged in straight wholesaling. The remaining types reported various combinations, exporters conducting straight wholesaling, importing and brokerage businesses with their exporting; and importers combining straight wholesaling, exporting, and brokerage with their importing business.

The following tabulation indicates the extent to which different types of wholesalers engaged in the same activities. Wholesale merchants reported 69.26 per cent of their sales on a straight wholesaling basis; 17.05 per cent on a brokerage basis; 4.73 per cent, cash-and-carry; 4.10 per cent, importing; 2.48 per cent, exporting; and 2.06 per cent, drop shipment sales. Brokers confined themselves more exclusively to a brokerage business, the extent being 82.2 per cent. They reported in addition 9.17 per cent of their business on a straight wholesaling basis, 6.9 per cent as importers, and 1.61 per cent in export trade.

As noted above for wholesale merchants, all types of wholesalers reported over two-thirds of their business to lie in their primary field of wholesale activity, the range being from 67.32 per cent cash-and-carry business by cash-and-carry wholesalers to 83.13 per cent drop-shipment business by drop shippers. The conclusion seems warranted that overlapping of functions among wholesalers is not very extensive.[14]

EXTENT OF MULTIPLE TYPES OF WHOLESALING BY 489 ESTABLISHMENTS IN THE GROCERY TRADE—UNITED STATES: 1929

PRIMARY TYPE OF ESTABLISHMENT	Number of establishments	Net sales	PER CENT OF NET SALES DONE BY—							
			Wholesale merchants	Brokers	Importers	Exporters	Cash-and-carry wholesalers	Wagon distributors	Drop shippers	All other types
Total	489	$535,865,249								
Wholesale merchants	257	241,769,607	*69.26*	17.05	4.10	2.48	4.73	0.30	2.06	0.02
Brokers	78	91,575,158	9.17	*82.17*	6.90	1.61		0.01	0.14	
Importers	76	86,203,142	8.41	2.69	*75.38*	13.13	0.02	0.13	0.12	0.12
Exporters	21	38,525,727	5.59	2.49	14.05	*72.30*				5.07
Cash-and-carry wholesalers	28	15,994,949	32.27		0.03		*67.32*	0.04	0.18	0.16
Wagon distributors	16	6,839,629	12.46	2.13		0.06	4.61	*80.74*		
Drop shippers	3	816,819	1.22	14.54					*83.13*	1.11
All other types	10	54,140,218								

GROCERY ESTABLISHMENTS, BY LINE OF GOODS HANDLED

In conclusion of the general summary of the establishments which operated in the grocery trade, an analysis of the lines of goods handled is offered. (See Table 7.) Out of a total of 13,618 establishments, 5,878 operated in the general line grocery trade. The sales of these establishments amounted to 51.6 per cent of the total. The remaining 7,740 establishments, accounting for 48.4 per cent of the total business, were divided among 21 lines of specialization. These lines included *bakery products*, various lines of *canned goods, coffee, tea and spices,*

[14] See separate Bulletin "Multiple Types of Wholesaling," Wholesale Distribution, Bureau of the Census, for a more complete discussion of this subject.

flour, soaps and soap powders, sugar, and other items. Apart from the miscellaneous group, the largest number of establishments specialized in bakery products. The largest volume of business, however, was reported by sugar wholesalers. Second in rank, from the standpoint of sales volume, were the canned-goods wholesalers, which are followed by those specializing in coffee.

Of those establishments handling a general line of groceries, agents and brokers accounted for slightly over 9 per cent; importers, 0.6 per cent; manufacturers' sales branches, 0.3 per cent. The remainder was largely in the hands of general line wholesale merchants, which in Table 7, is included in the "all other" group. It is possible to determine the volume of specialized business in any one of the 21 lines and to determine the relative importance of each line as compared with the total volume of grocery and food-specialty business. It is also possible to determine which type of wholesale establishment was most important in a given line of trade. For example, of the 130 establishments specializing in soaps and soap powders, with sales of nearly $250,000,000, manufacturers' sales branches were the most important type of establishment. They accounted for 94.6 per cent of all the sales by specialized soaps and soap powder establishments.

Such types as are shown in Table 7, agents and brokers, importers, manufacturers' sales branches, wagon distributors, and, of course, specialty wholesale merchants concentrated on specialized items rather than general-line grocery products, although some of them carried a general line. The general-line grocery products, however, are very largely in the hands of general line wholesalers and chain store warehouses.

TABLE 7.—GROCERY ESTABLISHMENTS, BY LINE OF GOODS HANDLED AND TYPE OF ESTABLISHMENT—UNITED STATES: 1929

[(X) *indicates that the amount must be witheld to avoid disclosure of individual operations, but it is included in the total*]

KIND OF BUSINESS (Line of goods handled)	Number of establishments	TOTAL NET SALES		TYPE OF ESTABLISHMENT											
				AGENTS AND BROKERS		IMPORTERS		MANUFACTURERS' SALES BRANCHES		WHOLESALE MERCHANTS (specialty)		WAGON DISTRIBUTORS		ALL OTHER TYPES [1]	
		Amount	Per cent of total net sales	Number of establishments	Per cent of total net sales	Number of establishments	Per cent of total net sales	Number of establishments	Per cent of total net sales	Number of establishments	Per cent of total net sales	Number of establishments	Per cent of total net sales	Number of establishments	Per cent of total net sales
Total	**13,618**	**$9,118,641,283**	**100.0**	**1,851**	**19.2**	**335**	**2.8**	**2,315**	**16.2**	**3,149**	**9.9**	**178**	**0.2**	**5,790**	**51.7**
Groceries (general line)	5,878	4,702,090,775	51.6	452	9.1	46	0.6	19	0.3			9		5,352	[1] 90.0
Bakery products	1,014	297,232,398	3.3	(X)	0.6	(X)	0.1	515	85.3	361	10.5	47	1.6	74	1.9
Beans, dried	169	90,821,420	1.0	26	30.0	5	3.9			56	37.3			82	28.8
Biscuits and crackers	118	26,587,227	0.3	(X)	0.4			97	84.7	19	14.8	(X)	0.1		
Canned fruits and vegetables	90	59,457,044	0.7	47	69.8	3	0.4	10	9.8	23	14.3			7	5.7
Canned goods (general line)	579	455,728,691	5.0	355	59.3	17	1.5	13	1.8	173	23.2			21	14.2
Canned sea foods	82	54,818,778	0.6	35	59.0	16	12.9	4	9.3	14	9.0			9	9.8
Cereals	92	85,437,216	0.9	10	3.4			69	92.8	(X)	1.5	3	0.5	(X)	1.8
Coffee	395	433,021,025	4.7	90	35.8	58	24.2	17	5.5	208	27.5	5	0.1	17	6.9
Coffee, tea, and spices	288	97,028,872	1.1	27	11.3	28	16.9	11	5.1	209	53.3	5	0.5	8	12.9
Delicatessen products	138	12,492,624	0.1	5	6.5	3	8.8	9	6.8	101	67.4	16	4.6	4	5.9
Extracts and spices	99	39,792,158	0.4	16	23.2	8	39.4	16	11.8	50	10.9	(X)	0.2	(X)	14.5
Flour	413	268,128,974	2.9	103	22.1			85	31.1	198	25.3			27	21.5
Flour and feed	463	169,373,855	1.9	37	9.8			(X)	13.4	395	55.8	(X)		26	21.0
Fruits and vegetables (dried)	142	87,134,565	0.9	42	41.1	6	3.9	8	20.9	67	21.7			19	12.4
Lard substitutes	14	11,574,235	0.1	10	80.1			(X)	19.5	(X)	0.1			(X)	0.3
Malt, malt products, and hops	206	34,057,657	0.4	11	4.2	(X)	0.7	41	11.8	140	79.6	(X)	0.2	10	3.5
Milk (condensed, evaporated, and powdered)	145	89,515,288	1.0	20	14.1			119	74.0	(X)	4.6			(X)	7.3
Nuts and nut meats	170	78,827,674	0.9	37	27.5	19	20.6	(X)	0.7	81	28.4	(X)	0.1	30	22.7
Soaps and soap powders	130	248,715,675	2.7	23	1.8			76	94.6	31	3.6				
Sugar	273	775,398,718	8.5	153	57.8	(X)	1.1	10	26.9	104	13.4			(X)	0.8
Other food and grocery specialties	2,720	1,001,406,414	11.0	332	16.5	117	3.9	1,188	41.5	905	18.0	87	1.2	91	18.9

[1] Includes wholesale merchants (general line) and chain-store warehouses.

LENGTH OF LIFE AND CONTINUITY OF OWNERSHIP OF GROCERY ESTABLISHMENTS

A better understanding of the business institutions comprising the wholesale grocery and food-specialty trade may be gained by a study of the age of the establishments and the length of time they have continued under the same ownership. Each establishment reporting to the Census Bureau was requested to give the date when the business was first established, together with the date the business came under the 1929 ownership. The replies to these inquiries have been summarized for four of the more important types of wholesale establishments in Tables 8, 9, and 10.

There are certain limitations upon the use of these statistics that should be borne in mind from the outset. In the first place, they show only the life span of a group of business houses which were in existence in 1930. Take, for example, the 4,776 general-line wholesale merchants reporting to the census in that year. All the statistics tell is that of this number, 26 were more than 80 years old, 234 were between 56 and 80 years old, 639 were between 31 and 55 years old, 1,147 were between 17 and 30 years, etc. How many more general-line wholesalers entered business and passed out of existence before 1929 can not be determined from the census statistics. The same statement applies to all of the other types of wholesale establishments. *In other words, the statistics do not tell how many firms were established in any given year, but only how many of those existing in 1930 first started business in that given year.*

In analyzing the number of business units out of a given group which were established during the various periods of time and how long they have remained under the same ownership, a number of interesting comparisons may be made between the different types of wholesalers. Thus, in Table 8, it is seen that less than 4 per cent of the general line wholesalers were 1 year old, as compared with over 7 per cent of the specialty wholesalers, over 8 per cent of the manufacturers' sales branches, and nearly 5 per cent of the chain-store warehouses. This gives some idea of the relative recency of certain types of wholesale establishments. While the evidence is not sufficient as a basis for determining trends, these statistics indicate that specialty line wholesalers showed a larger percentage of total establishments entering the field in recent years than did the other types. Slightly over 54 per cent of all specialty wholesalers reporting in 1930 were 10 years old or less. The chain-store warehouses showed 56 per cent established during this period; general-line wholesalers had nearly 40 per cent, while less than 23 per cent of the manufacturers' sales branches were established during this decade. In other words, nearly 46 per cent of the specialty wholesalers, 44 per cent of the chain-store warehouses, over 60 per cent of the general-line wholesalers, and over 77 per cent of the manufacturers' sales branches were more than 10 years old. It might be concluded that specialty houses and chain-store warehouses are of more recent origin than the other two types of establishments, although other factors which are not shown by the statistics no doubt are present.

This is particularly true of chain-store warehouses, as further analysis indicates. The two chain-store warehouses, for example. shown to be over 80 years old in Table 8 could not have been correctly so called at the time of their establishment, since there were no chains worthy of the name in existence at that time. A glance at Table 10 reveals that one of these two has been under present (1930) chain ownership only since 1929 and the other for not to exceed 10 years. The conclusion seems warranted that these establishments started business as wholesalers and were later purchased by chains. Much the same reasoning, no doubt, applies to most of the chain-store warehouses which were established prior to 1900 or even later. The average grocery chain does not require a warehouse

until it has built up a considerable number of retail outlets. There were very few grocery chains which had reached this stage of development prior to the opening of the twentieth century and the number did not greatly increase until after 1910.[15]

TABLE 8.—LENGTH OF LIFE OF ESTABLISHMENTS IN THE GROCERY AND FOOD-SPECIALTY TRADE, BY FOUR TYPES—UNITED STATES: 1930

YEARS ESTABLISHED	NUMBER OF ESTABLISHMENTS							
	Wholesale merchants (general line)		Wholesale merchants (specialty)		Manufacturers' sales branches		Chain-store warehouses	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Total	4,776	100.0	3,149	100.0	2,315	100.0	234	100.0
1 year	181	3.8	228	7.2	191	8.2	11	4.7
2 years	202	4.2	275	8.7	56	2.4	35	15.0
3 years	191	4.0	184	5.8	45	1.9	9	3.8
4 years	175	3.7	154	4.9	33	1.4	8	3.4
5 years	186	3.9	157	5.0	23	1.0	12	5.1
6–10 years	971	20.3	696	22.1	186	8.0	55	23.5
11–16 years	747	15.7	336	10.7	169	7.3	34	14.5
17–30 years	1,147	24.0	601	19.1	849	36.8	40	17.1
31–55 years	639	13.4	303	9.6	503	21.7	19	8.1
56–80 years	234	4.9	122	3.9	68	3.0	6	2.6
More than 80 years	26	0.5	24	0.8	55	2.4	2	0.9
All other [1]	77	1.6	69	2.2	137	5.9	1	1.3

[1] Established prior to 1924, but exact date not reported.

TABLE 9.—CONTINUITY OF OWNERSHIP OF ESTABLISHMENTS IN THE GROCERY AND FOOD-SPECIALTY TRADE, BY FOUR TYPES—UNITED STATES: 1930

YEARS UNDER SAME OWNERSHIP	NUMBER OF ESTABLISHMENTS							
	Wholesale merchants (general line)		Wholesale merchants (specialty)		Manufacturers' sales branches		Chain-store warehouses	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Total	4,776	100.0	3,149	100.0	2,315	100.0	234	100.0
1 year	290	6.1	382	12.1	759	32.8	19	8.1
2 years	331	6.9	348	11.1	115	5.0	44	18.8
3 years	269	5.6	235	7.5	47	2.0	17	7.3
4 years	235	4.9	209	6.6	39	1.7	9	3.8
5 years	241	5.0	181	5.7	59	2.5	16	6.8
6–10 years	1,135	23.9	724	23.0	254	11.0	66	28.2
11–16 years	774	16.2	361	11.5	166	7.2	18	7.7
17–30 years	1,052	22.0	495	15.7	247	10.7	35	15.0
31–55 years	361	7.6	138	4.4	439	19.0	7	3.0
56–80 years	30	0.6	16	0.5	49	2.1	----	----
More than 80 years	4	0.1	3	0.1	141	6.0	----	----
All other [a]	54	1.1	57	1.8	----	----	1	1.3

[a] Same ownership since prior to 1924, but exact date not reported.

[15] According to a report on the "Growth and Development of Chain Stores" compiled by the Federal Trade Commission (1932), there were 21 grocery chains in 1900 and 62 in 1910, as compared with 180 in 1920 and 315 in 1928.

The recency of certain types of wholesale establishments is shown in Table 9, which points even more definitely toward the same conclusion reached above. Of the 234 chain-store warehouses reported in 1930, 73 per cent had been under the same ownership for 10 years or less. While some of these may have been established by chains and were later absorbed by other chains, it is likely that many of them were originally independent wholesale establishments. A similar situation prevails with manufacturers' sales branches. Although less than 23 per cent of the 1930 total had been established in the preceding decade, 55 per cent of the total had been in the hands of manufacturers 10 years or less. Many of these must have been established earlier either by other manufacturers or by various types of wholesalers and were purchased by manufacturers who desired to establish an integrated marketing system.

The interesting problems involved in the foregoing discussion may be understood more fully by an examination of Table 10, which presents a combination of the statistics on date of establishment and date of present (1930) ownership. To illustrate the use of this table, consider the general-line wholesale merchants with date of establishment prior to 1850. A total of 26 out of the 4,776 wholesale business units existing in 1930 were established before 1850. Of the 26 but 4 had remained under the same ownership for more than 80 years. Eight others had remained under the same ownership since 1899 at least, 5 since 1913, 1 since 1919, and 8 since 1924. Again, 234 were established between the years 1850 and 1874. Of this number 30 had continued under the same ownership since 1874 at least, 53 since 1899 at least, 59 since 1913 at least, and so on down to 5 since 1929.

Parts C and D of Table 10 reveal the conditions that have developed in the integrated types of marketing, and help to support the conclusion that the use of manufacturers' sales branches and chain-store warehouses are of comparatively recent origin. For example, although there were 55 manufacturers' sales branches out of the total of 2,315 existing in 1930, which were established before 1850, 31 had been under the same ownership only since 1928.

Chain-store warhouses illustrate the same condition. Of the 8 established prior to 1875, 5 have been under the same chain ownership only since 1928 and of the 19 which were established between 1875 and 1899 only 5 have continued under the same ownership since at least 1899.

The statistics in Table 10, dealing with manufacturers' sales branches, are particularly significant from another angle. The yearly average of establishments shows a great increase in the number of manufacturers' sales branches starting out in the closing years of the nineteenth and the opening years of the twentieth century. The yearly average for the period 1850 to 1874 was less than 3 (68 establishments in 25 years). Between 1875 and 1899 this average had increased to 20, and between 1900 and 1913 to 60. The average of 60 new establishments per year between 1900 and 1913 needs a word of explanation. Many of these business units were probably not originally manufacturers' sales branches, since but 205 of the 844 established during those years have remained under manufacturers' ownership since at least 1913. There were 539 which have been under the same ownership only since 1929. Although it is true that there were, no doubt, other establishments of which no record is here available, these facts have particular significance as indicative of increased activity on the part of manufacturers in establishing sales branches during this period. This conclusion is further borne out by the fact that of the 503 units established between 1875 and 1899, 428 have continued under manufacturers' ownership at least since 1899.

These facts, together with the additional fact that the average number of new establishments for which reports are available declined between 1914 and 1919 and again in 1925, following an increase between 1920 and 1924, after which it has increased up to and including 1929, indicate fluctuation in the use of wholesale

branches by manufacturers. Indeed some degree of correlation seems to exist in these statistics with the established fact that the era of the 90's and the early 1900's was characterized by a development of integrated industries or, to use a common phrase, trusts.[16] The early confidence in this type of business organization was not supported by experience and there was a decline in its popularity until after the war. In the past decade the old idea has been taken up again. The emphasis in recent years has been on an increased integration of producing and marketing units.

TABLE 10.—DATE OF ESTABLISHMENT AND DATE OF PRESENT (1930) OWNERSHIP—WHOLESALE GROCERY ESTABLISHMENTS—UNITED STATES

DATE OF ESTABLISHMENT	Total	Yearly average	DATE OF ACQUISITION BY PRESENT OWNERSHIP											
			1929	1928	1927	1926	1925	1920 to 1924	1914 to 1919	1900 to 1913	1875 to 1899	1850 to 1874	Prior to 1850	All other[1]
A. WHOLESALE MERCHANTS (GENERAL LINE)														
Total	4,776		290	331	269	235	241	1,135	774	1,052	361	30	4	54
Yearly average			*290*	*331*	*269*	*235*	*241*	*227*	*129*	*75*	*14*	*1*		
1929	181	181	181											
1928	202	202	8	194										
1927	191	191	5	13	173									
1926	175	175	4	4	10	157								
1925	186	186	3	8	4	4	167							
1920–1924	971	194	24	32	23	17	15	860						
1914–1919	747	124	12	32	14	7	12	66	604					
1900–1913	1,147	82	34	23	22	24	24	104	74	842				
1875–1899	639	25	9	13	9	15	15	65	67	146	300			
1850–1874	234	9	5	9	7	6	5	32	28	59	53	30		
Prior to 1850	26							8	1	5	8		4	
All other[1]	77		5	3	7	5	3							54
B. WHOLESALE MERCHANTS (SPECIALTY)														
Total	3,148		382	348	235	209	181	724	361	495	138	16	3	57
Yearly average			*382*	*348*	*235*	*209*	*181*	*145*	*60*	*35*	*6*	*0.6*		
1929	228	228	228											
1928	275	275	14	261										
1927	184	184	12	6	166									
1926	154	154	4	5	6	139								
1925	157	157	12	8	5		132							
1920–1924	696	139	31	25	16	27	17	580						
1914–1919	336	56	8	14	9	7	5	35	258					
1900–1913	601	43	50	11	14	18	16	59	43	390				
1875–1899	303	12	13	13	14	15	6	33	33	47	129			
1850–1874	122	5	3	3	3	1	2	10	24	53	9	14		
Prior to 1850	24		3	1			1	6	3	5		2	3	
All other[a]	69		4	1	2	2	2	1						57

[a] Established prior to 1924, but exact date not reported.

[16] See Dewing, A. S., Quarterly Journal of Economics, November, 1921.

TABLE 10.—DATE OF ESTABLISHMENT AND DATE OF PRESENT (1930) OWNERSHIP—WHOLESALE GROCERY ESTABLISHMENTS—UNITED STATES—Contd.

C. MANUFACTURERS' SALES BRANCHES

DATE OF ESTABLISHMENT	Total	Yearly average	DATE OF ACQUISITION BY PRESENT OWNERSHIP											
			1929	1928	1927	1926	1925	1920 to 1924	1914 to 1919	1900 to 1913	1875 to 1899	1850 to 1874	Prior to 1850	All other[1]
Total	**2,315**		**759**	**115**	**47**	**39**	**59**	**254**	**166**	**247**	**439**	**49**		**141**
Yearly average			*759*	*115*	*47*	*39*	*59*	*51*	*28*	*18*	*18*	*2*		
1929	191	191	191											
1928	56	56		56										
1927	45	45	1		44									
1926	33	33				33								
1925	23	23	1				22							
1920–1924	186	37	2		1	2	8	173						
1914–1919	168	28	4	2			5	22	135					
1900–1913	844	60	539	11	2	1	21	44	11	215				
1875–1899	503	20	21	13		2	2	11	8	18	428			
1850–1874	68	3		1		1		4	9		4	49		
Prior to 1850	55			31					3	14	7			
All other[1]	143			1			1							141

D. CHAIN-STORE WAREHOUSES

Total	**234**		**19**	**44**	**17**	**9**	**16**	**66**	**18**	**35**	**7**			**3**
Yearly average			*19*	*44*	*17*	*9*	*16*	*13*	*3*	*2.5*	*2.8*			
1929	11	11	11											
1928	35	35		35										
1927	9	9			9									
1926	8	8	1			7								
1925	12	12					12							
1920–1924	55	11		1	1			53						
1914–1919	34	6	5		7		2	3	17					
1900–1913	40	3	2	3		2	2	8	1	22				
1875–1899	19	0.8						1		13	5			
1850–1874	6	0.2		4							2			
Prior to 1850	2			1				1						
All other[1]	3													3

[1] Established prior to 1924, but exact date not reported.

In conclusion of this phase of the analysis the following tabulation of the dates of establishment and the dates of present ownership of all business units established prior to 1850 and operating in 1930 as general line or specialty wholesale merchants is of interest. This tabulation correlates the dates for the individual establishments which have been summarized in the preceding tables.

Among these venerable institutions the oldest was a specialty house established in 1730 but which has been under the latest ownership only since 1928. The oldest establishment which has remained under the same ownership since its organization was also a specialty house established in 1790. Among the general-line wholesale merchants, the oldest establishment was set up in 1787 but has been under the same ownership only since 1923. The oldest general-line wholesaler remaining under the same ownership since established was organized in 1819. These dates corroborate the common belief that wholesaling extends back into the early history of our country. They also reveal the fact that it is possible for at least some business establishments to bridge the centuries.

