

# AUTOMOBILE TRADES

By CHARLES F. BEACH

## INTRODUCTION

The term "Automobile Trades" is used to describe the various kinds of establishments engaged in supplying the motoring public with automobiles and other motor vehicles; with replacement parts and accessories; with satisfactory facilities for repairs and other service; and with necessary fuel and lubrication.

The agencies which perform these various functions can be segregated roughly into three separate major groups. The first is composed of the motor-vehicle dealers; the second, dealers in accessories, tires, and batteries, including repairs and service; and the third, filling stations. Each of these three groups performs some of the functions of the others. Motor-vehicle dealers sell parts and accessories and also provide repairs and service. Most of them provide complete lubrication facilities and many sell gasoline. The accessory, tire, and battery shops furnish minor repairs and make installations in addition to selling merchandise, and frequently handle gasoline and oil. Many filling stations sell tires, batteries, and other parts and accessories for automobiles as well as minor services such as tire repairs, etc., and some garages sell new and used cars.

**Scope of this report.**—This presentation includes much of the operating and expense data reported by each of the three groups engaged in supplying the needs of the motoring public. Because of the overlapping of their activities no one of these groups can be omitted. Consequently separate chapters will be devoted to each.

The tables are, for the most part, limited to United States totals and averages, supplemented by necessary State compilations, so essential for purposes of comparison. Discussions, also, are limited to broad general conclusions based upon these national and State figures. Similar data may be compiled, for any desired area, from the various State reports,<sup>1</sup> and such State and city compilations should be used whenever possible.

National averages have a value as general business barometers even though they may not apply as local barometers. They should not be applied to individual communities without first being checked against the figures for the area or areas under consideration.

Except when otherwise indicated, all data cover store operations for the calendar year 1929, the last nearly normal business year. It is particularly fortunate that complete operating and expense data are available for 1929 because it provides a basis for expense comparisons between that year and later years which have brought general reductions in dollar volume and expenses resulting from unemployment, reduced prices, and from greatly reduced buying activities of the public.

Chapter I contains a brief outline of our national distribution system as applied to the automotive industry and a series of definitions describing how the establishments were classified. Chapter II contains an analysis of the activities of motor-car dealers. It includes, among other data, complete expense information as well as much of the available data on credits. It also includes a discussion of establishments and sales by size of city and by size of business. Motor-vehicle chains are also discussed.

Because of the marked similarity, both in kinds of merchandise sold, the services performed, and the methods of operation between motor-vehicle dealers (retailers) and those distributors (wholesalers) engaged in selling at retail as well as at wholesale, this chapter also includes comparable data for these wholesalers which perform both functions. These wholesaler-retailers of automobiles are discussed in some detail in connection with the motor-vehicle dealers operating on a retail basis only.

Chapter III deals primarily with the retail stores and shops selling accessories, tires, and batteries. It also includes the garages and repair shops. Data similar to those described for chapter II are included for these dealers in parts and

<sup>1</sup> Copies of these retail and wholesale State reports may be secured from the Superintendent of Documents, Government Printing Office, Washington, D.C. A nominal charge, ranging from 5 cents to 35 cents, is made for each copy, the price depending upon the size of the report.

accessories. This chapter also contains a brief analysis of expense information in connection with other nonautomotive kinds of stores which are successfully competing with these accessory stores, and tire and battery shops for the sale of this merchandise.

Chapter IV is confined to an explanation of filling stations and other retailers selling gasoline and oil. Chapter V is devoted to a detailed discussion of the commodities sold by each of the three major groups of automotive establishments. It includes commodity data furnished by the wholesaler-retailer automobile dealers as well as for retailers only.

This report, which is prepared from data secured in the first Nation-wide census of distribution is the sixth of a series of special retail-trade studies. It was prepared under the general supervision of Robert J. McFall, chief statistician for distribution, and John Guernsey, in charge of retail distribution.

## CHAPTER I.—AUTOMOTIVE PRODUCTS—BY WHOM SOLD

The term "Automotive Group" which, in all Census of Distribution reports, has been employed to describe the extensive and rather complicated structure developed for the purpose of disposing of the products of the automobile manufacturers and for the purpose of supplying the subsequent needs of the motoring public, is the second largest of the nations several distributing groups (the largest, both in number of stores and annual sales, being the food group). The following brief outline, covering the 10 trade groups into which all retail establishments were classified, provides the basis for a comparison of the relative importance of each.

### ESTABLISHMENTS AND SALES BY KIND-OF-BUSINESS GROUPS

GROUP CLASSIFICATION	Establishments	Sales
United States total.....	1, 543, 168	\$40, 114, 063, 289
Food group.....	481, 801	10, 837, 421, 686
General stores.....	104, 089	2, 570, 744, 006
General merchandise group.....	53, 030	6, 444, 100, 907
Automotive group.....	257, 086	9, 016, 810, 008
Apparel group.....	114, 200	4, 240, 892, 577
Furniture and household group.....	69, 041	2, 754, 720, 607
Restaurants and eating places.....	134, 203	2, 124, 890, 455
Lumber and building group.....	52, 814	2, 021, 036, 720
Other retail stores.....	200, 448	7, 750, 041, 273
Second hand stores.....	15, 005	148, 008, 141

The automotive group includes many different kinds of establishments and their functions vary. Some, like many of the filling stations, perform only the one function, that of supplying gasoline and complete lubrication, while others like the motor-car dealers sell automobiles, parts, and accessories, and in addition provide complete facilities for repairs and service. The battery and ignition shops limit their activities almost exclusively to the sale and repair of electrical equipment for automobiles while the garages and repair shops make both mechanical and electrical repairs, supply necessary replacement parts, and make other installations. These functional limitations, together with location of establishments and the speed with which the sale or service is performed have had a tendency to develop in motorists the habit of patronizing different kinds of establishments for different kinds of merchandise and service.

A special "automobile business" schedule was used for securing the operating and expense information and the commodity sales data of dealers in automotive products in the cities of more than 10,000 population. This schedule, which was planned in collaboration with officials of the National Automobile Chamber of Commerce and other interested groups, was designed to produce the maximum amount of pertinent data consistent with the necessity for limiting inquiries to essential basic information. This automobile schedule, which was used in the cities of more than 10,000 population whenever possible and occasionally for certain large establishments located in smaller places, was used for both wholesalers and retailers.

Following is an abbreviated facsimile of this "automobile business" schedule. Only that portion of the inquiry which deals with the identifying information, and is the same on all schedules, has been omitted.

FORM 22.—AUTOMOBILE BUSINESS—CENSUS OF DISTRIBUTION

4. Number of Paid Employees for Specified Months, and Total Salaries and Wages Paid:  
 (Report number of paid employees as of the fifteenth day, or nearest pay-roll date, for each month. Do not include proprietors and firm members or their salaries) Present time

a. Total number of employees .....  
 b. Total salaries and wages paid to all employees for the year.....

April July October December Present time  
 Males Females  
 c. Number of part-time employees\* (included above).....

d. Salaries and wages paid (included above) to part-time employees for the year\*.....  
 \*NOTE.—Employees who work only part of the normal working day, and those who work only part of the normal working week, should be considered part-time employees.

- 5. Rent, if any, paid for premises during the year.....
- 6. Interest, if any, paid during the year for money borrowed for this business.....
- 7. All other expenses paid during the year, not including wages, salaries, commissions, rent, and interest. (Do not include cost of goods purchased for resale).....
- 8. Stocks on hand for sale;  
 Value of merchandise at cost or replacement value on hand Dec. 31, 1929, or nearest inventory date.....
- 9. Receipts from sales and service (Receipts from repair and service operations should be reported under no. 12, and should also be included in this inquiry):
  - a. Gross receipts (include receipts from storage).....
  - b. Returns, repossessions, and allowances.....
  - c. Total net receipts (difference between a and b).....

10. Sales (net) by commodities:

Commodities	Sales to ultimate consumers		Sales to other dealers	
	Number	Sales	Number	Sales
1. Automobiles, trucks, buses, tractors, and accessories:				
a. Passenger automobiles, new.....		\$.....		\$.....
b. Passenger automobiles, used.....		\$.....		\$.....
c. Buses.....		\$.....		\$.....
d. Commercial cars and trucks, new.....		\$.....		\$.....
e. Commercial cars and trucks, used.....		\$.....		\$.....
f. Tractors, farm and other.....		\$.....		\$.....
g. Special-purpose vehicles: (Fire apparatus, ambulances, taxicabs, etc.).....		\$.....		\$.....
h. Automotive parts and accessories (except tires, tubes, and storage batteries).....	x x x x	\$.....	x x x x	\$.....
i. Tires and tubes.....	x x x x	\$.....	x x x x	\$.....

	Total net sales			Total net sales	
		\$.....			\$.....
2. Batteries, storage.....		\$.....	4. Radios and radio equipment, total (sum of a and b)..... (Report storage batteries under no. 2, and not here.)		\$.....
3. Gasoline, lubricating oils, and greases, total (sum of a and b).....		\$.....	a. Radio sets.....		\$.....
a. Gasoline.....		\$.....	b. Radio parts, accessories, and equipment.....		\$.....
b. Lubricating oils and greases.....		\$.....	5. Miscellaneous merchandise items (including confectionery, soft drinks, cigars, etc.).....		\$.....
			6. Total sales, all commodities.....		\$.....

11. Credit sales (include sales value also in no. 10):

	Number	Total sales value including down payments
1. Passenger cars sold on installments:		
a. Carried on your own books.....		\$.....
b. Not carried on your own books.....		\$.....
2. Other auto vehicles sold on installments:		
a. Carried on your own books.....		\$.....
b. Not carried on your own books.....		\$.....
3. Credit sales not on installment plan (cars and other merchandise).....	x x x x x x	\$.....

12. Repair and service operations (include receipts from all classes of repair work, and other service operations. Do not include receipts from storage):

- a. Gross receipts from repairs and services for automobiles and accessories, including batteries, tires, tops, etc. Do not include value of parts and accessories installed. (Include also in no. 9).....
- b. Number of employees at the present time (including foreman) engaged chiefly in the repair and servicing of automobiles and accessories. (Include also in no. 4).....

Form 14; which was used for all establishments (both wholesale and retail) located in places of less than 10,000 population does not contain the commodity sales breakdown. Nor does it include as elaborate a credit breakdown. An abbreviated facsimile of the form 14 is also included.

## FORM 14

5. Number of paid employees for specified months, and total salaries and wages paid: (Report number of paid employees as of the fifteenth day, or nearest pay-roll date, for each month. Do not include proprietors and firm members or their salaries)

					Present time	
	April	July	October	December	Males	Females
a. Total number of employees	-----	-----	-----	-----	-----	-----
b. Total salaries and wages paid to all employees for the year	----- \$-----					
					Present time	
	April	July	October	December	Males	Females
c. Number of part-time employees* (include above)	-----	-----	-----	-----	-----	-----
d. Salaries and wages paid (included above) to part-time employees for the year	----- \$-----					

\* NOTE.—Employees who work only part of the normal working day, and those who work only part of the normal working week, should be considered part-time employees.

6. Rent, if any, paid for premises during the year ----- \$-----

7. Interest, if any paid during the year for money borrowed for this business ----- \$-----

8. All other expenses paid during the year, not including wages, salaries, commissions, rent, and interest. (Do not include cost of goods purchased for resale) ----- \$-----

9. Stocks on hand for sale:

a. Value of merchandise at cost or replacement value on hand Dec. 31, 1929, or nearest inventory date ----- \$-----

10. Sales of merchandise and products, and receipts from service operations:

(Gross sales less returned goods and allowances. Purchases of members through cooperatives should be included. Receipts from meals served by restaurants should be reported under no. 14, receipts from repair and service operations under no. 11, and receipts from sale of farm products where called for under no. 12 should also be included in this inquiry.)

a. Net cash sales ----- \$-----

b. Net credit sales ----- \$-----

c. Total net sales (sum of a and b) ----- \$-----

d. If any of this merchandise was manufactured in this establishment, give selling value, f.a.b. plant, which should also be included in 10 a, b, and c, above ----- \$-----

e. Sales made by retailers to other retailers (to be also included above) ----- \$-----

11. Repair and service operations. (Include receipts from all classes of repair work, and also revenues from barber shops, beauty parlors, and other service operations.)

a. Gross receipts from repairs and services for automobiles and accessories, including batteries, tires, tops, etc. (Do not include value of parts and accessories installed. Include in no. 10) ----- \$-----

b. Gross receipts from other repair and service operations. (Include in no. 10) ----- \$-----

c. Number of employees (including foreman) engaged chiefly in the repair and servicing of automobiles and accessories. (Include in no. 6) -----

12. Farm products bought or taken in from farmers: (To be included in no. 10.)

a. Total purchase value of farm products bought for others on salary or commission basis ----- \$-----

b. Sales to wholesalers, retailers, and manufacturers, and consignments to commission merchants. Total sales value ----- \$-----

c. Name principal commodities thus handled, in relative order of importance, using the following classification (milk and cream, butter, eggs, poultry, cattle, swine, sheep, etc., wheat, corn, etc., hay, cotton, tobacco, hides, wool, potatoes, beans, fruits, and vegetables, furs—other products, indicate which).

(1) ----- (3) ----- (5) -----

(2) ----- (4) ----- (6) -----

13. Number of meat animals slaughtered during the year:

(Do not include any farm slaughter)

a. Slaughtering done on the premises of this concern, whether retailer, wholesaler, custom, or public slaughterhouse, or abattoir. (Include slaughtering done on other than main premises of this concern, e.g., on outskirts of town. Retailers and wholesalers should report slaughtering done on other than their own premises in item 13-b and not here.)

1. Calves ----- 2. Other cattle ----- 3. Sheep and lambs -----

4. Goats and kids ----- 5. Hogs and pigs ----- 6. Total -----

b. Slaughtering done by or for this concern in slaughterhouses which are not their own premises.

1. Calves ----- 2. Other cattle ----- 3. Sheep and lambs -----

4. Goats and kids ----- 5. Hogs and pigs ----- 6. Total -----

14. Restaurant operations. (To be answered only by public restaurants. Not to be answered by boarding houses; not by clubs; school, store, or factory lunch rooms for pupils and employees; nor by dining cars, or dining rooms on boats; nor by soda fountains or refreshment stands; nor by hotels covering dining rooms operated by them.)

a. Normal seating capacity—number of persons -----

b. Receipts from sale of meals ----- \$-----

(Report sales of confectionery, cigars, etc., in no. 10, and not here.)

Classifying schedules as wholesaler and retailer.—The census of distribution divides all dealers in automotive products and equipment into two groups; namely, wholesale and retail. This segregation was made by the Census Bureau strictly in accordance with the information reported by the establishments.

Three classes of schedules were obtained. First, there were concerns reporting that they sold exclusively at wholesale. These were classified in the wholesale census without question. Second were the concerns which reported selling only at retail. Such schedules were of course classified in the retail census. The third class consisted of concerns which reported sales at both wholesale and retail. The schedule, as planned, provided for a segregation of sales to indicate sales to ultimate consumers and sales to other dealers. This segregation provided the basis for classifying this third class of establishments. Reports showing that more than 50 percent of the sales were made to other dealers were classified as wholesale, and those showing more than 50 percent of the sales made to ultimate consumers were classified as retail.

The short form schedule which was used by the establishments located in places of less than 10,000 population contained one inquiry calling for information on the sales made to other retailers from which the 50 percent segregation could be consistently maintained.

On the basis of such a segregation the retail census reported a total of 257,685 dealers in automotive products with annual sales aggregating \$9,615,810,098 in 1929. The wholesale census reported a total of 4,600 concerns handling automotive products with total annual sales of \$2,255,524,716, exclusive of dealers in petroleum products. These 4,600 establishments included all types of wholesalers and obviously involves considerable duplication, which will be discussed more in detail in chapter II.

The two tables shown below, the first referring to wholesale trade and the second to retail dealers, present an outline of the two automotive groups by major kinds of business. These two business groups as shown agree with the definitions of kinds of business included also in this chapter.

WHOLESALE TRADE—NUMBER OF ESTABLISHMENTS AND SALES  
[Shown by kinds of business for the automotive group]

KIND OF BUSINESS	Number of establishments	Total sales <sup>1</sup>
Automotive group total.....	4,600	\$2,255,524,716
Automobiles and other motor vehicles.....	743	1,226,346,761
Automotive equipment.....	2,183	480,797,300
Automobile parts (new and used).....	1,049	152,777,249
Tires and tubes.....	655	386,603,407

<sup>1</sup> This table does not include the wholesaling of petroleum products which are included in the wholesale census under the group classification of "Petroleum and Petroleum Products." For detailed data on petroleum see the United States Summary of Wholesale Distribution and the various wholesale State reports. Copies may be secured from the Superintendent of Documents, Government Printing Office, Washington, D.C., at prices ranging from 5 to 25 cents each.

RETAIL DISTRIBUTION—NUMBER OF ESTABLISHMENTS AND SALES  
[Shown by kinds of business for the automotive group] <sup>1</sup>

KIND OF BUSINESS	Number of establishments	Total sales
Automotive group total.....	257,685	\$9,615,810,098
Motor-vehicle dealers (new and used).....	43,894	6,294,148,693
Automobile dealers with farm implements and machinery.....	1,407	113,363,249
Accessory, tire, and battery dealers.....	22,313	599,205,161
Filling stations.....	121,513	1,787,423,097
Garages and repair shops.....	66,793	785,009,636
Motocycles, bicycles, and supplies.....	1,432	20,244,450
Other automotive establishments.....	333	10,334,812

<sup>1</sup> This table does not include automobile junk yards, which are included in the wholesale census, nor dealers in second-hand tires, parts, and accessories, which are included in the retail census under the second-hand stores group.

**Kinds of business defined.**—The automotive group of the wholesale census contains 10 separate kind-of-business classifications. These different classifications are adequately described by name and need no more specific explanation of what is included in each, than is contained in the following brief outline.

## AUTOMOTIVE GROUP—WHOLESALE TRADE

1. *Automobiles and other motor vehicles:*
  - (a) Automobiles and other motor vehicles (general line)
  - (b) Automobiles (new and used)
  - (c) Automobiles (used)
  - (d) Trucks and tractors
2. *Automotive equipment:*
  - (a) Automobile accessories
  - (b) Automotive equipment (general line)
  - (c) Automotive equipment (specialty lines)
3. *Automobile parts (new and used):*
  - (a) Automobile parts (new) such as pistons, pumps, gears, shafts, axles, springs, etc.
  - (b) Automobile parts (used)
4. *Tires and tubes*

No attempt has been made to segregate from the petroleum and petroleum products group, the bulk tank stations, tank wagons, and other wholesale distributors of gasoline, lubricating oils, and greases.

There are 18 different kind-of-business classifications in the automotive group of retail establishments, in each of which, the primary object is the sale of some automotive product or the performance of some service incidental thereto. To insure a complete understanding of the establishments included in this group and to provide for uniform use, definitions, outlining the kinds included in each classification, have been prepared. In all reports, individual classifications have been used wherever possible. However, in many instances it has been found necessary to combine a number of separate kinds of business to avoid disclosure of individual operations. It was therefore necessary, in order to insure the presentation of comparable statistics, to adopt a standard basis for making combinations. Definitions have been prepared in a manner which describes, first, the standard or condensed classifications, followed by a brief description of each of the different kinds of establishments included under the general heading. For purpose of clarity those definitions which apply to the retail establishments are included in this report, as follows:

## AUTOMOTIVE GROUP—RETAIL

**Automobile salesrooms** (*New and trade in, but not used-car establishments*).—This classification describes retail dealers of new automobiles and commercial vehicles, and such used cars and trucks as have been traded in on new-car purchases. Stocks of replacement parts and accessories are carried and repair departments are maintained to take care of free new-car service, as well as subsequent repairs from which income is derived. Limited quantities of tires and batteries are carried, the sale of which is included. Large establishments often add to their income by utilizing unused floor space for storage. These sources of additional income are negligible in their effect on the total sales volume in this classification, which is predominantly the sale of new motor vehicles.

**Used-car dealers.**—This classification, when necessary to avoid disclosure, is sometimes included with *motor-vehicle dealers (new and trade in)*. When this combination is made, the combined classification is referred to as *motor-vehicle dealers (new and used)*. The *used-car dealer* classification is used only where the establishments sell used cars and trucks primarily. As a rule no stock of parts is carried, for the reason that a variety of makes of automobiles is handled. Frequently a limited stock of new tires, tubes, and batteries of the cheaper varieties is carried. A repair department is usually maintained to place the used cars in salable condition, and to service and repair the cars after sale. The receipts of the repair department have little effect on the total sales, which are primarily of used cars.

**Automobile dealers with farm implements and machinery.**—These establishments usually are found only in the smaller cities and towns and in rural communities. Large stocks are not maintained normally, most of the business being done on the agency basis. These establishments usually represent the manufacturer of some automobile truck or tractor, as well as the manufacturer of some pleasure car and may represent one or more manufacturers of farm implements and machinery. A limited stock of parts is usually carried, as are tires and batteries. A department for repairing automobiles, farm implements, and machinery is maintained.

**Accessory stores, tire and battery shops.**—Three kinds of stores or shops are included under this classification. First there are the stores handling all kinds of *automobile accessories, tires, and batteries*. Usually no service department is maintained and only incidental installations are made. The articles purchased are normally installed by or at the expense of the purchaser. Secondly, there are the *battery shops* selling batteries as well as auto electrical parts and appliances and frequently tires and tubes. These shops maintain a service for repairing and rebuilding batteries and other electrical goods and also for charging batteries. The third class in this group is the *tire shops*, selling new and used tires and tubes and maintaining vulcanizing facilities for tire repairs. Tire shops are also rapidly becoming important distributors of batteries. It is not unusual to find any one of these three kinds of stores selling gasoline and lubricating oils and greases. Tire shops are often manufacturer-controlled, specializing in the products of one manufacturer.

**Filling stations.**—There are three kinds of filling stations. First, there is the station which sells gasoline and oil, maintaining grease pits or racks but selling no accessories or other merchandise. Second, there is the station which performs all of the functions of the first and, in addition, sells tires and accessories, often with emergency tire-repair service. The third variety of filling station performs all the functions of the first, may or may not sell tires and accessories and perform minor repairs, and, in addition, sells other merchandise, such as lunches and refreshments, candy, tobacco, or groceries. This classification also includes the superservice station, combining in one establishment a number of services to motorists.