DATE OF ESTABLISHMENT AND DATE OF PRESENT (1930) OWNERSHIP FOR 107 WHOLESALE ESTABLISHMENTS ORGANIZED PRIOR TO 1850

WHOLESALE MERCHANTS (GENERAL LINE)			WHOLESALE MERCHANTS (SPECIALTY)		
Number of establishments	Date of establishment	Date of present ownership	Number of establishments	Date of establishment	Date of present ownership
1	1787	1923	1	1730	1928
5	1795	1894	1	1790	1790
1	1811	1921	1	1809	1809
1	1819	1819	1	1812	1822
1	1826	1905	1	1812	1824
1	1830	1830	1	1820	1905
1	1832	1907	1	1825	1893
1	1836	1921	1	1830	1919
1	1838	1910	1	1830	1921
1	1840	1920	1	1830	1922
1	1842	1842	1	1834	1905
1	1842	1891	1	1834	1925
1	1842	1921	1	1835	1920
1	1844	1903	1	1838	1903
1	1844	1915	1	1838	1911
1	1845	1886	1	1838	1918
1	1845	1901	1	1840	1919
1	1845	1913	1	1842	1912
1	1845	1924	1	1842	1920
1	1847	1847	1	1845	1908
1	1849	1849	2	1845	1920
1	1849	1921	1	1845	1923
			1	1849	1924

LOCATION OF WHOLESALE ESTABLISHMENTS IN THE GROCERY AND FOOD-SPECIALTY TRADE

States and geographic divisions.—One of the most important problems from the point of view of the sales executive is the location of the wholesale marketing establishments. Much of this information has been covered in a general way in the State bulletins and in the United States Summary of Wholesale Distribution. The few additional facts presented here should prove to be both interesting and valuable to all who are concerned with the wholesale grocery market.

The number of establishments and the net sales are presented for the entire grocery trade and for general-line wholesalers separately by geographic divisions of the country and by States. The following summary will serve as a point of departure:

COMPARISON OF SALES BY WHOLESALE GROCERY ESTABLISHMENTS WITH POPULATION BY GEOGRAPHIC DIVISIONS, UNITED STATES: 1929

GEOGRAPHIC AREA	Per cent of total wholesale grocery sales	Per cent of sales by general-line wholesalers	Per cent of total population
United States	100.0	100.0	100.0
New England	6.0	4.3	6.6
Middle Atlantic	29.0	16.4	21.4
East North Central	19.1	16.7	20.6
West North Central	10.5	13.0	10.8
South Atlantic	9.7	13.3	12.9
East South Central	4.7	8.9	8.1
West South Central	8.6	14.2	9.9
Mountain	2.2	4.3	3.0
Pacific	10.2	8.9	6.7

For all grocery establishments the Middle Atlantic States dominated, with 29 per cent of the total business. Since this group of States contained 21.4 per cent of the population, it is apparent, on the assumption that grocery trade and population are closely related, that wholesale establishments located in New York, Philadelphia, and other Middle Atlantic trade centers sold in other sections of the country.[17] New England and the East North Central States, for example, were probably supplied in part from Middle Atlantic cities, since each had a smaller percentage of the total grocery business than of the total population. *The same condition prevailed in the South Atlantic and East South Central States* and the same explanation probably applies. The West North Central States reported their percentage of grocery business as nearly equal to the population percentage, and hence may be considered as practically self-sufficient. In the West the Pacific States had 10.2 per cent of the total trade and but 6.7 per cent of the population. They no doubt supplied a part of the needs of the Mountain and West South Central sections, where population percentages were greater than percentages of total grocery business.

For general line wholesale merchants in the three northeastern sections—New England, Middle Atlantic, and East North Central—the percentage of business reported fell from 2.3 to 5 points below the population percentages. This was, no doubt, due in part to the fact that other types of wholesale establishments, such as chain-store warehouses and manufacturers' sales branches, had secured a larger share of the business in those territories. All of the other sections had larger percentages of sales by wholesale merchants than they had of population.

In the South Atlantic and East South Central divisions the differences between percentages of wholesale sales and total population were very small for general-line wholesalers, and it may be assumed that these States were approximately self-sufficient. In the remaining sections the surpluses of sales over population percentages were considerably larger and indicate that the general-line wholesale merchants must have covered larger territories than their own geographic divisions. Establishments in the West North Central section, no doubt, covered a part of the East North Central States. In the remaining sections—Pacific, Mountain, and West South Central—the explanation may lie in the fact that general-line wholesalers located in coastal cities or near the Canadian or Mexican borders frequently engaged in some exporting.[18]

It is significant to note that there was considerable variation between the different sections, due to the composition of wholesale trade. Thus, in the Middle Atlantic States, general-line wholesalers accounted for but 16.5 per cent of the total volume of business in groceries and food specialties, as compared with 56.5 per cent in the Mountain States. The extremes by States were 10.2 per cent by general-line wholesalers in Rhode Island to 96.7 per cent for the same type of wholesalers in Nevada. (See Table 11.)

Further examination of Table 11 shows that New York was the leading State in both total volume of wholesale grocery business and in sales by general-line wholesale merchants. California was second in total sales and fourth in sales by general-line wholesalers, although occupying sixth place in population. Pennsylvania, which was the second State in population, held third place for both total grocery sales and sales by general-line wholesalers. Texas, the fifth State in size, had second place in sales by general-line wholesale merchants, although ranking ninth in total volume of grocery sales. For the country as a whole, however, there was a fairly even distribution of the total grocery business among the several States on the basis of relative population. The distribution was also

[17] See next footnote 19 and Table 11 for basis of this assumption.

[18] Wholesale merchants performing multiple functions reported 2.48 per cent of their sales to be export business. See preceding section.

uniform for general-line wholesale merchants, much more so than was true of the relation between sales and population in such trades as radios and hardware. In fact, the correlation between grocery sales, both total and for general-line wholesalers, and population was unusually high.[10]

TABLE 11.—WHOLESALE GROCERY AND FOOD-SPECIALTY TRADE, BY STATES AND GEOGRAPHIC DIVISIONS—UNITED STATES: 1929

DIVISION AND STATE	ALL TYPES OF ESTABLISHMENTS					WHOLESALE MERCHANTS (GENERAL LINE)				
	Number of establishments	Net sales		Rank in		Number of establishments	Net sales		Per cent of sales by all types	Rank in volume
		Amount	Per cent of total	Volume	Population		Amount	Per cent of total		
United States	13,618	$9,118,641,283	100.0	------	------	4,776	$2,660,450,140	100.0	29.2	------
New England	824	551,273,078	6.0	------	------	252	115,100,886	4.5	20.9	------
Maine	84	44,226,864	0.5	37	35	36	20,297,913	0.8	45.9	34
New Hampshire	46	10,729,064	0.1	46	42	22	8,603,026	0.3	80.2	43
Vermont	28	11,830,802	0.1	45	46	13	5,800,036	0.2	49.0	46
Massachusetts	475	368,543,220	4.0	7	8	125	56,164,458	2.1	15.2	20
Rhode Island	59	45,152,454	0.5	36	37	12	4,610,583	0.2	10.2	47
Connecticut	132	70,790,674	0.8	31	29	44	19,624,870	0.7	27.7	36
Middle Atlantic	2,957	2,640,651,776	29.0	------	------	645	436,192,041	16.4	16.5	------
New York	1,796	1,813,977,293	19.9	1	1	298	208,591,889	7.8	11.5	1
New Jersey	201	175,050,907	1.9	13	9	66	62,054,532	2.4	35.4	15
Pennsylvania	960	651,623,576	7.2	3	2	281	165,545,620	6.2	25.4	3
East North Central	2,459	1,742,025,548	19.1	------	------	584	443,379,429	16.7	25.5	------
Ohio	613	464,823,325	5.1	5	4	133	120,470,685	4.3	25.9	6
Indiana	279	127,015,123	1.4	20	11	92	49,155,714	1.9	38.7	26
Illinois	765	628,425,496	6.9	4	3	170	142,544,486	5.4	22.7	5
Michigan	524	347,007,169	3.8	8	7	109	71,528,210	2.7	20.6	9
Wisconsin	278	174,754,435	1.9	14	13	80	59,671,334	2.2	34.1	18
West North Central	1,309	955,601,717	10.5	------	------	440	345,877,270	13.0	36.2	------
Minnesota	236	207,721,056	2.3	11	18	68	57,269,082	2.2	27.6	19
Iowa	228	136,883,570	1.5	19	19	73	64,172,623	2.4	46.9	14
Missouri	471	399,537,749	4.4	6	10	133	93,434,073	3.5	23.4	7
North Dakota	50	23,691,697	0.3	41	38	33	19,893,735	0.7	84.0	35
South Dakota	57	20,799,957	0.2	42	36	27	15,215,847	0.6	73.2	38
Nebraska	110	85,940,192	0.9	27	32	41	50,278,511	1.9	58.5	23
Kansas	157	81,027,496	0.9	28	24	65	45,613,399	1.7	56.3	28
South Atlantic	1,942	885,765,682	9.7	------	------	1,048	353,526,608	13.3	39.9	------
Delaware	21	5,396,861	0.1	48	47	7	2,891,177	0.1	53.6	48
Maryland	195	164,470,785	1.8	16	28	55	26,754,803	1.0	16.3	33
District of Columbia	45	50,755,344	0.6	35	41	9	5,803,177	0.2	11.4	45
Virginia	309	137,442,156	1.5	18	20	152	50,029,999	1.9	36.4	24
West Virginia	175	69,680,681	0.7	32	27	86	45,804,386	1.7	65.7	27
North Carolina	355	117,872,905	1.3	21	12	265	68,029,221	2.6	57.7	11
South Carolina	201	51,354,948	0.5	34	26	122	33,206,856	1.3	64.8	30
Georgia	372	188,747,098	2.1	12	14	219	77,210,828	2.9	40.9	8
Florida	269	100,044,904	1.1	24	31	133	43,736,161	1.6	43.7	29
East South Central	943	428,610,796	4.7	------	------	556	236,215,849	8.9	55.1	------
Kentucky	219	106,696,681	1.2	23	17	137	49,923,860	1.9	46.8	25
Tennessee	272	158,110,012	1.7	17	16	131	67,730,094	2.5	42.8	12
Alabama	250	88,952,628	1.0	26	15	139	52,337,985	2.0	58.8	21
Mississippi	202	74,851,475	0.8	29	23	149	66,223,910	2.5	88.5	13
West South Central	1,452	780,807,945	8.6	------	------	825	378,073,231	14.2	48.5	------
Arkansas	236	89,357,201	1.0	25	25	162	61,763,857	2.3	69.1	16
Louisiana	288	244,986,670	2.7	10	22	163	71,493,844	2.7	29.2	10
Oklahoma	242	110,516,117	1.2	22	21	107	61,345,451	2.3	55.5	17
Texas	686	335,947,957	3.7	9	5	393	184,070,079	6.9	54.8	2
Mountain	476	202,448,696	2.2	------	------	200	114,426,094	4.3	56.5	------
Montana	74	28,010,687	0.3	39	39	34	19,283,255	0.7	68.8	37
Idaho	51	19,609,790	0.2	43	43	18	12,525,395	0.5	63.9	42
Wyoming	28	7,819,162	0.1	47	48	15	7,196,045	0.3	92.0	44
Colorado	149	71,084,367	0.8	30	33	51	32,430,954	1.2	45.6	31
New Mexico	44	17,201,802	0.2	44	45	29	13,229,288	0.5	76.9	41
Arizona	60	25,612,911	0.3	40	44	32	13,765,152	0.5	53.7	40
Utah	63	31,240,407	0.3	38	40	17	14,188,577	0.5	45.4	39
Nevada	7	1,869,570	------	49	49	4	1,807,428	0.1	96.7	49
Pacific	1,256	931,456,045	10.2	------	------	226	237,058,732	8.9	25.5	------
Washington	241	168,370,544	1.8	15	30	48	50,515,698	1.9	30.0	22
Oregon	140	67,423,208	0.7	33	34	28	28,945,220	1.1	42.9	32
California	875	695,662,293	7.7	2	6	150	157,597,814	5.9	22.7	4

[10] A correlation coefficient of 0.9333 was found to exist between total sales of grocery wholesalers and population by States and a coefficient of 0.926 between sales of general-line wholesale merchants and population by States. The rank difference method was used. (A correlation coefficient may range from 0 to +1 or −1. The nearer the coefficient approaches +1 or −1 the greater the degree of correlation indicated. Both of the above coefficients, therefore, indicate a very high degree of correlation.)

Leading wholesale centers.—The leading wholesale centers in the grocery trade, with one exception, have been selected on the arbitrary basis of sales volume. All cities with grocery and food-specialty sales of $50,000,000 or more were included. The only exception was Denver, Colo., with sales slightly under $50,000,000 but with an important strategic location for wholesale trade. A total of 28 cities representative of all sections of the country are listed in Table 12 in order of their rank by population. These cities together accounted for over $5,000,000,000 in grocery sales, which was 58.5 per cent of the total for the United States. (See map in front of bulletin.)

It is highly significant that there was a fairly even distribution of grocery business among these cities as compared with their populations. New York and Chicago were in the lead, followed by San Francisco, Philadelphia, and Boston. For the 28 cities as a whole, the correlation between sales by grocery and food-specialty wholesalers and population was 0.79, not as high as was true of the correlation by States but indicating a very marked degree of correlation and a most uniform distribution of grocery wholesaling.

In addition to the foregoing facts, Table 12 presents a breakdown of total establishments into the different types operating in each city. This information should prove of much value in formulating selective distribution campaigns. Among the more important facts revealed is that there was considerable variation in the number of establishments of different types located in the 28 leading cities. Slightly over one-third of all grocery establishments were found in these cities, as compared with nearly 100 per cent of the exporters, 90 per cent of the importers, and about 60 per cent of the brokers. On the other hand, only about 16 per cent of the general-line wholesale merchants were found in those cities, 21 per cent of the wagon distributors, 30 per cent of the manufacturers' sales branches, and 41 per cent of the chain-store warehouses. The explanation of these differences is not difficult to find. Agents and brokers specialize in the selling function and seldom maintain warehouses. The best locations for them are the large cities where an office in the heart of the trading and industrial section keeps them in close touch with buyers and sellers. The exporters and importers, of course, are located in the seaport cities and near the Canadian and Mexican borders. The 28 selected cities include practically all of these exporting and importing centers. On the other hand, wholesale merchants, manufacturers' sales branches, and chain-store warehouses find many advantages in locating close to the consuming centers. One of their major functions is to maintain storage reservoirs for the current needs of their localities. While they assemble goods in carload lots and, therefore, secure minimum freight rates, they redistribute them in small shipments which would be a costly process for long hauls. The wagon distributors cover an even more restricted territory, since their sales are made by truck-driver salesmen who take orders and deliver at the same time. A reasonable trucking range probably seldom exceeds 75 miles, and is usually much less.

The statistics in Table 12 should be used in conjunction with the State bulletins on wholesale distribution to gain the maximum benefits in formulating wholesale trading areas.

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TABLE 12.—WHOLESALE GROCERY AND FOOD-SPECIALTY TRADE CENTERS IN THE UNITED STATES: 1929

CITY	Number of establishments	Net sales	Per cent of total net sales	RANK IN		NUMBER OF OUTLETS									
				Volume	Population	Agents and brokers	Cash-and-carry wholesalers	Chain-store warehouses	Exporters	Importers	Manufacturer's sales branches	Wholesale merchants (general line)	Wholesale merchants (specialty)	Wagon distributors	All other types
United States, total	**13,618**	**$9,118,641,283**	**100.0**	-------	-------	**1,851**	**362**	**234**	**66**	**335**	**2,315**	**4,776**	**3,149**	**178**	**352**
28 cities, total	4,779	5,337,704,803	58.5	-------	-------	1,124	116	98	64	302	708	756	1,473	38	101
New York, N. Y	1,182	1,374,769,787	15.1	1	1	277	5	18	31	172	71	153	425	9	21
Chicago, Ill	420	506,128,654	5.6	2	2	109	4	6	-------	21	52	64	151	9	4
Philadelphia, Pa	288	318,441,769	3.5	4	3	66	1	3	-------	9	41	51	114	2	1
Detroit, Mich	165	228,997,247	2.5	6	4	32	19	4	-------	1	32	29	46	1	1
Los Angeles, Calif	227	204,807,833	2.2	7	5	55	23	3	2	8	25	45	63	-------	3
Cleveland, Ohio	121	140,303,149	1.5	12	6	28	3	3	-------	-------	31	13	40	1	2
St. Louis, Mo	157	165,461,479	1.8	11	7	29	-------	4	1	1	29	28	61	1	3
Baltimore, Md	141	138,349,434	1.5	13	8	38	-------	3	-------	2	15	29	48	1	5
Boston, Mass	226	250,422,832	2.7	5	9	63	4	8	1	19	30	31	66	-------	4
Pittsburgh, Pa	160	166,049,893	1.8	10	10	29	9	3	-------	2	30	29	55	1	2
San Francisco, Calif	311	360,869,562	4.0	3	11	67	2	5	21	54	37	40	71	3	11
Milwaukee, Wis	103	103,125,578	1.1	17	12	22	11	2	-------	-------	13	27	25	1	2
Buffalo, N. Y	106	79,791,359	0.9	19	13	23	2	5	-------	2	17	18	33	2	4
Washington, D. C	45	50,755,344	0.6	27	14	5	-------	2	-------	-------	11	12	13	1	1
Minneapolis, Minn	79	123,899,719	1.4	14	15	23	-------	2	-------	1	19	10	22	-------	2
New Orleans, La	121	184,901,735	2.0	8	16	28	-------	1	1	-------	17	24	32	-------	19
Cincinnati, Ohio	92	100,030,222	1.1	16	17	19	-------	4	-------	-------	17	17	33	1	1
Kansas City, Mo	128	170,254,612	1.9	9	18	31	5	3	1	1	37	15	27	3	5
Seattle, Wash	136	115,263,073	1.3	15	19	38	10	4	4	6	15	21	31	1	6
Indianapolis, Ind	64	61,585,967	0.7	22	20	19	-------	2	-------	-------	19	14	10	-------	-------
Louisville, Ky	55	56,702,102	0.6	25	21	11	-------	3	-------	-------	15	15	11	-------	-------
Portland, Oreg	85	56,976,278	0.6	24	22	32	-------	-------	2	1	18	9	22	1	-------
Columbus, Ohio	57	55,695,903	0.6	26	23	8	9	3	-------	-------	19	7	10	-------	1
Denver, Colo	63	48,535,031	0.5	28	24	19	-------	-------	-------	2	19	7	15	-------	1
Atlanta, Ga	68	74,989,119	0.8	20	25	12	6	2	-------	-------	19	15	14	-------	-------
Dallas, Tex	55	80,918,687	0.9	18	26	13	1	2	-------	-------	20	8	10	-------	1
Memphis, Tenn	68	62,798,727	0.7	21	27	13	2	2	-------	-------	23	13	14	-------	1
Omaha, Nebr	56	56,879,708	0.6	23	28	15	-------	1	-------	-------	17	12	11	-------	-------

Extent of sales territory radius.—In addition to the foregoing statistics dealing with the location of the wholesale establishments operating in the grocery and food-specialty trade, a special analysis has been made of the extent of the sales territory or the distance from the trading center which wholesale distributors traveled in securing business. Eighteen cities have been selected for this phase of the study, primarily on the basis of their important geographic location as representative of every section of the United States.

The information on sales territory radius covered regularly has been summarized in Table 13, which shows the total net sales for each of the 18 cities for all wholesale establishments in the grocery and food-specialty trade and for general-line wholesale merchants in that trade. A breakdown is provided which shows the percentage of the total business secured by such establishments confining their sales within a sales territory radius of 75 miles, the cumulative percentage secured within radii of 150 miles, 250 miles, 500 miles, and over 500 miles but not national. The per cent of the total business which was done by establishments reporting a nation-wide sales territory is shown separately, as is the remaining business, which is largely exporting.

To illustrate, the total business transacted by all grocery establishments located in the 18 cities was $4,542,126,221. (See Table 13a.) Of this total, 31.6 per cent was sold by those establishments which operated within a radius of 75 miles from the several cities. Establishments which covered a territory with a radius of as high as 150 miles on the average, including those that kept within 75 miles, secured 44 per cent of the sales, and those going as far as 250 miles secured 55.6 per cent. In order to secure 66.3 per cent of the total business, a sales territory of 500 miles radius had to be covered, and it was not until the average sales territory was greater than 500 miles that as much as 81.7 per cent of the business was secured. The remainder of the total consisted of 10.9 per cent sold by establishments reporting national coverage and of 7.4 per cent which was chiefly export sales. There is a wide variation in the distance that must be covered by wholesale establishments of all types in the 18 cities as is shown in Table 13a.

Sales territory radius for general-line wholesale merchants.—The statistics for general-line wholesale merchants are even more interesting and important. Wholesale merchants constitute a much more homogeneous group, since they consist very largely of establishments selling to the retail trade and facing similar problems of sales and delivery. A glance at Table 13b shows that general-line wholesale merchants secured a larger per cent of their business from nearer home than was true for the total of all types of wholesale establishments. In only 3 of the 18 cities did the general-line wholesalers report sales to foreign countries and in only 5 did they show nation-wide coverage. These statistics should prove of unusual value to wholesalers and to manufacturers in working out improved sales policies. The figures should be used in conjunction with those of the retail census, as well as the State bulletins on wholesale distribution. The high degree of correlation between sales by general-line wholesalers and population, noted in a previous section, should prove to be an important consideration in the use of these sales territory figures. For similarly located communities, it is reasonable to assume that much the same factors prevail as shown in this analysis. At least these figures form a basis for a more intelligent approach to the wholesale-sales-territory problem than has been possible heretofore.

TABLE 13.—SALES-TERRITORY RADIUS[1] REPORTED BY ESTABLISHMENTS IN THE WHOLESALE GROCERY AND FOOD SPECIALTY TRADE—EIGHTEEN CITIES, UNITED STATES: 1929

CITY (Arranged according to population)	Net sales	Per cent of net sales made by establishments whose sales territory extended from their respective locations to a radius of:						
		Not over 75 miles	Not over 150 miles	Not over 250 miles	Not over 500 miles	Over 500 miles		All other[2]
						But not nation wide	Nation wide	
A—ALL TYPES								
Total for 18 cities	**$4,542,126,221**	**31.6**	**44.0**	**55.6**	**66.3**	**81.7**	**10.9**	**7.4**
New York, N. Y.	1,374,769,787	35.9	38.3	42.5	47.4	63.2	22.9	13.9
Chicago, Ill.	506,128,654	24.9	44.3	56.3	74.9	90.7	9.0	0.3
Philadelphia, Pa.	318,441,769	43.4	63.0	69.5	79.1	94.9	5.1	-------
Detroit, Mich.	228,997,247	55.5	75.0	85.1	97.2	100.0	-------	-------
Los Angeles, Calif.	204,807,833	31.2	46.7	68.4	84.6	90.1	8.2	1.7
Cleveland, Ohio	140,303,149	55.4	77.6	84.8	97.9	100.0	-------	-------
St. Louis, Mo.	165,461,479	21.9	59.7	78.6	84.8	97.9	1.8	0.3
Baltimore, Md.	138,349,434	26.7	52.2	57.4	66.0	92.9	5.3	1.8
Boston, Mass.	250,422,832	28.7	32.2	82.9	89.4	97.4	2.1	0.5
Pittsburgh, Pa.	166,049,893	41.5	85.4	92.8	93.9	98.9	1.1	-------
San Francisco, Calif.	360,869,562	15.5	19.0	20.3	34.9	58.0	13.8	28.2
Milwaukee, Wis.	103,125,578	19.4	22.1	51.5	84.8	99.4	0.3	0.3
Buffalo, N. Y.	79,791,359	39.9	89.7	99.2	100.0	-------	-------	-------
New Orleans, La.	184,901,735	10.5	14.1	22.9	32.5	89.5	5.0	5.5
Seattle, Wash.	115,263,073	25.1	31.3	47.1	49.4	61.4	19.8	18.8
Denver, Colo.	48,535,031	5.8	14.1	38.5	66.9	95.7	4.3	-------
Atlanta, Ga.	74,989,119	24.7	30.9	63.2	93.8	99.3	0.7	-------
Dallas, Tex.	80,918,687	18.0	25.5	51.0	87.5	100.0	-------	-------
B—WHOLESALE MERCHANTS (GENERAL LINE)								
Total for 18 cities	**$611,379,717**	**44.7**	**52.0**	**62.7**	**74.1**	**88.3**	**9.2**	**2.5**
New York, N. Y.	123,368,182	47.3	-------	48.0	52.9	86.5	12.5	1.0
Chicago, Ill.	90,416,790	28.4	32.6	33.5	36.5	59.6	40.4	-------
Philadelphia, Pa.	46,074,331	77.3	87.1	92.3	96.6	-------	3.4	-------
Detroit, Mich.	22,798,943	96.1	99.4	-------	100.0	-------	-------	-------
Los Angeles, Calif.	51,515,908	51.5	57.1	75.9	99.6	100.0	-------	-------
Cleveland, Ohio	23,332,516	11.2	21.4	24.9	100.0	-------	-------	-------
St. Louis, Mo.	31,544,927	35.6	42.8	80.9	89.9	95.0	5.0	-------
Baltimore, Md.	17,178,110	71.1	75.1	82.4	100.0	-------	-------	-------
Boston, Mass.	14,814,301	46.6	63.7	73.7	-------	100.0	-------	-------
Pittsburgh, Pa.	24,123,946	68.6	92.7	95.5	100.0	-------	-------	-------
San Francisco, Calif.	53,741,051	26.1	38.0	46.6	75.0	97.9	2.1	-------
Milwaukee, Wis.	24,742,062	27.5	37.1	83.9	100.0	-------	-------	-------
Buffalo, N. Y.	12,335,924	59.6	100.0	-------	-------	-------	-------	-------
New Orleans, La.	16,032,070	53.3	62.3	64.2	83.3	-------	-------	16.7
Seattle, Wash.	25,254,015	9.6	13.7	55.7	55.8	-------	-------	44.2
Denver, Colo.	16,235,585	0.2	10.8	61.6	-------	100.0	-------	-------
Atlanta, Ga.	6,579,336	100.0	-------	-------	-------	-------	-------	-------
Dallas, Tex.	11,291,720	39.1	100.0	-------	-------	-------	-------	-------

[1] The length of the sales-territory radius does not mean that the sales territory is circular. It may be only a segment of a circle, as is true of a seacoast city or where competition restricts sales effort. Furthermore, the territory radius does not mean that the trade is not secured locally, as well as at all points within the radius. If a given city shows no business for a particular radius, such as 150 miles, for example, this does not mean that the territory was not covered, but merely that no establishments in the city reported that particular radius for their sales territory. The territory was either covered by establishments reporting a longer radius for the same city or, in the absence of the latter, by establishments in other marketing centers. The chief value of these statistics is that they indicate how far from the home city trade is sought and the volume of business of the concerns operating within a given radius.

[2] Includes establishments engaged in foreign trade, in domestic and foreign trade, and a few establishments that did not report the sales territory covered. In Seattle a large share of the business by wholesale merchants (general line) was in sales to Alaska and the Orient.

Sales analysis, wholesale grocery and food-specialty establishments. *Commodity sales.*—In an earlier section of this report, an analysis was made of the distribution channels through which grocery commodities were sold. At this point, a different sort of commodity analysis is presented for the purpose of showing *what commodities were sold, and in what proportions, by wholesale establishments which specialized in the grocery trade.* As indicated previously in this report, grocery commodities were not handled exclusively by the grocery trade. Conversely, the grocery trade did not limit itself to grocery commodities, but handled a variety of other merchandise. Table 14 shows the commodities that were reported by wholesale establishments specializing in the grocery trade. The first part of the table summarizes the total net sales, total commodity sales, and total detailed commodity sales. This part of the table shows the per cent of commodity coverage or the per cent of net sales which was reported on a commodity basis, both for major commodity lines and for detailed commodity items. These facts are given for each type of wholesale establishment. They reveal that 92.9 per cent of all sales in the grocery and food-specialty trade were reported on a commodity basis in greater or less detail. The commodity coverage for all detailed commodities combined averaged 78.7 per cent for all types of establishments. General-line wholesale merchants, a group which accounted for the largest share of the business, reported a commodity coverage of 86.2 per cent for the major items and 66.0 per cent for the detailed items. The highest percentages were reported by cash-and-carry wholesalers and importers, 99.8 per cent and 99.6 per cent, respectively, of their sales being reported by the major commodity lines and 83.9 per cent and 99.4 per cent by the detailed items. The lowest were reported by specialty wholesale merchants, with 74.8 per cent of their sales shown by major lines and 72.9 per cent by detailed commodity items.

The commodities are listed in the stub of the main part of the table. The arrangement of the commodity items follows that used in Table 4. The major commodity lines appear first, *Bakery products* being an example. Under the major lines are listed the detailed commodity classifications. Since the detailed information is less complete than that on major commodity lines, the first item under each of the major lines is the unitemized total. To illustrate, under the heading *Bakery products* appears first, *Bakery products not itemized.* This is followed by the detailed items *Biscuits and crackers* and *Other bakery products.* (See table 14b.)

The first column in the second part of Table 14 gives the dollar volume of commodity sales. The second column shows the per cent of the total commodity sales which each item constitutes. *Bakery products,* for example, made up 4.7 per cent of the total, and *Canned goods,* 13.4 per cent. The detailed commodity items, as well as the major commodity lines, are shown as percentages of the same total. If it is desired to know what percentage a detailed commodity item is of a major commodity line, it is necessary to divide the percentage for the given item by that for the major line. Milk and cream, for example, made up 0.2 per cent of total commodity sales, while the major line, *Dairy products and eggs,* accounted for 5.0 per cent of the total. Milk and cream, therefore, made up 4 per cent of total sales of *Dairy products and eggs* (0.2 divided by 5.0). The total figures in dollars are perhaps less significant than the percentages since the latter show more clearly the relative importance of each item in the list of commodities handled by wholesale grocery establishments.

In the remaining columns of Table 14b each type of establishment is shown separately, together with the composition of its sales. This table answers the questions: What items make up the average stock in trade of the general-line wholesale merchant; what does the chain store warehouse handle; how does the manufacturers' sales branch differ from the other types of wholesale outlets in

variety of merchandise sold? The following summary illustrates the use of this tabulation.

COMMODITY	PER CENT OF TOTAL COMMODITY SALES		
	Wholesale merchants (general line)	Wholesale merchants (specialty)	Chainstore warehouses
Total	100.0	100.0	100.0
Bakery products	0.7	5.0	4.5
Canned goods	18.8	16.6	6.4
Cigars, cigarettes, and tobacco	6.0	0.2	4.6
Confectionery and soft drinks	7.1	0.7	2.1
Dairy products and eggs	3.9	4.2	11.4
Fish and sea foods	0.3	0.2	0.3
Fruits and vegetables (fresh and dried)	4.6	8.1	12.0
Groceries	47.3	53.5	48.8
Meats and meat products	1.3	0.8	4.3
Soaps and toilet preparations	3.0	1.1	1.1
All other commodities	7.0	9.6	4.5

Bakery products were but a small per cent (0.7) of the sales of general-line wholesale merchants. Specialty houses carried a much larger per cent, as did chain-store warehouses (5.0 and 4.5, respectively). Both general-line and specialty-wholesale merchants reported a much larger per cent of canned goods than did chain-store warehouses (18.8 and 16.6, as compared with 6.4). General-line wholesalers sold more than twice as much confectionery and soft drinks as the other two types combined. In addition to the above items, it might be pointed out that general-line wholesalers handled substantial amounts of dairy products and eggs; fruits and vegetables, fresh and dried; cigars, cigarettes, and tobacco; and soaps and toilet preparations. Specialty houses sold even more of the first two items and for chain-store warehouses they constituted larger percentages of the total business than for either of the other two. Chain-store warehouses also handled a fairly large ratio of cigars, cigarettes, and tobacco, although not as much as the general-line wholesale merchants. On the other hand, chain-store warehouses reported much larger percentages of meats and meat products than was true of the other two types.

TABLE 14A.—COMMODITY COVERAGE BY TYPE OF ESTABLISHMENT FOR GROCERY AND FOOD-SPECIALTY ESTABLISHMENTS—UNITED STATES: 1929

TYPE OF ESTABLISHMENT	Number of establishments	Net sales	TOTAL COMMODITY SALES—MAJOR COMMODITY LINES		SALES IN DETAILED COMMODITY ITEMS	
			Amount (thousands of dollars)	Percent of net sales	Amount (thousands of dollars)	Percent of net sales
Total	13,618	$9,118,641,283	$8,475,198	92.9	$7,174,010	78.7
Agents and brokers	1,851	1,751,993,419	1,745,002	99.6	1,622,961	92.6
Cash-and-carry wholesalers	362	101,188,058	100,941	99.8	84,933	83.9
Chain-store warehouses	234	1,457,408,292	1,447,553	99.3	1,182,456	81.1
Exporters	66	85,831,009	84,609	98.6	82,184	95.8
Importers	335	252,177,340	251,235	99.6	250,731	99.4
Manufacturers' sales branches	2,315	1,480,162,243	1,455,938	98.4	1,282,418	86.6
Wagon distributors	178	18,998,940	18,710	98.5	18,140	95.5
Wholesale merchants (general line)	4,776	2,660,450,140	2,293,727	86.2	1,755,313	66.0
Wholesale merchants (specialty)	3,149	901,862,528	674,518	74.8	657,640	72.9
All other types	352	408,569,314	402,965	98.6	237,234	58.1

TABLE 14B.—COMMODITY SALES BY TYPE OF ESTABLISHMENT FOR GROCERY AND FOOD-SPECIALTY ESTABLISHMENTS—UNITED STATES: 1929

[*Amounts in thousands of dollars*]

COMMODITIES	TOTAL		PER CENT OF TOTAL									
	Commodity sales	Per cent of total	Agents and brokers	Cash-and-carry wholesalers	Chain-store warehouses	Exporters	Importers	Manufacturers' sales branches	Wagon-distributors	Wholesale merchants (general line)	Wholesale merchants (specialty)	All other
Total reported commodity sales	***8,475,198**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Bakery products	401,540	4.73	0.17	0.71	4.65	0.06	0.22	18.77	24.80	0.71	4.96	0.56
Bakery products, not itemized	*141,843*	*1.67*	*0.07*	*0.12*	*3.90*	-------	(1)	*5.19*	*1.85*	*0.16*	*0.53*	*0.24*
Biscuits and crackers	122,037	1.44	0.05	0.46	0.33	0.06	0.16	6.84	0.84	0.41	0.92	0.01
Other bakery products	137,660	1.62	0.05	0.13	0.42	(1)	0.06	6.74	22.11	0.14	3.51	0.31
Canned goods	1,136,401	13.41	22.21	16.39	6.60	13.64	6.61	1.25	1.39	18.82	16.57	11.64
Canned goods, not itemized	*153,638*	*1.81*	*2.36*	*1.69*	*0.47*	-------	*0.24*	-------	*0.02*	*3.83*	*0.16*	*3.58*
Canned fruits	299,829	3.54	5.73	3.97	1.76	5.21	0.43	0.42	0.03	4.79	4.72	4.18
Canned vegetables	382,229	4.52	7.96	5.54	3.14	0.18	1.10	0.44	0.05	6.43	3.83	2.40
Canned fish and sea foods	163,121	1.92	4.18	2.28	0.63	8.08	3.86	0.16	0.38	1.72	2.34	1.14
Canned meats	50,246	0.59	0.56	0.82	0.28	0.04	0.11	0.18	0.39	0.78	2.17	0.02
Other canned goods	87,338	1.03	1.42	2.09	0.32	0.13	0.87	0.05	0.52	1.27	3.35	0.32
Cigars, cigarettes, and tobacco	226,112	2.67	0.02	16.08	4.76	-------	0.07	0.01	0.84	6.00	0.23	0.24
Confectionery and soft drinks	234,215	2.76	0.77	4.96	2.18	0.96	0.62	0.71	1.10	7.05	0.72	1.19
Confectionery and soft drinks, not itemized	*129,482*	*1.54*	*0.20*	*1.14*	*0.09*	*0.47*	*0.27*	*0.38*	*0.03*	*4.94*	*0.01*	*0.94*
Candy	37,219	0.44	0.17	1.81	0.19	0.34	0.08	0.23	0.37	1.04	0.24	0.06
Chewing gum	9,238	0.11	0.02	0.86	0.06	0.06	-------	0.01	0.06	0.29	0.03	(1)
Ice cream	712	(1)	(1)	0.01	(1)	(1)	-------	-------	0.41	(1)	0.02	0.04
Bottled beverages	34,272	0.40	0.28	0.84	0.75	0.03	0.24	0.05	0.06	0.63	0.21	0.15
Other confectionery	23,292	0.27	0.10	0.30	1.09	0.06	0.03	0.04	0.17	0.15	0.21	(1)
Dairy products and eggs	419,812	4.95	2.48	3.86	11.78	8.05	2.58	4.71	8.94	5.91	4.24	0.12
Dairy products, not itemized	*14,006*	*0.17*	*0.41*	*0.45*	*0.15*	*0.01*	*0.13*	*0.05*	*0.41*	*0.34*	*0.09*	(1)
Milk and cream	12,500	0.14	0.06	0.22	0.46	-------	-------	0.05	0.85	0.13	0.10	0.01
Milk, evaporated, condensed, and powdered	170,411	2.01	1.96	1.91	0.46	7.80	0.13	4.42	-------	1.72	2.55	(1)
Butter	93,575	1.10	(1)	0.53	5.49	0.09	(1)	0.01	1.62	0.45	0.32	0.09
Cheese	58,082	0.68	0.24	0.43	1.37	0.01	2.13	0.14	5.99	0.88	0.73	(1)
Eggs	68,445	0.81	0.08	0.32	3.85	0.02	-------	0.01	0.07	0.35	0.40	(1)
Other (except poultry)	2,793	0.04	0.03	(1)	(1)	0.12	0.19	0.03	-------	0.04	0.05	0.02

[1] Less than one one-hundredth of 1 per cent.

TABLE 14B.—COMMODITY SALES BY TYPE OF ESTABLISHMENT FOR GROCERY AND FOOD-SPECIALTY ESTABLISHMENTS—UNITED STATES: 1929—Continued

[*Amounts in thousands of dollars*]

COMMODITIES	TOTAL		PER CENT OF TOTAL									
	Commodity-sales	Per cent of total	Agents and brokers	Cash-and-carry wholesalers	Chain-store warehouses	Exporters	Importers	Manufacturers' sales branches	Wagon-distributors	Wholesale merchants (general line)	Wholesale merchants (specialty)	All other
Fish and sea foods	16,205	0.19	0.11	0.23	0.34	0.09	0.35	(1)	0.21	0.30	0.16	0.02
Fish and sea foods not itemized	*7,293*	*0.09*	*0.01*	*0.07*	*0.29*	(1)	(1)	-------	*0.01*	*0.12*	*0.01*	(1)
Fresh and frozen fish	1,215	0.01	0.01	0.01	0.03	(1)	(1)	-------	0.01	0.02	0.02	-------
Cured and processed fish	6,112	0.07	0.05	0.14	0.01	(1)	0.29	(1)	0.19	0.14	0.11	0.02
Other sea foods	1,585	0.02	0.04	0.01	0.01	0.09	0.06	(1)	-------	0.02	0.02	(1)
Fruits and vegetables	506,210	5.97	6.41	2.03	12.48	10.50	3.66	1.38	0.32	4.63	8.05	3.23
Fruits and vegetables not itemized	*44,223*	*0.52*	*1.02*	*0.34*	*0.51*	*0.02*	*0.01*	*0.05*	*0.22*	*0.72*	*0.15*	*0.09*
Fruits, fresh	135,702	1.60	0.32	0.35	6.83	0.81	0.62	0.05	-------	1.12	0.22	0.22
Vegetables, fresh	98,865	1.17	0.56	0.25	4.55	0.17	0.15	(1)	0.08	0.89	0.17	0.19
Fruits, dried	130,844	1.54	2.54	0.66	0.29	6.34	2.87	1.16	0.02	1.17	3.27	0.80
Vegetables, dried	96,576	1.14	1.97	0.43	0.30	3.16	0.01	0.12	-------	0.73	4.24	1.93
Groceries	4,464,064	52.67	58.44	47.63	46.88	57.74	74.78	50.79	56.97	47.33	53.48	70.62
Groceries not itemized	*691,127*	*8.16*	*2.76*	*11.59*	*9.37*	*3.92*	*1.93*	*3.03*	*2.00*	*12.85*	*1.00*	*35.14*
Cereal preparations	222,124	2.62	1.12	4.81	0.58	0.64	0.29	6.19	5.61	3.30	2.89	0.45
Coffee	514,296	6.07	9.62	2.46	10.67	13.69	43.79	4.68	5.82	4.45	4.29	3.10
Extracts and spices	70,085	0.83	0.69	0.58	0.17	0.53	4.92	0.26	0.32	1.06	1.86	0.34
Flour	413,153	4.87	3.90	2.09	4.89	17.59	0.80	4.29	0.88	3.65	14.58	2.63
Nuts	105,105	1.24	2.08	0.38	0.16	0.03	5.55	0.19	0.32	0.77	3.13	2.62
Lard, lard substitutes, and cooking fats	195,748	2.31	1.51	1.16	2.03	9.34	2.43	4.54	0.27	1.99	0.92	1.68
Oleomargarine and butter substitutes	41,850	0.49	0.07	0.28	0.08	0.58	0.02	0.77	8.29	0.39	1.32	2.01
Pickles, preserves, and jams	132,863	1.57	1.19	1.36	0.76	0.62	1.43	1.66	22.42	2.10	2.57	0.41
Rice	44,355	0.52	0.76	0.60	0.07	0.69	1.08	0.18	0.06	0.93	0.32	0.01
Sugar	1,122,805	13.25	29.59	11.32	5.14	6.91	5.42	14.28	0.14	8.64	12.73	2.37
Tea	76,450	0.90	0.50	0.57	0.22	(1)	4.82	0.47	0.13	0.99	2.70	1.01
Other groceries	834,103	9.84	4.65	10.43	22.74	3.20	2.30	10.25	10.71	6.21	5.17	18.85
House furnishings	82,292	0.97	0.14	0.67	3.56	0.14	0.08	0.06	0.23	1.12	0.07	0.01
House furnishings not itemized	*3,362*	*0.04*	*0.14*	*0.07*	(1)	-------	-------	(1)	*0.12*	*0.03*	-------	-------
House furnishings	78,930	0.93	-------	0.60	3.56	0.14	0.08	0.06	0.11	1.09	0.07	0.01

Meats and meat products	109,118	1.30	0.26	0.51	4.53	1.10	0.56	0.07	0.48	1.30	0.75	0.02
Meats and meat products not itemized	*64,894*	*0.77*	*0.05*	*0.01*	*3.67*	*1.05*		(1)	*0.02*	*0.39*	*0.38*	(1)
Meats, fresh	11,598	0.14	0.03	0.18	0.33	0.02	0.11			0.25	0.02	
Meats, cured and smoked	25,330	0.30	0.13	0.31	0.50	0.03	0.05	0.07	0.42	0.55	0.25	0.02
Poultry and game	2,999	0.04	0.02	(1)	0.04	(1)	0.04	(1)		0.06	0.06	(1)
Other meat products	4,297	0.05	0.03	0.01	0.09		0.36	(1)	0.04	0.05	0.04	
Soaps and toilet preparations	310,882	3.67	0.70	4.99	1.15	0.07	0.03	13.67	0.29	3.03	1.11	0.16
Soaps and toilet preparations not itemized	*12,560*	*0.15*	*0.02*	*4.31*	(1)			*0.53*	*0.02*	(1)	(1)	(1)
Soaps, powders, and cleansers	285,925	3.37	0.68	0.68	1.15	0.07	0.03	12.32	0.27	3.03	1.04	0.16
Toilet preparations	12,397	0.15						0.82			0.07	
Food products not elsewhere specified	158,612	1.88	1.47	0.49	0.49	0.05	6.60	2.35	4.22	2.35	0.97	3.29
Commodities other than food and groceries	409,735	4.83	6.83	1.45	0.61	7.61	3.86	6.23	0.21	3.45	8.69	8.91
Automotive equipment, parts, and accessories	25	(1)	(1)				0.01					
Automotive equipment and supplies	1	(1)	(1)									
Automotive parts	20	(1)					0.01					
Tires and tubes	4	(1)					(1)					
Automobiles, trucks, and tractors	130	(1)					0.05					
Automobiles, trucks, etc	130	(1)					0.05					
Building materials not listed elsewhere (such as wallboard, roofing, etc.)	13	(1)									(1)	
Cement, lime, and plaster	50	(1)									0.01	(1)
China, glassware, and crockery	72	(1)									0.01	
China	36	(1)									0.01	
Glassware	18	(1)									(1)	
Crockery	18	(1)									(1)	
Coal and coke	137	(1)		0.03						(1)	0.02	
Coal and coke not itemized	*49*	(1)		*0.03*						(1)	(1)	
Anthracite coal	6	(1)									(1)	
Bituminous coal	82	(1)									0.02	
Cotton, raw	110	(1)					0.04					
Crude nonmetallic minerals and their products, not listed elsewhere	1,976	0.02	0.03								0.22	
Drugs and drug sundries	427	0.01	0.02							(1)	0.02	
Drugs and drug sundries not itemized	*195*	*0.01*	*0.01*							(1)	*0.01*	
Drugs, chemicals, and pharmaceuticals	187	(1)	0.01								(1)	
Proprietory medicines	5	(1)									(1)	
Drug sundries not listed elsewhere	40	(1)									0.01	
Dry goods not specified, except carpets and rugs	40	(1)								(1)		
Electrical household appliances	19	(1)								(1)		
Farm products not elsewhere classified	16,281	0.19	0.18			0.59			0.02	0.38	0.49	0.21
Feeds mixed and other	26,513	0.32	0.13	0.09		0.03		0.24		0.13	1.78	1.40
Fertilizer and fertilizer materials	1,119	0.01						0.06		(1)	0.04	
Field, garden, and flower seeds	499	0.01	(1)	(1)						(1)	0.06	0.01
Field and garden seeds, not itemized	*179*	(1)	(1)	(1)						(1)	*0.01*	*0.01*
Field seeds	251	0.01									0.04	
Garden seeds, flower seeds, and bulbs	69	(1)									0.01	
Furniture, wooden and metal	94	(1)										
Furniture, not itemized	*74*	(1)								(1)		
Household furniture	20	(1)								(1)		

[1] Less than one one-hundredth of 1 per cent.