**Garages and repair shops (repairs, gas and oil, etc.).**—First under this classification are *body, fender, and paint shops* engaged in the repair of automobile and truck bodies and fenders, and auto paint shops. These shops usually confine their services to body and fender work and the installation of new body parts where necessary and do not engage in the repair of mechanical parts of the vehicle. Occasionally some radiator repair work is engaged in. Paint shops usually confine themselves to the actual painting job. Next are the *repair garages*, incidentally selling gas, oil, and accessories in addition to making mechanical repairs and body repairs. Receipts from storage sometimes add to the income of these garages. Washing and lubrication service is frequently provided, but most of the income is from repairs, new parts, and fuel. The third kind of establishment is the *parking garage and parking lot*. In the case of parking garages, additional services such as washing, lubrication, and minor adjustments are often provided. Gas and oil are frequently sold. Parking lots generally confine themselves to parking with occasional sales of gas and oil. Because the lots are not under roof, washing and repairs are not practical in most instances and are not usually available. Parking garages and lots which sell nothing but service are not included in this census. *Radiator shops*, which sell radiators, winter fronts, and other radiator accessories, derive much of their income from radiator repairs. These shops frequently make repairs to damaged metal bodies and fenders as well as to radiators. They constitute the fourth kind of business included in this four-part classification.

**Motorcycles, bicycles, and supplies.**—Three kinds of shops are included under this classification. First, are the shops selling *motorcycles*, both new and trade in, and incidental parts and accessories. Second, are the shops selling *motorcycles and bicycles*, and their supplies. Parts and accessories are carried, and usually receipts from repairs represent a substantial part of the total income. The third kind of business and this general classification is the *bicycle shop*, handling bicycles and parts and accessories therefore. Repairs constitute a part of the business of bicycle shops. Occasionally some parts for motorcycles, such as lamps, tires, etc., are sold by these bicycle shops.

**Other automotive establishments.**—Under this heading are two kinds of business; those selling *aircraft and accessories*, and those selling *boats* (motor boats, yachts, canoes, etc.). These shops also sell supplies and equipment, and repairs.

**Other definitions.**—Complete definitions for all kinds of retail stores are shown in a special section of the United States Summary of Retail Distribution to which reference is particularly invited. This special section also includes definitions for the various different types of operation as well as an explanation of the various forms of organization under which the stores were operated.

Complete definitions for all kinds of wholesale establishments are contained in the United States Summary of Wholesale Distribution and also in a special report which can be secured upon request from the Bureau of the Census.

## CHAPTER II.—AUTOMOBILES AND OTHER MOTOR VEHICLES

This chapter, dealing with two classes of establishments, both of which are primarily engaged in the sale of motor vehicles, is divided into two sections. Section 1 is devoted to a discussion of those concerns which were classified as wholesalers, while section 2 contains an analysis of those classified as retailers. Both classes perform functions which are essential parts of the process of transferring the cars and trucks from the manufacturers into the hands of the ultimate consumers. The functions of these two classes of establishments are so different, the one dealing with the consumers and the other selling primarily to retailers, that no significant comparisons can be made between them. However, both must receive their share of consideration in any study of the automobile business.

### Section 1.—Wholesaler—Retailers

The wholesale census has presented data showing that in 1929 there was a total of 743 concerns engaged in wholesaling automobiles and other motor vehicles. From the same source it is ascertained that the aggregate sales of these 743 establishments amounted to \$1,226,346,000 in the same year. The following brief table, which has been prepared from data published in the United States Summary of Wholesale Distribution contains, in addition to number of establishments and total sales, such operating data as number of employees, pay roll, total operating costs and stocks, for all automobile concerns classified as being primarily engaged in some form of wholesaling.

**MOTOR-VEHICLE DEALERS PRIMARILY ENGAGED IN WHOLESALE TRADE**

KINDS OF BUSINESS <sup>1</sup>	Number of establishments	Number of employees	Salaries and wages	Total operating expenses (including salaries and wages)	Sales	Stocks
Automobiles and other motor vehicles, total.....	743	31,595	\$64,467,762	\$126,871,687	\$1,226,346,751	\$87,360,195
Automobiles and other motor vehicles (general line).....	134	4,964	11,699,800	22,490,965	159,663,301	13,474,588
Automobiles (new and used).....	432	24,332	48,157,437	96,038,625	1,011,047,512	62,579,166
Automobiles (used).....	33	104	210,045	512,230	4,591,305	264,819
Trucks and tractors.....	94	2,195	4,390,480	7,829,867	51,074,633	11,041,822

<sup>1</sup> These classifications do not correspond to the commodities sold. For sales by commodities see chapter V of this report and the United States Summary of Wholesale Distribution.

National totals and averages fail to take into consideration the many variations which are apparent from an examination of the individual State figures. The reasons for these variations, which appear not only in number of establishments and sales but also in operating expenses and stocks, are not easily identified. They apparently do not result from variations in population, from climatic conditions, or from other factors known to have a definite effect on the sales of retailers. The activities of wholesalers are not necessarily confined to one State but depend upon the sales policies of the respective manufacturers of motor vehicles and the sales territories allotted to these distributors. Sales totals are also influenced by the establishment, at strategic points, of manufacturers' sales branches, district and general sales offices, etc., and obviously give to those areas greater sales volume than the actual retail sales of these areas would warrant.

In order to provide for a satisfactory consideration of the total wholesale sales of automobiles in each of the respective States the following State table is included. This table includes all types of wholesale distributors.

WHOLESALE TRADE—AUTOMOBILES AND OTHER MOTOR VEHICLES

DIVISIONS AND STATES	Number of establishments	Net sales 1929	Total operating expenses (includes rent and pay roll)	Stocks, 1929
United States, total.....	743	\$1,226,346,751	\$126,871,687	\$87,360,195
NEW ENGLAND.....	49	84,385,887	8,822,065	5,022,455
Maine.....	7	5,119,086	715,259	362,407
New Hampshire.....	2	564,261	88,129	59,197
Vermont.....	3	1,769,171	230,602	239,670
Massachusetts.....	23	65,619,742	6,211,803	3,242,760
Rhode Island.....	4	2,794,874	380,647	330,181
Connecticut.....	10	8,513,753	1,186,625	788,180
MIDDLE ATLANTIC.....	192	300,988,265	41,094,700	26,658,348
New York.....	94	233,924,069	24,242,732	16,456,898
New Jersey.....	19	27,117,770	3,231,983	1,468,775
Pennsylvania.....	79	129,946,426	13,619,985	8,742,675
EAST NORTH CENTRAL.....	157	319,188,124	31,059,555	22,921,769
Ohio.....	48	82,498,701	8,874,980	3,661,675
Indiana.....	15	22,990,173	2,411,445	1,748,570
Illinois.....	40	104,106,017	8,622,494	10,016,794
Michigan.....	30	80,312,981	8,462,726	5,431,421
Wisconsin.....	24	29,681,262	2,687,940	2,073,309
WEST NORTH CENTRAL.....	122	175,242,048	20,976,470	12,400,352
Minnesota.....	23	26,549,547	3,021,942	1,595,181
Iowa.....	29	23,296,637	2,768,377	2,641,623
Missouri.....	23	73,187,371	8,714,007	4,366,775
North Dakota.....	8	16,932,337	860,616	420,114
South Dakota.....	7	2,275,344	323,896	179,997
Nebraska.....	22	27,134,815	4,545,469	2,197,006
Kansas.....	10	5,866,697	742,169	499,756
SOUTH ATLANTIC.....	60	68,229,438	6,690,602	5,293,377
Delaware.....	1	324,810	61,188	32,705
Maryland.....	3	4,049,396	712,201	325,804
District of Columbia.....	8	27,775,607	1,292,247	942,195
Virginia.....	6	1,514,981	283,424	104,682
West Virginia.....	11	6,846,080	859,320	439,771
North Carolina.....	12	7,799,493	1,121,798	1,211,088
South Carolina.....	1	145,418	34,122	12,728
Georgia.....	10	12,261,192	1,217,755	906,837
Florida.....	8	7,615,401	1,108,687	1,257,266
EAST SOUTH CENTRAL.....	20	14,014,477	1,559,099	1,280,995
Kentucky.....	6	481,888	90,043	39,411
Tennessee.....	10	12,163,888	1,180,450	1,020,232
Alabama.....	3	872,464	199,258	107,350
Mississippi.....	2	490,737	82,655	54,000
WEST SOUTH CENTRAL.....	60	41,133,008	3,576,200	3,850,942
Arkansas.....	2	127,115	16,536	-----
Louisiana.....	9	5,880,885	888,371	429,247
Oklahoma.....	18	11,835,667	750,872	802,422
Texas.....	21	23,832,961	1,011,421	2,562,273
MOUNTAIN.....	31	28,332,919	2,700,500	1,972,121
Montana.....	5	2,813,812	271,652	124,021
Idaho.....	1	145,521	45,727	39,793
Wyoming.....	1	260,843	57,190	42,280
Colorado.....	12	13,158,207	1,552,628	1,157,697
New Mexico.....	4	799,153	82,488	65,071
Arizona.....	2	1,491,689	166,923	84,529
Utah.....	5	10,050,922	510,145	449,271
Nevada.....	2	112,892	13,747	8,060
PACIFIC.....	62	104,832,685	10,392,493	7,959,838
Washington.....	12	13,092,413	1,616,061	1,079,554
Oregon.....	7	6,410,639	490,069	444,883
California.....	43	85,329,633	7,976,444	6,435,901

The tables shown above involve some duplication in number of establishments, sales, and expenses, because of the necessity for including all types of distributors regardless of the functions performed or the duplication of activities. Also they include the straight wholesalers, which perform no retail functions, as well as those serving in a dual capacity as both wholesalers and retailers. Time and space do not allow the segregation of these different kinds of wholesale functionaries in a manner which will permit a separate discussion of the operating and expense problems of each. The State reports and the United States summary contain sufficiently detailed analyses to provide much of the necessary data concerning each of these various types of distributors.

This study of wholesale operators will here be confined to those establishments which are engaged in both wholesaling and retailing. For this purpose a special hand tabulation has been made of the data reported by these wholesaler-retailer

concerns, many of which, as explained in chapter I, were classified as wholesalers merely because more than 50 percent of their sales were reported as sales to dealers. They will be referred to either as wholesaler-retailers or as distributor-dealers.

**Number of wholesaler-retailer establishments and sales.**—There were 500 distributor-dealers in operation in 1929 and their combined annual sales aggregated \$857,751,336 which represents about 70 percent of the sales of all types of wholesale distributors of motor vehicles. The majority of these concerns are located in the cities of more than 30,000 population. In fact there are so few in the cities of less than 30,000 population that no separate State data can be shown (as was done in the case of retailers, see table 1A) because to do so would disclose the operations of individual establishments. The number of wholesalers acting in a dual capacity varies materially in different sections of the country and between States, the variation apparently having little connection with the variation in population. There are 5 States in which there are no wholesalers which are also selling at retail. These States are Arkansas, Mississippi, Nevada, South Carolina, and Wyoming. Also, there are 10 other States in each of which there are less than 3 distributor-dealers, necessitating the elimination of separate State figures. These States are Alabama, Arizona, Delaware, Idaho, Kentucky, Maryland, Montana, New Hampshire, Rhode Island, and Vermont. The figures for these States are included in the totals shown in table 5.

**Expenses of distributor-dealers.**—The average total operating expenses of these distributor-dealers is \$11.45 for each \$100 of sales. This average is nearly \$6 per \$100 of sales lower than the average reported by retail dealers which amounts to \$17.71 for automobile salesrooms. Of course, this difference in average operating costs does not mean that the expense incurred by these wholesalers in making sales at retail are proportionately lower than that of the retail dealer. The lower costs of making wholesale sales bring about the greatly reduced total operating expense reported.

The following brief table of operating expenses of distributor-dealers supplies national ratios for consideration with the expense ratios of retailers. Table 5 provides the same information by States. This table which appears on page 62 should be used for any given area rather than the national averages.

#### OPERATING EXPENSE OF WHOLESALER-RETAILERS

CLASSIFICATIONS	Amounts and averages
Number of establishments.....	500
Net sales.....	\$857,751,336.00
Total operating expenses.....	98,245,093.00
Total operating expenses per \$100 of sales.....	11.45
Total wage cost.....	48,676,629.00
Total wage cost per \$100 of sales.....	5.67
Reported pay roll.....	48,475,725.00
Estimated value of proprietors' services <sup>1</sup> .....	200,004.00
All other expenses (includes rent) <sup>2</sup> .....	40,569,364.00
Rental cost per \$100 of sales in leased premises <sup>2</sup> .....	.98

<sup>1</sup> Proprietors compensation is computed at the same rate paid to full-time employees in the same kind of business.

<sup>2</sup> In computing average rental cost, only those establishments operating in wholly leased premises were used.

**Number of establishments and sales by size of business.**—These motor-vehicle establishments, are for the most part, large-volume businesses. Nearly 46 percent of these concerns had annual sales of more than a million dollars each in 1929. The sales of these 229 large-volume concerns represents more than 86 percent of the total sales of distributor-dealers, and average more than \$3,000,000 each. The 111 establishments comprising the group with annual sales ranging from \$500,000 to \$1,000,000 account for an additional 9 percent of the total sales in 22 percent of the salesrooms. Together these two groups account for 95 percent of the business in 68 percent of the establishments.

In contrast there is only one establishment in the group with sales of less than \$5,000 and that is a part-year business. Sales of this concern cannot be shown. A total of 18 establishments reported sales of less than \$30,000 annually and only 27 had yearly sales of less than \$50,000.

The following table provides a brief analysis of the number of establishments and annual sales for each of 10 size-of-business groups. The figures shown are national totals only. For State totals see table 7 of this report.

NUMBER OF AUTOMOBILE WHOLESALER-RETAILERS AND SALES BY SIZE OF BUSINESS

SIZE-OF-BUSINESS GROUPS	Estab-lish-ments	Percent	Sales	Percent	Average sales per establish-ment
Total, all wholesalers-retailers <sup>1</sup> -----	500	100. 00	\$857, 751, 336	100. 00	\$1, 715, 500
Establishments with sales of more than \$50,000.....	473	94. 60	857, 074, 017	99. 02	1, 811, 000
Establishments with sales of less than \$50,000.....	27	5. 40	677, 319	. 08	25, 000
Establishments with sales of more than \$1,000,000.....	229	45. 80	742, 755, 451	86. 59	3, 243, 500
From \$500,000 to \$1,000,000.....	111	22. 20	81, 227, 210	9. 47	731, 300
From \$300,000 to \$500,000.....	48	9. 60	18, 457, 930	2. 15	384, 500
From \$200,000 to \$300,000.....	34	6. 80	5, 496, 511	. 99	249, 900
From \$100,000 to \$200,000.....	30	6. 00	4, 048, 063	. 54	155, 000
From \$50,000 to \$100,000.....	21	4. 20	1, 488, 252	. 18	70, 000
Establishments with sales of:					
From \$30,000 to \$50,000.....	9	1. 80	355, 292	. 04	39, 500
From \$20,000 to \$30,000.....	10	2. 00	244, 279	. 03	24, 400
From \$10,000 to \$20,000.....	4	. 80	53, 234	. 01	13, 300
Less than \$10,000.....	4	. 80	24, 514	-----	6, 000

<sup>1</sup> It should at all times be borne in mind that the establishments and sales shown apply only to wholesalers who are also retailers and does not include either retail dealers or other types of wholesale distributors.

**Credit sales of distributor-dealers.**—Credit sales amounting to \$215,225,199 were reported by concerns which are primarily wholesalers but also sell at retail. This sum, which represents over 30 percent of the sales of these distributor-dealers, cannot by any means be construed to constitute the total amount of credit extended by all wholesalers-retailers. Out of the total of 500 establishments classified as wholesaler-retailers only 400 reported concerning their credit activities. The remaining 100 either reported that no record had been kept of the amount of credit sales, or ignored the credit inquiry without furnishing an explanation.

The credit question, in its relation to motor vehicle sales, is further complicated by the more or less general confusion existing among the officers of motor-vehicle establishments as to what should be classed as credit. Many looked upon installment transactions in which the customers notes were handled through finance companies as cash sales because they received immediate payment in full for the cars sold. Others properly considered them as credit transactions and so reported. Still others reported the customary initial cash payments as a part of their credit sales. It is not uncommon practice for these concerns to consider open account credit as cash and the schedules furnished suggest that many have failed to report the 30 and 60 day accounts so often carried on sales of parts and accessories, and for service and repairs.

This condition has been found in nearly all parts of the country and in all kinds of motor-vehicle establishments regardless of whether they are wholesaler-retailers or retail dealers. The discussion of credit extended by the retail dealers will be referred to in more detail in section 2 of this chapter.

The following table shows by States the number of establishments which reported on their credit activities, the amount of their credit sales and the proportion of credit to total sales of reporting concerns. The wide variations between States clearly reflect the irregularities in reporting.

## CREDIT REPORTED BY WHOLESALER—RETAILERS

DIVISIONS AND STATES	Number of establishments reporting credit sales	Total sales of establishments reporting credit sales	Credit sales of establishments reporting credit sales	Percent of total
United States.....	1 400	\$689,881,477	\$215,225,199	30.75
<b>NEW ENGLAND.....</b>	<b>30</b>	<b>44,872,411</b>	<b>10,889,072</b>	<b>24.27</b>
Maine.....	5	5,005,708	1,427,701	28.52
New Hampshire.....	2	(x)	(x)	(x)
Vermont.....	2	(x)	(x)	(x)
Massachusetts.....	12	29,305,924	6,300,583	21.49
Rhode Island.....	2	(x)	(x)	(x)
Connecticut.....	7	6,799,203	2,241,761	32.97
<b>MIDDLE ATLANTIC.....</b>	<b>110</b>	<b>231,430,856</b>	<b>62,344,404</b>	<b>26.93</b>
New York.....	54	127,061,574	38,166,015	30.03
New Jersey.....	10	17,625,706	3,408,575	19.33
Pennsylvania.....	46	86,743,576	20,769,904	23.94
<b>EAST NORTH-CENTRAL.....</b>	<b>94</b>	<b>219,167,253</b>	<b>65,104,197</b>	<b>29.70</b>
Ohio.....	29	63,275,401	18,439,669	21.24
Indiana.....	9	14,351,888	5,103,711	35.59
Illinois.....	21	57,387,297	24,145,248	42.07
Michigan.....	19	63,761,078	18,875,191	29.60
Wisconsin.....	16	20,391,609	3,540,388	17.36
<b>WEST NORTH-CENTRAL.....</b>	<b>70</b>	<b>79,594,084</b>	<b>36,834,080</b>	<b>46.27</b>
Minnesota.....	10	15,969,407	3,988,078	25.00
Iowa.....	24	21,640,126	13,392,952	61.88
Missouri.....	10	14,748,940	7,088,814	48.06
North Dakota.....	5	2,846,063	2,344,607	82.39
South Dakota.....	5	1,917,412	448,666	23.39
Nebraska.....	14	19,539,370	8,980,242	45.95
Kansas.....	2	2,992,176	590,730	19.74
<b>SOUTH ATLANTIC.....</b>	<b>33</b>	<b>28,001,456</b>	<b>11,720,845</b>	<b>41.89</b>
Delaware.....	1	(x)	(x)	(x)
Maryland.....	4	8,214,880	3,317,315	40.38
District of Columbia.....	4	1,129,006	622,113	55.10
Virginia.....	8	5,304,087	1,146,767	21.61
West Virginia.....	7	4,580,358	1,201,395	26.22
North Carolina.....	4	3,781,447	1,808,402	47.69
South Carolina.....	5	4,107,200	3,101,853	75.52
Georgia.....	7	10,239,352	3,571,340	34.87
Florida.....	6	6,994,107	3,334,509	33.30
<b>EAST SOUTH-CENTRAL.....</b>	<b>1</b>	<b>(x)</b>	<b>(x)</b>	<b>(x)</b>
Kentucky.....	7	10,239,352	3,571,340	34.87
Tennessee.....	6	6,994,107	3,334,509	33.30
Alabama.....	1	(x)	(x)	(x)
Mississippi.....	1	(x)	(x)	(x)
<b>WEST SOUTH-CENTRAL.....</b>	<b>15</b>	<b>18,008,040</b>	<b>5,365,161</b>	<b>29.90</b>
Arkansas.....	4	4,359,609	1,235,781	28.34
Louisiana.....	2	6,435,904	2,449,055	38.05
Oklahoma.....	4	7,212,407	1,710,325	23.71
Texas.....	9	7,212,407	1,710,325	23.71
<b>MOUNTAIN.....</b>	<b>16</b>	<b>12,339,061</b>	<b>3,719,740</b>	<b>30.14</b>
Montana.....	2	(x)	(x)	(x)
Idaho.....	1	(x)	(x)	(x)
Wyoming.....	1	(x)	(x)	(x)
Colorado.....	8	8,676,831	2,534,692	29.21
New Mexico.....	3	739,198	253,092	34.36
Arizona.....	2	(x)	(x)	(x)
Utah.....	2	(x)	(x)	(x)
Nevada.....	2	(x)	(x)	(x)
<b>PACIFIC.....</b>	<b>25</b>	<b>56,228,064</b>	<b>15,637,252</b>	<b>27.81</b>
Washington.....	7	9,807,227	3,051,858	31.11
Oregon.....	2	1,799,835	365,026	20.31
California.....	16	44,621,002	12,219,768	27.38

<sup>1</sup> The difference between the number of establishments included in this table and the number shown in table 5 indicates those which failed to furnish credit information. This failure to report does not warrant the conclusion that all transactions were for cash.

**Section 2.—Motor-Vehicle Dealers (retailers)**

**Description.**—The motor-vehicle dealers described in this section are those engaged primarily in the sale of automobiles and other motor vehicles at retail. They are, of course, outlets for other kinds of merchandise and in most cases they do sell other commodities and provide facilities for service, but as their principal activity is the sale of motor vehicles they are classified as motor-vehicle dealers.

**Number of establishments and sales.**—There were 43,894 retail motor-vehicle dealers operating in the United States in 1929. The combined annual sales of these dealers amounted to \$6,294,148,693 in the same year. This total is made up of two kinds of establishments, namely, automobile salesrooms and used-car dealers. As more fully explained in the definitions supplied in chapter I, the automobile salesrooms are primarily for the sale of new cars, and incidentally for the sale of used cars traded in on new-car purchases. Used-car dealers are those engaged primarily in the sale of second-hand motor vehicles. There were 40,797 automobile salesrooms with sales aggregating \$6,153,217,000 and 3,097 used-car dealers with total sales amounting to \$140,932,000.