TABLE 14B.—COMMODITY SALES BY TYPE OF ESTABLISHMENT FOR GROCERY AND FOOD-SPECIALTY ESTABLISHMENTS—UNITED STATES: 1929—Continued

[*Amounts in thousands of dollars*]

COMMODITIES	TOTAL		PER CENT OF TOTAL									
	Commodity sales	Per cent of total	Agents and brokers	Cash-and-carry wholesalers	Chain-store warehouses	Exporters	Importers	Manufacturers' sales branches	Wagon-distributors	Wholesale merchants (general line)	Wholesale merchants (specialty)	All other
Commodities other than food and groceries—Continued.												
Glass	26	(1)								(1)		
Grain	13,947	0.16	0.07			0.05	0.01	0.07		0.01	0.93	1.24
Grain, not itemized	*1,947*	*0.02*	*0.03*			*0.01*		(1)		*0.01*	*0.15*	*0.01*
Wheat	4,904	0.06						0.02			0.08	1.02
Oats	1,042	0.01	(1)					(1)			0.14	
Corn	3,711	0.04	0.01			0.04		0.05			0.43	
Barley	398	0.01				(1)		(1)			0.06	
Rice	129	(1)	0.01				0.01					(1)
All other grain	1,816	0.02	0.02					(1)			0.07	0.21
Hardware	4	(1)								(1)		
Hay, straw, and alfalfa	770	0.01	0.01	0.01				0.01		0.01	0.04	0.01
Hides and skins	76	(1)					0.03					
Industrial and heavy chemicals (including coal tar and other synthetic organic chemicals)	3,973	0.05	0.01					0.25			0.03	
Industrial machinery, equipment, and supplies	262	(1)	(1)				0.04			0.01		
Industrial machinery, equipment, and supplies, not itemized	*139*	(1)								*0.01*		
Textile machinery	18	(1)					0.01					
Industrial machinery and equipment not listed elsewhere	105	(1)	(1)				0.03					
Iron and steel	47	(1)	(1)									
Jewelry, silverware, clocks, watches, precious stones, and precious metals	27	(1)	(1)							(1)	(1)	
Jewelry, not itemized	*22*	(1)	(1)							(1)		
Silverware and plated ware	5	(1)									(1)	
Junk and scrap	43	(1)				0.05						
Lumber (rough, dressed, and finished)	604	0.01				0.34	0.12				(1)	
Miscellaneous chemicals	15,904	0.19	0.01			0.02	0.54	0.92		(1)	0.14	
Men's and boys' clothing and furnishings	1	(1)								(1)		
Musical instruments, accessories and parts	10	(1)								(1)		
Notions and dry goods small wares (such as ribbons, laces, thread, etc.)	9	(1)								(1)		
Oils, animal and vegetable	8,170	0.10	(1)				0.03	0.50		(1)	0.11	
Paints, varnishes, and lacquers	42	(1)	(1)							(1)	(1)	

Paper	267	(1)	0.01						0.08	(1)	(1)	
Paper, not itemized	23	(1)							0.08	(1)		
Paper board	26	(1)									(1)	
Book paper, uncoated	2	(1)									(1)	
All other paper	216	(1)	0.01									
Paper goods (such as paper boxes, bags, cups, dishes, napkins, towels, patterns, etc.)	406	(1)	(1)	0.02						0.01	0.01	
Petroleum and its products	67	(1)					0.03				(1)	
Lubricating oils and greases	6	(1)					(1)				(1)	
All other petroleum products (including crude oil and kerosene)	61	(1)					0.03					
Piece goods	404	(1)					0.16					
Jute fabrics	403	(1)					0.16					
All other piece goods and yard fabrics	1	(1)					(1)					
Plumbing and heating equipment and supplies	1	(1)								(1)		
Printed books and magazines	15	(1)								(1)	(1)	
Rubber, crude	29	(1)					0.01					
Second-hand merchandise	3	(1)	(1)							(1)		
Sheet metal work	6	(1)								(1)		(1)
Sporting goods, including arms and ammunition	4	(1)	(1)									
Stationery and stationery supplies, not listed elsewhere	82	(1)		(1)						(1)	(1)	
Textile products, not listed elsewhere	70	(1)								(1)	(1)	
Toilet articles (such as brushes, combs, dresser sets, atomizers, manicure implements, etc.)	6	(1)								(1)	(1)	
Toys and games	232	(1)								0.01		
Wood products, not listed elsewhere	1,275	0.02	0.01					0.07		(1)	0.02	
Wool, raw (whether in the grease, scoured, or carbonized)	173	(1)	0.01							(1)		(1)
Miscellaneous, not itemized	315,275	3.73	6.34	1.30	0.61	6.53	2.79	4.11	0.11	2.87	4.76	6.04

[1] *Less than one one-hundredth of 1 per cent.*

General sales breakdown.—This section deals with a breakdown of the sales of the different types of wholesale establishments into gross sales, returns and allowances, net sales, credit sales, sales to home consumers, and sales of goods manufactured by the wholesaler.

A general summary shows that less than 1 per cent of net sales of all establishments in the grocery and food-specialty trade consisted of goods returned by and allowances made to customers. For all types of establishments combined credit sales were less than 50 per cent, sales to home consumers about one-third of 1 per cent, and sales of goods manufactured in the wholesale establishments three-fourths of 1 per cent. The extent of these elements of wholesalers' sales are analyzed in detail in the following pages.

Returns and allowances.—Although constituting but a small percentage of net sales, returns and allowances amounted to the very substantial sum of $79,425,841. Of this total, general-line wholesale merchants and manufacturers' sales branches reported the largest percentage, with combined returns and allowances amounting to more than $56,000,000. To determine as accurately as possible the percentage of returns and allowances to net sales, Table 15 shows separately the number of establishments which reported returns and allowances together with their net sales. Thus, out of a total of 13,618 establishments, but 3,996 reported returns and allowances. For these 3,996 establishments, the total amounted to 2.9 per cent of their net sales. Apart from the miscellaneous types of establishments the highest percentage of returns and allowances was reported by the 19 chain-store warehouses which gave information on this subject. Five and two-tenths per cent of their net sales (at wholesale values) consisted of returns by or allowances made to the retail stores. It is probable that a large proportion of this consisted of allowances made for spoiled or otherwise unsaleable merchandise. For manufacturers' sales branches, this item amounted to 3.5 per cent of the sales of those establishments (nearly half) which reported returns and allowances. The lowest per cent was in the case of exporters, 15 of whom reported returns and allowances of some $40,000, which was 0.6 per cent of their net sales. General-line wholesale merchants reporting on this item showed 2.4 per cent of their sales to be returned by customers, or to consist of allowances made to customers. A slightly greater percentage (2.7) was reported by wagon distributors. The remaining types, in order of the extent of this practice, were importers, 2.3 per cent; wholesale merchants (specialty), 1.9 per cent; agents and brokers, 1.6 per cent; and cash-and-carry wholesalers, 1.1 per cent.

Although the relative extent of returns and allowances in the grocery trade was not great, as compared with the hardware trade and the paint and varnish trade, where the percentages are 6.9 and 3.1, respectively, and where the range was from 2.1 per cent to 7.3 per cent in the hardware trade and from 2.3 per cent to 7.9 per cent in the paint and varnish trade, it nevertheless amounted to a substantial volume of business and constitutes a potential source of loss if not carefully watched.

TABLE 15.—RETURNS AND ALLOWANCES, BY TYPE OF ESTABLISHMENT—GROCERY AND FOOD-SPECIALTY TRADE, UNITED STATES: 1929

TYPE OF ESTABLISHMENT	ALL ESTABLISHMENTS		ESTABLISHMENTS REPORTING RETURNS AND ALLOWANCES		RETURNS AND ALLOWANCES		
	Number	Net sales	Number	Net sales	Amount	Per cent of all net sales	Per cent of sales made by reporting establishments
Total	13,618	$39,118,641,283	3,996	$2,720,637,861	$379,425,841	0.9	2.9
Agents and brokers	1,851	1,751,993,419	102	95,610,472	1,568,709	0.1	1.6
Cash-and-carry wholesalers	362	101,188,058	46	26,831,704	297,337	0.3	1.1
Chain-store warehouses	234	1,457,408,292	19	25,501,441	1,325,381	0.1	5.2
Exporters	66	85,831,009	15	6,397,432	40,043	-------	0.6
Importers	335	252,177,340	149	92,395,247	2,151,308	0.9	2.3
Manufacturers' sales branches	2,315	1,480,162,243	1,034	790,434,755	27,650,324	1.9	3.5
Wholesale merchants (general line)	4,776	2,660,450,140	1,652	1,224,464,745	28,776,986	1.1	2.4
Wholesale merchants (specialty)	3,149	901,862,528	878	376,580,763	7,062,854	0.8	1.9
Wagon distributors	178	18,998,940	43	5,479,689	148,994	0.8	2.7
All other types	352	408,569,314	58	76,441,613	10,403,905	2.5	13.6

Credit sales.—The percentage of credit sales varied considerably between the different types of wholesale establishments in the grocery and food-specialty trade. (See Table 16.) For all types of establishments the total for those reporting credit sales was 84.6 per cent of net sales. In five out of the nine separate types of establishments, the credit sales were greater than 84.0 per cent. The largest volume of credit sales in absolute figures was $1,811,384,877, extended by general-line wholesale merchants. This constituted 85.1 per cent of the net sales of the 3,654 such wholesalers reporting sales on a credit basis. Nearly $1,000,000,000 in credit was extended by 1,646 manufacturers' sales branches. This constituted 84.4 per cent of the sales of such establishments. Agents and brokers also engaged in credit transactions to a large extent—92.7 per cent of the sales of those establishments reporting this item. Cash-and-carry wholesalers, obviously, did not live up to their name 100 per cent. Thirty-nine of the three hundred and sixty-two wholesalers of this type apparently extended some credit, since 30.3 per cent of their net sales were reported as credit sales.

Apparently all types of establishments in the grocery trade found it necessary to extend some credit. For chain-store warehouses, it is probable that the explanation lies in sales made by the 29 reporting warehouses to other than their own outlets, since credit sales, in the strict sense of the term, can not enter into the relationship between the warehouses and the retail stores. It is known that chains did make sales from their warehouses to other merchants and to industrial users and it was, no doubt, to such accounts that some credit was extended. (See Table 28.) The fact that the percentage of credit sales extended by wagon distributors was below the average may be due to a closer check on payments made by the salesman-drivers. Wagon distributors specializing in highly perishable products very frequently find it necessary to operate on what approximates a cash basis. Then, too, since the retailer buys in small quantities and usually but a few items on a day-to-day basis, he may find it to his advantage to pay cash rather than trouble with so many small accounts.

TABLE 16.—CREDIT SALES, BY TYPE OF ESTABLISHMENT—GROCERY AND FOOD-SPECIALTY TRADE, UNITED STATES: 1929

TYPE OF ESTABLISHMENT	ALL ESTABLISHMENTS		ESTABLISHMENTS REPORTING CREDIT SALES		CREDIT SALES		
	Number	Net sales	Number	Net sales	Amount	Per cent of all net sales	Per cent of sales made by reporting establishments
Total	13,618	$9,118,641,263	8,509	$5,311,557,931	$4,494,954,923	49.4	84.6
Agents and brokers	1,851	1,751,993,419	708	837,185,482	776,398,359	44.3	92.7
Cash-and-carry wholesalers	362	101,188,058	39	18,974,999	5,758,103	5.7	30.3
Chain-store warehouses	234	1,457,408,292	29	53,834,886	11,058,425	0.8	20.5
Exporters	66	85,831,009	38	55,068,613	53,306,636	62.2	96.8
Importers	335	252,177,340	248	190,731,875	161,193,291	63.0	84.5
Manufacturers' sales branches	2,315	1,480,162,243	1,646	1,129,490,828	953,388,829	64.4	84.4
Wholesale merchants (general line)	4,776	2,660,450,140	3,654	2,128,297,587	1,811,384,877	68.1	85.1
Wholesale merchants (specialty)	3,149	901,862,528	1,891	707,370,504	591,055,003	65.5	83.6
Wagon distributors	178	18,998,940	84	11,854,528	7,977,889	42.0	67.3
All other types	352	408,569,314	172	178,748,629	123,433,511	30.2	69.1

Sales to home consumers.—Only 867 out of the total of 13,618 establishments reported sales to the ultimate or home consumer. Although this figure amounted to but 0.4 of 1 per cent of the total volume of grocery business, it accounted for 15.3 per cent of the sales of those establishments reporting on this item. The largest number of establishments were found in the wholesale merchants (specialty) group. In fact, over half of the total number of establishments reporting sales to home consumers were in this group and nearly one-third of the total sales to home consumers were made by them. (See Table 17.) General-line wholesale merchants accounted for nearly as much, with approximately $9,000,000, followed closely by manufacturers' sales branches with over eight and one-third million dollars. These three types together accounted for the largest per cent of such sales. However, relatively few establishments among general-line wholesalers and manufacturers' sales branches were included, 181 and 28, respectively. The per cent of net sales of establishments reporting sales to home consumers varied from 1.4 for the 10 chain store warehouses to 25.7 for the 28 manufacturers' sales branches reporting such activities.

Sales of goods of own manufacture.—A total of $63,881,527 of goods were reported as being manufactured in the wholesale establishments reporting. (See Table 18.) Four hundred and eighty establishments reported such manufacturing activities, the largest number being two hundred and sixty-two specialty wholesale merchants. Since all manufacturing which was conducted on an extensive scale was classified in the Census of Manufactures, these statistics contain only reports from establishments in which manufacturing was incidental to the wholesaling activities.

TABLE 17.—SALES TO HOME CONSUMERS, BY TYPE OF ESTABLISHMENT—GROCERY AND FOOD-SPECIALTY TRADE, UNITED STATES: 1929

TYPE OF ESTABLISHMENT	ALL ESTABLISHMENTS		ESTABLISHMENTS REPORTING SALES TO HOME CONSUMERS		SALES TO HOME CONSUMERS		
	Number	Net sales	Number	Net sales	Amount	Per cent of all net sales	Per cent of sales made by establishments reporting sales to home consumers
Total	**13,618**	**$9,118,641,283**	**867**	**$211,212,039**	**$32,348,473**	**0.4**	**15.3**
Agents and brokers	1,851	1,751,993,419	11	7,398,636	456,563	------	6.2
Cash-and-carry wholesalers	362	101,188,058	6	589,121	46,732	------	7.9
Chain-store warehouses	234	1,457,408,292	10	29,946,744	428,710	------	1.4
Exporters	66	85,831,009	3	972,074	164,077	0.2	16.9
Importers	335	252,177,340	35	7,937,046	931,333	0.4	11.7
Manufacturers' sales branches	2,315	1,480,162,243	28	32,596,556	8,362,785	0.6	25.7
Wholesale merchants (general line)	4,776	2,660,450,140	181	51,754,171	8,972,569	0.3	17.3
Wholesale merchants (specialty)	3,149	901,862,528	492	65,545,274	10,365,606	1.1	15.8
Wagon distributors	178	18,998,940	17	3,575,251	726,393	3.8	20.3
All other types	352	408,569,314	84	10,897,166	1,893,705	0.5	17.4

TABLE 18.—SALES OF GOODS MANUFACTURED BY WHOLESALERS, BY TYPE OF ESTABLISHMENT—GROCERY AND FOOD-SPECIALTY TRADE, UNITED STATES: 1929

TYPE OF ESTABLISHMENT	ALL ESTABLISHMENTS		ESTABLISHMENTS REPORTING SALES OF GOODS OF OWN MANUFACTURE		SALES OF GOODS OF OWN MANUFACTURE		
	Number	Net sales	Number	Net sales	Amount	Per cent of all net sales	Per cent of sales made by reporting establishments
Total	**13,618**	**$9,118,641,283**	**480**	**$327,297,810**	**$63,881,527**	**0.7**	**19.5**
Agents and brokers	1,851	1,751,993,419	6	6,877,507	352,329	(1)	5.1
Cash-and-carry wholesalers	362	101,188,058	------	------	------	------	------
Chain-store warehouses	234	1,457,408,292	2	25,745,551	1,147,652	0.1	4.5
Exporters	66	85,831,009	------	------	------	------	------
Importers	335	252,177,340	3	3,096,368	306,713	0.1	9.9
Manufacturers' sales branches	2,315	1,480,162,243	13	7,803,535	3,485,570	0.2	44.7
Wholesale merchants (general line)	4,776	2,660,450,140	111	197,556,341	15,877,197	0.6	8.0
Wholesale merchants (specialty)	3,149	901,862,528	262	60,121,101	22,369,688	2.5	37.2
Wagon distributors	178	18,998,940	8	684,164	289,089	1.5	42.3
All other types	352	408,569,314	75	25,413,243	20,053,289	4.9	78.9

[1] Less than 0.05 per cent.

OPERATING EXPENSES

The nature of the statistics.—The total expense figures used by the Census of Wholesale Distribution comprise five elements:

1. Salaries and wages paid.
2. Expenses of salesmen paid.
3. Rent paid.
4. Interest paid.
5. All other expenses paid during the year.

The first group is further subdivided into salaries and wages of salesmen, of executives, and of all other employees. In securing information for each of the five items, the enumerators were instructed to get only the actual money outlays for the items included, hence rent was not supposed to be reported for owned premises, nor interest on owned capital. *The "all other expense" item does not include net profits nor cost of the merchandise sold.* Such items as taxes; insurance; administrative, office and overhead expense; maintenance; delivery; stationery and supplies; light, heat, and power were supposed to be included. The following quotation from the printed instructions to the field force is of interest:

"A practical method of determining the amount of 'All other expenses' is to take the total operating expenses, which most firms have at hand, and deduct from this the sum of all expense items specifically provided for in the schedule—wages, salaries, commissions, bonuses, expenses of salesmen, rent, and interest. Sometimes it may be necessary to estimate the total operating expense by a building-up process and then deduct from it the sum of all items of expense listed separately in order to obtain all other expenses."

It is believed that the figures for total expenses afford a very accurate account of the out-of-pocket expenditures made by wholesale establishments. The value of an adequate accounting system has been so impressed upon most wholesalers by trade associations, bureaus of business research, and income-tax requirements that the census field force faced a much better group for the gathering of wholesale trade statistics than was possible in many other kinds of business activity. While it is true, of course, that uniform accounting systems are not generally used, there is little fundamental difference in bookkeeping practice for the few items required by the census. Moreover, since the entire field has been covered, minor discrepancies tend to offset each other through the operation of the law of averages. In the case of total salaries and wages and in the case of salesmen's salaries and wages, and expenses of salesmen, it is felt that the figures are particularly satisfactory. Wholesalers watch these items much more closely as a general rule than do most business men and constantly use the ratios of expense to sales as checks upon the efficiency of their employees.[20]

Scope of the analysis.—A general summary of the total expenses by type of establishment in the wholesale grocery and food-specialty trade is included in Table 19. This general summary is followed by a table showing frequency distributions of the total operating expenses as percentages of net sales for a number of the more important types of wholesale establishments. Thereafter a detailed analysis of the expense items is given for each of the nine types of wholesale establishments included in this study. In Table 19 a summary of the total expense ratios for each type is given for each of the nine geographic divisions of the United States. This material is followed in Table 22 by a detailed analysis of the expense items for *general-line wholesale merchants, chain store warehouses,*

[20] It should be noted that total expense figures do not contain net profits nor cost of merchandise sold. Moreover, certain economic costs, such as rent on owned premises, interest on owned capital, and miscellaneous accounting expense commitments (where money was not actually paid out), are not included.

manufacturers' sales branches, and *agents and brokers* for each of the nine geographic sections. These same four types are likewise analyzed later by size of business. The effect of the size of the sales-territory radius upon operating expenses for selected groups of general line wholesale merchants is briefly discussed, followed by separate treatments of chain store warehouses and voluntary chains.

Total operating expenses, general summary.—For the United States, as a whole, and for all types of wholesale establishments in the grocery and food-specialty trade, 7.5 per cent of net sales were absorbed in operating expenses. This ratio varied from 6.8 per cent in the Pacific States to 8.9 per cent in the Mountain States, showing a very close concentration about the average. Agents and brokers had the lowest operating costs of any single type, the average for the United States being 2.0 per cent of net sales. The range was from 1.7 per cent in Middle Atlantic, South Atlantic, and West South Central States to 3.6 per cent in New England. Chain-store warehouses with an average of 3.5 per cent for the United States were next to agents and brokers. Their average costs varied from 2.8 per cent in the West South Central States to 5.8 per cent in the Pacific States and 5.9 per cent in the Mountain States. At the other extreme were wagon distributors with average costs of 15.4 per cent for the United States, a low of 10.5 per cent for the Pacific States, and a high of 20.8 per cent for the West South Central division. Manufacturers' sales branches had next to the highest expenses, 13.6 per cent for the United States and a range from 10.8 per cent for the West South Central to 17.9 per cent in the East South Central and Mountain States. General-line wholesale merchants showed average costs of 9.1 per cent of net sales for the entire United States, with variation from 7.4 per cent in the Pacific States to 11.7 per cent in New England. They were more than one point under specialty wholesale merchants, whose average was 10.2 per cent for the United States and whose range was from 7.1 per cent in New England to 12.1 per cent in the Middle Atlantic States.

Cash-and-carry wholesalers had costs slightly less than half as great as those for general line wholesale merchants, the average being 4.5 per cent for the United States and the range from 3.5 per cent for the West South Central to 5.4 per cent for the New England States. The United States average for cash-and-carry wholesalers was very closely approximated in five of the nine geographic divisions. In the West North Central States the average was identical with that for the United States. In the Pacific States it was 0.1 point lower and in the Middle Atlantic, East North Central, and South Atlantic States, 0.1 point higher. Exporters showed average costs of 4.2 per cent; importers, 6.6 per cent; and all other types an average of 7.2 per cent.

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TABLE 19.—TOTAL OPERATING EXPENSES BY TYPE OF ESTABLISHMENT—GROCERY AND FOOD-SPECIALTY TRADE—UNITED STATES AND GEOGRAPHIC DIVISIONS: 1929 [1]

[*An (X) indicates that the amount must be withheld to avoid disclosure of individual operations, but it is included in the totals*]

TYPE	Net sales	TOTAL EXPENSES—UNITED STATES		TOTAL EXPENSES—PER CENT OF NET SALES (ARITHMETIC AVERAGE)								
		Amount	Per cent of net sales	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
United States	**$9,118,641,283**	**$677,246,377**	**7.5**	**8.4**	**6.9**	**8.0**	**8.1**	**7.2**	**7.6**	**7.0**	**8.9**	**6.8**
Agents and brokers	1,751,993,419	34,260,160	2.0	3.6	1.7	2.0	1.8	1.7	1.8	1.7	2.4	2.6
Cash-and-carry wholesalers	101,188,058	4,563,387	4.5	5.4	4.6	4.6	4.5	4.6	5.0	3.5	3.8	4.4
Chain-store warehouses	1,457,408,292	50,794,541	3.5	3.1	3.3	3.4	4.1	3.8	4.4	2.8	5.9	5.8
Exporters	85,831,009	3,562,842	4.2	(X)	4.3	------	(X)	------	------	(X)	------	3.6
Importers	252,177,340	16,686,191	6.6	8.1	6.4	12.6	9.8	13.3	------	3.3	(X)	6.5
Manufacturers' sales branches	1,480,162,243	201,558,336	13.6	13.9	12.3	15.9	16.1	14.5	17.9	10.8	17.9	11.0
Wholesale merchants (general line)	2,660,450,140	241,647,734	9.1	11.7	9.6	11.0	9.9	7.6	7.8	8.1	8.7	7.4
Wholesale merchants (specialty)	901,862,528	91,786,846	10.2	7.1	12.1	10.1	10.6	9.9	11.7	7.9	11.4	8.9
Wagon distributors	18,998,940	2,928,525	15.4	13.3	18.3	15.6	18.9	17.2	14.2	20.8	13.5	10.5
All other types	408,569,314	29,457,815	7.2	22.6	4.4	9.9	4.6	15.4	22.3	9.9	8.6	8.3

[1] Attention is called to the fact that the operating expense figures used in this report are for the year 1929. Two sets of factors have been at work during the depression years immediately following, seriously affecting operating expenses of wholesale organizations. Many such organizations have attempted to pare expenses to an absolute minimum, with a considerable degree of success. The effect of this effort has been to reduce the costs of doing business. However, the reduced expenses resulting from the adoption of more economical methods of management has been more than offset by falling prices. As a result of lower prices, more effort must be expended to do $1,000,000 worth of business than under conditions of prevailing high prices. More merchandise must be handled, the number of transactions is greater, with the result that expenses are correspondingly increased. Moreover, the decline in prices has also been accompanied by lower sales volume, not only in dollars and cents but in actual physical volume, which means that many wholesale establishments in the grocery and food-specialty trade, as in other trades, have been forced to operate on a smaller scale, thereby tending to increase the costs of doing business. It is probable that the net result of these forces has been to increase operating expenses somewhat during the depression period.

Frequency distributions of total expenses.—Because a wide variation in the total expenses exists between the different establishments within the same classification, frequency distributions are shown in Table 20 which reveal more fully the average costs for seven selected types of wholesale establishments. By the use of frequency distributions it is possible to compute average expenses that are not unduly influenced by the extremely high and the extremely low cost establishments within a group. In addition to the simple arithmetic average used in Table 19, there are two other statistical averages which are widely used in studying large groups of figures. These are the mode, or the most frequent or typical average cost, and the median, which is the cost for the establishment occupying the midpoint of a distribution of items arranged according to size.

The frequency distribution for *agents and brokers* shows a very large concentration of establishments with total expenses of less than 2.0 per cent. In this case the mode coincides with the arithmetic average of 2.0 per cent, although the median is 2.6 per cent. For *cash-and-carry wholesalers* the arithmetic average and the median are both higher than the modal average, which is 3.6 per cent. For *chain-store warehouses* the mode is midway between the arithmetic average and the median, both mode and the median being higher than the arithmetic average. The mode and the arithmetic mean for *manufacturers' sales branches* are practically the same, but the median is somewhat higher. For *wagon distributors* the mode is 5 points lower than the arithmetic average and the median occupies a position between the two. There is a wide dispersion in the case of the *wagon distributors*, however, which makes it difficult to arrive at a satisfactory figure for the mode. Modal averages for *specialty houses* and for *general line wholesalers* are both lower than the arithmetic means. For the former the arithmetic average lies between the mode and the median, while for the *general line wholesale merchants* the median lies between the other two averages.

It should be pointed out that the use of these various averages is designed to measure more accurately the typical operating-expense figure for the different groups of wholesale establishments in the grocery and food specialty trade. If the variation between the different establishments were of such nature that the frequency distributions were perfectly symmetrical all three averages would coincide. The differences between the averages indicate that there is considerable dispersion among the establishments in the same classification and that the distributions are not perfectly symmetrical. Chart 3 presents three of the types graphically and shows the variations existing between *manufacturers sales branches* and *general-line* and *specialty* wholesale merchants.

TABLE 20.—FREQUENCY DISTRIBUTIONS OF OPERATING EXPENSES FOR GROCERY TRADE, BY TYPE OF ESTABLISHMENT—UNITED STATES: 1929

TOTAL EXPENSES, AS PER CENT OF NET SALES	NUMBER OF ESTABLISHMENTS						
	Agents and brokers	Cash-and-carry wholesalers	Chain-store warehouses	Manufacturers' sales branches	Wagon distributors	Wholesale merchants (general line)	Wholesale merchants (specialty)
Total	1,851	361	234	2,315	178	4,776	3,149
Under 2 per cent	1,049	----------	----------	----------	----------	----------	----------
Under 4 per cent	1,411	166	108	112	13	569	277
4 to 8	197	147	68	215	42	1,853	649
8 to 12	58	30	23	337	27	1,504	577
12 to 16	48	8	11	397	32	527	400
16 to 20	22	1	5	203	20	164	318
20 to 24	19	2	4	160	5	64	256
24 to 28	19	2	4	213	17	39	167
28 to 32	14	----------	2	184	3	20	139
32 to 36	6	----------	1	150	5	9	94
36 to 40	3	2	2	111	4	3	54
40 to 44	8	1	2	64	3	7	43
Over 44	46	2	4	169	7	17	175
	AVERAGE EXPENSES						
Modal average	2.0	3.6	4.0	13.5	10.4	7.0	8.9
Median	2.6	7.9	4.5	17.7	12.6	7.9	12.7
Arithmetic average	2.0	4.5	3.5	13.6	15.4	9.1	10.2

Detailed analysis of operating expenses.—As indicated in the opening paragraph under the heading "Operating expenses," total expenses include a variety o items. Table 21 shows the breakdown of these items for all establishments in the grocery and food-specialty trade and for each of the ten types of establishments. Total expenses of 7.4 per cent consisted of salaries and wages, 3.5 per cent; expenses of salesmen, 0.4 per cent; rent, 0.3 per cent; and all other expenses, 3.3 per cent. The fact that the rent percentage has been computed on the basis of only those establishments which reported rent raises this figure slightly so that the detailed items add to a total of 7.5 per cent. Salaries and wages are divided into three groups—executives' salaries and wages, which amounted to 0.4 per cent of net sales; salesmen's salaries and wages, which were 1.3 per cent of net sales; and salaries and wages of all other employees, 1.8 per cent of net sales.

For all types of establishments combined salaries and wages constituted nearly half of the total expenses. This was true also for *agents and brokers*, *cash-and-carry wholesalers*, *chain-store warehouses*, *importers*, and *specialty wholesale merchants*. For *exporters* the salaries and wages were nearer one-third than one-half of total expenses and much the same was true of *manufacturers' sales branches* where salaries and wages were 4.9 per cent and total expenses 13.6 per cent. *General line wholesale merchants* and *wagon distributors* paid over half of total expenses in salaries and wages, 5.1 out of 9.1 per cent and 8.7 out of 15.4 per cent, respectively.

The expenses of salesmen, which were 0.4 per cent for all establishments, varied from none at all for the *chain-store warehouses* and 0.1 per cent for *cash-and-carry wholesalers* and *exporters* to 0.3 per cent for *importers* and *general line wholesalers*, 0.6 per cent for *specialty wholesalers* and 1.0 per cent for *manufacturers' sales branches*. There was an even greater variation for rent, the average being 0.3 per cent for all establishments reporting this item and the range from 0.1 per cent for *agents and brokers* to 0.7 per cent for *wagon distributors*.

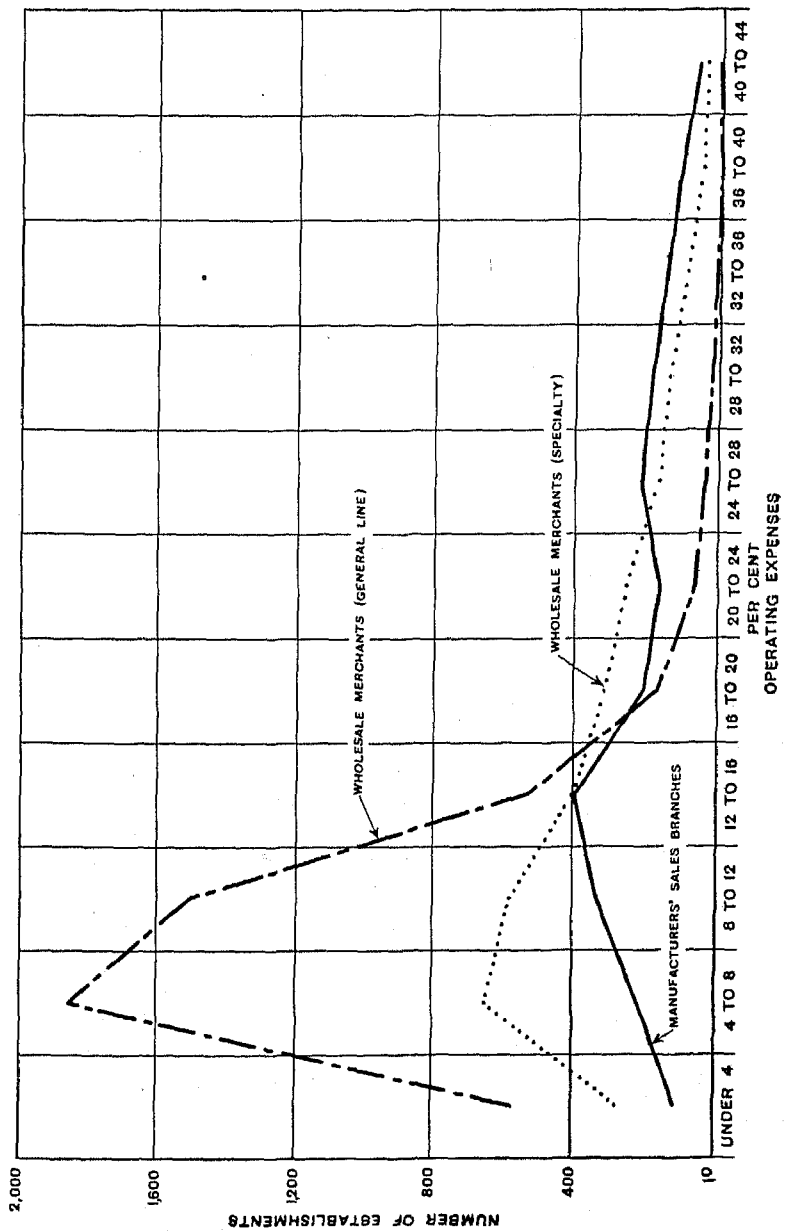


CHART III.—FREQUENCY DISTRIBUTION OF OPERATING-EXPENSE RATIOS—UNITED STATES: 1929

TABLE 21.—OPERATING-EXPENSE ANALYSIS IN THE GROCERY AND FOOD-SPECIALTY TRADE, BY TYPE OF ESTABLISHMENT—UNITED STATES: 1920

[Amounts in thousands of dollars]

	TOTAL		AGENTS AND BROKERS		CASH-AND-CARRY WHOLESALERS		CHAIN-STORE WAREHOUSES	
	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales
Number of establishments	13,618	------	1,851	------	362	------	234	------
Net sales	$9,118,641	------	$1,751,993	------	$101,188	------	$1,457,408	------
Total expenses	$677,246	7.4	$34,260	2.0	$4,563	4.5	$50,795	3.5
Salaries and wages	$320,105	3.5	$17,766	1.0	$2,212	2.2	$24,195	1.7
Executives	$40,048	0.4	$4,471	0.3	$334	0.3	$2,686	0.2
Salesmen	$112,956	1.3	$7,838	0.4	$532	0.5	------	------
All other employees	$167,101	1.8	$5,457	0.3	$1,346	1.4	$21,509	1.5
Expenses of salesmen	$33,400	0.4	$2,640	0.2	$54	0.1	------	------
Rent [1]	$22,731	0.3	$1,622	0.1	$508	0.5	$2,411	0.2
All other expenses	$301,011	3.3	$12,232	0.7	$1,789	1.8	$24,189	1.7

	EXPORTERS		IMPORTERS		MANUFACTURERS' SALES BRANCHES		WHOLESALE MERCHANTS (GENERAL LINE)	
	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales
Number of establishments	66	------	335	------	2,315	------	4,776	------
Net sales	$85,831	------	$252,177	------	$1,480,162	------	$2,660,450	------
Total expenses	$3,563	4.2	$16,686	6.6	$201,558	13.6	$241,648	9.1
Salaries and wages	$1,378	1.6	$7,782	3.1	$72,233	4.9	$134,356	5.1
Executives	$304	0.4	$1,881	0.8	$5,049	0.4	$17,006	0.6
Salesmen	$220	0.3	$2,270	0.9	$38,727	2.6	$38,680	1.5
All other employees	$854	0.9	$3,631	1.4	$28,457	1.9	$78,670	3.0
Expenses of salesmen	$80	0.1	$870	0.3	$15,152	1.0	$7,883	0.3
Rent [1]	$137	0.2	$827	0.4	$3,411	0.3	$8,892	0.5
All other expenses	$1,968	2.3	$7,206	7.5	$110,761	7.5	$90,516	3.4

	WHOLESALE MERCHANTS (SPECIALTY)		WAGON DISTRIBUTORS		ALL OTHER TYPES	
	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales	Number or amount	Per cent of net sales
Number of establishments	3,149	------	178	------	352	------
Net sales	$901,863	------	$18,999	------	$408,569	------
Total expenses	$91,787	10.2	$2,929	15.4	$29,458	7.2
Salaries and wages	$43,877	4.9	$1,660	8.7	$14,645	3.6
Executives	$6,777	0.8	$160	0.8	$1,379	0.4
Salesmen	$18,116	2.0	$1,115	5.9	$5,458	1.3
All other employees	$18,984	2.1	$385	2.0	$7,808	1.9
Expenses of salesmen	$5,018	0.6	$46	0.2	$1,656	0.4
Rent [1]	$3,891	0.6	$81	0.7	$950	0.3
All other expenses	$39,001	4.3	$1,142	6.0	$12,206	3.0

[1] Per cent of net sales is based upon only those establishments reporting rent. For this reason the detailed percentages do not always add to the same figure as total expenses.

Net sales, operating expenses, and stocks on hand, by geographic divisions—wholesale merchants (general line).—A continuation of the more detailed analysis of operating expenses for *general-line wholesale merchants, chain-store warehouses, manufacturers' sales branches,* and *agents and brokers* brings out regional differences of importance. It was pointed out above that there existed

a wide range in the *total expenses* for each type of establishment between the different parts of the country. The statistics in Table 22 show, in addition, the variation in salaries and wages paid and include also the item of stocks on hand. For the *general-line wholesale merchants* the range in total operating expenses was from 7.4 per cent in the Pacific States to 11.7 per cent in the New England States, a total spread of 4.3 per cent. A part of the differences in total expenses between sections of the country may be imputed to the fact that stocks on hand were relatively heavier in New England than in the Pacific States, 16.8 per cent of net sales as contrasted with 12.1 per cent. In fact, with the exception of the Mountain States, those sections of the country with total expenses of less than the United States average had smaller proportions of their sales invested in inventory at the end of the year than did those establishments with higher total operating expenses. This indicates, in a very general way, a rough correlation between the size of the inventory and the expense ratio.

Chain-store warehouses.—The division of chain-store warehouse business between the various sections of the country contrasts sharply with that for general-line wholesale merchants. The latter were much more evenly distributed and showed a very close correlation with the population, as indicated in an earlier part of this report. (See Footnote 19.) For chain-store warehouses over three-fourths of the total business was concentrated in New England, Middle Atlantic, and East North Central States and over 90 per cent in the same three sections plus the West North Central and South Atlantic States. There was relatively little chain-store warehouse business in the Mountain States and the remaining three sections divided less than 9.0 per cent among them. These facts should be taken into consideration in the analysis of the variation of total expenses between the different parts of the country. The total variation in chain store expenses by geographic divisions ranged from 2.8 to 5.9 per cent, while the variation within the leading five geographic divisions was from 3.1 to 4.1 per cent. In the Pacific Coast States the high costs may have been due to the fact that a larger proportion of total expenses was absorbed in salaries and wages, over half as contrasted with less than half in the other sections. In this section also the percentage of stocks on hand to net sales was high, indicating that warehousing expenses were probably a contributing factor to the higher total. The salaries and wages and the percentages of stocks to net sales for the first five geographic divisions, those accounting for over 90 per cent of the total, showed a very high degree of uniformity and approximated very closely the average for the United States.

Manufacturers' sales branches.—Manufacturers' sales branches also had a high concentration of sales in the more densely populated sections of the country. Those branches which accounted for over half of the total volume of business were concentrated in the Middle Atlantic and East North Central States. In some of the sections, New England for example, the correspondence between *percentage of total sales by manufacturers' sales* branches and percentage of total population was very close. In the West North Central and West South Central States, the sales figures lagged somewhat below those for population. In other parts of the country wide differences are revealed. In the East South Central section manufacturers' sales branches did but 2.6 per cent of their total business, although these States had 8.1 per cent of total population. In the Mountain section, with 3.0 per cent of population, manufacturers' sales branches did but 1.7 per cent of their total business. On the other hand, the Pacific States, with 6.7 per cent of the population, showed manufacturers' sales branches to have 10.2 per cent of their total sales. The branches in the Coast States, no doubt, covered the Mountain States territory as well as the Pacific States.

Total expenses for manufacturers' sales branches showed a maximum variation of 7.1 per cent, the lowest being 10.8 per cent in the West South Central States and the highest being 17.9 per cent in the East South Central section. The Pacific States, which had higher total expenses in the case of the chain-store warehouses, had lower-than-average expenses for the manufacturers' sales branches. The explanation of this condition is difficult to find. A partial explanation may lie in the fact that the percentages of salaries and wages to net sales were lower in the Pacific States than in those sections with similar total expenses. The salaries and wages in the Pacific States constituted 3.9 out of a total of 11 per cent, as compared with 4.1 out of 10.8 per cent in the West South Central States and 4.7 out of 12.3 per cent in the Middle Atlantic States. To offset this, however, is the fact that stocks on hand constituted a higher percentage of net sales in the Pacific States than in any other part of the country. Apart from these Western States, the per cent of stocks on hand to net sales was fairly uniform, varying only from 3.1 per cent of net sales to 5.0 per cent.

Agents and brokers.—Over one-third of the business reported by agents and brokers was concentrated in the Middle Atlantic States, which had but little over one-fifth of the total population. In but two other sections, the West North Central and the Pacific States, did the percentages of total brokerage business exceed the percentages of total population. There was, in fact, a very noticeable discrepancy in the New England section, which had but 2.8 per cent of the brokerage business, although containing 6.7 per cent of the population. This is, no doubt, a reflection of the well-known fact that New York City brokerage houses cover the New England territory. The East South Central group also showed a relatively small development of the brokerage business, 3.8 per cent of the total as compared with 8.1 per cent of the population.

The total expenses for agents and brokers which averaged 2.0 per cent for the entire United States were fairly uniform throughout the Middle Atlantic, South Atlantic, West South Central, East South Central, and West North Central sections. New England had the highest expenses, 3.6 per cent of net sales, which seems to support the fact pointed out in the two preceding tabulations, namely, that expenses were highest in those sections where the particular type of establishment accounted for but a small per cent of the business. The operating expenses were also considerably above the average in the Pacific States, the ratio being 2.6 per cent. The reason for this is not clear from the existing statistics, although a contributing cause may be gleaned from an examination of the percentages of stocks on hand to net sales. In both Pacific and the New England States these ratios were nearly twice as high as the average for the United States. This may be an indication that some of these agents and brokers engaged in outright merchant wholesaling activities to a greater extent than was true of the other sections of the country.

TABLE 22.—NET SALES, OPERATING EXPENSES, AND STOCKS ON HAND, BY GEOGRAPHIC DIVISIONS—GROCERY AND FOOD-SPECIALTY TRADE: 1929

GEOGRAPHIC DIVISION	Number of establishments	NET SALES		Per cent of total population	Total expenses, per cent of net sales	Salaries and wages, per cent of net sales	Stocks on hand, per cent of net sales
		Amount	Per cent of total				
A—WHOLESALE MERCHANTS (GENERAL LINE)							
United States, total	**4,776**	**$2,660,450,140**	**100.0**	**100.0**	**9.1**	**5.1**	**13.3**
New England	252	115,100,886	4.3	6.6	11.7	5.8	16.8
Middle Atlantic	645	436,192,041	16.4	21.4	9.6	5.6	14.2
East North Central	584	443,379,429	16.7	20.6	11.0	6.4	14.9
West North Central	440	345,877,270	13.0	10.8	9.9	5.6	12.5
South Atlantic	1,048	353,526,608	13.3	12.9	7.6	4.1	11.5
East South Central	556	236,215,849	8.9	8.1	7.8	4.2	11.3
West South Central	825	378,673,231	14.2	9.9	8.1	4.3	13.0
Mountain	200	114,426,094	4.3	3.0	8.7	4.5	15.6
Pacific	226	237,058,732	8.9	6.7	7.4	4.1	12.1
B—CHAIN-STORE WAREHOUSES							
United States, total	**234**	**1,457,408,292**	**100.0**	**100.0**	**3.5**	**1.7**	**4.3**
New England	19	148,082,637	10.2	6.6	3.1	1.5	4.4
Middle Atlantic	58	464,215,739	31.9	21.4	3.3	1.6	4.3
East North Central	49	482,273,405	33.1	20.6	3.4	1.7	3.6
West North Central	21	75,204,857	5.2	10.8	4.1	1.9	4.5
South Atlantic	32	151,308,147	10.4	12.9	3.8	1.5	4.5
East South Central	17	53,659,396	3.7	8.1	4.4	1.8	5.1
West South Central	16	37,225,165	2.5	9.9	2.8	1.0	4.1
Mountain	2	1,730,185	0.1	3.0	5.9	2.5	15.3
Pacific	20	43,708,761	2.9	6.7	5.8	3.0	8.2
C—MANUFACTURERS' SALES BRANCHES							
United States, total	**2,315**	**1,480,162,243**	**100.0**	**100.0**	**13.6**	**4.9**	**4.0**
New England	188	110,693,194	7.5	6.6	13.9	4.9	5.0
Middle Atlantic	469	490,387,926	33.1	21.4	12.3	4.7	3.4
East North Central	524	261,936,109	17.7	20.6	15.9	6.3	3.1
West North Central	280	138,635,273	9.4	10.8	16.1	5.2	3.4
South Atlantic	269	137,279,674	9.3	12.9	14.5	4.2	3.8
East South Central	102	38,152,969	2.6	8.1	17.9	5.1	3.8
West South Central	171	125,914,953	8.5	9.9	10.8	4.1	5.0
Mountain	107	25,520,364	1.7	3.0	17.9	5.2	4.1
Pacific	205	151,641,781	10.2	6.7	11.0	3.9	7.4
D—AGENTS AND BROKERS							
United States, total	**1,851**	**1,751,993,419**	**100.0**	**100.0**	**2.0**	**1.0**	**0.6**
New England	88	48,647,887	2.8	6.6	3.6	2.1	1.1
Middle Atlantic	455	600,438,199	34.3	21.4	1.7	0.8	0.5
East North Central	308	267,545,927	15.3	20.6	2.0	1.1	0.4
West North Central	184	219,298,260	12.5	10.8	1.8	1.0	0.6
South Atlantic	271	162,637,635	9.3	12.9	1.7	0.9	0.7
East South Central	116	66,531,525	3.8	8.1	1.8	0.8	0.3
West South Central	152	134,000,773	7.6	9.9	1.7	0.8	0.6
Mountain	60	37,402,500	2.1	3.0	2.4	1.1	0.3
Pacific	217	215,490,713	12.3	6.7	2.6	1.4	1.1

Net sales, expenses, and stocks on hand by size of establishment—wholesale merchants (general line).—It is a well-known fact that there is a great variation in the average size of business conducted by wholesalers in the grocery and food-specialty trade. The extent of such variation and its relation to total expenses, salesmen and their expenses, and stocks on hand is shown in Table 23 for general-

line wholesalers. Out of a total of 4,776 general-line wholesale merchants, 571 had an annual average sales volume of less than $100,000, with 215 of the latter selling less than $50,000 of goods per year. In contrast with these 571 small establishments, which accounted for but 1.3 per cent of the total volume of business, there were 13 giant establishments with sales between $8,000,000 and $25,000,000 per year. The combined sales of these 13 establishments accounted for 6.1 per cent of the total volume reported by general-line wholesale merchants. The largest single group comprised 991 general-line wholesalers, with average sales between $500,000 and $1,000,000 per year. This group accounted for 25.7 per cent of the total sales volume. If the groups on either side of this largest group be included, it is found that there were 1,776 establishments with sales between $400,000 and $2,000,000 per year, which together accounted for exactly half of the total volume of business. These figures indicate that, while there was a fairly large number of very small-scale establishments and a few very large-scale establishments, there was, nevertheless, a very marked concentration of the business of general-line wholesale merchants in the $400,000 to $2,000,000 group.