**How the size of city affects sales.**—The cities of more than 30,000 population contain only about 25 percent of the motor vehicle establishments of the country but these 10,980 dealers do more than 50 percent of the business. The population of the 30,000 and over cities constitutes about 39 percent of the total population of the United States. The cities with population ranging from 10,000 to 30,000 contain about 15 percent of the motor-vehicle establishments and do 16 percent of the retail automobile business of the country. The 10,000 to 30,000 population group contains 8.77 percent of the total population of the country. More than 60 percent of the motor-vehicle dealers are located in places of less than 10,000 population. These 26,470 dealers account for only 33.53 percent of the business. The residents of this under 10,000 group constitutes 52.48 percent of the country's total population. These average ratios vary materially between States, depending upon the number of cities within their boundaries.

Table 1 of this report, showing establishments and annual sales, provides the basis for comparisons between States in each of the three size-of-city groups.

**Geographic distribution of motor-vehicle dealers and sales.**—More than 51 percent of the sales of automobile salesrooms (retailers of new cars and trade ins) were made in establishments located in eight States. These States arranged in the order of their sales importance are New York, California, Pennsylvania, Illinois, Ohio, Michigan, Texas, and Massachusetts. In the case of used-car dealers, those located in the same eight States account for more than 68 percent of the sales of all used-car establishments in the country. These States contain 10 of the cities of more than 500,000 population and 44 of the 93 cities of more than 100,000 population. Nearly 48 percent of the entire population of the United States are inhabitants of these same eight States.

The following table, showing separate arrangements of the States in the order of their sales importance, contain some interesting examples of peculiarities in geographic distribution when arrangement is based upon sales alone and other factors and other kinds of business are not taken into consideration. The population ranking column, indicating the relative position of each State, is provided for the purpose of comparison.

## SALES OF RETAIL MOTOR-VEHICLE DEALERS BY STATES

[Arranged in order of sales importance]

STATE	Pop-ulation ranking	Sales of auto salesrooms	Cumulative percent of U.S. total	STATE	Pop-ulation ranking	Sales of used-car establishments	Cumulative percent of U.S. total
United States total.		\$8,163,216,567	100.00	United States total.		\$140,932,128	100.00
1 New York	1	617,273,867	10.03	1 California	6	28,164,647	19.88
2 California	6	455,604,065	17.43	2 New York	1	16,118,075	31.42
3 Pennsylvania	2	417,775,767	24.22	3 Illinois	3	13,612,490	41.08
4 Illinois	3	391,670,738	30.59	4 Michigan	7	12,454,874	49.02
5 Ohio	4	378,714,075	36.74	5 Ohio	4	10,567,591	57.42
6 Michigan	7	329,048,159	42.09	6 Massachusetts	8	6,185,026	61.80
7 Texas	5	328,029,473	47.42	7 Texas	5	5,980,497	69.05
8 Massachusetts	8	235,352,211	51.25	8 Missouri	10	4,956,155	69.56
9 New Jersey	9	210,703,270	54.67	9 Pennsylvania	2	4,451,462	72.72
10 Indiana	11	175,177,067	57.52	10 Wisconsin	13	3,233,064	75.92
11 Missouri	10	170,140,565	60.28	11 Indiana	11	3,201,929	77.29
12 Wisconsin	13	160,701,063	62.90	12 New Jersey	9	3,200,890	79.56
13 Oklahoma	21	136,522,929	65.11	13 Iowa	19	2,825,294	81.67
14 Iowa	10	135,953,607	67.32	14 Oklahoma	21	2,681,925	83.47
15 Minnesota	18	129,826,244	69.43	15 Connecticut	20	2,425,283	85.19
16 Kansas	24	118,461,489	71.36	16 Florida	31	2,042,786	86.94
17 Washington	30	111,601,599	73.17	17 Washington	30	1,981,846	88.04
18 Connecticut	29	95,585,653	74.72	18 Maryland	28	1,747,958	89.25
19 Tennessee	16	87,885,881	76.15	19 Nebraska	32	1,736,558	90.51
20 North Carolina	12	85,382,725	77.54	20 Rhode Island	37	1,629,688	91.67
21 Nebraska	32	85,325,543	78.92	21 Colorado	33	1,561,475	92.93
22 Georgia	14	84,500,560	80.30	22 Kansas	24	1,335,496	93.58
23 Virginia	20	78,364,754	81.57	23 District of Colum- bin	41	1,099,152	94.36
24 Kentucky	17	75,142,835	82.79	24 Minnesota	18	890,225	94.99
25 Colorado	33	70,944,502	83.95	25 Oregon	34	812,453	95.57
26 Alabama	15	69,379,064	85.07	26 Maine	35	768,865	96.12
27 Oregon	34	68,392,746	86.19	27 Georgia	14	625,409	96.55
28 Florida	31	65,208,467	87.25	28 Tennessee	16	561,411	96.96
29 Maryland	28	64,595,340	88.30	29 Alabama	15	549,750	97.35
30 Mississippi	23	62,532,454	89.31	30 Kentucky	17	473,254	97.69
31 Louisiana	22	62,349,131	90.33	31 Louisiana	22	428,802	98.24
32 Arkansas	25	59,587,124	91.30	32 West Virginia	27	394,380	98.45
33 West Virginia	27	54,744,997	92.18	33 North Carolina	12	390,015	98.66
34 Maine	35	46,630,954	92.94	34 Utah	40	299,015	98.85
35 South Carolina	26	41,416,509	93.62	35 South Carolina	26	285,384	99.04
36 South Dakota	36	38,810,416	94.24	36 New Hampshire	42	269,323	99.21
37 Montana	39	36,603,784	94.84	37 Arizona	44	250,738	99.37
38 Rhode Island	37	30,305,335	95.43	38 Arkansas	25	226,137	99.61
39 North Dakota	38	36,060,989	96.01	39 Virginia	20	195,653	99.61
40 District of Colum- bin	41	33,964,050	96.57	40 Montana	39	122,925	99.60
41 Arizona	44	33,448,449	97.13	41 Vermont	46	113,085	99.68
42 Utah	40	32,078,053	97.64	42 Wyoming	48	100,628	99.75
43 Idaho	43	29,514,990	98.12	43 Mississippi	23	81,100	99.81
44 New Hampshire	42	29,171,319	98.59	44 North Dakota	38	69,150	99.88
45 Vermont	46	25,889,017	99.01	45 New Mexico	45	66,702	99.91
46 New Mexico	45	19,448,329	99.33	46 Delaware	47	50,543	99.94
47 Wyoming	48	18,714,682	99.63	47 Idaho	43	34,966	99.97
48 Delaware	47	13,299,335	99.85	48 South Dakota	36	27,993	99.99
49 Nevada	49	9,505,696	100.00	49 Nevada	40	7,448	100.00

This table clearly indicates that each of these two kinds of automobile dealers have a direct relation to the total sales of the other and therefore must be considered together. Then, too, there is another kind of automobile dealer which has an important effect on the sales of the more commonly recognized salesrooms and used car dealers. This third classification is the automobile dealer with farm implements and machinery. More than 37 percent of the total sales of these dealers were in passenger automobiles and trucks. When considered in connection with the other two kinds of automobile establishments this comparatively small group of dealers explain many of the irregularities in the relationship between sales and population. The following table showing the sales of the automobile dealers with farm implements and machinery is shown in order that their sales may be associated with those shown in the preceding table.

SALES OF AUTOMOBILE DEALERS WITH FARM IMPLEMENTS AND MACHINERY, BY STATES

[Arranged in order of sales importance]

STATES	Pop-ulation ranking	Sales of auto and farm implement dealers	Cumulative percent of U. S. total	STATES	Pop-ulation ranking	Sales of auto and farm implement dealers	Cumulative percent of U. S. total
United States total		\$119,383,249	100.00	25 Virginia	20	826,199	94.34
1 Kansas	24	11,073,186	9.77	26 Maine	35	702,033	94.96
2 North Dakota	38	9,267,602	17.94	27 Vermont	40	605,451	95.55
3 Minnesota	18	8,122,620	25.11	28 Alabama	18	583,313	96.06
4 Wisconsin	13	7,722,065	31.92	29 Wyoming	48	550,801	96.55
5 Iowa	19	7,646,599	38.67	30 West Virginia	27	519,417	97.01
6 Illinois	3	7,180,058	45.01	31 Oregon	34	476,455	97.43
7 South Dakota	36	6,204,277	56.43	32 South Carolina	26	457,788	97.83
8 Montana	39	6,098,991	55.83	33 Louisiana	22	459,703	98.23
9 Nebraska	32	5,495,656	60.68	34 New Jersey	9	382,607	98.57
10 Ohio	4	5,240,953	65.30	35 Florida	31	344,292	98.87
11 California	6	4,896,519	69.62	36 Arizona	44	322,321	99.16
12 Texas	5	4,892,158	73.06	37 Delaware	47	202,957	99.33
13 New York	1	3,941,012	75.65	38 Kentucky	17	191,500	99.50
14 Michigan	7	2,504,984	77.86	39 New Mexico	45	180,953	99.66
15 Oklahoma	21	2,308,887	79.90	40 Georgia	14	115,975	99.77
16 Missouri	10	2,304,093	81.93	41 Tennessee	16	96,000	99.85
17 Washington	30	2,214,253	83.88	42 New Hampshire	42	95,201	99.93
18 Pennsylvania	2	1,976,090	85.62	43 Arkansas	25	75,000	100.00
19 Indiana	11	1,958,852	87.35	44 Connecticut	29		
20 Mississippi	23	1,841,676	88.98	45 District of Columbia	41		
21 Colorado	33	1,613,305	90.40	46 Massachusetts	8		
22 Maryland	28	1,366,587	91.60	47 Nevada	49		
23 North Carolina	12	1,220,193	92.68	48 Rhode Island	37		
24 Idaho	43	1,058,237	93.61	49 Utah	40		

Per capita sales of the three kinds of motor-vehicle dealers, taken separately or collectively, do not provide a completely adequate measure of motor-vehicle sales. There are a number of reasons for this, two of which are particularly obvious. One is wide variation in prices, which is an important consideration. In low-income areas the cheaper cars predominate and in the higher income communities higher-priced cars are in more demand. This has an important effect on total sales reported. Another factor affecting per capita sales ratios is the fact that sales reported by these three kinds of automobile dealers do not represent sales of motor cars only, but include, in addition, sales of a variety of other merchandise and service.

Population is, however, a reasonably accurate index of the number of motor vehicles in operation. A comparison between population and motor-vehicle registrations shows a remarkably close relationship and better still it eliminates the factor of price, which so influences the dollar sales figures. The following table contains the ranking by States for both population and motor-vehicle registrations. The relationship is shown on the basis of the States' ranking, which provides a simple method of comparison.

## COMPARISON OF POPULATION AND MOTOR-VEHICLE REGISTRATIONS, BY STATES

STATES	RANKING		STATES	RANKING	
	Pop-ulation	Reg-istrations		Pop-ulation	Reg-istrations
Maine.....	35	37	West Virginia.....	27	31
New Hampshire.....	42	44	North Carolina.....	12	17
Vermont.....	46	45	South Carolina.....	26	34
Massachusetts.....	8	10	Georgia.....	14	22
Rhode Island.....	37	40	Florida.....	31	23
Connecticut.....	29	25			
New York.....	1	1	Kentucky.....	17	24
New Jersey.....	9	9	Tennessee.....	16	21
Pennsylvania.....	2	4	Alabama.....	15	23
			Mississippi.....	23	32
Ohio.....	4	3	Arkansas.....	25	33
Indiana.....	11	8	Louisiana.....	22	20
Illinois.....	3	5	Oklahoma.....	21	16
Michigan.....	7	6	Texas.....	5	7
Wisconsin.....	13	11			
Minnesota.....	18	14	Montana.....	39	39
Iowa.....	19	12	Idaho.....	43	41
Missouri.....	10	13	Wyoming.....	48	47
North Dakota.....	38	36	Colorado.....	33	27
South Dakota.....	36	35	New Mexico.....	45	40
Nebraska.....	32	19	Arizona.....	44	48
Kansas.....	24	15	Utah.....	40	42
			Nevada.....	49	49
Delaware.....	47	48	Washington.....	30	18
Maryland.....	28	28	Oregon.....	34	30
District of Columbia.....	41	38	California.....	6	2
Virginia.....	20	20			

**Position index of motor-vehicle establishments.**—The use of sales as a measure of the relative buying power of a community is particularly valuable when used in relation to the total sales of the State or the United States. This method has been described as the position index. The comparison of the sales ratio for a given State to the United States sales ratio expresses the relative position of that kind of dealer in that State. Similarly, a comparison of a city may be made with the State ratio in the same manner. This method might be defined as an index of the relative importance of the sales of a given kind of business in different areas or communities.

For example, in New York State the sales of motor-vehicle dealers (automobile salesrooms and used-car dealers combined) constitute 8.96 percent of the total retail sales in that State. The sales of similar establishments for the United States as a whole averages 12.82 percent. Thus the position index for motor-vehicle dealers in New York is 70 (that is, 8.96 is 70 percent of 12.82). Table 2 of this report contains the position index of motor-vehicle dealers for each of the 48 States and the District of Columbia. This table also contains similar data for automobile dealers with farm implements and machinery, for accessory, tire and battery dealers, for garages and repair shops, and for filling stations.

**Size of establishments.**—Retail motor-vehicle establishments are predominately large volume businesses. Only 25 percent had sales of less than \$30,000 in 1929 and only 38 percent had annual sales of less than \$50,000. Nearly 40 percent had sales in excess of \$100,000 in the same year. About half of the total business of the country was done in 11 percent of the establishments. The following table shows comparisons for establishments and sales for motor-vehicle dealers (automobile salesrooms and used-car dealers combined). Table 6 shows separate figures, not only for the two kinds of retail dealers included in this text table but also for automobile dealers with farm implements and machinery. A similar compilation, prepared for wholesale establishments, also engaged in retailing a part of their total output, will be found in the brief text table appearing on page 11 and also in table 7 previously referred to. These various kinds of establishments may not be combined to arrive at a total because of the duplication in sales involved in the wholesale activity. The retail table follows:

**NUMBER OF ESTABLISHMENTS AND SALES BY SIZE OF BUSINESS FOR MOTOR-VEHICLE DEALERS (NEW AND USED)**

SIZE-OF-BUSINESS GROUPS	Estab-lish-ments	Percent	Sales	Percent	Average sales per establishment
Total, all retail motor-vehicle dealers (new and used) <sup>1</sup> -----	43,804	100.00	\$6,294,155,000	100.00	\$143,400
Establishments with sales of: More than \$50,000-----	26,981	61.48	5,903,656,000	93.80	222,500
Establishments with sales of: More than \$1,000,000-----	504	1.15	842,808,000	13.39	1,672,200
From \$500,000 to \$1,000,000-----	1,691	3.85	1,156,300,000	18.37	683,800
From \$300,000 to \$500,000-----	2,861	6.52	1,088,008,000	17.29	380,300
From \$200,000 to \$300,000-----	3,616	8.24	877,540,000	13.94	242,700
From \$100,000 to \$200,000-----	8,874	20.22	1,256,065,000	19.96	141,600
From \$50,000 to \$100,000-----	9,435	21.50	682,929,000	10.85	72,400
Establishments with sales of: Less than \$50,000-----	16,913	38.52	390,499,000	6.20	23,100
Establishments with sales of: From \$30,000 to \$50,000-----	5,684	12.95	221,429,000	3.52	39,000
From \$20,000 to \$30,000-----	3,566	8.11	87,216,000	1.39	24,400
From \$10,000 to \$20,000-----	4,086	9.31	59,454,000	0.94	14,500
Under \$10,000-----	3,577	8.15	22,400,000	0.35	6,500

<sup>1</sup> Does not include automobile dealers with farm implements and machinery, nor wholesaler-retailers of automobiles and other motor vehicles. These classifications cannot be combined with the 2 kinds of dealers shown in this table.

**Operating expenses of motor-vehicle dealers.**—Retail motor-vehicle dealers operate at an average expense rate of \$17.80 per \$100 of sales.<sup>1</sup> However, this average covers both automobile salesrooms and used-car dealers. The former operate at an average of \$17.71 while the latter has an average of \$21.76 for each \$100 of sales. The operating expenses of automobile dealers with farm implements and machinery is \$16.18 per \$100 of sales.

The average of \$17.80 for motor-vehicle dealers is more than \$7 less for each \$100 than the average for all retail stores in the United States and over \$4 lower than the average of \$22.06 for the automotive group as a whole. It is \$6 higher for each \$100 of sales than the average for wholesaler-retailers, not because it costs these distributors less to retail merchandise but because of the low costs of the wholesale portion of the business. Table 3 of this report shows a comparison for each of the three kinds of retail dealers in motor vehicles and table 5 contains comparative expense figures for the wholesaler-retailers. Similar data for accessory, tire and battery dealers, for garages and repair shops, for filling stations and competitors of these dealers in automotive products are also shown in table 3.

**Employees and wages.**—Motor-vehicle dealers (new and used) engaged the services of 337,891 full-time employees, 12,161 part-time employees and 41,826 active proprietor-owners, making a total of 391,878 retail workers in 1929. The reported pay roll was more than \$10,000,000 a week or a total of \$540,793,007 for the year. To this amount must be added the wage value of proprietors' services in order to arrive at a total wage cost. For this purpose proprietors' compensation has been computed at the same rate of wage paid to full-time employees in the same kind of business. This necessary computation adds an additional \$65,416,910 to the reported pay roll, making a new total of \$606,209,917 representing total wage cost. This amount represents 9.63 percent of the total sales of these establishments. The expense table previously referred to contains additional information on employees and wages. The total of 391,878 retail workers employed in these establishments include 137,475 persons employed in service and repair operations which represents 35 percent of the total personnel. Complete retail employment and wage statistics are now available, for all kinds of business, in the United States Summary of Retail Distribution, in each of the separate State reports, and in the special economic study entitled "Employment and Wages in the Retail Industry." Copies of these reports may be secured

<sup>1</sup> Expense ratios include no return on capital invested in merchandise, fixtures and accounts, and do not of course include the cost of merchandise sold or profit.

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**Expenses by size of city.**—Expense varies directly with the size of city, all other factors being equal. It costs more to operate in a large city than in one of moderate size and more in the moderate-sized city than in a small one. This is true because so many of the individual items of expense that enter into the operating costs are more expensive in the larger cities. Rents are higher and wages are higher, in fact, nearly every item of cost increases with the size of city. This principle receives further support from this study of motor-vehicle dealers. Only one exception is noted. The total wage costs for places of less than 10,000 population are larger in relation to sales than in the 10,000 to 30,000 group. This is directly caused by the higher proportion of proprietor-owned and operated establishments in the small cities. When measured in terms of pay-roll costs, rather than in total wage costs, the three size groups follow normal order. Table 3 also contains expense data by size-of-city groups.

**Rents.**—Rents, always an important item of expense are comparatively low, the average for motor-vehicle dealers being only \$1.80 for each \$100 of sales for the entire United States. More than 64 percent of all motor-vehicle establishments were operated in leased premises and these 28,219 dealers accounted for more than 70 percent of the total sales of all motor-vehicle dealers. The average rental cost in automobile salesrooms was \$1.77 per \$100 of sales, while the average for used car dealers was nearly twice that amount or \$3.28 for each \$100 worth of merchandise sold. For complete information on rents paid in leased premises by the different kinds of dealers in automotive products and by competing stores see table 4.

**Credit extended by motor-vehicle dealers.**—Section 1 of this chapter outlines some of the difficulties encountered by the Census Bureau in attempting to present authentic and accurate credit statistics. Such information as was furnished has been tabulated and presented in State reports and in the United States summary. However, it is recognized that the data are not complete and must be used with care.

This is particularly true in the case of motor-vehicle dealers, where lack of uniformity in reporting credit sales and irregularities resulting from differences of opinion as to what constitutes credit have destroyed the possibility of securing adequate totals of the amount of credit extended.

Only 39,246 of the total of 43,894 motor-vehicle dealers, included in the retail census, reported as to their credit activities. Of these 39,246 establishments, 5,460 reported that they sold only for cash. This obviously is not the actual situation. In all probability, the credit of these dealers was handled entirely by the finance companies, and therefore was not considered as credit by the selling concerns. In addition there were 4,265 dealers reporting only 1 to 10 percent credit, 3,151 reporting from 11 to 20 percent credit and 2,916 reporting from 21 to 30 percent credit. It seems likely that such amounts represent credits carried on their own books rather than the total amount of credit extended. However, in preparing credit ratios and estimating the total amount of credit extended by concerns reporting, it is necessary to include all except those which failed to report and those which reported that all sales were made for cash.

**Credit sales as a selling factor.**—Credit sales reported by the 33,786 motor-vehicle dealers, reporting that they extended credit in varying proportions, effectively demonstrates the importance of credit as a sales inducement. The total sales of these establishments amounted to \$4,986,806,000. It is conservatively estimated that a minimum of \$2,660,346,000, which represents more than 53 percent of the total, represented credit extended by these dealers and either carried on their own books or handled through finance companies.

It is doubtful if any other one factor exerts as much influence on the customers final decision to buy as the ease with which it is possible to purchase a car or truck with a comparatively small outlay of cash. The following table, which by no means represents the total credit sales, shows the approximate proportions of cash and credit as indicated by the reporting stores. Additional data on credit are contained in table 9 appearing on pages 72 to and including page 75.

REPORTED CREDIT SALES OF MOTOR-VEHICLE DEALERS

DEGREE OF CREDIT CLASSIFICATIONS	CREDIT REPORTING DEALERS			
	Number of establishments	Total sales cash and credit	Approximate cash proportion	Approximate credit proportion
1 to 10 percent credit.....	4, 265	\$394, 175, 000	\$374, 460, 000	\$19, 709, 000
11 to 20 percent credit.....	3, 161	348, 981, 000	306, 634, 000	42, 347, 000
21 to 30 percent credit.....	2, 916	420, 187, 000	315, 140, 000	105, 047, 000
31 to 40 percent credit.....	3, 229	481, 220, 000	312, 793, 000	168, 427, 000
41 to 50 percent credit.....	3, 860	587, 375, 000	323, 055, 000	264, 320, 000
51 to 60 percent credit.....	3, 123	539, 708, 000	242, 868, 000	296, 840, 000
61 to 70 percent credit.....	3, 553	578, 756, 000	202, 565, 000	376, 191, 000
71 to 80 percent credit.....	3, 465	508, 657, 000	142, 104, 000	426, 493, 000
Over 80 percent credit.....	6, 234	1, 067, 747, 000	106, 775, 000	960, 972, 000
Total, cash and credit.....	33, 786	4, 986, 806, 000	2, 326, 460, 000	2, 660, 346, 000
Percent.....			46.65	53.35
All cash.....	5, 460	528, 774, 000		
Total reporting as to their credit activities.....	30, 246	5, 515, 580, 000		
Concerns not reporting.....	4, 648	778, 569, 000		

**Motor-vehicle chains.**—The retail census shows that in 1929 there was a total of 167 chain organizations operating automobile salesrooms selling new motor vehicles and such used cars as were traded in on new-car purchases. These chains operated 1,290 separate establishments with sales aggregating \$616,594,816 which represents approximately 10 percent of the sales of all retail automobile salesrooms in the country. In addition to the new-car salesrooms there were 6 chains operating 33 used-car establishments. The total sales of these used-car establishments amounted to \$5,116,484.

More than 63 percent of the automobile salesrooms operated by the chains are located in cities of more than 100,000 population and these 820 establishments accounted for nearly 85 percent of the total sales of all chain salesrooms. About 13 percent of the chain establishments are located in the 30,000 to 100,000 cities, 10 percent are in the 10,000 to 30,000 cities, and 14 percent are located in the places of less than 10,000 population.

The following table provides expense data for these 1,290 chain salesrooms and for the 33 used-car establishments. Complete chain-store data are available in the merchandising series report (distribution No. R-71) entitled "Motor Vehicle Dealer Chains", obtainable from the Superintendent of Documents at a cost of 5 cents each.

## CENSUS OF DISTRIBUTION

## MOTOR VEHICLE DEALER CHAINS

	Number and sales
Net sales (1920).....	\$010, 694, 816
Number of chains.....	187
Units operated by local chains.....	737
Units operated by sectional chains.....	218
Units operated by national chains.....	337
Operating expenses, total.....	\$118, 967, 371
Per \$100 of sales.....	\$19. 20
Pay roll—total.....	\$64, 005, 720
Per \$100 of sales.....	\$10. 38
Other operating expenses, including rent.....	\$54, 961, 651
Per \$100 of sales.....	\$8. 91
Rent in 1,000 leased premises, per \$100 of sales in such leased premises (included above).....	\$2. 11
Stocks on hand, end of year at cost.....	\$73, 328, 806
EMPLOYMENT DATA	
Full-time employees, total.....	30, 978
Men.....	27, 574
Women.....	3, 404
Total pay roll.....	\$68, 800, 089
Part-time employees, total.....	266
Men.....	236
Women.....	30
Total pay roll.....	\$205, 631

## USED-CAR CHAINS

	Number and sales
Number of chains (all local).....	6
Number of units operated.....	33
Total net sales (1920).....	\$5, 116, 484
Stocks on hand, end of year, at cost.....	\$1, 045, 225
Expenses: <sup>1</sup>	
Total operating expenses (per \$100 of sales) (Rent in 20 leased premises, included above, amounts to \$2.75 per \$100 of sales in such leased premises).....	\$20. 74
Total number of employees (9 part-timers included).....	346
Total pay roll (part-time proportion, \$4,805).....	\$528, 325
Total operating expenses, except pay roll.....	\$532, 619

<sup>1</sup> This computation of expenses includes no return on capital invested in merchandise, fixtures, or acc counts. Expenses do not include, of course, the cost of merchandise sold, nor profit.

## CHAPTER III.—ACCESSORY, TIRE, AND BATTERY DEALERS— GARAGES AND REPAIR SHOPS

**Description of the business.**—The accessory, tire, and battery dealers described in this chapter are dealers whose principal activities are the sale of automotive equipment at retail. These dealers may and usually do sell other kinds of merchandise but in comparatively insignificant proportions. Other kinds of establishments also sell the same kinds of merchandise but unless they deal principally in automotive equipment they are not classified as accessory, tire, and battery dealers.

Also included in this chapter are the garages and repair shops. A large part of the income of these establishments is derived from repairs, installations, and other forms of service. However, accessories, tires and tubes, and batteries are also sold in considerable quantities, and, consequently, these concerns which are so largely service organizations must be associated and discussed in this part of the report.

**Number of stores and shops.**—There are seven kinds of stores, shops, and garages included under this general heading. The largest in number of establishments is the garages, of which there are 60,627. There are 8,142 tire shops, 7,762 accessory stores, and 6,409 battery and ignition shops (including brake repair shops). Garages also report the highest total sales of any of the seven individual classifications in this group. Their sales amount to \$693,063,270. Accessory stores are second in volume of sales with \$257,742,856, while the tire shops are third with annual sales of \$247,314,087.

Other kinds of business in this grouping are shown in the following summary of stores and sales:

### ACCESSORY, TIRE, AND BATTERY DEALERS—GARAGES AND REPAIR SHOPS

KIND OF BUSINESS	Number of establishments	Total sales
Total.....	89,106	\$1,384,295,797
Accessories, tires, and batteries.....	22,313	599,295,161
Accessory stores with tires and batteries.....	7,762	257,742,856
Battery and ignition shops—brake repair shops.....	6,409	94,233,218
Tire shops (including tire repairs).....	8,142	247,314,087
Garages and repair shops.....	66,793	785,000,636
Body, fender, and paint shops.....	3,379	48,108,105
Garages (repair and storage, gas and oil, and accessories).....	60,627	693,063,270
Parking stations, parking garages and lots.....	2,059	39,261,738
Radiator shops (including repairs).....	728	6,500,523

In addition to these establishments, the motor-vehicle dealers covered in chapter II, and the filling stations which are separately discussed in chapter IV, there are three other kinds of stores in which the sales of automotive accessories, tires,

### OTHER STORES SELLING ACCESSORIES, TIRES, AND BATTERIES <sup>1</sup>

KIND OF BUSINESS	Number of establishments	Total sales <sup>2</sup>	Sales of automotive products
Department stores without food departments.....	3,730	\$2,063,082,608	\$68,876,523
Mail-order general merchandise houses.....	31	447,023,641	24,513,997
General merchandise stores without food departments.....	9,849	363,887,420	18,445,247

<sup>1</sup> Other stores, such as hardware stores, furniture stores, electrical shops, etc., frequently sell accessories, tires, and batteries. However, their total sales volume in merchandise was relatively unimportant in 1929 and therefore they are not included in this discussion, but their sales of automotive products are separately shown in commodity table 11.

<sup>2</sup> This column represents total sales, not sales of automotive accessories, tires, and batteries. For commodity sales of these stores see column marked "Sales of automotive products."

and batteries are sufficiently large to warrant including in this report. There are 3,730 department stores, 31 mail-order general merchandise houses and 9,849 general merchandise stores which sell this kind of merchandise in addition to their more regular lines. Following is a brief table covering these three kinds of stores. More detailed data will be supplied later in the report.

Garages reported the largest sales volume of any of the seven classifications included in this group. More than 50 percent of the total sales of all accessory, tire, and battery dealers, and garages and repair shops were reported by the garages. It is of interest to note that only about 46 percent of the sales of garages consists of repairs and service and storage. The remaining 54 percent represents sales of merchandise. The second highest classification, in volume of sales, is the accessory stores, closely followed by the tire shops. These three kinds of establishments, which were highest in volume of sales, account for more than 86 percent of the aggregate sales of the seven kinds of dealers.

Battery and ignition shops are fourth in sales and account for more than 50 percent of the remaining sales of the group.

**How the size of city affects sales.**—The cities of more than 30,000 population contain more than 54 percent of the accessory, tire, and battery dealers of the country. These 12,169 stores and shops account for over 68 percent of the aggregate sales of this classification. Only about 32 percent of the garages and repair shops are located in the cities of more than 30,000 population. However, these 21,188 establishments do more than 45 percent of the business of all garages and repair shops in the country. These 30,000-and-over cities contain about 39 percent of the total population of the United States.

The proportion of establishments and sales in the cities of over 30,000 vary materially between States, depending upon the number of cities and the proportion of the total population of the State located in the cities. Table 1 provides necessary data for comparison between States.

**Average sales by size-of-city groups.**—The sales of these establishments vary materially in the various size-of-city groups. The average sales for all accessory, tire, and battery shops is \$26,859 and for garages and repair shops is \$11,754. Receipts from repairs and service are included in these sales averages and in the case of garages and repair shops constitute an important part of the sales volume reported. This average for the accessory, tire, and battery dealers located in the over 30,000 cities is \$33,374, or more than 25 percent greater than the average for the United States. The average for the cities from 10,000 to 30,000 population is \$25,723 which closely parallels the United States average. The sales average is \$14,291 for those dealers located in the places of less than 10,000 population.

The average sales of garages and repair shops (including receipts from service and repairs) is \$16,846 in the cities of over 30,000 and is \$12,713 in the cities from 10,000 to 30,000 population, both of which are well above the average for the country as a whole. The average of only \$8,918 for the places of less than 10,000 population is 24 percent below the national average.

The following table presents in tabular form the differences found in the various size-of-city groups.

AVERAGE SALES BY SIZE-OF-CITY GROUPS FOR ACCESSORY, TIRE, AND BATTERY DEALERS—GARAGES AND REPAIR SHOPS

SIZE-OF-CITY GROUPS	AVERAGE SALES PER ESTABLISHMENT	
	Accessory, tire, and battery dealers	Garages and repair shops
United States.....	\$26, 859	\$11, 754
Over 30,000 population.....	33, 734	16, 846
10,000 to 30,000 population.....	25, 723	12, 713
Under 10,000 population.....	14, 291	8, 028

**Geographic distribution of stores and sales.**—More than 43 percent of the total sales of accessory, tire, and battery dealers were made in establishments located in the Middle Atlantic States centering on New York City and the East North Central Division containing the metropolitan cities of Chicago, Cleveland, and Detroit. The Pacific Coast States alone accounted for more than 12 percent of the national total in these establishments. Together these three geographic divisions accounted for more than the remaining six geographic divisions.

Approximately 60 percent of the sales of all garages and repair shops in the United States were also made in the same three geographic divisions referred to in the preceding paragraph. This concentration is not unexpected for the reason that figures on motor-vehicle registration previously available show that approximately 54 percent of all registered motor cars and trucks belong to persons residing in the States located in these divisions. Following is a table showing, for each of the nine geographic divisions, the number of registered automobiles, the total number of accessory, tire, and battery dealers, and the number of garages and repair shops together with the sales of each.

MOTOR-VEHICLE REGISTRATIONS COMPARED WITH STORES AND SALES, BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISIONS	Motor-vehicle registration <sup>1</sup>	GARAGES AND REPAIR SHOPS		ACCESSORY, TIRE, AND BATTERY DEALERS	
		Stores	Sales	Stores	Sales
United States total <sup>2</sup> .....	20,501,443	66,763	\$785,000,636	22,313	\$599,295,161
New England.....	1,166,192	4,146	53,783,204	1,593	44,004,381
Middle Atlantic.....	4,828,874	13,276	189,924,097	4,839	128,579,138
East North Central.....	6,437,021	12,681	149,771,709	5,840	149,223,764
West North Central.....	3,663,223	9,251	90,708,837	3,056	66,991,156
South Atlantic.....	2,602,134	6,773	63,417,733	1,615	47,343,537
East South Central.....	1,230,823	3,884	34,496,987	666	24,381,447
West South Central.....	2,432,894	6,940	72,799,012	1,563	49,388,238
Mountain.....	954,593	2,639	32,334,788	712	19,300,147
Pacific.....	2,685,689	7,203	66,764,219	2,399	70,023,300

<sup>1</sup> Figures from the United States Bureau of Public Roads.

<sup>2</sup> Does not include tax exempt official cars not included in official registrations. These Federal, State, and local official cars totaled 152,007 in 1929.

**Sales by States.**—More than 50 percent of the sales of accessory, tire, and battery dealers were made in establishments located in seven States. These States arranged in order of their relative sales are New York, California, Pennsylvania, Ohio, Illinois, Michigan, and Texas. These 7 States, the largest of the 48, contain 9 of the 13 cities of more than 500,000 population and 35 of the 93 cities of over 100,000 population (Greater New York is one city). About 43 percent of total population of the United States are residents of these seven States.

The garages and repair shops located in these seven States also account for about 50 percent of the total reported sales of all such establishments in the United States. These seven States differ from those mentioned in the preceding paragraph only by the substitution of the State of New Jersey for the State of Michigan. However, when arranged in sales array the order of the States is changed materially.

The following table illustrates some of the peculiarities of geographic distribution in these two classes of retail establishments. In each case the States are arranged in the order of their sales importance which does not in all cases parallel the order of population.

## ARRANGEMENT OF STATES SHOWING SALES OF ACCESSORY, TIRE, AND BATTERY DEALERS, AND GARAGES AND REPAIR SHOPS

STATE	Sales of accessories, tires, and battery shops	Cumulative percent of U.S. total	STATE	Sales of garages and repair shops	Cumulative percent of U.S. total
United States total.....	\$599, 295, 181	100. 00	United States total.....	\$785, 000, 636	100. 00
New York.....	60, 000, 814	10. 11	New York.....	101, 482, 963	12. 93
California.....	54, 743, 510	19. 24	California.....	68, 219, 962	21. 62
Pennsylvania.....	45, 534, 080	26. 84	Pennsylvania.....	56, 153, 120	28. 77
Ohio.....	44, 965, 736	34. 34	Illinois.....	53, 342, 534	35. 57
Illinois.....	42, 884, 341	41. 50	Texas.....	45, 530, 281	41. 37
Michigan.....	27, 761, 633	46. 13	Ohio.....	35, 477, 508	45. 89
Texas.....	26, 605, 297	50. 57	New Jersey.....	32, 288, 014	50. 00
Massachusetts.....	24, 168, 108	54. 00	Missouri.....	25, 770, 959	53. 28
New Jersey.....	22, 444, 264	58. 34	Michigan.....	23, 993, 282	50. 34
Indiana.....	20, 075, 042	61. 69	Massachusetts.....	23, 137, 032	59. 29
Missouri.....	18, 502, 882	64. 78	Indiana.....	21, 925, 909	62. 08
Iowa.....	13, 681, 934	67. 09	Iowa.....	16, 127, 323	64. 13
Wisconsin.....	13, 546, 412	69. 35	Minnesota.....	15, 917, 927	66. 16
Oklahoma.....	12, 828, 768	71. 49	Washington.....	15, 914, 833	68. 19
Minnesota.....	12, 262, 429	73. 54	Wisconsin.....	15, 032, 416	70. 10
Connecticut.....	10, 150, 602	75. 28	Kansas.....	14, 357, 554	71. 93
Kansas.....	10, 137, 264	76. 92	Oklahoma.....	13, 006, 809	73. 70
Tennessee.....	9, 841, 066	78. 56	Oregon.....	12, 627, 424	75. 31
Washington.....	9, 203, 441	80. 10	Tennessee.....	11, 204, 032	76. 74
Florida.....	8, 702, 937	81. 55	North Carolina.....	10, 869, 355	78. 12
Georgia.....	7, 791, 902	82. 85	Connecticut.....	10, 778, 486	79. 49
Nebraska.....	7, 155, 153	84. 04	Florida.....	10, 637, 153	80. 85
Maryland.....	6, 888, 142	85. 19	Colorado.....	9, 545, 053	82. 07
Colorado.....	6, 566, 035	86. 28	Kentucky.....	9, 411, 330	83. 27
Alabama.....	6, 452, 425	87. 36	Nebraska.....	9, 334, 498	84. 40
North Carolina.....	6, 406, 440	88. 43	Virginia.....	9, 165, 710	85. 63
Oregon.....	6, 076, 349	89. 44	Maryland.....	8, 005, 569	86. 73
Virginia.....	6, 000, 927	90. 44	Georgia.....	8, 208, 915	87. 78
Kentucky.....	5, 882, 165	91. 37	Alabama.....	8, 129, 356	88. 81
Louisiana.....	5, 412, 747	92. 27	Maine.....	7, 617, 306	90. 78
Arkansas.....	4, 541, 426	93. 03	Louisiana.....	6, 888, 075	90. 66
Rhode Island.....	4, 509, 801	93. 78	West Virginia.....	6, 804, 725	91. 53
West Virginia.....	4, 491, 873	94. 53	Arkansas.....	6, 473, 787	92. 36
District of Columbia.....	3, 347, 961	95. 09	Mississippi.....	5, 751, 360	93. 08
South Dakota.....	3, 284, 090	95. 64	Montana.....	5, 534, 753	93. 70
Idaho.....	2, 664, 392	96. 08	South Dakota.....	5, 262, 353	94. 46
Montana.....	2, 534, 486	96. 50	Arizona.....	4, 801, 670	95. 07
Mississippi.....	2, 504, 891	96. 92	Rhode Island.....	4, 317, 563	95. 62
South Carolina.....	2, 460, 066	97. 33	New Hampshire.....	4, 037, 238	96. 13
Maine.....	2, 364, 406	97. 72	North Dakota.....	3, 937, 723	96. 63
Arizona.....	2, 336, 925	98. 11	Vermont.....	3, 895, 560	97. 13
Utah.....	1, 994, 548	98. 44	District of Columbia.....	3, 898, 518	97. 62
North Dakota.....	1, 967, 407	98. 77	Idaho.....	3, 734, 773	98. 10
Vermont.....	1, 619, 776	99. 04	South Carolina.....	3, 545, 974	98. 55
New Mexico.....	1, 482, 066	99. 29	Utah.....	3, 272, 910	98. 97
Wyoming.....	1, 313, 916	99. 51	New Mexico.....	2, 924, 874	99. 34
Delaware.....	1, 247, 339	99. 72	Wyoming.....	1, 980, 138	99. 59
New Hampshire.....	1, 191, 388	99. 92	Delaware.....	1, 051, 853	99. 80
Nevada.....	467, 579	100. 00	Nevada.....	1, 539, 711	100. 00

**Position index of accessory, tire, and battery dealers, and garages and repair shops.**—The unsoundness of per capita sales as an index of relative buying power of a community is fully discussed in chapter II, where on page 15 it is pointed out that population alone is only one factor and does not take into consideration the other contributing factors which affect the buying habits of the inhabitants. Per capita sales should only be used with extreme caution and then only after careful weighing to offset these other factors. The position index for accessory, tire, and battery dealers and for garages and repair shops is shown in table 2.

**Size of stores.**—The accessory, tire, and battery establishments, and the garages and repair shops are, predominately low-volume businesses. An analysis of the sales of accessory, tire, and battery dealers shows that nearly 75 percent of the establishments had annual sales of less than \$30,000 in 1929. In fact, nearly 64 percent had sales of less than \$20,000. An analysis of the annual sales reported by garages and repair shops shows that over 84 percent had sales of less than \$20,000.

The following table presents in abbreviated form a comparison of stores and sales for accessory, tire, and battery dealers and for garages and repair shops. Complete detailed data for each of 11 size-of-store groups are shown in table 6 of this report. Similar data for each State are shown in the several State reports.<sup>1</sup>

<sup>1</sup> Obtainable from the Superintendent of Documents, Government Printing Office, Washington, D. C., at prices ranging from 5 to 35 cents each.

STORES AND SALES BY SIZE OF BUSINESS

A. ACCESSORY, TIRE, AND BATTERY DEALERS

SIZE-OF-STORE GROUPS CLASSIFIED ACCORDING TO AMOUNT OF ANNUAL SALES	Stores	Percent	Sales (in thousands)	Percent	Average sales per store
Total.....	22,313	100.00	\$569,295	100.00	\$26,859
Total, all stores with sales over \$20,000.....	8,142	36.49	491,234	81.97	60,334
Stores with sales of:					
Over \$100,000.....	1,062	4.76	192,494	32.13	181,266
From \$50,000 to \$100,000.....	2,071	9.28	141,738	23.65	68,440
From \$30,000 to \$50,000.....	2,539	11.38	97,225	16.22	38,293
From \$20,000 to \$30,000.....	2,470	11.07	59,777	9.97	24,201
Total, all stores with sales less than \$20,000.....	14,171	63.51	108,061	18.03	7,626
Stores with sales of:					
From \$10,000 to \$20,000.....	4,673	20.49	65,020	10.85	14,218
From \$5,000 to \$10,000.....	3,960	17.75	23,369	4.73	7,161
Under \$5,000.....	5,638	25.27	14,682	2.45	2,604

B. GARAGES AND REPAIR SHOPS

SIZE-OF-STORE GROUPS CLASSIFIED ACCORDING TO AMOUNT OF ANNUAL SALES	Stores	Percent	Sales (in thousands)	Percent	Average sales per store
Total.....	66,793	100.00	\$785,001	100.00	\$11,753
Total, all stores with sales over \$20,000.....	10,548	15.80	437,798	55.77	41,505
Stores with sales of:					
Over \$100,000.....	475	0.72	76,358	9.72	160,743
From \$50,000 to \$100,000.....	1,721	2.57	113,744	14.49	65,511
From \$30,000 to \$50,000.....	3,498	5.24	131,156	16.71	37,495
From \$20,000 to \$30,000.....	4,864	7.27	116,540	14.85	24,009
Total, all stores with sales less than \$20,000.....	56,245	84.20	347,203	44.23	6,173
Stores with sales of:					
From \$10,000 to \$20,000.....	12,584	18.83	174,947	22.29	13,902
From \$5,000 to \$10,000.....	14,400	21.56	101,854	12.91	7,033
Under \$5,000.....	29,261	43.81	70,902	9.03	2,423

These tables show only general summaries. A more complete analysis may be obtained by breaking down each of the above into their component classifications on the same size basis as outlined on page 65. This will bring out still more striking differences and will go far toward explaining the reasons for the differences.

**Operating expenses of accessory, tire, and battery dealers, and garages and repair shops.**—These establishments when taken as a group operate at an average expense rate of \$39.40 per \$100 of sales. However, this average is not representative of expense ratios of either of the two classes of establishments comprising this group. The average for the accessory, tire, and battery dealers is \$30.70 per \$100 of sales while the average for the garages and repair shops is \$46.03 for each \$100 of sales. The high total expense rate of the accessory, tire, and battery dealers results partly from the item of service, in which pay roll plays such an important part, and partly as a result of the relatively low sales of these establishments. The high expense rate of the garages and repair shops is the direct result of the pay-roll expense which amounts to an average of \$31.25 per \$100 of sales. Table 3 presents a comparison for each of these two classes of establishments. It furnishes a comparison of the variation of expense ratios for each of the individual classification included in each class and also presents expense variations for each of the three size-of-city groups. Similar data for department stores with food departments, for mail-order general merchandise houses, and for general merchandise stores with food departments, provide the basis for a comparison of expense ratios of competing stores.