Turning from the distribution of sales volume to the distribution of *total expenses by size of business* a very interesting situaton may be observed. The total expenses for the entire group of general-line wholesalers were, as noted before, 9.1 per cent of net sales. (See Chart IV.) The lowest figure for any group was 8.1 per cent for those establishments with sales between $200,000 and $300,000 per year. The highest figure was 13.8 per cent of net sales for the extremely small-scale establishments, those selling less than $50,000 per year. The distribution of total expenses by size of business shows that the total expenses declined from 13.8 per cent for the very small establishments to 8.1 per cent for those with sales between $200,000 and $300,000 per year. The ratio rose to 8.4 per cent for those establishments with sales between $300,000 and $400,000 per year and again rose to 8.9 per cent for establishments with sales between $500,000 and $1,000,000. The average for the group of 9.1 per cent was attained by establishments with sales between $1,000,000 and $2,000,000 per year. The next size group showed a small decline, followed by increases to 10.3 per cent for establishments selling between $4,000,000 and $8,000,000 per year and to 12.9 per cent for those with sales between $8,000,000 and $25,000,000. It appears from these statistics that it was more costly to operate on an extremely small and on an extremely large scale than was true of an intermediate size of business. Some of the reasons for this may appear from an examination of the relation existing between size of business and salesman and their expenses.

The *average sales per salesman* for all groups of general-line wholesalers were $116,690. The average was very small for the establishments with sales below $100,000 per year, being $22,117 for those selling less than $50,000 and $44,383 for establishments selling between $50,000 and $100,000 per year. *Salesmen's expenses*, which include salaries and wages and all other expenses directly incurred by salesmen, bear out the same conclusion that intermediate sizes of business have lower costs than the two extremes. Such expenses constituted 2.5 per cent of net sales for the average of all establishments. However, the smallest groups of establishments showed 5.3 per cent and 3.6 per cent, respectively, while the very largest establishments showed 3.7 per cent. The lowest ratio was 2.1 per cent for establishments selling between $2,000,000 and $4,000,000 per year, the group which had highest average sales per salesman or $156,369.

TABLE 23.—NET SALES, EXPENSES, AND STOCKS ON HAND, BY SIZE OF ESTABLISHMENT—GROCERY AND FOOD—SPECIALTY TRADE—UNITED STATES: 1929

[*An* (x) *indicates that the amount must be withheld to avoid disclosure of individual operations*]

WHOLESALE MERCHANTS (GENERAL LINE)

SIZE GROUP	Number of establishments	Net sales [1] per cent of total	Total expenses, per cent of net sales	SALESMEN [2]			Stocks on hand, per cent of net sales
				Number	Average sales per salesman	Salaries and expenses, per cent of net sales	
Total	4,776	100.0	9.1	15,809	$116,690	2.5	13.3
Under $50,000	215	0.2	13.8	75	22,117	5.3	21.4
$50,000 to $100,000	356	1.1	8.9	183	44,383	3.6	15.2
$100,000 to $200,000	815	4.6	8.3	674	64,293	3.1	13.4
$200,000 to $300,000	794	7.3	8.1	929	90,654	2.6	13.9
$300,000 to $400,000	632	8.2	8.4	1,194	86,925	2.6	13.4
$400,000 to $500,000	420	7.0	8.3	895	110,777	2.3	13.0
$500,000 to $1,000,000	991	25.7	8.9	4,026	118,836	2.4	13.4
$1,000,000 to $2,000,000	365	17.3	9.1	2,959	134,627	2.4	13.5
$2,000,000 to $4,000,000	133	13.6	8.5	1,924	156,369	2.1	11.9
$4,000,000 to $8,000,000	42	8.9	10.3	1,552	132,118	2.7	13.4
$8,000,000 to $25,000,000	13	6.1	12.9	1,398	(x)	3.7	13.9

[1] Net sales were $2,660,450,140.
[2] Average sales per salesman and salesman's salaries and expenses as percentages of net sales are computed on the basis of only those establishments reporting the use of salesmen.

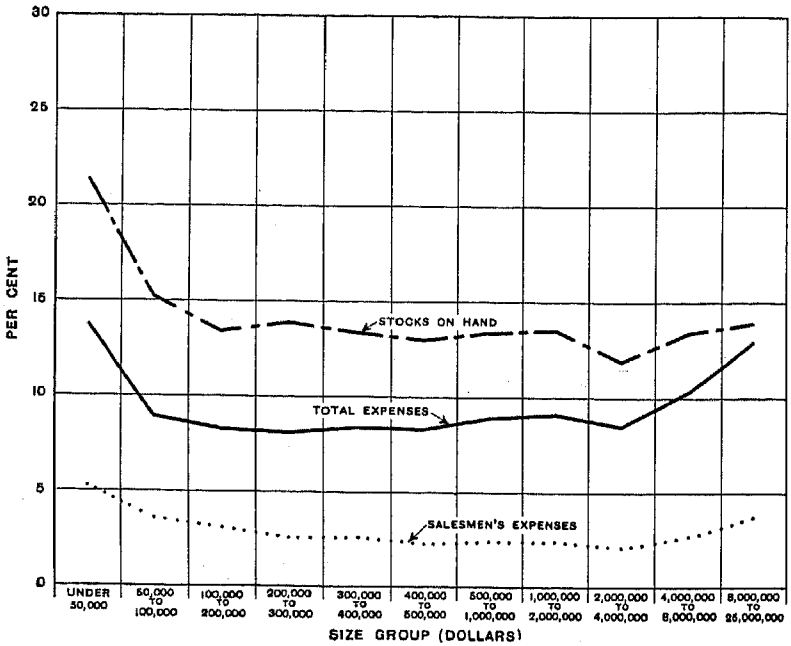
The relative size of stocks on hand showed much less variation with the size of the business than was true of the other items. However, the same general trend is indicated. The very small establishments reported 21.4 per cent of their sales in inventory at the end of the year. This figure declined to 15.2 per cent for establishments selling between $50,000 and $100,000 per year, varied between 13.0 per cent and 13.9 per cent for the next six groups, dropped to 11.9 per cent for establishments selling between $2,000,000 and $4,000,000 each per year, and increased thereafter to 13.4 per cent and finally to 13.9 per cent.[21]

Relation between sales territory radius and total expenses for three size groups of general-line wholesalers.—In attempting to measure the total expenses of a group of wholesale establishments so many variable factors enter in that it is difficult to isolate a single factor as the cause of low or high expenses. The frequency distribution of total operating expense percentages (Table 21) showed the wide dispersion of expenses from very low to very high. The distribution of operating expenses by geographic divisions and by size of business brought out some possible causes of this variation. In this section still another variable factor, the size of the sales territory, is examined. Three groups of general-line wholesalers have been selected which are comparable from the angle of sales volume. The influence of the length of the sales-territory radius or of the size of the sales territory upon total expenses for each group is revealed. Although it is impossible to hold all variables constant, except that of the size of the sales territory, the selected groups are quite homogeneous. The establishments are all in the grocery and food specialty trade; they are all general-line wholesale merchants and the size of the business is kept within a narrow range for two of the three groups.

In the first of these groups (Table 24a) the average sales volume is $200,000 per year and none of the establishments had less than $100,000 in sales nor over $300,000. There were 876 establishments in this group, of which 763 covered a sales territory not exceeding 75 miles from the home city. The modal average

[21] See footnote, Table 6.

CHART IV.—TOTAL EXPENSES, SALESMEN'S EXPENSES, AND STOCKS ON HAND AS PER CENT OF NET SALES, BY SIZE OF ESTABLISHMENT—WHOLESALE MERCHANTS (GENERAL LINE) IN GROCERY AND FOOD SPECIALTY TRADE, UNITED STATES: 1929



total expenses for these 763 establishments was 7.84 per cent of net sales. There were 60 establishments operating over a sales territory up to 150 miles in radius, with average total expenses of 8.33 per cent. Similarly, for the 25 establishments covering a sales territory up to 300 miles in radius the average expense ratio was 11.11 per cent of net sales, and for 16 establishments going as far afield for business as 500 miles, the modal average was 7.5 per cent although 8 of the 16 had expenses above 10 per cent and the median average was 10 per cent of net sales. There were 11 establishments covering a sales territory in excess of 500 miles, with total expenses amounting to 10 per cent of net sales for the modal average and 13 per cent for the median. From this analysis the evidence appears to be convincing that total expenses tend to increase as the size of the sales territory increases.

Part (*b*) of Table 24 bears out this conclusion for a group of establishments with average sales of $500,000 to $1,000,000, the total expenses rising successively from 8.57 per cent of net sales for those establishments covering a sales territory of 75 miles or less, to 13.0 per cent for those going beyond 500 miles for business. In the third group (Table 24c), establishments with sales between $1,000,000 and $4,000,000 per year, the evidence is not as definite. Nevertheless those establishments selling in a radius of 75 miles or less had lower expenses than those covering larger territories and much lower than the establishments selling in a territory extending over 500 miles from the city. This group, however, is not as homogeneous as the other two, since the maximum spread in sales volume of $3,000,000 may influence some of the classes. It seems reasonable to conclude from the facts shown by these three groups of statistics that the further afield it is necessary to go, on the average, to secure business for general-line grocery wholesalers, the greater the total expenses for conducting the business.

TABLE 24.—FREQUENCY DISTRIBUTION OF TOTAL EXPENSES AS PER CENT OF NET SALES, BY SIZE OF SALES TERRITORY—GENERAL-LINE WHOLESALE MERCHANTS—UNITED STATES: 1929

TOTAL EXPENSES, PER CENT OF NET SALES	Total	NUMBER REPORTING SALES RADIUS UP TO:				NUMBER	
		75 miles	150 miles	300 miles	500 miles	Over 500 miles	All other
A.—NUMBER OF ESTABLISHMENTS WITH NET SALES OF $100,000 TO $300,000 PER YEAR							
Total	876	783	60	25	16	11	1
Under 5 per cent	158	145	9	2	2		
5 to 10	402	359	25	7	6	4	1
10 to 15	227	195	18	10	2	2	
15 to 20	51	41	4	2	2	2	
20 to 25	24	16	2	2	2	2	
25 to 30	8	3	1	1	2	1	
30 and over	6	4	1	1			
EXPENSE AVERAGES							
Modal average	7.95	7.84	8.33	11.11	7.50	10.00	
Median average	8.48	8.29	9.20	11.75	10.00	13.00	
Arithmetic average for group	8.2						
B.—NET SALES $500,000 TO $1,000,000 PER YEAR							
Total	690	496	103	47	30	11	3
Under 5 per cent	76	61	10	3	1	1	
5 to 10	330	249	43	22	13	2	1
10 to 15	226	153	41	15	12	4	1
15 to 20	42	26	5	5	3	3	
20 to 25	9	6	1		1		1
25 to 30	5		2	2		1	
30 and over	2	1	1				
EXPENSE AVERAGES							
Modal average	8.74	8.57	9.02	9.17	9.62	13.00	12.50
Median average	9.08	8.76	9.83	9.60	10.42	12.75	12.50
Arithmetic average for group	8.9						
C.—NET SALES $1,000,000 TO $4,000,000 PER YEAR							
Total	393	202	96	52	32	9	2
Under 5 per cent	44	31	4	4	5		
5 to 10	185	97	49	24	13	1	1
10 to 15	133	64	37	16	11	4	1
15 to 20	23	9	3	7	2	2	
20 to 25	5		1	1	1	2	
25 to 30	2	1	1				
30 and over	1		1				
EXPENSE AVERAGES							
Modal average	8.76	8.37	9.51	9.00	8.43	13.33	10.00
Median average	9.12	8.61	9.49	9.23	9.23	9.38	10.00
Arithmetic average for group	8.8						

Manufacturers' sales branches, by size of business.—The distribution of size of business for manufacturers' sales branches differs in a number of important respects from that for general line wholesalers (compare Tables 23 and 25).

Although the same general phenomenon of a large number of very small-scale houses and a relatively few large-scale houses obtained, the distribution of sales volume was quite different. Only 14.2 per cent of the total business was handled by establishments selling less than $500,000 each per year, as compared with 28.4 per cent by general-line wholesalers. The concentration of over half of the business of general-line wholesalers in the middle brackets was not found true of manufacturers' sales branches. In each of the seven higher groupings, those with average sales in excess of half a million to those selling over $25,000,000, there were substantial quantities represented, ranging from 5.6 per cent of the total by establishments with sales between $15,000,000 and $25,000,000 to 16.9 per cent for the group with sales between $4,000,000 and $8,000,000.

In contrast with general-line wholesalers whose maximum sales were $25,000,000 there were 6 manufacturers' sales branches handling more than $25,000,000 per year and together accounting for 11 per cent of the total sales by manufacturers' sales branches.

The *total expense percentages* for manufacturers' sales branches present even more interesting contrasts. The general trend was from high expenses for the small-scale establishments, those under $500,000 per year, to lower and lower expenses as the average size of business increased. In fact, the group average—13.6 per cent—was not reached until the average sales were in excess of $4,000,000 per year. The highest expenses were 26.2 per cent of net sales for establishments with average sales between $100,000 and $200,000 per year. For the seven groups into which those establishments with average sales of less than $1,000,000 have been divided the range was from 20.0 per cent to 26.2 per cent. As the average size of business increased above $200,000 per year the total expense percentages decreased successively to a minimum of 2.0 per cent of net sales. This is in sharp contrast with the wholesale merchants where the costs increased with the size of the business after a low point had been reached with relatively small average sales volume.

The same general trend was noticeable in the item *expenses of salesmen* as for total expenses of manufacturers' sales branches. These expense percentages decreased steadily as the average sales per establishment increased, thus showing a high degree of inverse correlation. The *average sales per salesman*, often used as a measure of operating efficiency, corroborated the facts shown by the other two series, total expenses and salaries and expenses of salesmen since there is a direct correlation shown between average sales per salesman and average sales per establishment. The average sales per salesman were small where the size of business was small and where the total expenses were high.

Unlike the series just examined (average sales per salesman), *stocks on hand* showed a much greater uniformity throughout the distribution. The average for the group amounted to 4.1 per cent of net sales. The range was from a low of 3.4 to a high of 5.6 per cent. No correlation is noticeable between percentage of stocks and percentages of expenses. In fact the very largest establishments carried a slightly higher proportionate inventory than the very smallest group, 4.8 per cent of net sales and 4.7 per cent, respectively.

In considering the meaning of these statistics it should be pointed out that size of the business was not the only factor affecting the results. The manufacturers' sales branch group was not as homogeneous as most of the classifications. This arises from the fact that the classification was largely based upon ownership, whereas most of the other groups were classified on the basis of wholesale marketing functions which they performed.[22] The manufacturers' sales branches fall in at least two groups which it has not been found practicable to separate. One group performs the same functions as the wholesale merchant,

[22] Chain-store warehouses were also classified on the basis of ownership.

maintaining a warehouse, a force of salesmen calling upon the retail trade, and a delivery system. The other group operates from an office and maintains no warehouse. Occasionally members of this group rent space in a public warehouse from which delivery of special hurry-up orders may be made. Frequently these offices sell to other wholesalers, to institutional buyers and to retailers, particularly to the chain systems. Judging from the statistics in Table 25, it appears that a larger percentage of the first group were found in the smaller-size brackets and a larger percentage of the latter in the large size brackets. Wherever it is possible for a salesman to average from $500,000 to $1,000,000 per year in sales, the presumption is that he was not selling to the typical independent retailer in the grocery trade but rather to establishments such as chains, hotels, restaurants, or to wholesalers, all of which are able to buy in much larger quantities than the typical retailer. While the average sales per salesman for general-line wholesalers was $116,690 and did not exceed $156,369 in any size group, for the manufacturers' sales branches the group average was $69,122 and did not exceed $190,140 until the 10 establishments selling over $15,000,000 each per year were reached.

In addition to difference in functions performed, there is also a difference in the kind of merchandise handled. Manufacturers' sales branches normally carry a limited line of their own products rather than a general line of grocery items. This fact no doubt explains in part the higher average costs for manufacturers' sales branches as compared with general line wholesalers.

TABLE 25.—NET SALES, EXPENSES, AND STOCKS ON HAND, BY SIZE OF ESTABLISHMENT—GROCERY AND FOOD-SPECIALTY TRADE—UNITED STATES: 1929

[*An (x) indicates that the amount must be withheld to avoid disclosure of individual operations*]

MANUFACTURERS' SALES BRANCHES

SIZE GROUP	Number of establishments	Net sales, per cent of total [1]	Total expenses per cent of net sales	Salesmen [2]			Stocks on hand, per cent of net sales
				Number	Average sales per salesman	Salaries and expenses, per cent of net sales	
Total	**2,318**	**100.0**	**13.6**	**19,592**	**$69,122**	**4.0**	**4.1**
Under $50,000	813	1.2	20.9	1,382	11,475	10.9	4.7
$50,000 to $100,000	231	1.1	20.0	755	18,729	10.2	5.0
$100,000 to $200,000	316	3.1	26.2	1,793	22,975	10.0	4.3
$200,000 to $300,000	207	3.5	25.0	1,716	26,987	7.5	5.6
$300,000 to $400,000	130	3.0	24.9	1,092	36,353	7.4	3.9
$400,000 to $500,000	75	2.3	22.3	779	40,380	6.0	4.1
$500,000 to $1,000,000	237	11.4	21.0	2,877	46,227	5.7	3.4
$1,000,000 to $2,000,000	154	14.5	17.9	2,621	69,135	4.6	4.0
$2,000,000 to $4,000,000	83	15.9	16.1	3,335	67,474	4.6	4.3
$4,000,000 to $8,000,000	47	16.9	10.9	2,125	115,379	3.1	3.7
$8,000,000 to $15,000,000	[3] 15	10.5	3.6	821	190,140	2.2	3.4
$15,000,000 to $25,000,000	[3] 4	5.6	2.5	133	(x)	0.9	4.4
$25,000,000 and over	[3] 6	11.0	2.0	163	(x)	0.3	4.8

[1] Net sales, $1,480,162,243.
[2] Average sales per salesman and salesmen's salaries and expenses as percentage of net sales are computed on the basis of only those establishments reporting the use of salesmen.
[3] These establishments are chiefly engaged in distributing sugar for their own refineries. (See text, page 79.)

Agents and brokers.—The distribution by size of business for agents and brokers shows that 984, or nearly 55.0 per cent, of the establishments with average sales of less than $500,000 each accounted for less than 11.0 per cent of the sales (see Table 26). At the other extreme, 24 establishments selling over $8,000,000 each accounted for 18.6 per cent of the total. The distribution for the agents and

brokers group approximated more closely that for general-line wholesalers than that for manufacturers' sales branches in that the middle brackets accounted for over 50 per cent of the total business. Those agents and brokers with average sales between $500,000 and $4,000,000 had 53.9 per cent of the total.

Total expenses, as percentages of net sales, and *salaries and expenses of salesmen* both showed declines as the average sales increased. The very small-scale establishments had the highest total expense ratio, the highest percentage of salesmen's salaries and expenses, the smallest average sales per salesman, and the largest ratio of stocks to net sales. At the other extreme, the very largest establishments had lowest total expenses, lowest expenses for salesmen, highest sales per salesman, and no stocks at all. It is possible that the smaller establishments engaged in outright wholesale merchandising activities to a larger extent than did the agents and brokers operating on a larger scale. This would explain, at least in part, the larger stocks and the higher expenses. The minor variations among the low-cost groups may be due to differences in the degree of specialization in lines of merchandise handled.

The specialization on the selling function by agents and brokers is clearly evidenced by the relatively large part of total expenses going to salesmen. Moreover, apart from the smallest group, stocks on hand were very low. For the entire group they averaged but 0.6 per cent of net sales. This indicates that little or no storage or warehousing was performed by agents and brokers.

TABLE 26.—NET SALES, EXPENSES, AND STOCKS ON HAND, BY SIZE OF ESTABLISHMENT—GROCERY AND FOOD-SPECIALTY TRADE—UNITED STATES: 1929

[*An (x) indicates that the amount must be withheld to avoid disclosure of individual operations*]

AGENTS AND BROKERS

SIZE GROUP	Number of establishments	Net sales, per cent of total [1]	Total expenses, per cent of net sales	Salesmen [2]			Stocks on hand, per cent of net sales
				Number	Average sales per salesman	Salaries and expenses, per cent of net sales	
Total	**1,796**	**100.0**	**2.0**	**2,803**	**$619,746**	**1.0**	**0.6**
Under $50,000	155	0.2	20.7	83	41,095	17.4	13.1
$50,000 to $100,000	170	0.7	8.6	117	104,575	8.0	2.6
$100,000 to $200,000	241	2.0	5.1	207	166,797	4.7	1.9
$200,000 to $300,000	178	2.5	3.4	143	305,529	3.0	0.7
$300,000 to $400,000	147	2.9	3.2	136	367,627	2.0	1.2
$400,000 to $500,000	93	2.4	3.4	166	247,694	1.8	2.2
$500,000 to $1,000,000	340	13.5	2.1	407	576,449	1.1	0.7
$1,000,000 to $2,000,000	270	20.7	1.8	553	650,722	1.2	0.5
$2,000,000 to $4,000,000	123	19.7	1.6	435	788,030	0.8	0.5
$4,000,000 to $8,000,000	55	16.8	2.0	287	1,016,477	0.6	0.6
$8,000,000 to $15,000,000	19	11.0	1.3	233	817,537	0.6	0.1
$15,000,000 and over	5	7.6	0.5	36	(x)	0.1	--------

[1] Net sales, $1,737,149,388.
[2] Average sales per salesman and salesmen's salaries and expenses as percentage of net sales are computed on the basis of only those establishments reporting the use of salesmen.

CHAIN-STORE WAREHOUSES

Chain-store warehouses as wholesale establishments.—Chain-store warehouses are wholesale establishments maintained by retail chains as distributing stations to supply their stores with merchandise. In some ways they are similar in operations to establishments of wholesale merchants and are, in reality, more than mere warehouses. They maintain stocks, break bulk, and deliver and bill

the merchandise to the retail outlets. Furthermore, the activities of these warehouses may include accounting and general supervision, and chain stores often maintain branch executive offices at these warehouses charged with the superintendence of the retail outlets within their respective districts.

Chain-store warehouses differ sharply from typical wholesale establishments in that they are integral parts of a combined wholesaling-retailing system of marketing. They are included in the Census of Wholesale Distribution for two reasons. In the first place, it was necessary to secure all reports on an establishment basis. The field enumerators were given definite territories in which to work and instructions to secure a report from each marketing establishment in their territory. Since chain-store warehouses are usually distinct physical structures or places of business, they were included in the field canvass. Second, chain-store warehouses, although admittedly not independent wholesale organizations, are nevertheless engaged in the performance of many of the wholesaling functions. Merchandise is purchased, assembled in car lots, stored, and delivered to the retail outlets. Accounting departments are maintained that keep records of purchases and deliveries. A supervisory force of store inspectors works from the warehouse in much the same manner as the sales force of the typical wholesaler. While these supervisors do not normally make sales or take orders, they perform the important functions of liaison officers and keep the warehouse headquarters informed as to the actual marketing conditions and new developments in the field. In order to obtain a complete picture of wholesaling, it was therefore necessary to include chain-store warehouses as part of the census of wholesaling.