**Employees and wages.**—A total of 272,209 persons were employed in accessory, tire, and battery shops and garages and repair shops, of which about 32 percent were employed in making repairs and installations. This total number of workers is made up of 96,864 active proprietors, 154,895 full-time employees, and 20,450 part-time employees. The total reported pay roll amounted to \$221,645,860, which averages about \$4,000,000 a week. To this amount must be added the wage value of proprietors' services in order to arrive at the total wage cost. Proprietors' compensation computed in the manner described in chapter II amounts to \$130,505,340.

Following is a table showing the pertinent wage data for the two classes of establishments. Additional detailed information by individual kinds of business will be found in table 3 of this report.

## PAY ROLL AND WAGE COSTS

KIND OF BUSINESS	Pay roll	Pay roll cost per \$100 of sales	Total wage cost including estimated value of proprietors' services	Total wage cost per \$100 of sales
Total.....	\$221, 045, 860	\$15. 29	\$352, 151, 200	\$25. 44
Accessory, tire, and battery dealers.....	76, 103, 776	12. 70	106, 873, 721	17. 83
Garages and repair shops.....	146, 542, 084	18. 54	245, 277, 479	31. 25

**Repair employees.**—The establishments in these two classifications reported a total of 86,443 repair employees, 17,659 of which were employed by accessory, tire, and battery dealers, and 68,784 by garages and repair shops. Additional data on this subject will be found in the special trade study on "Employment and Wages in the Retail Industry" previously referred to and on page 17 of chapter II. This is an important consideration since it may be directly associated with the amount reported as receipts from service and repairs.

**Expenses by size of city.**—The expense data shown in table 3 for the three size-of-city groups further supports the principle developed by the census that operating costs increase in almost direct proportion to the size of city. The reason is obvious. Wages are lower in the smaller cities, as are rents and many other items of expense. For a comparison of expenses with motor vehicle dealers (new and used) and filling stations see chapters II and IV, respectively, and the complete expense table shown on page 60.

**Rents.**—More than 80 percent of all accessory, tire, and battery dealers operate in leased premises. The average rental for these 17,908 establishments is \$4.52 for each \$100 of sales. Only about 57 percent of the garages and repair shops were operated in leased quarters. However, the average rental charges for these 37,941 establishments were \$10.45 per \$100 of sales. These ratios apply only to those dealers operating in wholly leased premises. The remainder of the establishments were operated in either owned or partly owned premises. Rental data for each of the individual classifications included in the two classes of establishments will be found in table 4.

**Expenses of competing stores.**—Large quantities of automotive accessories, particularly tires and tubes and batteries, are sold by department stores (without food departments), by mail-order general merchandise houses and by general merchandise stores (without food departments). The expense ratios of these three kinds of stores are well under the expense rate of the accessory, tire and battery shops and are about 15 percent lower than the garages and repair shops. This results in a distinct advantage for these competing stores. It permits a more advantageous pricing of the merchandise. This is also important from another angle namely that it increases store traffic and tends to increase the sales of other lines of merchandise.

Motor-vehicle dealers and filling stations, other important distributors of accessories, tires, and batteries also operate at much lower expense rates than either the regular accessory dealers or the garages. Each of these two kinds of distribution outlets are discussed individually in other chapters of this report, but must be considered collectively in any study of the distribution of automotive products.

**Cash versus credit.**—The amount of credit sales of accessory, tire, and battery shops, and garages, has heretofore been considered to be of minor importance. Actually, such is not the case, as the figures compiled from data furnished for the retail census clearly show. In reality credit in these establishments amounts to about 25 percent of the total sales and is relatively as important as the credit extended by the apparel stores as well as many others which are looked upon as being credit stores.

Out of a total of 7,762 accessory stores with tires and batteries, 6,074 reported concerning their credit activities. Only 2,709 reported that sales were made strictly on a cash basis. The remaining 3,365 representing more than 55 percent of the total number reporting advised that credit was extended in varying proportions, from amounts representing as little as 10 percent of sales to others

amounting to more than 80 percent of their entire volume. The aggregate amount of credit extended by the 6,074 dealers represents about 22 percent of their sales.

In the case of tire shops, 6,353 stores out of a national total of 8,142, reported as to their credit activities. Sales exclusively for cash were reported by 2,433 leaving 3,920 reporting credit in varying degrees. The credit of these 3,920 stores amounts to about 32 percent of the total sales of the 6,353 shops reporting, including the cash stores. There were 32,973 garages which reported that credit was extended, 18,873 which reported all cash sales and 8,781 which failed to answer the credit inquiry. Credit sales of the 51,846 garages which answered the inquiry amounted to more than 25 percent of their aggregate sales. While there was a total of 12,258 establishments in these three classifications which failed to report, there is little likelihood that the cash and credit ratios would vary materially from those of the 64,273 which did report.

The following series of tables for the three kinds of automotive businesses previously referred to supplies the approximate total credit sales made in each of the 10 degree-of-credit groupings and the proportions which represent cash and credit.

CREDIT OPERATIONS OF ACCESSORY STORES WITH TIRES AND BATTERIES

DEGREE OF CREDIT CLASSIFICATION	Number of establishments	Retail sales cash and credit	Approximate cash proportion	Approximate credit proportion
All cash.....	2,709	\$89,307,000	\$89,307,000	-----
1 to 10 percent credit.....	623	13,728,000	13,041,000	\$686,000
11 to 20 percent credit.....	502	12,501,000	10,625,800	1,875,200
21 to 30 percent credit.....	413	9,941,000	7,455,500	2,485,500
31 to 40 percent credit.....	386	10,153,000	6,599,500	3,553,500
41 to 50 percent credit.....	452	10,330,000	5,681,500	4,648,500
51 to 60 percent credit.....	308	8,593,000	4,316,800	4,276,200
61 to 70 percent credit.....	269	9,366,000	3,278,100	6,087,900
71 to 80 percent credit.....	201	8,761,000	2,190,200	6,570,800
Over 80 percent credit.....	211	10,858,000	1,085,800	9,772,200
Total analyzed.....	6,074	184,538,000	143,581,800	40,956,200
Percent of sales.....	-----	100.00	77.81	22.19

CREDIT OPERATIONS OF TIRE SHOPS (INCLUDING TIRE REPAIRS)

DEGREE OF CREDIT CLASSIFICATION	Number of establishments	Retail sales cash and credit	Approximate cash proportion	Approximate credit proportion
All cash.....	2,433	\$66,399,000	\$66,399,000	-----
1 to 10 percent credit.....	613	9,753,000	9,265,400	\$487,600
11 to 20 percent credit.....	472	8,328,000	7,078,800	1,249,200
21 to 30 percent credit.....	409	7,303,000	5,477,300	1,825,700
31 to 40 percent credit.....	405	7,849,000	5,101,800	2,747,200
41 to 50 percent credit.....	552	12,604,000	6,932,200	5,671,800
51 to 60 percent credit.....	354	10,521,000	4,734,500	5,786,500
61 to 70 percent credit.....	320	12,057,000	4,220,000	7,837,000
71 to 80 percent credit.....	345	14,720,000	3,680,000	11,040,000
Over 80 percent credit.....	450	20,221,000	2,022,100	18,198,900
Total analyzed.....	6,353	169,755,000	114,911,100	54,843,900
Percent of sales.....	-----	100.00	67.69	32.31

CREDIT OPERATIONS OF GARAGES (REPAIRS, STORAGE, GASOLINE, AND OIL, ACCESSORIES)

DEGREE OF CREDIT CLASSIFICATION	Number of establishments	Retail sales cash and credit	Approximate cash proportion	Approximate credit proportion
All cash.....	18,873	\$187,471,000	\$187,471,000	-----
1 to 10 percent credit.....	5,755	66,150,000	62,848,200	\$3,301,800
11 to 20 percent credit.....	5,452	52,457,000	44,588,400	7,868,600
21 to 30 percent credit.....	4,239	42,031,000	32,198,200	10,732,800
31 to 40 percent credit.....	4,404	48,556,000	31,561,400	16,994,600
41 to 50 percent credit.....	5,851	64,082,000	35,245,100	28,836,900
51 to 60 percent credit.....	2,431	36,038,000	16,217,100	19,820,900
61 to 70 percent credit.....	2,131	34,293,000	11,992,000	22,271,000
71 to 80 percent credit.....	1,006	25,011,000	6,262,700	18,758,300
Over 80 percent credit.....	1,074	20,621,000	2,052,100	18,468,900
Total analyzed.....	51,849	677,486,000	430,426,200	147,059,800
Percent of sales.....	-----	100.00	74.53	25.47

**Accessory chains.**—Chain penetration in this field has not been particularly marked. A total of 52 chain organizations operated 855 separate establishments in 1929 and reported aggregate sales of \$59,486,300. The average sales per store amounted to \$69,575 at an average operating expense of \$27.34 per \$100 of sales. These averages are of particular interest since the average sales for all accessory dealers is only about \$33,000 at an average expense rate of \$28.34. Following is a brief summary of the operating data supplied by the accessory chains.

## SUMMARY OF OPERATING DATA—ACCESSORY CHAINS

	<i>Number and amount</i>
Total, accessory chains.....	52
Number of local chains.....	34
Number of sectional and national chains.....	18
Total units.....	855
Local.....	189
Sectional and national.....	666
Total net sales (1929).....	\$59,486,300
Credit sales.....	2,500,305
Store operating expenses (per \$100 of sales).....	27.34
Pay-roll cost, 4,353 employees (per \$100 of sales).....	10.77
Other store operating expenses, including rent (per \$100 of sales).....	16.57
Rent, 821 leased stores (per \$100 of sales).....	4.00

**Tire chains.**—There were 67 tire chains operating 1,137 separate establishments in 1929. The sales of these chain tire shops amounted to a total of \$58,381,233 in that year. Nearly 40 percent of these chain stores were opened during 1929. About 25 percent were opened during the period from 1925 to 1928 and the remainder were begun prior to 1925. The following summary of operating data of tire chains is included, not because chain operators were a particularly important factor in the field during 1929, but because of the chain development which has taken place in the field in recent years. The entry of certain tire manufacturers in the field of retailing may have an important influence on the tire distribution in subsequent years.

## SUMMARY OF OPERATING DATA—TIRE CHAINS

	<i>Number and amount</i>
Total number of tire chains.....	67
Number of local chains.....	50
Number of sectional and national chains.....	17
Total units.....	1,137
Local.....	329
Sectional and national.....	808
Total net sales (1929).....	\$58,381,233
Credit sales.....	8,282,795
Store operating expenses (per \$100 of sales).....	30.68
All cash chains (per \$100 of sales).....	28.08
Credit-granting chains (per \$100 of sales).....	31.30
Pay roll cost, 8,993 employees (per \$100 of sales).....	14.94
All cash chains, 5,833 employees (per \$100 of sales).....	13.45
Credit-granting chains, 1,160 employees (per \$100 of sales).....	15.29
Other store operating expenses, including rent (per \$100 of sales).....	15.74
All cash chains (per \$100 of sales).....	14.63
Credit-granting chains (per \$100 of sales).....	16.01
Rent, 1,062 leased premises (per \$100 of sales in such premises).....	3.90
All cash chains, 391 leased premises (per \$100 of sales in such leased premises).....	4.15
Credit-granting chains, 671 leased premises (per \$100 of sales in such leased premises).....	3.84

## CHAPTER IV.—FILLING STATIONS

**Description of the business.**—The filling stations described and discussed in this chapter are establishments in which the principal activity is the sale of gasoline, lubricating oils, and greases at retail. These stations may, and very often do, sell other merchandise, but unless gasoline, oil, and lubrication service are the principal items sold, they are not classified as filling stations.

Many other kinds of retail dealers also sell gasoline and oil, particularly in the smaller cities and towns and in certain rural areas where the infrequent demand does not warrant establishments devoted exclusively to the sales of this merchandise. These establishments were classified on the basis of the principal commodities sold or on the basis of their popular designation. For example, a country general store selling some gasoline and oil as well as a general line of merchandise is recognized both by residents of the community and by travelers as a general store and it is so classified in the census.

**Retail outlets for gasoline and oil.**—In order to secure a comprehensive picture of the country's gasoline distribution system a tabulation has been prepared showing by States the number of retailers (irrespective of the kind of business classification) operating gasoline pumps. This tabulation shows that a total of 317,232 retail establishments reported the sale of gasoline in 1929. Only about 38 percent of this number were filling stations (so classified because the sale of gasoline and oil was their principal activity). Nearly 20 percent were garages and parking stations. Another 14 percent of the establishments were motor-vehicle dealers (new and used). The remainder, representing about 28 percent of the total number, are stores engaged primarily in some other line of business and operating gasoline pumps as a secondary part of their business.

The following table shows by kind of business and by States the number of retailers operating gasoline pumps. This table does not take into consideration those retailers who do not sell gasoline but do distribute lubricating oil, either in bulk or in sealed containers. It is recognized that there are many such establishments but no data are available from which authentic totals or even accurate estimates can be secured.

RETAIL OUTLETS FOR GASOLINE AND OIL IN THE UNITED STATES  
 [Number of filling stations and other retailers]

STATES	RETAILERS SELLING GASOLINE AND OIL														
	Automotive group					Other kinds of business					All other retail				
Total	Filling stations	Garages and parking stations	Motor-car dealers	Used-car dealers	Accessory, tire, battery, and other auto-omobile shops	Country general stores	Grocery and other food stores	Restaurants and other eating places	Hardware stores	Farmers' supply stores		General merchandise stores	Lumber dealers	Furniture stores	Drug stores
United States.....	317,232	92,456	40,797	3,085	5,192	39,530	34,455	9,568	2,085	1,763	1,431	444	490	343	1,096
Percent.....	38.30	19.70	12.86	0.97	1.64	12.15	10.86	1.12	0.66	0.55	0.45	0.14	0.14	0.11	0.35
Connecticut.....	1,595	760	537	73	62	60	204	47	16	6	2	8	7	4	13
Maine.....	2,996	671	419	41	40	482	477	73	54	37	34	10	6	4	26
Massachusetts.....	7,363	1,401	1,142	148	121	101	462	187	13	9	3	3	7	3	33
New Hampshire.....	1,741	364	254	15	22	171	180	57	9	3	10	3	1	1	12
Rhode Island.....	1,458	623	344	174	29	23	31	17	9	2	4	2	3	3	6
Vermont.....	1,740	502	351	6	25	363	134	91	31	30	13	8	3	1	10
New York.....	22,181	6,022	3,043	262	373	1,243	1,274	495	205	161	41	57	32	17	115
New Jersey.....	3,265	2,062	1,167	81	222	1,275	1,468	193	42	9	15	163	28	6	30
Pennsylvania.....	6,761	4,168	3,119	121	398	1,882	1,452	467	164	142	53	46	39	11	87
Illinois.....	14,237	6,008	2,477	218	302	785	645	135	135	111	52	21	13	4	46
Indiana.....	6,622	2,064	1,367	68	270	1,094	896	173	74	81	26	15	11	8	31
Michigan.....	11,340	1,830	1,829	184	218	674	894	96	66	74	22	14	14	7	41
Ohio.....	16,851	7,230	3,235	206	285	1,410	1,414	221	139	85	42	29	20	10	65
Wisconsin.....	7,674	1,834	1,684	87	142	633	537	191	120	73	24	13	13	1	32
Iowa.....	7,366	1,665	1,533	77	188	411	237	21	111	73	11	14	12	4	20
Kansas.....	6,557	1,465	1,106	73	177	356	283	19	43	71	9	15	7	3	26
Minnesota.....	2,273	1,417	1,351	31	161	528	330	61	121	92	24	12	14	1	20
Missouri.....	10,393	2,330	1,143	135	213	577	724	61	62	114	40	16	11	8	31
Nebraska.....	3,854	899	924	53	74	1,185	124	9	75	33	15	9	9	2	13
North Dakota.....	1,990	444	426	27	216	216	69	5	159	82	18	9	24	4	8
South Dakota.....	2,176	495	526	3	42	173	100	5	91	29	7	2	4	1	18

Delaware.....	174	309	151	83	3	6	90	100	6	4	11	2	1	1	1
District of Columbia.....	470	269	96	71	18	118	548	841	44	4	9	26	3	9	2
Florida.....	8,023	2,898	1,032	425	60	118	1,786	2,490	76	19	9	53	12	42	13
Georgia.....	8,990	2,818	993	563	21	80	1,786	2,490	76	19	9	53	12	42	27
Maryland.....	3,409	939	674	414	39	53	519	657	37	28	20	10	4	4	5
North Carolina.....	10,380	4,092	1,123	678	14	50	2,115	2,203	38	11	20	35	4	6	16
South Carolina.....	5,241	1,694	868	326	16	25	1,031	1,513	9	7	4	35	4	9	9
Virginia.....	8,800	2,116	1,039	663	9	64	3,273	1,402	43	29	25	80	12	10	27
West Virginia.....	3,713	1,201	708	495	16	30	800	1,305	70	9	9	46	5	1	15
Alabama.....	7,173	1,618	960	403	10	110	2,199	1,608	109	11	6	67	13	41	17
Kentucky.....	6,065	1,201	1,147	661	10	83	2,013	692	100	24	39	47	8	5	17
Mississippi.....	6,100	1,612	672	451	4	23	1,715	1,445	55	13	7	53	4	33	9
Tennessee.....	6,069	1,326	979	503	19	84	2,178	828	63	7	18	55	11	15	12
Arkansas.....	5,728	1,807	750	400	11	55	1,458	1,058	84	10	21	64	4	13	14
Louisiana.....	5,200	1,856	685	354	9	44	1,193	1,020	39	4	10	55	3	9	6
Oklahoma.....	4,224	4,330	1,278	864	72	100	555	908	21	15	26	21	4	7	6
Texas.....	19,885	8,523	3,876	1,863	170	215	1,868	2,978	82	29	48	88	10	27	50
Arizona.....	1,642	625	271	172	18	24	153	314	11	1	1	33	2	17	17
Colorado.....	3,304	1,349	772	450	50	50	212	277	16	23	21	30	5	3	15
Idaho.....	1,352	441	274	264	3	29	156	129	8	11	11	14	4	4	4
Montana.....	1,671	434	404	315	9	20	269	119	8	33	24	14	5	8	8
Nevada.....	1,379	116	77	74	2	7	60	34	3	33	24	14	9	3	3
New Mexico.....	1,494	450	235	151	3	41	298	275	3	2	1	24	1	2	3
Utah.....	1,324	534	270	153	7	14	176	107	13	2	4	6	1	3	8
Wyoming.....	778	238	138	169	4	13	114	62	2	4	5	14	6	10	4
California.....	17,813	8,650	4,649	1,870	515	395	452	1,171	133	13	21	35	10	1	48
Oregon.....	3,751	1,361	965	401	36	45	308	367	31	11	28	10	5	6	11
Washington.....	3,482	2,467	1,193	633	46	78	373	559	32	26	32	19	11	3	22

The preceding table will provide the answer for many of the questions raised in the subsequent discussions of filling stations. Probably one of its most popular uses will be to furnish an explanation of why in some sections of the country a lower proportionate number of filling stations are found. The explanation, of course, is that in many communities a large share of the motorists buy fuel for their automobiles from other kinds of retail stores, and not that the number of motor vehicles in operation is relatively low.

**Filling stations—number and amount of annual sales.**—There were 121,513 stations, classified as such, in operation in the United States in 1929 and their total annual sales aggregated \$1,787,423,097 in the same year. This national sales total represents 3.64 percent of the total annual sales of all retail stores in the country and 18.59 percent of the total reported sales of the entire retail automotive group. Table 1E enumerates these stations and sales by States. Filling stations have been classified into three separate kinds in the separate State reports and in the United States Summary, the basis for such segregation being fully explained in that portion of chapter I which is devoted to definitions. The filling station tables contained in this report show the three kinds of establishments separately when necessary for expense comparisons, etc., but combine the three into one group whenever possible.

**How the size of city affects sales.**—The cities of more than 30,000 population contain only about 27 percent of the filling stations of the country but these 32,381 establishments do more than 41 percent of the total filling station business. The proportion of stations and sales vary materially between States, partly because of the wide variation in population, partly as a result of competition from other kinds of business also selling gasoline and oil and not infrequently, in the more densely populated areas, as a result of local legislative restrictions. Variation in gasoline tax rates in adjoining States may also have an effect on total sales, especially in cities located on or near State boundary lines.

Table 1E provides, for each State and for the nine geographic divisions, a comparison of the number of stations and the sales in each of the three size-of-city groups.

**Geographic distribution of filling-station sales.**—More than 52 percent of the country's total sales of filling stations were made in establishments located in 9 of the 48 States and the District of Columbia. These States, which include, in respective sales order, New York, California, Ohio, Illinois, Michigan, Pennsylvania, Texas, New Jersey, and Missouri, contain 49 percent of the total population of the United States and 52 percent of all registered motor vehicles.<sup>1</sup> These States contain 10 of the 13 cities of more than 500,000 population and 43 of the 93 cities of over 100,000 population.

The following table presents the States arranged in the order of their filling station sales importance. It also contains a column showing the population ranking. Gasoline and oil and food are two lines of merchandise which, under normal conditions, are most preferably purchased in reasonably close proximity to the place of residence, if other factors influencing the sales are about equal. The State population ranking which shows a considerable variation from the sales ranking is believed to be partly the result of gasoline and oil purchases from other than strictly filling stations.

<sup>1</sup> Registration figures from the U.S. Bureau of Public Roads, Department of Agriculture.