Chain-store warehouses by size of business.—The wholesale departments of chain systems, or chain-store warehouses, have been examined from a number of different angles in this report. Heretofore, however, they have been treated as a group constituted of more or less homogeneous units. The following discussion consists of a more analytical approach to this type of wholesale establishment. First there is an analysis of a breakdown of chain-store warehouse sales by size of business similar to that just completed for general line wholesalers, manufacturers' sales branches, and agents and brokers. A further and more complete analysis of a selected group of chain store warehouses concludes this phase of the problem.

One of the outstanding facts disclosed by Table 27 is that chain-store warehouses were not confined to large-scale business organizations, or at least all did not report large volumes of sales through the warehouses. There were 10 warehouses with average sales of less than $50,000 per year, 7 with sales between $50,000 and $100,000, and 17 with sales between $100,000 and $200,000 each. In fact there were 101 out of a total of 234 chain-store warehouses with sales of less than $1,000,000 each, per year. The combined sales of these warehouses, however, amounted to less than 2.5 per cent of the total chain-store warehouse business. In sharp contrast with this condition is the fact that 14 chain-store warehouses, with over $25,000,000 sales each, per year, accounted for nearly 35.0 per cent of the total volume for all chain warehouses, and 33 warehouses, with average sales greater than $15,000,000, handled 59.7 per cent of the total. These facts indicate that while many of the smaller chains make use of their own warehouses, no doubt in hopes of gaining the advantages of wholesale purchasing, that the chain-store business is predominately large scale.

Whatever the reason for the existence of the small-scale warehouses, an examination of total operating expenses indicates that they were comparatively expensive luxuries. In fact, the low average cost of 3.5 per cent of net sales was not reached until the warehouses had attained an average volume of business of $8,000,000 or more.

Total expense ratios varied inversely with the average size of business, declining very rapidly as average sales increased from less than $50,000 per year to between $300,000 and $400,000 per year. Thereafter the decrease in expenses was less rapid but continues with minor fluctuations to a low point of 2.4 per cent for the largest group of establishments. The trend for total expenses was paralleled very closely by the figures for salaries and wages, which decreased from 17.7 per cent of net sales for the smallest scale warehouses to 1.2 per cent for the largest.

Average sales per employee varied directly with sales, but not as uniformly as did expenses. Stocks on hand, or inventories, likewise showed a fairly high degree of correlation, although inverse, with average size of business. Apart from the small-scale warehouses which, strangely enough, in view of their high operating expenses, had a fairly low inventory, the ratio of stocks on hand to net sales decreased as the size of the business increased. All of these facts taken together tend to explain the lower total expenses for the large warehouses, as well as the higher expenses for the small-scale ones.

TABLE 27.—NET SALES, OPERATING EXPENSES, AND STOCKS ON HAND FOR CHAIN-STORE WAREHOUSES, BY SIZE OF ESTABLISHMENT—UNITED STATES: 1929

SIZE GROUP	Number of establishments	Net sales,[1] per cent of total	Total expenses, per cent of net sales	Number	Average sales per employee	Employees' wages, per cent of net sales	Stocks on hand, per cent of net sales
Total	234	100.0	3.5	16,819	$86,652	1.7	4.3
Under $50,000	10	--------	40.2	28	7,645	17.7	5.9
$50,000 to $100,000	7	--------	15.9	27	19,746	7.2	16.4
$100,000 to $200,000	17	0.2	13.2	152	16,366	7.5	20.4
$200,000 to $300,000	19	0.3	11.4	173	26,285	6.3	12.0
$300,000 to $400,000	8	0.2	5.3	61	47,686	3.9	7.3
$400,000 to $500,000	14	0.4	7.7	157	38,917	3.8	8.8
$500,000 to $1,000,000	26	1.3	6.9	455	40,882	3.3	9.0
$1,000,000 to $2,000,000	30	3.2	5.5	977	48,103	2.6	8.5
$2,000,000 to $4,000,000	17	3.3	4.9	881	54,602	2.8	9.5
$4,000,000 to $8,000,000	30	11.9	5.4	3,254	53,406	2.5	6.5
$8,000,000 to $15,000,000	23	19.5	3.2	2,451	115,788	1.4	3.4
$15,000,000 to $25,000,000	19	25.0	3.3	3,652	99,604	1.6	3.2
$25,000,000 and over	14	34.7	2.4	4,551	111,089	1.2	3.4

[1] Net sales are at wholesale values comparable to sales by other types of wholesalers. The total equals $1,457,408,292, and includes all goods billed through the warehouse.

Special analysis for 142 chain-store warehouses operated by 24 grocery chains.—Twenty-four grocery chains operating 142 warehouses and 32,929 retail stores reported operating information to the Census Bureau on special listing sheets, which provided for certain items not included in the regular wholesale schedules. These additional items include the value of goods actually handled through the warehouses, as well as the total value of merchandise billed through the warehouses; a division of employees and salaries into executives and buyers, office workers, and all other; the value of direct deliveries or business going direct to the retail stores without passing through the warehouses; and sales made through the warehouses to other than the retail outlets of the respective chains.

These items have particular importance, since the 24 chains reporting constituted a very substantial part of the entire grocery-chain business. The warehouses comprised approximately 65 per cent of all grocery-chain warehouses reporting to the Census Bureau, and accounted for over 90 per cent of the total volume of sales at wholesale values reported by grocery-chain warehouses. The retail outlets of these 24 chains made up 62.7 per cent of all retail grocery-chain

stores reporting and accounted for 66.8 per cent of total reported grocery-chain store sales at retail. (See Table 28). It may be said, in explanation of the different proportions of total warehouses and total retail outlets, that most of the 2, 3, 4, and 5 store organizations do not operate warehouses, but bought from wholesalers of various types, or directly from the manufacturers.

TABLE 28.—SALES ANALYSIS FOR 142 GROCERY-CHAIN WAREHOUSES—UNITED STATES: 1929

Number of chains	24
Number of warehouses	142
Number of retail chain-grocery stores	32,920
Sales of retail chain-grocery stores	$1,858,759,255
Total value at wholesale of goods billed through the warehouses	$1,308,746,149
Value of goods actually handled through warehouses	$1,009,244,092
Direct deliveries (drop shipments) billed through warehouses	[1] $299,502,057
Sales through warehouses to others at actual selling price	[2] $7,658,328

Analysis of the sales of these chain-store warehouses reveals that 30.5 per cent of the total sales at wholesale values, by the 14 chains reporting on this item, were drop shipment or direct store-door delivery sales. In other words, merchandise valued at 30.5 per cent of the total billed to the retail outlets of the chains did not pass through the chain-store warehouse. The following tabulation shows the variation in direct shipment percentages by the 14 chains reporting on this item. The range was from 4.39 per cent to 50.98 per cent, indicating that such sales were a very important part of the business of some of the chains.

PERCENTAGE OF DIRECT DELIVERIES TO TOTAL VALUE OF GOODS BILLED THROUGH THE WAREHOUSES [a]

	Number of chains		Number of chains
Under 10 per cent	4	40 to 50 per cent	1
10 to 20 per cent	3	Over 50 per cent	1
20 to 30 per cent	1		
30 to 40 per cent	4	Average 30.5 per cent	14

[a] 14 chains in 121 warehouses—combined sales billed through warehouses, $1,277,738,610.

Some light is also thrown upon another significant phase of chain-store business by the fact that 12 of the chains reported sales to others or sales on a wholesale basis from their warehouses. Such sales amounted to over $7,500,000, or 1.2 per cent of the total value of goods passing through the 12 chain-store warehouses so reporting.

The 24 chains gave employment to 12,355 people in their warehouses and paid out in salaries $17,851,289, which was 1.36 per cent of total volume of sales, or 1.96 per cent of value of goods handled through the warehouses. Over 19 per cent of the total employees for all chains were female.

There were 390 executives and buyers with salaries of $2,129,716, an average of $5,461 each; 3,055 office workers receiving $4,043,792, or an average of $1,324; and 8,910 warehouse workers and truckmen receiving $11,677,781, or $1,310 each on the average. Executives thus received nearly 12 per cent of total salaries paid, although constituting but little over 3.0 per cent of the total employees. Office workers, who made up nearly 25.0 per cent of the employees, received approximately 23 per cent of the total salaries, while warehousemen and truckers, constituting over 72 per cent of all employees, were paid but little more than 65 per cent of the total salaries and wages. These facts bring into relief

[1] Reported by 14 chains only with sales through warehouses of $980,517,101.
[2] Included in value of merchandise actually handled through warehouses. Reported by 12 chains only with sales through warehouses of $654,615,782 and direct deliveries of $265,817,530.

the differences in salary scales between the three classes of workers. (See Table 29.)

Total expenses, exclusive of rent, amounted to 3.15 per cent of the value of merchandise passing through the warehouses, as compared with 2.19 per cent of the value of all goods billed through the branches. For those establishments which reported rent paid, an additional 0.18 per cent must be added for this item, bringing total expenses to 3.33 per cent for that group. The value of knowing the extent of direct deliveries should be clear from this illustration. If total expenses are computed on the basis of total volume of goods billed through the warehouse, a much lower figure is obtained. But such a procedure is misleading, since the additional expense of the direct sales is only a part of the buying, office, and administrative expense, and probably a very small part of total operating expenses. Thus, the average of 3.5 per cent of net sales for total expenses for all chain-store warehouses (Table 27) underestimates the true condition, since it may be assumed that approximately the same average percentage of direct deliveries obtained for all chain systems. On this assumption a more accurate measure of the cost of performing the wholesale functions of the chains may be obtained by reducing the net sales figure by 30.5 per cent, the amount of direct deliveries, before computing the ratio of expenses to net sales. This raises the total warehouse expenses, expressed as a percentage of net sales of goods actually handled through the warehouses to 5.0 per cent. A small deduction should be made from this figure to allow for the buying and general administrative expenses properly chargeable against direct shipments. On a pro rata basis for salaries of executives and buyers, salaries and wages of office workers, and miscellaneous warehouse expenses, this allowance would not exceed 0.40 per cent of net sales, leaving a figure of 4.60 per cent of net sales as a reasonable measure of the expenses of operating a chain store warehouse.[23]

TABLE 29.—OPERATING INFORMATION FOR 142 GROCERY-CHAIN WAREHOUSES, UNITED STATES: 1929

ITEM	Number or amount	Per cent of total volume of sales	Per cent of value of goods handled through warehouses [a]
Number of chains	24		
Number of warehouses	142		
Total volume of sales at wholesale values	$1,308,746,149	100.00	69.46
Total employees	12,355		
Total salaries	$17,851,289	1.36	1.96
Male employees	9,993		
Female employees	[b] 2,362		
Executives and buyers	390		
Salaries of executives and buyers	$2,123,716	0.16	0.23
Office workers	3,055		
Salaries of office workers	$4,043,792	0.31	0.45
All other employees (chiefly warehouse workers and truckmen)	8,910		
Salaries of all other employees	$11,677,781	0.90	1.29
Rent paid for warehouses	[c] $1,735,349		[c] 0.18
All other warehouse expenses	$10,904,410	0.83	1.19
Total expenses (exclusive of rent)	$28,755,699	2.19	3.15
Stocks on hand, Dec. 31, 1929	$46,979,233	3.59	5.17

[a] Total value of goods *handled* through the warehouses are taken as 69.46 per cent of total volume of goods *billed* through the warehouses (100 per cent minus 30.54 per cent direct deliveries).
[b] Reported by 20 chains with 12,220 warehouse employees.
[c] Reported by 18 chains only with 133 warehouses and value of goods handled through warehouses of $967,279,366. Percentage of rent to value of sales is computed only on basis of warehouses reporting rent.

[23] See final section of this bulletin for a discussion of retail chain stores and total chain system expenses.

WHOLESALER-RETAILER VOLUNTARY (COOPERATIVE) CHAINS [24]

There remains an important aspect of the wholesale trade in grocery and food specialties which requires special analysis. This is the cooperative activities of independent wholesale merchants with independent retail stores. Much confusion exists as to the real nature and character of this movement, due to the fact that there are at least two distinct types of voluntary chains and many variations of each type. The oldest type historically is the *retailer-wholesaler* group. In this type of voluntary chain, the retailers have joined together and organized their own wholesale establishment. The primary object of such cooperation is to secure buying advantages for the retailers. There are a number of methods followed by retailer groups to achieve this objective. A separate wholesale house may or may not be maintained. Sometimes this cooperation consists merely of joint purchases of merchandise. At the other extreme, an elaborate wholesale establishment, differing but little in appearance and function from an independent wholesaler, is operated by the retailers. Since retailer-wholesaler chains are owned and operated by retail stores, they have been omitted from the following analysis.

The second type, that of *wholesaler-retailer* voluntary chain, is of more recent origin and falls more clearly within the province of a study of wholesaling, since it is an activity in which wholesalers have taken the initiative. Wholesaler-reatiler voluntary chains, unlike the other type, are not designed primarily to secure buying advantages for retailers, although this may be a subsidiary result. The chief objective is a desire on the part of the wholesaler to cement his relations with his better retailer customers more firmly and thereby to improve his and their competitive positions. The competition of regular chain systems has been felt by wholesalers, as well as by retailers, and the voluntary chain movement as sponsored by wholesalers has been primarily motivated by the urge for self-preservation. Since wholesalers can exist only so long as they have successful retail outlets, it is to the wholesaler's advantage to cooperate with his customers in building a stronger competitive structure. The retailer also gains from such cooperation. He frequently receives his merchandise at lower cost and is assisted in advertising and selling. He also is advised as to improved marketing and accounting technic and assisted in reorganizing his store on modern lines. In fact, both wholesaler and retailer may gain many of the advantages of integrated business without suffering the major disadvantages. At the same time, the advantages of independent ownership and supervision are retained.

The wholesaler-retailer voluntary chains, like their retailer-wholesaler counterparts, take many forms. In some of the chains, the relationship between the wholesaler and his retail clientele is rigidly defined by binding contracts. At the other extreme, very loose agreements serve as the basis for cooperative efforts. Indeed, the variation in form and extent of cooperation is so great that it is difficult to measure this movement with very great accuracy.

Since the original wholesale schedules made no provision for selecting the wholesale establishments which conducted voluntary chains, it was necessary to supplement the field work with a special mail canvass. The following analysis of voluntary chains is therefore based upon the returns from this canvass and constitutes a survey or sample study rather than a complete enumeration. In the latter part of 1931, a letter was sent out to 5,383 establishments which has been classified by the Census of Wholesale Distribution as wholesale merchants

[24] A voluntary chain was defined for census purposes as a cooperative buying group, sometimes called a contract-wholesaler group, which combines one or more *independent* wholesale establishment with a group of *independent* retail stores, *the organization being formed on the initiative of the wholesaler.* (See also report of Federal Trade Commission on "Cooperative Grocery Chains," 1932, Superintendent of Documents, Washington, D. C.)

in the grocery trade to determine the number which were connected with voluntary chains.[25] A second letter asking for additional facts was sent to each establishment which reported membership in a wholesaler-retailer voluntary chain.

A total of 3,110 replies to the first letter were received. (See summary below.) This constituted 57.7 per cent of all general-line grocery wholesalers. Of the replies, 442, or 14.2 per cent, reported some connection with a wholesaler-retailer voluntary chain, and 306, or about 10 per cent, of the total, reported that they had been members of wholesaler-retailer voluntary chains during the year 1929. Since all replies were very carefully checked to eliminate doubtful cases, such as retailer-owned wholesale houses, it is believed that the results afford a sound basis for estimating the extent of the wholesaler-retailer voluntary chain movement in 1929. Such an estimate follows.

If it be assumed that the 57.7 per cent sample was fairly representative of the entire field, it may be estimated that there were, in 1929, more than 500 (10 per cent of 5,383) wholesale grocery *establishments* connected with the voluntary chain movement. *A smaller, rather than a larger number, would seem to be more probable, however, due to the fact that the interest in voluntary chains would tend to exert an influence upon those who were in the movement to reply to the inquiry.* In other words, the original assumption as to the representativeness of the sample is open to the criticism that it is probable that those reporting voluntary chain membership in 1929 constituted a much larger percentage of all wholesale establishments connected with voluntary chains than the total replies received constituted of all inquiries mailed to wholesalers. If such was the case, a *much lower estimate, say, nearer 400 than 500, probably represents the extent to which wholesale grocery establishments were connected with voluntary chains in 1929.*[26]

SUMMARY OF REPLIES TO WHOLESALER-RETAILER VOLUNTARY CHAIN LETTERS
UNITED STATES: 1931

First letters mailed to wholesale establishments	5,383
Replies received	3,110
Number of establishments "out of business" between end of 1929 and end of 1931	177
Number indicating connection with wholesaler-retailer chain	442
Number indicating establishment of chain in 1929, or before	[a] 311
Second letters mailed	311
Replies received to second letter	145
Replies incomplete	50
Satisfactory replies	95

The summary of replies received to letters and questionnaires incidentally throws some light upon the effect of the decline in business upon wholesale grocers. Of the replies received to the first letter mailed out, 177 indicated that the establishments were no longer in business at the end of 1931. These establishments constituted 5.7 per cent of all replies received, or 3.29 per cent of all wholesale grocery establishments.

[25] A subsequent reexamination of all schedules reduced this number to 4,776, as genuine general-line wholesalers for the grocery and food specialty trade study. Many of the others were specialty houses and some were the wholesale establishments owned by retailer-wholesaler voluntary groups.

[26] Since some of the wholesaler-retailer groups had more than one wholesale establishment, the number of groups or chains was much less than 400 and probably did not greatly exceed 300 in 1929. The number of retail stores, based upon an average of 150 for each wholesale establishment (see Table 32), was approximately 60,000. This estimate of 300 wholesaler-retailer cooperative chains, with 400 wholesale establishments and 60,000 retail stores, in 1929, based upon census statistics, supplements two other estimates. The Federal Trade Commission gave the number of cooperative grocery chains as 395 and the number of retail stores as 53,419 at the beginning of 1930. (Ibid., p. 14). The American Institute of Food Distribution estimated 551 voluntary chains with 59,640 retail stores as of May, 1930. Both the Federal Trade Commission and the American Institute of Food Distribution have included wholesaler-retailer and retailer-wholesaler groups, whereas the census statistics have excluded the latter.

[a] Five of these were later discarded as incorrectly classified.

Questionnaires were mailed to the 311 establishments indicating connection with voluntary chains in 1929 to secure additional information about such chains. Replies were received from 145 establishments, or 46.6 per cent of the total. Only 95 of these replies were complete enough to be useful. However, the original schedules filed by each of the 306 establishments which proved to be genuine wholesale members of wholesaler-retailer voluntary chains were available for special examination and the analysis of these 306 schedules follows. (See Table 31.) Furthermore, information on the date of organization of the voluntary chain was supplied by 438 wholesale grocery establishments in reply to the first letter sent out. These include establishments reporting for 1930 and 1931. (See Table 30.)

Year of organization.—It is interesting to note that one wholesale grocer reported the organization of a voluntary chain group as early as 1891. (See Table 30.) There followed a gap in the series to 1910, at which time another establishment reported the organization of a voluntary chain. Thereafter to date, with the exception of only three years—1913, 1916, 1917—each year has seen the birth of new voluntary chain groups. Prior to 1925, the largest number reported in any one year was seven, in the year 1921. In 1925, there were 17 organizations reported and the movement has shown substantial growth each year since.

TABLE 30.—WHOLESALE ESTABLISHMENTS REPORTING YEAR OF ORGANIZATION OF VOLUNTARY CHAIN

YEAR ORGANIZED	Number of establishments	YEAR ORGANIZED	Number of establishments	YEAR ORGANIZED	Number of establishments
Total reporting	438	1925	17	1918	2
1931	[1] 89	1924	3	1915	1
1930	[1] 42	1923	3	1914	1
1929	[2] 121	1922	3	1912	1
1928	68	1921	7	1911	1
1927	39	1920	4	1910	1
1926	33	1919	1	1891	1

[1] The establishments reporting the organization of voluntary chains in 1930 and 1931 must not be taken as the total for those years, since they constitute only the new voluntary chain organizations of wholesale grocers in business and reporting to the Census for the year 1929.
[2] Includes 31 establishments reporting year of organization as 1929, or earlier, without specifying the exact year.

The outstanding fact revealed by this summary is that the wholesaler-retailer voluntary chain movement is of comparatively recent origin. Not until after 1925 did the numbers become significant. Indeed, 410 out of the total of 438 were established during the past seven years. Among the earliest examples of this development are some establishments which, while they came under the definition adopted for this analysis, are not strictly comparable with what is now recognized as a wholesaler-retailer voluntary chain. One, for example, was a wholesale house owned and operated by Chinese which had for years been supplying the needs of a group of Chinese-owned retail stores in much the same manner that wholesale houses cooperate with their retail clients under the modern voluntary chain plan.

Expense and Sales Analysis of 306 Wholesale Establishments Identified with Voluntary Chains.—The 306 wholesale establishments reporting connection with voluntary chains in 1929 were divided into two groups on the basis of the size of the community, 258 being located in cities of 10,000 or more inhabitants, and 48 establishments located in communities of less than 10,000 people. Some significant differences between these two groups are indicated in Table 31. The average sales per establishment were over twice as great for the larger city houses.

The total operating expenses, instead of being lower for the larger-scale establishments, as might be expected, were lower by 1.73 points for the small-scale concerns. Salaries and wages which were 1.35 points higher for the larger establishments no doubt accounted for most of the difference. Miscellaneous expenses were somewhat higher for the small town establishments, but rents were considerably lower. A greater extension of credit on the part of the larger city establishments is indicated by the figures of 85.59 per cent as compared with 82.97 per cent of the net sales reported by establishments in communities of less than 10,000 in population.

TABLE 31.—WHOLESALE GROCERY ESTABLISHMENTS OPERATING VOLUNTARY CHAINS IN 1929 UNITED STATES SUMMARY

ITEM	Located in cities of 10,000 or more population	Per cent of net sales	Located in cities under 10,000 in population	Per cent of net sales
Number of establishments	258		48	
Net sales	328,063,397	100.00	26,911,738	100.00
Total employees	10,239		706	
Total salaries	18,640,533	5.68	1,165,100	4.33
Number of salesmen	2,279			
Salaries of salesmen	6,309,779	1.92		
Executives	464			
Salaries of executives	2,413,180	0.74		
All other employees	7,496			
Salaries of all other employees	9,917,574	3.02		
Expenses of salesmen	1,091,683	0.33		
Rent [1]	1,213,131	[1] 0.52	46,974	[1] 0.37
All other expenses (including interest)	11,977,343	3.65	1,033,122	3.84
Total expenses	33,032,281	10.07	2,245,196	8.34
Stocks on hand, December 31, 1929	46,962,528	14.32	3,838,067	14.26
Returns and allowances [2]	4,372,063	[2] 1.83		
Average sales per establishment	1,271,559		560,661	
Net sales of establishments with credit sales	281,107,575	85.69	13,423,148	49.88
Net sales of establishments reporting returns and allowances	239,476,130	73.00		
Net sales of establishments paying rent	229,095,522	69.83	12,541,624	46.60
Credit sales [3]	240,610,189	[3] 85.59	11,137,002	[3] 82.97
Sales to home consumers	150,518	0.05		
Goods manufactured	3,071,275	0.95	179,876	0.67

[1] Per cent computed on basis of net sales of establishments reporting rent.
[2] Per cent computed on basis of net sales of establishments reporting returns and allowances.
[3] Per cent computed on basis of net sales of establishments reporting credit sales.