FILLING STATIONS

Filling station sales ranking	States	Population ranking	Sales of filling stations	Cumulative percent of U.S. total	Filling station sales ranking	States	Population ranking	Sales of filling stations	Cumulative percent of U.S. total
	United States total		\$1,787,423,087	100.00					
1	New York	1	140,987,573	7.89	24	Colorado	33	\$21,793,002	84.02
2	California	2	137,724,082	15.59	25	Tennessee	16	18,984,638	85.08
3	Ohio	4	132,795,326	23.02	26	Louisiana	22	18,752,959	86.13
4	Illinois	3	110,482,634	29.20	27	Alabama	15	18,424,322	87.16
5	Michigan	5	109,068,913	35.31	28	Arkansas	25	17,992,916	88.17
6	Pennsylvania	2	102,670,553	41.04	29	West Virginia	27	17,987,966	89.17
7	Texas	5	94,418,511	46.83	30	Mississippi	23	17,115,878	90.13
8	New Jersey	9	84,549,594	49.38	31	Maryland	28	17,081,338	91.09
9	Missouri	10	83,419,690	52.87	32	Oregon	34	16,957,001	92.03
10	Massachusetts	8	62,819,408	55.29	33	Kentucky	17	16,548,702	92.95
11	Indiana	11	49,751,323	60.94	34	South Carolina	20	15,211,659	93.80
12	Oklahoma	21	48,341,443	63.68	35	South Dakota	36	14,848,453	94.64
13	Wisconsin	13	48,061,636	66.88	36	District of Columbia	41	11,354,951	95.28
14	Iowa	10	46,720,813	68.09	37	North Dakota	38	10,705,925	95.89
15	Minnesota	15	44,344,911	71.47	38	Montana	39	10,213,083	96.46
16	Kansas	24	37,824,040	72.50	39	Rhode Island	37	8,870,971	96.96
17	North Carolina	12	29,909,997	75.28	40	Utah	44	8,654,398	97.44
18	Florida	31	28,415,451	78.51	41	Arizona	40	8,185,356	97.90
19	Nebraska	32	28,413,679	76.01	42	Maine	35	6,987,700	98.27
20	Washington	30	26,387,419	81.49	43	Idaho	38	6,268,339	98.63
21	Georgia	14	26,387,419	81.49	44	New Hampshire	42	5,318,179	98.93
22	Connecticut	20	23,610,820	82.81	45	New Mexico	42	4,812,807	99.26
23	Virginia	20	23,610,820	82.81	46	Vermont	46	4,388,855	99.45
					47	Delaware	47	4,254,293	99.68
					48	Wyoming	48	4,242,850	99.92
					49	Nevada	49	1,350,934	100.00

**Position index of filling stations.**—The use of per capita sales as a general index of buying power for popular use has been repeatedly discouraged in all of the special retail trade studies. Chapter II outlines several of the reasons why per capita sales indices may result in arriving at inaccurate or unsound conclusions, and why they should be used with extreme care. The position index, briefly described as an index of the relative importance of the sales of a given kind of business in different areas or communities, is a more significant and reliable barometer and is recommended in place of the individual indexes which fail to take into consideration other factors having a definite bearing on the question. Table 2 of this report contains the position index for filling stations as well as for the other important kind-of-business classifications in the retail automotive group.

**Size of stations.**—Filling stations are predominately low-volume businesses. A comparison of stations and sales by size of establishment shows that more than 54 percent of all stations in operation in 1929 had annual sales of less than \$10,000. The total sales of these 65,641 gasoline outlets amounted to only \$258,635,000 or 14.46 percent of the total sales of all filling stations. In fact more than 76 percent of the stations had annual sales of less than \$20,000.

The following brief table shows comparisons of the number of establishments and sales by size-of-business groups. More detailed data will be found in table 6.

NUMBER AND SALES OF FILLING STATIONS BY SIZE OF BUSINESS

SIZE-OF-STATION GROUPS CLASSIFIED ACCORDING TO AMOUNT OF ANNUAL SALES	Stations	Percent	Sales (in thousands)	Percent	Average sales per station
Total, all filling stations	121,513	100.00	\$1,787,423	100.00	\$14,710
Total, filling stations with sales over \$20,000	28,483	23.44	1,139,215	63.74	40,000
Stations with sales of:					
Over \$100,000	977	.81	155,628	8.71	159,180
From \$50,000 to \$100,000	4,440	3.65	291,036	16.32	65,680
From \$30,000 to \$50,000	9,951	8.19	374,895	20.97	37,670
From \$20,000 to \$30,000	13,115	10.79	317,166	17.74	24,180
Total, filling stations with sales of less than \$20,000	93,030	76.56	648,208	36.26	6,970
Stations with sales of:					
From \$10,000 to \$20,000	27,389	22.54	389,573	21.80	14,220
From \$5,000 to \$10,000	23,345	19.21	167,043	9.34	7,160
Under \$5,000	42,296	34.81	91,592	5.12	2,170

**Operating expenses of filling stations.**—Filling stations operate at an average expense rate of \$23.81 per \$100 of sales. This average is not representative of the operating costs of each of the three kinds of filling stations. Those which sell gasoline and oil exclusively and perform lubrication service operate at a total reported cost of \$23.66 per \$100 of sales. Those which perform all the functions of the first and in addition sell tires and accessories reported a total operating cost of \$22.87 for each \$100 of sales, which is nearly 1 percent under the national average for all stations. This is partly accounted for by lower wage costs in relation to sales and partly by a lower rate of rental cost, both apparently resulting from increased sales volume accounted for by the added lines of related merchandise. The stations which sell other miscellaneous merchandise such as smokes, candy, lunches, soft drinks, etc., operate at an expense rate of \$25.37 which is \$1.50 per \$100 of sales higher than the average for all stations. Higher wage costs are largely responsible for this increase in operating costs which suggests that the selling of this additional miscellaneous merchandise required additional employees without providing enough added business to keep them fully occupied.

Table 3 of this report summarizing the expenses of the three kinds of filling stations is worthy of special consideration especially in connection with chapter which contains a breakdown of the commodities sold. Related lines of merchandise should be added only if the additional merchandise can be sold without increasing the costs of operation out of all proportion to the amount added to the sales volume.

**Expenses by size of city.**—The expenses of filling stations increase with the size of city in the case of the cities of more than 10,000 population. The reports for stations located in places of less than 10,000 population, while about equal to the average for all stations is 1.79 percent higher than those located in cities from 10,000 to 30,000 population. Table 3 provides an explanation of this increase in cost. A much higher proportion of the stations are proprietor-owned which has added materially to the wage costs of these small city and country stations. Reported wages paid to salaried employees are low in this under 10,000 population group but amounts charged to the establishments as compensation for proprietors increase the pay roll cost from \$7.08 per \$100 of sales to \$16.91, an increase of 139 percent over the reported pay roll cost.

**Rents paid in leased premises.**—Rents, always an important item of expense, average \$5.35 per \$100 of sales for filling stations operated in leased premises. This national average for all stations does not vary materially between any of the three kinds of establishments. The average for those selling gasoline and oil exclusively is \$5.79, the average for those also selling tires and accessories is an even \$5; while those selling other miscellaneous merchandise reported an average rental rate of \$4.96 per \$100 of sales. Only about 42 percent of the filling stations were operated in leased premises.

The following table supplies rental data for each of the three kinds of filling stations:

RENTS PAID IN LEASED PREMISES

KIND OF BUSINESS	Number operated in leased premises	Percent of total operated in leased premises	Rent paid for leased premises	Sales of stations operated in leased premises	Rental cost per \$100 of sales
Total, all filling stations.....	51,249	42.18	\$40,854,302	\$875,569,485	\$5.35
Filling stations (gasoline and oil).....	22,132	41.97	23,201,023	400,992,206	5.79
Filling stations (with tires and accessories).....	15,163	59.89	15,714,349	314,577,584	5.09
Filling stations (with other merchandise).....	13,954	33.24	7,939,130	160,029,695	4.96

**Cash versus credit in filling stations.**—A total of 91,072 filling stations out of the United States total of 121,513 reported concerning their credit activities. These 91,072 stations are included in an analysis in which they have been classified according to the degree of credit business. Only about 48 percent of these stations reported that they were selling entirely for cash. These cash stations accounted for more than 36 percent of the total business of reporting establishments. The remaining 52 percent of the stations reported that they sell on credit as well as for cash. The sales of credit-granting stations amounted to about 64 percent of the business of reporting establishments.

The following brief table provides some interesting comparisons of average sales between the cash and credit-granting stations.

## AVERAGE SALES

STATIONS REPORTING CREDIT	Number of stations	Net sales	Average sales
All stations.....	91,072	\$1,223,780,000	\$13,438
All cash.....	43,589	442,660,000	10,155
Cash-credit.....	47,483	781,120,000	16,451

While there were 30,441 stations with sales aggregating \$563,643,000 which failed to report concerning their credit activities, the 91,072 which report accounted for 68.41 percent of the total sales of all stations. There is no reason to believe that the cash and credit ratios of the nonreporting stations would materially affect the ratios of the reporting stations. The following table estimates the amount of cash and credit of the 91,072 filing stations reporting on their credit activities.

## FILING STATIONS

DEGREE OF CREDIT CLASSIFICATION	Number of establishments	Retail sales cash and credit	Approximate cash proportion	Approximate credit proportion
All cash.....	43,589	\$442,660,000	\$442,660,000	-----
1 to 10 percent credit.....	13,106	200,503,000	190,477,800	\$10,025,200
11 to 20 percent credit.....	8,309	114,876,000	97,644,000	17,231,400
21 to 30 percent credit.....	6,469	97,638,000	73,220,200	24,409,800
31 to 40 percent credit.....	6,030	100,946,000	65,614,900	35,331,100
41 to 50 percent credit.....	6,723	110,624,000	60,843,200	49,780,800
51 to 60 percent credit.....	2,767	58,050,000	26,122,500	31,927,500
61 to 70 percent credit.....	2,008	42,020,000	14,707,000	27,313,000
71 to 80 percent credit.....	1,206	27,659,000	6,914,700	20,744,300
Over 80 percent credit.....	865	28,803,000	2,880,300	25,922,700
Total analyzed.....	91,072	1,223,780,000	981,094,200	242,685,800
Percent of sales.....	-----	100.00	80.17	19.83

Table 9 contains complete degree-of-credit figures for filing stations. It also contains a breakdown of all cash stores and cash and credit stores together with the sales of each, for each of the several States. Additional State credit data will be found in each of the separate State reports and in the United States summary.

**Filing station chains.**—The importance of the chains in the filing station field is evident from the chain figures which show that more than 23 percent of the stations are chain operated and that their sales represent nearly 34 percent of the total annual sales of all filing stations. It is the only field in the automotive group in which the chain growth has been particularly rapid and important. The chain figures shown in this report cover only stations 100 percent operated by the chain organization. Those operated by individuals under a leasing or licensing agreement are independents. See table 8.

The following table, prepared from data contained in the report no. R-63 entitled "Retail Distribution by Filing Station Chains", furnishes expense and other operating data for the chain stations in this field.

This table differs in number of establishments and sales from table 6 of the United States summary of Retail Distribution for the reason that table 6 is based upon individual classification of each schedule, while in the chain report the classification is based on the chain as a whole without taking into consideration each individual station. The difference is insignificant and should have no material effect on the conclusions reached.

CHAIN FILLING STATIONS<sup>1</sup>

	Number and amount
Number of chain organizations.....	864
Number of units <sup>2</sup> .....	30,038
Total net sales <sup>2</sup> .....	\$620,024,266
<b>EXPENSES</b>	
Total reported expenses.....	\$149,498,301
Expenses per \$100 of sales.....	\$23.77
Total wage cost.....	\$81,230,385
Wage cost per \$100 of sales.....	\$12.02
Other operating expenses (including rent).....	\$4,368,132
<b>CREDIT IN CHAINS REPORTING CREDIT</b>	
Total credit sales.....	\$43,030,937
Percent of total sales.....	20.8
Total cash sales.....	\$103,480,431
Percent of total sales.....	79.2

<sup>1</sup> The filling stations included in this table are those which are 100 percent operated by the chain companies. Those operated by individuals on a leasing or licensing arrangement with chain owners are classified as independent operators.

<sup>2</sup> Classified individually the chain stations number 28,617 with sales amounting to \$605,203,748, a difference of 1,421 stations and \$23,820,548 in sales. For further explanation of differences see the United States Summary of Retail Distribution.

## CHAPTER V.—SALES BY COMMODITIES

Manufacturers, marketing their products through wholesale and retail trade channels, and advertising agencies, directing and promoting the distribution of manufactured products have a very definite and direct use for commodity sales data. Likewise, wholesalers and retailers also have definite use for reliable information concerning the nature and volume of each commodity sold in a given kind of business. In fact, authentic commodity sales data are of interest and value to each and every one of the several groups performing any of the necessary functions incidental to the movement of goods from the producer to the consumer.

It is obvious, of course, that accurate data could only be secured to the extent that the records of the establishments made that possible. In the case of concerns engaged in wholesale trade, little difficulty was experienced because the majority were located in the cities of more than 10,000 population and a large proportion had sufficient sales volume to make commodity sales records essential to successful operation. However, in the case of retailers the situation was somewhat different. Not more than 15 percent of the total number of retailers keep records in such detail that they are able to accurately report their sales in terms of commodities sold. They know the amount of their total business and have a general idea of about the proportion of their sales in each merchandise line but are unable to supply accurate book figures, or even close estimates of their dollar sales of each of the different commodities handled.

After the difficulties encountered and the experience gained in the Eleven City Census taken in 1927, it was decided to limit the requests for retail commodity sales figures to retailers located in the cities of more than 10,000 population which were doing an annual business of \$60,000 or more. In the case of dealers in automotive products, for which a special schedule had been prepared, the decision was amended to include all dealers regardless of size, located in the cities, which were able to supply commodity data. As a result, the concerns which were able to furnish commodity sales breakdowns, actually accounted for about 33 percent of the total sales of all retail dealers in automotive products. This relatively high degree of coverage for the retail automotive group as a whole is not at all representative of the coverage for the several individual kinds of business. The fact that about 50 percent of the sales of motor vehicle dealers (both new-car and used-car dealers) were made by concerns able to supply a sales breakdown is responsible for the high coverage for the group.

Following is a brief table showing the estimated commodity coverage for nine kinds of retail automotive establishments.

## DEGREE OF SALES COVERAGE OF COMMODITY REPORTS

KINDS OF BUSINESS	Average coverage <sup>1</sup> (estimated percent)
Automotive group (retail only).....	33.0
Automobile sales rooms (new and trade in).....	50.0
Used car dealers.....	78.0
Automobile dealers, with farm implements and machinery.....	10.0
Accessory stores with tires and batteries.....	40.0
Battery and ignition shops.....	20.0
Tire shops (including tire repairs).....	54.0
Filling stations (gasoline and oil only).....	18.0
Filling stations with tires and accessories.....	13.0
Garages.....	9.0

<sup>1</sup> Commodity coverage is the proportion of sales made in those establishments which reported commodity figures, to the total sales of all establishments in the same kind-of-business classification. These figures are estimated and are included only for the purpose of showing the wide variation between kinds of business in the percent of commodity coverage.

In view of these wide variations in the proportion of commodity coverage and because of the many different kinds of establishments involved, the commodity sales were shown only in percentages in the retail State reports, with the degree of coverage shown for each kind of business.

In the special series of trade reports outlining some specific uses for the data and providing the bases for other studies the percentages shown in the State reports were converted into sales totals, or dollar figures. This is accomplished by applying the percentages shown in the second column of table 15 of each State report to the total sales for the same kind of business as given in table 1 of the same report.

**National estimate of the retail sales of automotive products.**—Applying the method described above it is possible to obtain a very close approximation of the total sales of each of the automotive products sold by the different kinds of retail establishments. To these totals must be added the retail sales of wholesalers in order to arrive at a total retail figure.

In the manner described it has been estimated that the total retail sales of automotive products through all kinds of retail establishments amounted to approximately \$3,234,244,000 for the year 1929. The retail sales of automobile wholesaler-retailers amounted to an additional \$225,514,000, which increased the retail sales total to \$3,459,759,000. To this total, which represents sales of merchandise only, must be added \$991,230,000 of receipts from repairs and storage which obviously are retail operations. This increases the total volume of sales of automotive products and service to \$9,450,989,000.

The balance reported as sales is made up of wholesale sales of the retail dealers in automotive products and wholesaler-retailers, from sales of radios and radio equipment and other miscellaneous merchandise. The reported wholesale sales of these establishments will be discussed later in this chapter.

**Retail sales of automotive products by retailers.**—The \$3,234,244,000 reported by retailers of automotive products as representing sales of automobile commodities actually accounts for about 19 percent of the total sales of \$49,000,000,000 reported by all retail establishments in the United States. About 59 percent of the total of retail automotive products represents sales of motor vehicles, 18 percent was sales of parts, accessories, tires, and batteries, and 23 percent was sales of gasoline, lubricating oils, and greases.

The following table shows by States and geographic divisions the estimated sales of these retail establishments, arranged in six commodity groups for convenience in comparisons with national totals and averages. These figures are essentially composite figures representing, as they do, the accumulation of all reported retail sales of automotive products by the several kinds of retail businesses. It does not include the retail sales of automobile wholesaler-retailers, which will be separately discussed. Also it does not include the wholesale sales of the retail automobile establishments, nor the receipts from repairs and storage, nor the sales of nonautomotive commodities. Separate reference will also be made for these various items. Table 11 shown on page 77 of this report contains a complete breakdown of the retail sales of automotive products by the retail dealers and the wholesaler-retailers.

The abbreviated 6-commodity table follows:

APPROXIMATE TOTAL RETAIL SALES OF AUTOMOTIVE PRODUCTS BY STATES AND GEOGRAPHIC DIVISIONS<sup>1</sup> SHOWN FOR ALL KINDS OF RETAIL ESTABLISHMENTS EXCEPT COUNTRY GENERAL STORES

(Sales in thousands of dollars)

DIVISIONS AND STATES	Total, automotive commodities	Per-cent of total	Passenger automobiles (new and used)	Commercial cars and trucks (new and used)	Busses and special-purpose vehicles (including tractors)	Auto-motive parts and accessories (including batteries)	Tires, tubes, and tire accessories	Gasoline, oils, and greases
United States total.....	\$9,294,244	100.00	\$4,166,458	\$553,939	\$167,396	\$952,924	\$833,054	\$1,860,772
NEW ENGLAND.....	670,680	6.98	304,080	43,612	3,792	72,573	58,208	107,517
Connecticut.....	121,034	1.47	61,721	9,634	348	14,145	10,690	24,495
Maine.....	52,247	0.63	28,080	4,183	701	8,126	3,308	7,384
Massachusetts.....	285,125	3.46	154,200	21,329	1,707	30,210	17,331	64,287
New Hampshire.....	33,990	.41	18,593	1,927	110	4,790	2,252	6,348
Rhode Island.....	46,614	.67	24,503	4,390	553	5,243	2,895	9,080
Vermont.....	31,070	.39	17,843	2,144	371	4,059	1,730	5,523
MIDDLE ATLANTIC.....	1,605,995	19.60	811,111	140,696	40,088	187,094	99,883	326,221
New Jersey.....	278,941	3.39	141,042	25,327	4,150	32,148	16,580	59,712
New York.....	790,941	9.00	403,983	69,762	29,651	89,215	48,306	148,461
Pennsylvania.....	536,713	6.51	266,086	45,607	6,287	60,830	34,456	118,047
EAST NORTH CENTRAL.....	1,050,283	23.79	1,029,675	116,726	21,604	215,287	105,989	470,000
Illinois.....	534,380	6.48	283,926	29,861	7,283	65,587	28,982	113,739
Indiana.....	230,005	2.88	128,501	11,306	2,401	24,703	13,610	55,573
Michigan.....	447,591	5.43	239,463	28,142	4,148	44,032	21,350	109,866
Ohio.....	529,295	6.43	265,989	33,502	5,003	56,101	32,083	136,559
Wisconsin.....	211,922	2.57	106,798	13,915	2,709	24,263	9,964	64,273
WEST NORTH CENTRAL.....	1,016,460	12.34	473,749	63,133	38,403	113,826	64,056	283,802
Iowa.....	193,827	2.35	94,265	10,203	6,098	21,089	11,081	50,591
Kansas.....	171,305	2.08	81,634	11,868	2,610	16,578	12,221	46,433
Minnesota.....	184,647	2.24	85,582	10,125	6,816	20,788	11,694	48,642
Missouri.....	237,415	2.89	112,700	16,627	4,894	27,232	17,618	58,348
Nebraska.....	120,803	1.47	54,856	8,110	7,211	15,080	4,932	30,014
North Dakota.....	53,055	.64	21,515	3,992	5,698	6,073	3,224	12,549
South Dakota.....	55,357	.67	23,207	2,208	4,476	5,881	3,286	16,299
SOUTH ATLANTIC.....	727,642	8.84	343,909	50,079	6,414	85,105	48,853	193,281
Delaware.....	17,812	.22	8,908	1,841	116	2,167	771	4,510
District of Columbia.....	46,089	.56	21,810	3,801	413	5,715	2,605	11,844
Florida.....	101,993	1.23	44,508	4,625	734	11,192	7,110	33,853
Georgia.....	117,084	1.42	56,182	8,037	2,101	14,288	8,701	27,827
Maryland.....	87,537	1.07	40,567	10,294	1,119	11,087	5,903	18,657
North Carolina.....	127,436	1.55	56,434	7,096	685	14,874	10,224	38,074
South Carolina.....	67,066	.69	29,343	2,397	485	6,003	3,900	14,938
Virginia.....	99,603	1.21	51,151	5,943	422	11,494	4,918	25,669
West Virginia.....	73,022	.89	34,956	6,030	330	8,375	4,821	17,901
EAST SOUTH CENTRAL.....	376,182	4.57	193,138	25,217	9,246	44,059	27,555	76,906
Alabama.....	89,494	1.09	43,947	6,793	1,604	10,312	7,627	19,155
Kentucky.....	94,259	1.14	51,060	6,183	917	10,480	5,366	20,184
Mississippi.....	78,765	.96	39,750	5,019	2,827	9,362	5,043	16,761
Tennessee.....	113,664	1.38	58,346	7,222	3,540	13,896	8,495	20,866
WEST SOUTH CENTRAL.....	789,540	9.59	394,062	50,032	11,938	92,042	64,240	177,225
Arkansas.....	76,939	.93	35,209	5,269	1,548	8,650	4,268	18,984
Louisiana.....	82,506	1.01	41,282	6,164	511	9,473	7,459	17,611
Oklahoma.....	197,107	2.39	91,409	14,740	2,806	23,352	15,021	49,480
Texas.....	432,938	5.26	223,102	23,858	7,074	50,263	37,502	91,151
MOUNTAIN.....	322,467	3.92	160,004	20,209	11,976	87,928	10,354	72,990
Arizona.....	42,664	.52	21,233	2,410	2,347	4,313	2,682	6,672
Colorado.....	96,397	1.17	47,197	4,788	2,600	11,512	5,024	25,270
Idaho.....	36,501	.43	18,182	2,775	779	4,739	2,308	6,807
Montana.....	52,639	.64	24,812	3,320	4,065	5,641	2,415	12,183
Nevada.....	10,294	.12	5,865	382	144	1,189	676	2,008
New Mexico.....	24,353	.30	10,688	1,914	1,346	3,882	2,017	4,306
Utah.....	37,800	.46	19,916	2,895	359	4,162	3,015	7,452
Wyoming.....	22,794	.28	12,140	1,518	330	2,790	1,217	4,798
PACIFIC.....	805,987	10.52	455,828	44,235	23,935	104,309	64,917	172,764
California.....	688,876	7.76	350,300	23,057	15,365	75,000	46,071	129,183
Oregon.....	87,867	1.07	36,771	11,692	4,368	11,550	7,134	16,442
Washington.....	139,244	1.69	68,757	9,676	4,202	17,168	12,712	27,139

<sup>1</sup> Does not include the retail sales of automobile wholesaler-retailers, which are shown in table 11a.