For the 95 establishments reporting on the extent of voluntary chain operations additional facts of significance are presented in Table 32. The net sales of these establishments amounted to $131,056,279, constituting a fair sample of the total group operating voluntary chains in 1929. From these statistics, it appears that the voluntary chain permitted the wholesaler to secure larger sales per retail store and therefore a larger volume with fewer accounts than was true of the more typical method of selling. Fifteen wholesale establishments which reported all business through member stores averaged 241 retail-member outlets with sales of $7,139 per outlet. For the entire group, the average number of stores served was 657 per wholesaler, including both retail members and other retail stores. The average sales to retail outlets were $2,100. The average number of member stores for the entire group was 150, and the average sales to members was $4,500. Apparently, retail member stores were decidedly important outlets for wholesale grocers, increasing in value to the wholesaler as they become the exclusive outlets.

The figures for the total expenses corroborate this conclusion, indicating as they do that expenses were less for establishments catering exclusively to retail members of the voluntary chain. For the entire group of 95 wholesale establishments, the total expenses were 8.13 per cent, as compared with 8.99 per cent for

85 establishments selling to both retail members and other retailers and 4.63 per cent for 15 establishments selling exclusively through cooperating retail member stores. These percentages compare with the average of 9.1 per cent for all general-line wholesale merchants in the grocery and food-specialty, trade. It is possible that the 15 establishments were able to reduce costs by eliminating a substantial part of the selling expenses and by closer coordination of purchases and sales. It is also possible that delivery costs were reduced by cooperating with the retailers, such as cutting down on special deliveries and making fuller use of regular delivery routes.

TABLE 32.—ANALYSIS OF THE OPERATIONS OF 95 WHOLESALE GROCERY ESTABLISHMENTS OPERATING VOLUNTARY CHAINS: 1929

Number of establishments (wholesale)	95
Net sales	$131,056,279
Average sales per wholesale establishment	$1,379,540
Average *number of retail stores* served by each wholesale establishment	[a] 657
Average *sales to retail stores* served by each wholesale establishment	[a] $2,100
Average *number of retail member stores* per wholesale establishment	[b] 150
Average *sales to retail member stores* per wholesale establishment	[c] $4,500
Average sales to retail member stores by wholesalers *selling exclusively* to member stores	[d] $7,139
Average *sales per wholesale establishment* selling *exclusively* to member stores	[d] $1,721,354
Average *number of retail member* stores per wholesale establishment selling *exclusively* to member stores	[d] 241
Total expenses as per cent of net sales—95 establishments	8.13 per cent
Total expenses as per cent of net sales—15 establishments *selling exclusively* to retail member stores	4.63 per cent
Total expenses as per cent of net sales—85 establishments selling to member stores and other retailers	8.99 per cent

Retail distribution of groceries and food specialties.[27]—Retail distribution consists of all sales activities dealing directly with the consuming public. These activities were briefly sketched in the opening section of this report from the *commodity* standpoint. (See Chart II.) Building up from the statistics on grocery manufacturing and wholesaling a total value of $10,232,332,000 was estimated as the consumer price for manufactured grocery commodities. The following section deals with the *institutions* or retail stores which sold grocery commodities in addition to greater or lesser amounts of other commodities such as meats, dairy products, fresh fruits and vegetables, and even hardware, dry goods, and other unrelated lines.

United States Summary.—There was a total of 481,691 retail stores in the entire food group of stores as classified by the retail census. These stores sold a total of $10,837,421,585 worth of food products of all kinds. There were in this group 191,876 grocery stores, without meat departments, with net sales of $3,449,129,144, and 91,888 grocery stores with meat departments, selling $3,025,304,722 worth of merchandise in 1929. The food group also included 23,661 meat markets with grocery departments, the net sales of which were $878,357,345. In addition to the stores of the food group of stores, there were 104,089 general stores with sales of $2,570,744,006, a considerable part of which was in groceries and other food products. There were also 460 department stores with food departments, 2,182 general merchandise stores with food departments, and 7,127 feed stores with groceries. (See Table 33.)

The exact amount of business done by these different types of stores in grocery commodities varied considerably from one type to another, but can not be definitely determined because of the failure of most stores to report sales on a

[a] Based on reports from 89 wholesale establishments.
[b] Based on reports from 93 wholesale establishments.
[c] Based on reports from 76 wholesale establishments.
[d] Based on reports from 15 wholesale establishments.

[27] See special bulletin dealing with food retailing; also Retail Distribution No. R-70—Food Chains.

commodity basis. An examination of sample reports showing the percentage breakdown by each commodity indicates that the estimated total of $10,232,332,000, shown in Chart II, was not far from the truth, provided that due allowance is made for groceries consumed by restaurants, hotels, prisons, hospitals, institutions, and similar food outlets, most of which bought from wholesalers or manufacturers rather than from retail stores. The total sales of restaurants, not including hotel dining rooms, for example, were $2,124,890,445. The exact amount of this total which should be classified as grocery *commodity* business can only be estimated, but it probably amounted to approximately one billion dollars.

TABLE 33.—RETAIL DISTRIBUTION OF GROCERIES—UNITED STATES: 1929 [1]

ITEMS	KIND OF STORE—ALL TYPES			
	Food group total	Included in food group		
		Grocery stores (without meats)	Grocery stores (with meats)	Meat markets (with groceries)
Number of stores	481,891	191,876	91,888	23,661
Net sales	$10,837,421,585	$3,449,129,144	$3,025,304,722	$878,357,345
Proprietors and firm members (not on pay roll)	468,301	171,991	87,420	25,808
Employees (full time)	560,632	143,413	148,819	44,907
Employees (part time)	153,775	54,484	40,700	11,305
Pay roll (total)	$767,207,382	$183,439,001	$192,504,127	$61,759,350
Pay roll (part time only)	$35,554,773	$11,818,024	$9,231,060	$2,914,219
Stocks on hand	$601,480,620	$261,019,370	$179,059,970	$44,152,070
Total operating expenses (per cent of net sales)	19.50	17.36	15.78	17.21

ITEMS	KIND OF STORE—ALL TYPES			
	General stores	Department stores (with food)	General-merchandise stores (with food)	Feed stores (with groceries)
Number of stores	104,089	460	2,182	7,127
Net sales	$2,570,744,006	$939,411,294	$139,404,484	$205,235,703
Proprietors and firm members (not on pay roll)	121,366	184	2,150	8,300
Employees (full time)	107,023	107,354	8,472	8,168
Employees (part time)	30,931	10,650	1,254	2,057
Pay roll (total)	$115,511,168	$139,292,780	$10,804,835	$8,633,743
Pay roll (part time only)	$5,821,373	$3,835,895	$289,205	$472,502
Stocks on hand	$546,265,480	$136,575,930	$24,959,860	$19,064,510
Total operating expenses (per cent of net sales)	13.59	28.19	16.01	12.13

[1] United States Summary of Retail Distribution.

In addition to the extent of the retail trade in groceries, Table 33 also shows the number of proprietors and firm members, the number of employees, the salaries and wages of employees, the stocks on hand at the end of the year, and the total operating expenses as percentages of net sales. All of these figures are shown for each of the major types of stores handling groceries.

The three most important types, grocery stores with and without meat departments, and meat departments with grocery departments, reveal that the grocery trade proper gave employment to 337,139 full-time enployees, 106,489 part-time employees, and 285,267 proprietors and firm members. Total salaries and wages amounted to $461,665,781, of which $23,963,303 went to part-time employees. A total of $484,231,410 was invested in stocks of merchandise on hand at the end

of the year. This constituted 6.6 per cent of the net sales of the three major types of grocery outlets.

Total operating expenses, exclusive of net profits, amounted to 16.72 per cent of net sales for straight grocery stores, 15.77 per cent for grocery stores with meat departments, and 17.21 per cent for meat markets with grocery departments. These figures, however, include both independent and chain stores and are valuable chiefly as indicating the total cost of retailing grocery products by specialized grocery stores. A brief analysis of the chain stores follows.

Chain stores.—A total of 1,041 chain systems with 56,450 retail stores operated in the grocery and related trades in 1929. The total volume of sales exceeded three billion dollars. Combination-store chains, stores handling both groceries and meats were most numerous with 475 chains, 41,136 stores, and $2,381,827,445 sales volume. Second in rank were 313 grocery-store chains, with 12,330 stores and sales of $490,946,311. In addition there were 234 meat-market chains, 10 grocery and dry-goods chains, and 9 grocery and feed chains. These last three chains accounted for a relatively small part of the total business. (See Table 34.)

Operating Expenses.[28]—Exclusive of the three largest chains whose expenses were 13.6 per cent of net sales, the total retail-store operating expenses were 15.46 per cent of net sales for the combination-store chains. Straight grocery chains had lower expenses than the combination group, the ratio being 13.84 per cent of net sales. The total expenses for the three remaining types of chains were meat-market chains, 18.34 per cent; grocery and dry-goods chains, 14.93 per cent; and grocery and feed chains, 9.8 per cent.

TABLE 34.—RETAIL DISTRIBUTION OF GROCERIES—UNITED STATES: 1929 [1]

CHAIN STORES				
KIND OF BUSINESS	Number of chains	Number of stores	Total net sales	Total store expenses as a per cent of net sales
Total	1,041	56,450	$3,027,054,411	----------
Grocery-store chains	313	12,330	490,946,311	13.84
Meat-market chains	234	2,753	139,577,081	18.34
Combination-store chains	475	41,136	2,381,827,445	[2] 15.46
Grocery and dry-goods chains	10	187	11,331,102	14.93
Grocery and feed chains	9	44	3,372,472	9.8

[1] Distribution No. R-70—Food Chains.
[2] Exclusive of 3 largest chains whose total expense ratio was 13.60 per cent of net sales.

Commodity sales.—The following tabulation of the distribution of chain-store sales by commodities affords a basis for determining the relative importance of groceries and other items handled by the straight grocery chains. General-line groceries amounted to 69.75 per cent, fresh fruits and vegetables 12.11 per cent, and fresh meats 4.14 per cent of total net sales. The straight grocery chains sold in addition bakery products, bottled beverages, confectionery and nuts,

[28] Only the retail store operating expenses are shown here. To get the total expenses of chain systems it is necessary to include chain-store warehouse costs. These have been shown in the section on chain-store warehouses to amount to 4.6 per cent, or slightly less for the expenses of goods handled through the warehouses at wholesale values. This figure is equivalent to about 3.9 per cent of the net sales at retail prices. On the assumption that the average expenses for conducting the retail stores is affected very little by the fact that some of the chains do not have warehouses, it is reasonable to add the 3.9 per cent to the retail-store expenses to arrive at the total chain-system expense. This method brings the total for straight grocery store chains to 17.7 per cent and for combination store chains to 19.4 per cent of the consumer's dollar, exclusive in both cases of net profits.

fresh fruits and vegetables, milk and cream, and nonfood products. For comparison with the commodity classification used in the wholesale field, it is necessary to make an adjustment, since eggs were not classified among the grocery items in the wholesale commodity group, while bottled beverages, confectionery and nuts, and nonfood products were included. On this basis, groceries constituted 71.72 per cent of the sales of straight grocery chains.

TABLE 35.—SALES BY COMMODITIES [1]—GROCERY-STORE CHAINS

	All grocery-store chains	Grocery-store chains of less than 500 units	5 grocery-store chains of more than 500 units
Total sales, all chains	$490, 946, 311	$280, 798, 590	$210, 147, 721
Less amount which can not be broken down into commodities	134, 237, 076	134, 237, 076	
Sales further analyzed	356, 709, 235	146, 561, 514	210, 147, 721
Commodity	*Per cent* 100.00	*Per cent* 100.00	*Per cent* 100.00
Bakery products	3.37	2.64	3.88
Beverages, bottled	1.16	0.97	1.30
Confectionery and nuts	1.08	0.84	1.24
Delicatessen and ready-to-serve foods	0.18	0.43	
Fish and other sea foods	0.61	0.11	0.95
Fresh fruits and vegetables	12.11	8.98	14.29
Groceries, general line, total	69.75	74.22	66.64
Meats	4.14	4.19	4.10
Milk and cream	2.28	1.83	2.60
Restaurant operations	0.26	0.64	
Sales of nonfood products	5.06	5.15	5.00
A further partial breakdown of 2 of the above classifications, based upon a coverage of about 38 per cent in the case of groceries and 77 per cent in the case of nonfood products, is shown below:			
Groceries (general line)	69.75	74.22	66.64
Butter and cheese	11.27	10.34	11.36
Eggs	7.62	4.12	8.68
Lard, cooking fats, etc	1.33	2.34	0.94
Flour	1.90	2.92	1.50
Sugar	5.45	6.54	4.94
Canned goods and other groceries	42.18	47.96	39.22
Nonfood commodities	5.06	5.15	5.00
Cigars, cigarettes, and tobacco	2.21	1.71	2.28
Hardware, household supplies, stationery, and school supplies	2.10	2.18	2.07
All other nonfood products	0.75	1.26	0.65

[1] Food Chains—Distribution No. R-70, Census of Distribution.

APPENDIX

The following pages give, in terms of percentages, the proportion of different commodities sold by representative general-line wholesale merchants and specialty wholesale merchants located in different sections of the United States.

	Page
General-line wholesale merchants	93
Specialty wholesale merchants	95

GENERAL-LINE WHOLESALE MERCHANTS

COMMODITIES	Per cent of total sales
CASE NO. 1.—EAST	
Total sales, $15,972,000	
All commodities	100.00
Bakery products	0.28
Biscuits and crackers	.28
Canned goods	51.85
Canned fruits	13.10
Canned vegetables	22.29
Canned fish and sea foods	15.52
Canned meats	.94
Confectionery and soft drinks	1.01
Chewing gum	.01
Bottled beverages	.97
Other confectionery	.03
Dairy products and eggs	.39
Milk, evaporated, condensed, and powdered	.29
Butter	.05
Cheese	.05
Fruits and vegetables	3.95
Fruits, dried	3.95
Groceries	32.05
Cereal preparations	1.45
Coffee	6.90
Extracts and spices	.76
Flour	.66
Nuts (all kinds)	1.34
Pickles, preserves, jellies, jams, and sauces	5.67
Rice	1.00
Sugar	1.62
Teas	12.65
Other food products	5.58
Olives	2.05
Dried peas and beans	2.12
Macaroni, baking powder, etc.	1.25
Molasses and syrups	.16
Products, other than foods	4.89
Cigars, cigarettes, and tobacco	.20
Soaps, powders, and cleansers	.59
Household supplies, such as woodenware, galvanized goods, fruit jars, etc.	.33
Salt	3.77
Pepper	
Polishes	
Spices	
Jelly powders	
Insect powders	
Moth balls	
Plaster	
Capsules	
Tablets	

COMMODITIES	Per cent of total sales
CASE NO. 2.—EAST	
Total sales, $11,472,891	
All commodities	100.00
Canned goods	38.33
Canned fruits	11.50
Canned vegetables	17.25
Canned fish and sea foods	9.58
Confectionery and soft drinks	4.50
Bottled beverages	4.50
Dairy products and eggs	1.41
Cheese	1.41
Fruits and vegetables	5.68
Fruits, dried	5.68
Groceries	24.82
Cereal preparations	2.44
Coffee	6.94
Extracts and spices	2.06
Pickles, preserves, jellies, jams, and sauces	9.89
Rice	0.83
Sugar	1.94
Teas	0.72
Other food products	22.39
Salad dressing	12.55
Imported canned goods	9.84
Products, other than foods	2.87
Soaps, powders, and cleansers	2.87
CASE NO. 3.—MIDDLE WEST	
Total sales, $13,263,936	
All commodities	100.00
Bakery products	0.65
Biscuits and crackers	0.65
Canned goods	38.02
Canned fruits	13.76
Canned vegetables	17.43
Canned fish and sea foods	5.43
Canned meats	0.79
Other canned goods (not listed elsewhere)	0.61
Confectionery and soft drinks	3.55
Candy	1.98
Chewing gum	0.03
Bottled beverages	1.54
Dairy products and eggs	2.60
Milk, evaporated, condensed, and powdered	0.85
Cheese	1.75
Fish and sea foods	0.59
Fresh and frozen fish	0.04
Cured and processed fish	0.55

GENERAL-LINE WHOLESALE MERCHANTS—Continued

COMMODITIES	Per cent of total sales
CASE NO. 3.—MIDDLE WEST—continued	
Fruits and vegetables	9.28
Fruits, fresh	0.03
Vegetables, dried	6.26
Fruits, dried	2.99
Groceries	35.30
Cereal preparations	2.55
Coffee	10.08
Extracts and spices	2.37
Flour	2.51
Nuts (all kinds)	2.00
Lard, lard substitutes, and cooking fats	0.41
Pickles, preserves, jellies, jams, and sauces	8.62
Rice	0.63
Sugar	4.13
Teas	1.38
Cocoanut, chocolate, and cocoa	0.62
Meats and meat products	0.01
Meats, cured or smoked	0.01
Other food products	4.04
Canned soups	0.61
Syrups, molasses, etc	1.74
Olive oil, salad, and cooking oils	0.57
Dates and figs	0.59
Miscellaneous	0.53
Products other than foods	5.96
Cigars, cigarettes, and tobacco	2.05
Soaps, powders, and cleansers	0.64
Household supplies, such as woodenware, etc	2.54
Wrapping paper, bags, and stationery	0.73
CASE NO. 4.—MIDDLE WEST	
Total sales, $12,681,497	
All commodities	100.00
Canned goods	5.88
Canned fruits	2.35
Canned vegetables	2.65
Canned fish and sea foods	0.29
Other canned goods (not listed elsewhere)	0.59
Fruits and vegetables	2.76
Fruits, dried	2.76
Groceries	55.72
Cereal preparations	3.23
Coffee	29.99
Extracts and spices	0.90
Sugar	7.54
Teas	0.86
Other groceries	13.20
Other food products	1.38
Syrups	1.38
Products other than foods	34.26
Cigars, cigarettes, and tobacco	8.83
Household supplies, such as woodenware, etc	2.42
Auto accessories	4.77
Heavy hardware	3.05
General hardware	15.19
CASE NO. 5.—MOUNTAIN	
Total sales, $816,730	
All commodities	100.00
Canned goods	17.92
Confectionery and soft drinks	6.75
Bottled beverages	1.58
Other confectionery	5.17
Dairy products and eggs	5.91
Milk, evaporated, condensed, and powdered	4.91
Cheese	1.00
CASE NO. 5.—MOUNTAIN—continued	
Fruits and vegetables	3.01
Fruits, dried	3.01
Groceries	55.26
Cereal preparations	7.52
Coffee	3.72
Extracts and spices	1.84
Flour	0.70
Sugar	12.62
Teas	1.12
Other groceries	27.74
Other than food products	11.15
Paper and bags	1.31
Matches	0.74
Cigars	1.26
Tobacco	7.85
CASE NO. 6.—PACIFIC	
Total sales, $8,155,373	
All commodities	100.00
Canned goods	25.25
Canned vegetables and fruits	19.55
Canned fish and sea foods	5.70
Confectionery and soft drinks	0.13
Candy	0.13
Dairy products and eggs	1.03
Milk, evaporated, condensed, and powdered	1.03
Fruits and vegetables	4.46
Fruits, dried	3.18
Vegetables, dried	1.28
Groceries	61.85
Cereal preparations	1.79
Coffee	24.62
Extracts and spices	2.53
Lard, lard substitutes, and cooking fats	3.35
Rice	0.93
Sugar	11.70
Other groceries	16.93
Other food products	0.62
Syrup and molasses	0.62
Products other than foods	0.66
Soaps, powders, and cleansers	1.36
Household supplies, such as woodenware, etc	4.87
Sulphur	0.30
Quick-silver	0.13
CASE NO. 7.—SOUTH	
Total sales, $607,000	
All commodities	100.00
Bakery products	0.82
Biscuits and crackers	0.82
Canned goods	19.92
Canned fruits	6.58
Canned vegetables	9.88
Canned fish and sea foods	2.47
Canned meats	0.58
Other canned goods (not listed elsewhere)	0.41
Confectionery and soft drinks	4.12
Candy	1.65
Chewing gum	0.82
Bottled beverages	0.66
Other confectionery	0.99
Dairy products and eggs	1.81
Milk, evaporated, condensed, and powdered	0.84
Cheese	0.97
Fish and sea foods	0.25
Cured and processed fish	0.16
Other sea foods (except canned)	0.09
Fruits and vegetables	2.47
Fruits, dried	2.47

GENERAL-LINE WHOLESALE MERCHANTS—Continued

COMMODITIES	Per cent of total sales
CASE NO. 7.—SOUTH—continued	
Groceries	40.08
Cereal preparations	4.11
Coffee	4.94
Extracts and spices	0.82
Flour	4.11
Nuts	0.41
Lard, lard substitutes, and cooking fats	11.53
Rice	0.49
Sugar	12.53
Teas	0.49
Other groceries	0.65
Meats and meat products	9.87
Meats, cured or smoked	9.87
Other food products	5.76
Dried beans	3.29
Condiments	0.83
Syrups and molasses	0.82
Vinegars, etc	0.49
Other items	0.33
Products other than foods	14.90
Cigars, cigarettes, and tobacco	8.23
Soaps, powders, and cleansers	4.12
Household supplies, such as woodenware, etc	2.46
Miscellaneous	0.09
CASE NO. 8.—SOUTH	
Total sales, $265,000	
All commodities	100.00
Bakery products	0.63
Biscuits and crackers	0.63
Canned goods	2.52
Canned fruits	0.28
Canned vegetables	1.36
Canned fish and sea foods	0.45
Canned meats	0.15
Other canned goods (not listed elsewhere)	0.28
CASE NO. 8.—SOUTH—continued	
Confectionery and soft drinks	1.52
Candy	0.54
Chewing gum	0.62
Bottled beverages	0.36
Dairy products and eggs	2.40
Milk, evaporated, condensed, and powdered	0.36
Cheese	0.12
Eggs	1.92
Fruits and vegetables	8.15
Fruits, fresh	0.36
Vegetables, fresh	3.02
Fruits, dried	0.54
Vegetables, dried	4.23
Groceries	45.04
Cereal preparations	0.28
Coffee	3.62
Extracts and spices	0.12
Flour	7.55
Nuts	0.06
Lard, lard substitutes, and cooking fats	6.04
Pickles, preserves, jellies, jams, and sauces	0.75
Rice	0.36
Sugar	11.48
Teas	0.11
Other groceries	14.67
Meats and meat products	6.30
Meats, cured or smoked	5.43
Poultry and game	0.57
Other meat products	0.30
Other food products	4.15
Feeds	1.88
Baking powder	1.70
Soda	0.57
Products other than foods	29.29
Cigars, cigarettes, and tobacco	22.79
Soaps, powders, and cleansers	3.03
Household supplies, such as woodenware, etc	3.02
Drugs	0.11
Patent medicines	0.34

SPECIALTY WHOLESALE MERCHANTS

Case and commodities	Per cent of total sales
Case No. 1.—East. Total sales, $3,891,745	100.00
Milk, evaporated, condensed, and powdered	100.00
Case No. 2.—East. Total sales, $2,281,000	100.00
Confectionery and soft drinks (candy)	6.32
Groceries	93.68
Nuts (peanuts)	92.98
Other groceries	.70
Case No. 3.—Middle West. Total sales, $1,241,000	100.00
Groceries (flour)	100.00
Case No. 4.—Middle West. Total sales, $261,000	100.00
Fruits and vegetables	100.00
Fruits, dried	65.00
Vegetables, dried	35.00
Case No. 5.—South. Total sales, $1,147,000	100.00
Groceries	100.00
Coffee	27.00
Sugar	60.00
Teas	1.00
Other groceries	12.00
Case No. 6.—South. Total sales, $2,749,994	100.00
Groceries	100.00
Coffee	26.93
Sugar	60.07
Teas	1.00
Other groceries	12.00