**Retail sales of automotive products by automobile wholesaler-retailers.**—The estimated total retail sales of automobile products by wholesaler-retailers, for the year 1929, was approximately \$225,514,000. This amount represents 26.29 percent of the total sales reported by these combination wholesalers-retailers. Nearly 91 percent of the retail sales of these establishments represents sales of motor vehicles. About 8 percent represents retail sales of parts, accessories, tires, and batteries and the remaining 1 percent represents sales of gasoline, oils, and greases.

The following table shows by States and geographic divisions the estimated retail sales of these wholesale automobile distributors who also sell at retail. The commodities are arranged in the same six major groupings for ready comparison with the retail table previously referred to. As in the case of the retail table, receipts from repairs and storage, sales of nonautomotive products, and the wholesale sales have been omitted from this table. Table 10 shown at the back of this report contains a complete breakdown of the retail sales of automotive products by retailers and by automobile wholesaler-retailers.

The abbreviated six-commodity table follows:

### APPROXIMATE TOTAL RETAIL SALES OF AUTOMOTIVE PRODUCTS, BY STATES AND GEOGRAPHIC DIVISION, SHOWN FOR AUTOMOBILE WHOLESALER-RETAILERS

[Sale in thousands of dollars]

DIVISIONS AND STATES	Total	Per cent	Passenger automobiles (new and used)	Commercial cars and trucks (new and used)	Busses and special-purpose vehicles	Automobile parts and accessories	Tires, tubes, and tire accessories	Gasoline, oils, and greases
<b>United States total</b> .....	<b>\$225,503</b>	<b>100.00</b>	<b>\$187,908</b>	<b>\$16,788</b>	<b>\$369</b>	<b>\$14,493</b>	<b>\$3,722</b>	<b>\$2,233</b>
<b>NEW ENGLAND</b> .....	<b>20,197</b>	<b>8.96</b>	<b>17,460</b>	<b>1,408</b>	<b>5</b>	<b>994</b>	<b>150</b>	<b>190</b>
Maine.....	1,941	.86	1,667	100	5	78	17	44
New Hampshire.....	250	.11	222	---	5	7	2	19
Vermont.....	219	.10	200	---	---	13	---	6
Massachusetts.....	13,813	6.13	11,070	1,005	---	666	89	83
Rhode Island.....	1,039	.46	1,017	---	---	---	17	5
Connecticut.....	2,935	1.30	2,344	303	---	230	25	33
<b>MIDDLE ATLANTIC</b> .....	<b>69,024</b>	<b>30.61</b>	<b>61,473</b>	<b>2,000</b>	<b>223</b>	<b>2,607</b>	<b>1,288</b>	<b>533</b>
New York.....	31,509	13.97	28,424	1,287	193	1,083	241	281
New Jersey.....	8,760	3.89	7,929	251	---	484	81	15
Pennsylvania.....	28,755	12.75	25,120	1,362	30	1,040	966	237
<b>EAST NORTH CENTRAL</b> .....	<b>65,069</b>	<b>28.86</b>	<b>59,402</b>	<b>8,550</b>	<b>9</b>	<b>4,965</b>	<b>682</b>	<b>401</b>
Ohio.....	18,220	8.03	15,924	281	3	1,737	87	188
Indiana.....	5,922	2.63	5,062	369	6	310	130	30
Illinois.....	19,222	8.53	16,833	928	---	1,251	115	95
Michigan.....	17,055	7.56	8,884	6,840	---	1,070	150	105
Wisconsin.....	4,660	2.06	3,699	132	---	591	104	34
<b>WEST NORTH CENTRAL</b> .....	<b>26,974</b>	<b>11.96</b>	<b>22,210</b>	<b>1,216</b>	<b>15</b>	<b>2,544</b>	<b>443</b>	<b>546</b>
Minnesota.....	6,101	2.70	4,094	416	---	445	106	51
Iowa.....	5,090	2.26	4,352	99	3	465	99	72
Missouri.....	6,916	3.07	5,637	252	---	908	67	52
North Dakota.....	735	.32	374	---	---	176	7	178
South Dakota.....	830	.37	609	127	8	70	10	6
Nebraska.....	5,927	2.63	5,078	308	4	331	59	147
Kansas.....	1,375	.61	1,166	14	---	149	6	40
<b>SOUTH ATLANTIC</b> .....	<b>8,041</b>	<b>3.83</b>	<b>7,460</b>	<b>336</b>	<b>52</b>	<b>580</b>	<b>101</b>	<b>103</b>
Delaware.....	163	.07	---	134	---	19	---	---
Maryland.....	400	.18	400	---	---	---	---	---
District of Columbia.....	643	.28	514	65	---	49	8	7
Virginia.....	471	.21	350	30	50	12	19	8
West Virginia.....	2,366	1.05	2,122	8	---	206	19	11
North Carolina.....	1,789	.79	1,570	88	---	89	15	27
South Carolina.....	---	---	---	---	---	---	---	---
Georgia.....	1,276	.57	1,220	---	---	---	39	17
Florida.....	1,543	.68	1,282	11	2	214	1	33

APPROXIMATE TOTAL RETAIL SALES OF AUTOMOTIVE PRODUCTS, BY STATES AND GEOGRAPHIC DIVISION, SHOWN FOR AUTOMOBILE WHOLESALE-RETAILERS—Continued

(Sale in thousands of dollars)

DIVISIONS AND STATES	Total	Per cent	Passenger automobiles (new and used)	Commercial cars and trucks (new and used)	Busses and special-purpose vehicles	Automobile parts and accessories	Tires, tubes, and tire accessories	Gasoline, oils, and greases
<b>EAST SOUTH CENTRAL</b> .....	\$2,240	.99	\$1,781	\$270	-----	\$158	\$17	\$14
Kentucky.....	114	.05	-----	91	-----	23	-----	-----
Tennessee.....	2,008	.89	1,781	88	-----	108	17	14
Alabama.....	118	.05	-----	91	-----	27	-----	-----
Mississippi.....	-----	-----	-----	-----	-----	-----	-----	-----
<b>WEST SOUTH CENTRAL</b> .....	4,920	2.18	4,217	180	-----	391	89	43
Arkansas.....	-----	-----	-----	-----	-----	-----	-----	-----
Louisiana.....	1,803	.80	1,673	7	-----	116	6	1
Oklahoma.....	204	.12	201	-----	-----	44	10	9
Texas.....	2,853	1.26	2,343	173	-----	231	73	33
<b>MOUNTAIN</b> .....	5,121	2.27	4,345	208	10	378	77	103
Montana.....	438	.20	350	-----	-----	48	12	28
Idaho.....	6	-----	-----	0	-----	-----	-----	-----
Wyoming.....	-----	-----	-----	-----	-----	-----	-----	-----
Colorado.....	2,375	1.28	2,497	152	-----	132	46	48
New Mexico.....	430	.19	242	7	-----	173	7	1
Arizona.....	687	.30	652	-----	-----	25	5	5
Utah.....	685	.30	604	43	10	-----	7	21
Nevada.....	-----	-----	-----	-----	-----	-----	-----	-----
<b>PACIFIC</b> .....	23,317	10.34	18,570	1,720	45	1,807	875	240
Washington.....	4,837	2.14	3,087	452	-----	507	83	48
Oregon.....	969	.43	883	43	-----	41	-----	2
California.....	17,511	7.77	14,000	1,225	45	1,259	702	190

**Estimate of wholesale sales of automotive products by retailers and by automobile wholesaler-retailers.**—The approximate total wholesale sales of automotive products of retail dealers was \$485,840,000 in 1929. The wholesale sales of automobile wholesaler-retailers amounted to \$593,105,000, making a grand total of \$1,083,945,000, or 10 percent of the combined total sales of retail dealers in automotive products, automobile wholesaler-retailers and the automotive sales of other kinds of retail establishments.

Table 12 contains a summarization of the wholesale sales of the establishments referred to above. It is obvious that the wholesale sales figures are again reported in the retail sales which are also shown in table 11. In the absence of data on the cost of goods sold as well as on the proportion of merchandise purchased by retailers from other types of wholesale distributors it is impossible to obtain totals from which all duplication has been eliminated.

Table 12 shows the wholesale sales which were made by the establishments included in this report, segregation being made by individual kinds of business.

Table 10 furnishes a breakdown of the sales of automotive products into specific commodity lines not only for retailers but for automobile wholesaler-retailers. This table provides the basis for study of the different kinds of merchandise sold by each different kind of business and shows the relative importance of each line.

**Commodities sold by dealers in automotive products.**—The nature of the merchandise sold by the various kinds of dealers in automotive products varies materially. Also the proportions of each commodity vary, even though many commodities are sold by practically all dealers. The degree of importance of a given commodity in a given kind of establishment necessarily determines whether it is primary or featured merchandise or whether it is related or secondary merchandise. The following tables, supplying national figures for each of 13 different kinds of retail automotive products dealers, together with one showing national commodity totals for automobile wholesaler-retailers, provide the necessary basic data for subsequent discussion of primary and related commodities in which these brief tables will be used as illustrations.

COMMODITIES SOLD IN RETAIL AUTOMOBILE SALES ROOMS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$6, 153, 216, 587	100.00
Automobiles, parts and accessories sold to ultimate consumers, total.....	5, 685, 675, 986	92.41
Passenger automobiles (new).....	2, 899, 820, 145	47.12
Passenger automobiles (used).....	1, 125, 118, 123	18.29
Busses.....	40, 229, 901	.65
Commercial cars and trucks (new).....	420, 823, 978	6.84
Commercial cars and trucks (used).....	97, 986, 551	1.59
Special purpose vehicles.....	26, 214, 468	.43
Tractors.....	17, 747, 927	.29
Automobile parts and accessories (except tires, tubes and batteries).....	451, 171, 613	7.33
Tires, tubes, and tire accessories.....	56, 878, 132	.93
Batteries.....	7, 548, 754	.12
Gasoline.....	43, 703, 300	.71
Oils and greases.....	28, 703, 758	.47
Repairs, service, and storage.....	443, 289, 252	7.21
Radios and radio equipment.....	6, 483, 756	.11
Miscellaneous merchandise.....	19, 896, 299	.32
Automobiles, parts and accessories sold to dealers, total.....	497, 540, 601	7.59
Passenger automobiles (new).....	391, 276, 364	6.36
Passenger automobiles (used).....	6, 012, 518	.11
Busses.....	913, 885	.01
Commercial cars and trucks (new).....	44, 185, 217	.72
Commercial cars and trucks (used).....	797, 007	.01
Automobile parts and accessories (except tires and tubes).....	23, 606, 302	.38
Tires, tubes, and tire accessories.....	140, 308	-----

COMMODITIES SOLD BY WHOLESALER-RETAILERS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$867, 751, 335	100.00
Automobiles, parts and accessories, sold to ultimate consumers, total.....	248, 754, 398	29.00
Passenger automobiles (new).....	131, 679, 802	15.35
Passenger automobiles (used).....	59, 223, 587	6.56
Busses.....	125, 281	.01
Commercial cars and trucks (new).....	8, 212, 943	.96
Commercial cars and trucks (used).....	8, 576, 542	1.00
Special purpose vehicles.....	234, 900	.03
Automotive parts and accessories (except tires, tubes and batteries).....	13, 971, 518	1.63
Batteries.....	525, 600	.06
Tires, tubes, and tire accessories.....	3, 722, 509	.43
Gasoline.....	1, 233, 622	.14
Oils and greases.....	1, 002, 802	.12
Repairs, service, and storage.....	21, 230, 588	2.48
Radios and radio equipment <sup>1</sup> .....	2, 009, 644	.23
Automobiles, parts, and accessories sold to dealers, total.....	608, 996, 937	71.00
Passenger automobiles (new).....	521, 783, 733	60.83
Passenger automobiles (used).....	3, 079, 517	.36
Busses.....	149, 037	.02
Commercial cars and trucks (new).....	17, 412, 401	2.03
Commercial cars and trucks (used).....	10, 963, 100	1.23
Tractors.....	7, 060, 841	.89
Automobile parts and accessories (except tires, tubes, and batteries).....	33, 178, 958	3.87
Tires, tubes, and tire accessories.....	3, 877, 543	.45
Miscellaneous merchandise <sup>2</sup> .....	19, 891, 807	1.27

<sup>1</sup> While the schedule makes no provision for determining whether this merchandise was sold at wholesale or at retail, the comparatively insignificant total would indicate individual sales at retail.

<sup>2</sup> This classification includes incidental sales of farm machinery, farm wagons, other farm and garden equipment and supplies, and fuel oil sold by wholesaler-retailers and is believed to consist primarily of miscellaneous wholesale sales.

## COMMODITIES SOLD IN RETAIL USED-CAR ESTABLISHMENTS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities	\$140,932,120	100.00
Automotive parts and accessories	3,034,532	2.68
Automotive parts and accessories, sold to dealers	10,912	.01
Batteries	180,003	.13
Busses	58,036	.04
Commercial cars and trucks (new)	61,450	.04
Gasoline	1,920,514	.94
Miscellaneous merchandise (including candy, lunches, cigars, etc.)	181,142	.13
Oils and greases	234,450	.17
Passenger automobiles (new)	134,285	.09
Radios and radio equipment	120,388	.09
Repairs and service	2,013,808	2.07
Special purpose vehicles	70,327	.05
Special purpose vehicles, sold to dealers	25,007	.02
Storage	350,110	.25
Tires, tubes, and tire accessories	1,310,145	.93
Tractor	30,755	.03
Used commercial cars and trucks	2,020,278	2.07
Used commercial cars and trucks, sold to dealers	0,042	.01
Used passenger cars	124,800,400	88.60
Used passenger cars, sold to dealers	2,531,570	1.80

## COMMODITIES SOLD BY AUTOMOBILE DEALERS WITH FARM IMPLEMENTS AND MACHINERY

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities	\$113,363,210	100.00
Automotive parts and accessories	5,974,208	5.27
Batteries	26,430	.02
Commercial cars and trucks (new)	27,503,734	24.26
Farm machinery	24,541,051	21.65
Farm wagons	1,510,050	1.34
Gasoline	1,080,172	1.40
Miscellaneous merchandise	5,008,053	5.20
Oils and greases	428,833	.38
Other farm and garden equipment and supplies	3,190,803	2.82
Passenger cars (new)	10,000,050	9.02
Repairs and service	4,011,400	4.33
Special purpose vehicles	23,353	.02
Storage	25,405	.02
Tires, tubes, and tire accessories	1,115,085	.98
Tractors	21,008,700	19.12
Used commercial cars and trucks	3,208,047	2.83
Used passenger cars	630,384	.50

## COMMODITIES SOLD IN ACCESSORY STORES WITH TIRES AND BATTERIES

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities	\$257,742,858	100.00
Automotive parts and accessories	137,027,972	53.40
Automotive parts and accessories, sold to dealers	3,000,033	1.10
Batteries	12,500,201	4.88
Gasoline	10,380,713	4.03
Miscellaneous merchandise (including trucks, passenger cars, motorcycles, bicycles, etc.)	1,880,054	.73
Oils and greases	4,011,082	1.50
Radio sets	7,077,446	2.75
Radio parts and accessories	2,240,373	.87
Repairs and service	18,477,718	7.17
Storage	211,273	.08
Tires, tubes, and tire accessories	57,801,500	22.43
Tires, tubes, and tire accessories sold to dealers	1,022,032	.40
Used passenger cars, commercial cars, and trucks	435,752	.17

COMMODITIES SOLD IN BATTERY AND IGNITION SHOPS, BRAKE REPAIR SHOPS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$94, 238, 218	100.00
Automotive parts and accessories (except tires and tubes).....	12, 162, 712	12.91
Automotive parts and accessories, sold to dealers.....	779, 129	.83
Batteries.....	37, 230, 570	39.51
Gasoline.....	2, 158, 233	2.29
Miscellaneous merchandise (including soft drinks, lunches, candy, cigars, etc.).....	2, 068, 505	2.23
Oils and greases.....	617, 189	.65
Radio parts and accessories.....	1, 772, 693	1.88
Radio sets.....	4, 405, 871	4.77
Repairs and service.....	30, 944, 029	32.84
Storage.....	90, 971	.10
Tires, tubes, and tire accessories.....	1, 178, 300	1.25
Tires and tubes sold to dealers.....	114, 487	.12
Used passenger cars and trucks.....	24, 539	.03

COMMODITIES SOLD IN TIRE SHOPS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$247, 314, 087	100.00
Automotive parts and accessories (except tires, tubes, and batteries).....	0, 620, 526	3.89
Automotive parts and accessories sold to dealers.....	131, 283	.05
Batteries.....	5, 443, 038	2.20
Gasoline.....	24, 073, 710	9.89
Miscellaneous merchandise (including candy, soft drinks, lunches, cigars, etc.).....	1, 089, 140	.68
Oils and greases.....	5, 049, 049	2.04
Passenger cars and trucks (now and used).....	34, 308	.01
Radios and radio equipment.....	2, 590, 168	1.05
Repairs and service.....	24, 833, 643	10.04
Storage.....	280, 502	.11
Tires, tubes, and tire accessories.....	169, 254, 131	68.44
Tires and tubes sold to dealers.....	3, 712, 290	1.50

COMMODITIES SOLD IN GARAGES (REPAIRS, STORAGE, GASOLINE, OIL, ACCESSORIES)

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$693, 663, 270	100.00
Automotive parts and accessories.....	104, 063, 007	15.14
Automotive parts and accessories sold to dealers.....	3, 627, 369	.52
Batteries.....	21, 523, 844	3.11
Commercial cars and trucks (new).....	416, 819	.06
Gasoline.....	142, 219, 183	20.52
Miscellaneous merchandise.....	8, 819, 576	1.27
Oils and greases.....	33, 870, 875	4.89
Passenger automobiles (new).....	828, 670	.12
Radios and radio equipment.....	3, 455, 415	.50
Repairs and service.....	268, 778, 285	38.78
Special purpose vehicles.....	116, 046	.02
Storage.....	52, 128, 475	7.52
Tires, tubes, and tire accessories.....	48, 497, 064	7.00
Tires, tubes, and tire accessories sold to dealers.....	1, 325, 016	.19
Used commercial cars and trucks.....	314, 017	.05
Used passenger cars.....	2, 189, 609	.32

## CENSUS OF DISTRIBUTION

## COMMODITIES SOLD IN BODY, FENDER, AND PAINT SHOPS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$46, 106, 104	100. 00
Automotive parts and accessories.....	11, 992, 048	26. 01
Automotive parts and accessories sold to dealers.....	6, 923	. 02
Batteries.....	12, 801	. 04
Gasoline.....	287, 069	. 62
Miscellaneous merchandise.....	456, 506	. 99
Oils and greases.....	47, 422	. 10
Passenger cars, new and used.....	99, 080	. 21
Repairs and service.....	32, 898, 749	71. 35
Tires, tubes, and tire accessories.....	207, 304	. 45
Used passenger cars and trucks.....	90, 882	. 21

## COMMODITIES SOLD IN RADIATOR SHOPS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$6, 569, 523	100. 00
Automotive parts and accessories.....	1, 897, 047	28. 88
All other merchandise.....	137, 282	2. 09
Repairs and service.....	4, 535, 194	69. 03

## COMMODITIES SOLD AT PARKING STATIONS

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$30, 261, 738	100. 00
Automotive parts and accessories (except tires, tubes, and batteries).....	417, 700	1. 06
Batteries.....	278, 830	. 70
Gasoline.....	10, 820, 169	26. 29
Miscellaneous merchandise (including candy, lunches, tobacco, etc.).....	464, 107	1. 18
Oils and greases.....	1, 407, 556	3. 53
Repairs and service.....	3, 391, 878	8. 40
Storage.....	22, 571, 034	57. 49
Tires, tubes, and tire accessories.....	445, 698	1. 14
Tires and tubes sold to dealers.....	20, 817	. 07

## COMMODITIES SOLD IN FILLING STATIONS, GASOLINE AND OIL

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$809, 081, 365	100. 00
Fuel oil.....	8, 850, 634	1. 02
Gasoline.....	734, 382, 415	84. 50
Miscellaneous merchandise (including candy, lunches, cigars, etc.).....	8, 934, 846	1. 02
Oils and greases.....	107, 380, 534	12. 36
Repairs and service.....	9, 108, 963	1. 05
Storage.....	408, 970	. 06

COMMODITIES SOLD IN FILLING STATIONS WITH TIRES AND ACCESSORIES

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$516,916,621	100.00
Automotive parts and accessories (except tires, tubes, and batteries).....	20,166,520	3.90
Automotive parts and accessories, sold to dealers.....	156,874	.03
Batteries.....	9,471,615	1.83
Gasoline.....	332,509,417	64.33
Miscellaneous merchandise (including candy, beverages, lunches, cigars, etc.).....	5,322,586	.64
Oils and greases.....	59,847,505	11.53
Radios and radio equipment.....	1,070,734	.21
Repairs and service.....	24,759,648	4.79
Storage.....	1,209,823	.23
Tires, tubes, and tire accessories.....	63,591,810	12.30
Tires and tubes, sold to dealers.....	810,088	.16

COMMODITIES SOLD IN FILLING STATIONS WITH OTHER MERCHANDISE

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$401,425,111	100.00
Automotive parts and accessories (except tires, tubes, and batteries).....	13,810,823	3.44
Automotive parts and accessories, sold to dealers.....	261,202	.06
Batteries.....	5,156,161	1.29
Gasoline.....	201,532,318	65.16
Miscellaneous merchandise (including candy, beverages, lunches, cigars, etc.).....	21,801,815	5.43
Oils and greases.....	40,473,163	10.08
Passenger automobiles (new).....	168,450	.04
Radios and radio equipment.....	7,100,936	1.77
Repairs and service.....	15,748,645	3.92
Storage.....	888,138	.22
Tires, tubes, and tire accessories.....	33,476,449	8.34
Tires and tubes, sold to dealers.....	684,877	.17
Used passenger cars and trucks.....	332,074	.08

COMMODITIES SOLD IN AUTOMOBILE PARTS AND ACCESSORIES SHOPS  
(SECOND-HAND)

COMMODITIES SOLD	Estimated United States total sales	Percent
Total, all commodities.....	\$21,929,672	100.00
Automotive parts and accessories.....	16,767,050	76.46
Automotive parts and accessories, sold to dealers.....	66,203	.30
Batteries.....	182,389	.83
Gasoline.....	336,019	1.53
Miscellaneous merchandise.....	475,534	2.17
Oils and greases.....	118,168	.54
Radio sets.....	43,113	.20
Repairs and service.....	487,384	2.22
Storage.....	8,181	.04
Tires, tubes, and tire accessories.....	1,826,624	8.32
Tires, tubes, and tire accessories, sold to dealers.....	12,298	.06
Used commercial cars and trucks.....	386,437	1.76
Used passenger cars.....	1,205,006	5.50
Used passenger cars, sold to dealers.....	14,366	.07

**Primary commodities versus related commodities.**—The varied lines of merchandise sold by most retailers can usually be segregated into two classes, namely, *primary or basic commodities* and *related or secondary commodities*. The first consists of the principal or featured lines of merchandise, which represent a substantial proportion of all goods sold, and which usually are synonymous in the purchaser's mind with the kind of dealer in question. The second class is made up of goods often associated, by the customer, with the primary merchandise sold but which, from the customer's viewpoint are secondary to the featured lines.

This condition, while not as generally apparent among the different kinds of dealers in automotive products as in other kinds of business, nevertheless does exist in automotive trade and is becoming an increasingly important consideration, particularly in connection with certain lines of merchandise. Gasoline, oils, and greases represent a good typical example. This merchandise is clearly a primary-commodity line in filling stations where it accounts for nearly 86 percent of total sales. It is also primary merchandise in garages where it averages 25.41 percent of total sales. The same is true in parking garages and lots where gasoline, oils and greases represent 29.88 percent of their total reported receipts. This latter classification does not include those stations and lots which do not sell merchandise.

On the other hand, gasoline, oils, and greases are related merchandise in automobile salesrooms, many of which do not even carry gasoline for sale to customers. The sale of this merchandise in automobile salesrooms averages only 1.18 percent of total sales. The primary appeal is in automobiles and trucks which is featured as indicated by the proportion of motor vehicles (73.84 percent to consumers and 7.20 percent to other dealers) sold.

Tires and tubes provide another good example. In tire shops they represent about 70 percent of the total sales and are clearly primary commodities. They are also primary commodities in accessory stores where they represent nearly 23 percent of the total business. They are clearly related commodities in the two kinds of filling stations that sell other commodities than gasoline, oils, and greases. In those stations which sell tires and accessories, the sale of tires and tubes account for 12.46 percent of total sales and in the stations selling other miscellaneous merchandise, tire and tube sales represent 8.51 percent of sales. In the case of automobile salesrooms, tires and tubes account for less than 1 percent of sales and are clearly related commodities.

Radios and radio equipment, which are sold by many automotive dealers cannot be classed as primary merchandise in any of the establishments. Those which are built for use in automobiles obviously must be classed as related merchandise, while those which are intended for use in the home, store, etc., are clearly unrelated merchandise. Both types are sold by these dealers in automotive products and in the case of accessory stores amount to 3.62 percent of the total sales of these stores.

Receipts from repairs and service are relatively unimportant in many of these automotive establishments. However, in the case of battery and ignition shops these receipts represent nearly 33 percent of the total sales. It represents the largest item of income in garages where it averages nearly 49 percent of the total receipts, and in body, fender, and paint shops where repairs and service represent about 70 percent of the total income of the business.

**Retailers are interested in related commodities.**—Related commodity lines are of special interest to retailers because such merchandise should, under normal conditions, sell with less sales effort and with correspondingly lower expense than primary or featured merchandise. This point, which has been stressed repeatedly in previous trade studies, is again emphasized in connection with this study. It is particularly true in connection with certain kinds of automotive establishments and with certain kinds of merchandise.

Mechanical equipment of all kinds require periodic attention, often necessitating the replacing of worn materials with new merchandise. Motor vehicles are particularly susceptible to wear, not only mechanically but because of being driven in all kinds of weather and under all kinds of conditions in all moving and body parts as well. Batteries must be renewed. Tires must be replaced at infrequent intervals. In fact the automobile during its life requires new parts and accessories at any number of vulnerable points. Motorists driving in for a new battery or a new tire or for some minor service may discover other needed and desired merchandise, which obviously can be installed with a minimum of delay along with the originally desired merchandise. The purchaser of a new car is a potential customer for a number of practical accessories. He may find it desirable to have a radio installed if the set is properly demonstrated to him. Or a set of slip covers may be sold without an undue amount of effort. There are any number of desirable accessories which may, through prominent display or some sales effort, find ready sale to the motoring public, without adding materially to the operating costs. This matter is worthy of careful consideration and the brief tables previously given, as well as tables 11 and 12, are provided for purposes of illustrating the practicability of such methods of adding to sales volume as well as to furnish approximate total sales of these various commodity lines.

**Related commodity data are of value to the manufacturer and wholesaler.**—Dealers in automobile products offer present and potential markets for manufacturers and wholesalers of many commodities. The commodity tables contained in this report enable them to effectively gage their potential market in any of the several kinds of establishments which engage in the sale of automotive products. These tables will assist the manufacturer of a given commodity in deciding what kind of establishment or establishments are most desirable as sales agencies for the product. The State tables used in conjunction with the national commodity tables may also serve as a basis for revising sales territories or advertising plans. Used in connection with the general operating and expense data also found in this report it is possible to determine what kinds of dealers are operating at a mark-up within the range of the article in question. These are merely a few typical illustrations of uses for which commodity sales data answers a long felt need.

**Commodity data are of value to all concerns handling automobile products.**—Executives of concerns performing any of the functions of marketing are interested in ascertaining, first, what lines of merchandise are handled by the different kinds of automotive dealers to determine the nature and extent of the competition; second, how the expense ratios of these establishments compare and the relation of stocks to sales; third, the approximate total sales of the commodity in question in a given city or area; and fourth, what proportion of this total is supplied by each kind of establishment.

Reliable answers to these and other pertinent questions can be obtained with a minimum of effort by referring to the several State reports which contain all necessary data on State and city basis. Table 1 of each State report shows the total sales of each kind of establishment. Table 2 contains expense data prepared on the same basis. Table 4 contains data by size of business. Table 7 furnishes the basis for determining the relation which credit pays to the sales volume. Table 15 contains commodity sales break-downs for nearly every kind of store, which in the manner described on page 37 may be rebuilt to a dollar sales figure if desired.

The data officially at the disposal of the Bureau and available for analysis, are necessarily limited to the facts contained in the automobile questionnaire. This questionnaire was confined to the minimum consistent with securing the mass of necessary basic data. These limitations naturally preclude any attempt to itemize the many individual commodity items which have been developed by many of the establishments as related merchandise. However sales have been segregated into commodity lines which are sufficiently detailed to enable manufacturers, jobbers, retailers, etc., to satisfactorily gage the effectiveness of any given kind of store for any given commodity or groups of commodities.

TABLE 1A.—ESTABLISHMENTS AND SALES, BY STATES AND GEOGRAPHIC DIVISIONS, AND BY SIZE OF CITY  
RETAIL MOTOR-VEHICLE DEALERS (NEW AND USED)

DIVISIONS AND STATES	UNITED STATES TOTAL			CITIES OVER 30,000 POPULATION				CITIES 10,000-30,000 POPULATION				PLACES UNDER 10,000 POPULATION			
	Stores	Sales	Percent of United States sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales
United States total.....	43,894	\$6,294,143,693	100.00	10,980	\$3,177,040,419	50.43	6,444	\$1,008,860,860	15.98	36,470	\$2,110,241,984	38.53			
<b>NEW ENGLAND.....</b>	3,050	480,331,649	7.63	1,095	284,280,387	50.19	714	95,235,867	19.83	1,241	100,785,695	20.98			
Connecticut.....	610	95,010,566	1.56	221	46,427,039	39.61	141	17,620,556	17.98	248	21,963,341	22.41			
Maine.....	460	47,495,809	0.75	30	11,924,268	25.16	77	12,047,093	25.41	524	23,452,423	49.43			
Massachusetts.....	1,280	241,351,257	3.84	694	176,850,223	25.94	302	38,656,044	16.01	334	26,684,970	11.05			
New Hampshire.....	289	24,384,052	0.47	94	8,252,934	28.07	81	12,187,417	41.41	134	8,984,281	30.82			
Rhode Island.....	218	57,684,953	0.90	107	24,473,083	71.70	70	6,958,572	38.34	26	1,301,253	3.96			
Vermont.....	218	26,005,102	0.41	107	24,473,083	71.70	70	6,958,572	38.34	26	1,301,253	3.96			
<b>MIDDLE ATLANTIC.....</b>	7,783	1,269,523,301	20.17	2,450	749,216,088	58.46	1,443	215,707,632	16.99	3,900	311,509,601	24.55			
New Jersey.....	1,248	213,904,130	3.40	433	119,381,808	55.81	280	43,624,635	20.40	535	136,887,304	23.79			
New York.....	3,205	633,301,942	10.06	1,259	418,184,806	68.02	484	82,887,531	13.01	1,552	436,519,305	30.07			
Pennsylvania.....	3,240	422,227,229	6.71	788	204,649,304	48.47	679	89,056,165	21.24	1,806	127,802,702	30.29			
<b>EAST NORTH CENTRAL.....</b>	10,550	1,478,288,250	23.49	3,115	803,760,843	58.84	1,420	203,337,301	13.75	6,055	405,100,106	27.41			
Illinois.....	2,695	405,180,228	6.44	904	259,273,826	63.90	353	50,404,194	12.44	1,438	95,511,206	23.57			
Indiana.....	1,435	178,379,596	2.84	335	86,819,724	48.67	246	31,375,716	17.53	1,177	60,287,166	33.80			
Michigan.....	2,013	341,503,033	5.43	631	210,547,701	61.85	245	43,462,701	12.73	1,117	87,486,541	26.62			
Ohio.....	2,686	389,281,666	6.18	861	243,324,232	62.50	389	51,494,400	13.23	1,416	94,463,084	24.37			
Wisconsin.....	1,781	163,894,727	2.60	394	69,785,358	42.38	187	26,097,200	16.28	1,230	67,442,169	41.14			
<b>WEST NORTH CENTRAL.....</b>	7,388	726,419,533	11.54	635	238,444,985	32.82	793	117,316,561	16.15	5,660	370,658,287	51.03			
Iowa.....	1,615	138,779,001	2.21	176	37,626,826	27.11	181	24,165,792	16.69	1,258	77,986,283	56.20			
Kansas.....	1,179	119,796,985	1.90	110	34,368,104	20.33	207	29,882,958	25.03	862	65,455,833	56.64			
Minnesota.....	1,382	150,716,469	2.08	200	51,568,679	39.45	108	16,377,579	12.33	1,074	62,770,411	48.02			
Missouri.....	1,278	175,086,720	2.78	352	101,242,013	57.82	103	14,129,549	8.07	823	59,725,158	43.11			
Nebraska.....	477	87,062,101	1.38	80	19,370,392	22.13	55	12,493,022	14.35	813	55,298,687	63.62			
North Dakota.....	928	36,130,148	0.57	17	4,378,881	11.27	55	12,005,046	33.23	373	24,124,102	66.77			
South Dakota.....	529	38,838,406	0.62	17	4,378,881	11.27	55	9,161,815	23.56	457	25,297,713	68.14			



TABLE 1B.—ESTABLISHMENTS AND SALES, BY STATES AND GEOGRAPHIC DIVISIONS, AND BY SIZE OF CITY  
RETAIL AUTOMOBILE DEALERS WITH FARM IMPLEMENTS AND MACHINERY

DIVISIONS AND STATES	UNITED STATES TOTAL			CITIES OVER 30,000 POPULATION			CITIES 10,000-30,000 POPULATION			PLACES UNDER 10,000 POPULATION		
	Stores	Sales	Percent of United States sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales
United States total.....	1,407	\$113,363,249	100.00	20	\$4,188,388	3.69	53	\$8,099,667	7.15	1,394	\$101,076,194	89.16
NEW ENGLAND.....	10	1,463,585	1.29				1	83,201	5.98	15	1,880,384	94.32
Connecticut.....												
Maine.....												
Massachusetts.....	10	702,933	.62							10	702,933	100.00
New Hampshire.....	2	95,201	.08				1	83,201	87.40	1	12,000	12.60
Rhode Island.....												
Vermont.....	4	665,451	.59							4	665,451	100.00
MIDDLE ATLANTIC.....	65	5,299,909	4.68	2	237,496	4.48	3	852,998	16.09	60	4,209,415	79.43
New Jersey.....	2	382,807	.34							2	382,807	100.00
New York.....	36	2,941,012	2.60	2	237,496	8.07	2	715,704	24.34	32	1,987,732	67.59
Pennsylvania.....	27	1,976,090	1.74				1	137,204	6.94	26	1,838,886	93.06
EAST NORTH CENTRAL.....	304	24,613,492	21.71	7	1,067,286	4.34	14	2,084,832	8.47	263	21,461,374	87.19
Illinois.....	106	7,138,998	6.33				1	310,829	15.87	99	6,920,529	96.30
Indiana.....	26	2,088,362	1.83	1	54,007	2.13	3	377,058	19.25	22	1,770,965	64.88
Michigan.....	32	2,540,983	2.23	4	688,674	11.23	2	287,042	11.46	29	2,163,315	86.36
Ohio.....	50	5,240,983	4.63	4	688,674	8.81	5	450,966	8.61	41	4,240,313	80.16
Wisconsin.....	96	7,722,665	6.81	1	113,176	1.46	3	704,237	9.12	92	6,905,252	89.42
WEST NORTH CENTRAL.....	733	50,114,693	44.21				13	1,483,009	2.90	720	48,061,684	97.10
Iowa.....	110	7,646,599	6.74				4	891,005	5.11	106	7,255,594	94.89
Kansas.....	128	11,073,186	9.77				3	524,961	4.74	125	10,548,225	95.26
Minnesota.....	113	8,122,920	7.17				1	57,890	.71	112	8,065,030	99.29
Missouri.....	40	2,304,093	2.03				1	63,729	2.77	39	2,240,364	97.23
Nebraska.....	89	5,495,956	4.85					30,948	.66	88	5,465,008	99.44
North Dakota.....	141	9,267,662	8.18				1	9,652	.21	140	9,248,030	99.79
South Dakota.....	112	6,204,277	5.47				2	364,844	5.88	110	5,839,433	94.12

AUTOMOBILE TRADES

	40	5,046,408	4.45	5	1,109,560	21.96	5	708,553	14.04	30	3,228,295	63.07
<b>SOUTH ATLANTIC</b>	2	202,957	.18							2	502,957	100.00
Delaware.....												
District of Columbia.....	4	344,292	.30	1	140,000	40.96	1			3	204,292	58.84
Florida.....	5	115,975	.10	2	93,833	80.91	1			3	72,142	19.09
Georgia.....	7	1,365,537	1.21	1	370,582	27.14	1	94,114	6.80	7	900,911	65.97
Maryland.....	9	1,220,193	1.08	1	108,285	8.87	1	73,223	6.00	7	1,083,715	83.13
North Carolina.....	3	457,788	.40	1	536,910	64.89	1	339,216	74.10	2	138,972	32.90
South Carolina.....	6	826,190	.73	1						2	289,289	35.01
Virginia.....	4	513,417	.45							3	451,417	87.92
West Virginia.....												
<b>EAST SOUTH CENTRAL</b>	25	2,714,489	2.39	1	143,001	5.27	10	1,353,147	49.85	14	1,218,341	44.88
Alabama.....	7	583,313	.52				5	449,288	76.76	2	136,025	23.24
Kentucky.....	4	191,500	.17							4	191,500	100.00
Mississippi.....	13	1,841,676	1.62	1	143,001	7.76	5	902,859	49.08	7	794,816	43.16
Tennessee.....	1	96,000	.08							1	96,000	100.00
<b>WEST SOUTH CENTRAL</b>	54	6,728,748	5.94	3	1,266,848	18.83	5	918,835	13.65	46	4,543,065	67.52
Arkansas.....	1	75,000	.07							1	75,000	100.00
Louisiana.....	3	452,703	.40	1	178,995	39.54	1	261,600	57.70	1	17,108	2.97
Oklahoma.....	19	2,308,887	2.04				1	307,708	13.82	13	2,004,179	86.67
Texas.....	31	3,892,158	3.43	2	1,087,853	27.95	3	849,527	8.98	26	2,854,778	63.07
<b>MOUNTAIN</b>	115	9,794,098	8.64	1	273,646	2.79	1	115,346	1.18	113	9,405,706	96.08
Arizona.....	4	322,321	.29							4	322,321	100.00
Colorado.....	17	1,613,395	1.42	1	273,646	16.96				16	1,339,749	83.04
Idaho.....	13	1,083,237	.93				1	115,346	10.90	12	963,891	88.10
Montana.....	71	6,083,991	5.35							71	6,083,991	100.00
Nevada.....												
New Mexico.....	1	180,953	.16							1	180,953	100.00
Utah.....												
Wyoming.....	9	550,801	.49							9	550,801	100.00
<b>PACIFIC</b>	55	7,587,227	6.69	1	90,551	1.19	1	529,746	6.98	53	6,906,930	91.83
California.....	28	4,896,519	4.32	1	90,551	1.85				27	4,805,998	98.15
Oregon.....	5	478,455	.42							5	478,455	100.00
Washington.....	22	2,214,253	1.95				1	529,746	23.92	21	1,684,507	78.08

TABLE 1C.—ESTABLISHMENTS AND SALES, BY STATES AND GEOGRAPHIC DIVISIONS, AND BY SIZE OF CITY  
RETAIL ACCESSORY, TIRE, AND BATTERY DEALERS

DIVISIONS AND STATES	UNITED STATES TOTAL			CITIES OVER 30,000 POPULATION			CITIES 10,000-30,000 POPULATION			PLACES UNDER 10,000 POPULATION		
	Stores	Sales	Percent of United States sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales
United States total.....	23,313	\$539,235,161	100.00	12,169	\$410,509,250	68.50	3,833	\$96,397,083	16.45	6,311	\$90,138,828	15.05
NEW ENGLAND.....	1,593	44,004,381	7.34	1,115	33,851,505	76.93	283	6,403,938	14.70	196	3,650,480	8.31
Connecticut.....	349	10,150,302	1.69	217	7,396,992	22.43	62	1,463,908	14.42	70	1,320,325	13.10
Maine.....	97	2,364,405	0.40	31	7,396,992	38.02	24	795,851	33.66	42	660,663	28.32
Massachusetts.....	847	24,168,108	4.03	700	21,284,030	88.51	107	2,947,457	8.47	40	836,621	3.46
New Hampshire.....	72	1,191,388	0.20	29	445,039	41.91	31	545,178	46.76	12	151,151	12.69
Rhode Island.....	179	4,509,801	0.75	138	3,815,653	84.61	32	1,000,889	13.32	9	98,249	2.07
Vermont.....	49	1,616,776	0.27	32	1,040,265	64.22	26	1,040,265	64.22	23	579,571	35.78
MIDDLE ATLANTIC.....	4,839	128,379,138	21.46	3,222	98,187,879	76.36	781	17,102,094	13.30	836	13,289,255	10.34
New Jersey.....	802	22,444,264	3.75	519	17,121,430	76.28	121	2,755,164	15.28	102	2,567,670	11.44
New York.....	2,340	60,600,814	10.11	1,769	49,659,256	81.91	207	6,357,794	10.87	274	4,373,764	7.22
Pennsylvania.....	1,697	45,334,060	7.60	1,034	31,427,193	69.02	363	7,756,046	17.04	400	6,347,821	13.94
EAST NORTH CENTRAL.....	5,840	149,293,764	24.90	3,330	107,827,381	72.26	918	20,344,958	13.63	1,549	21,051,425	14.11
Illinois.....	1,623	49,854,311	7.16	1,070	33,623,671	78.41	211	4,931,680	11.50	342	3,235,950	10.09
Indiana.....	1,835	20,075,612	3.35	815	13,097,916	65.04	105	3,273,928	16.31	275	3,744,488	18.65
Michigan.....	1,008	27,751,623	4.63	638	20,839,664	75.09	167	3,300,519	12.62	253	3,714,450	12.29
Ohio.....	1,787	44,965,738	7.95	1,074	32,329,737	71.90	261	5,913,477	13.15	432	6,122,522	14.95
Wisconsin.....	587	13,546,412	2.20	253	7,976,393	58.88	114	2,726,044	20.12	220	2,843,973	21.00
WEST NORTH CENTRAL.....	3,056	66,991,159	11.18	1,002	33,502,288	50.01	556	14,702,219	21.95	1,498	18,781,272	28.04
Iowa.....	687	13,681,984	2.28	170	5,223,691	38.18	147	3,618,213	26.44	370	4,808,680	35.38
Kansas.....	580	10,137,264	1.69	32	2,634,079	28.94	133	3,248,364	32.05	335	3,054,521	30.01
Minnesota.....	545	12,269,493	2.09	228	6,965,951	56.81	73	1,864,711	15.21	244	3,431,107	27.98
Missouri.....	709	18,502,829	3.09	412	14,592,654	78.57	64	1,657,819	8.96	233	2,292,409	12.17
Nebraska.....	313	7,155,153	1.19	85	3,136,250	43.53	56	1,904,262	26.61	172	2,114,614	29.56
North Dakota.....	92	1,957,407	0.33	25	766,170	38.94	67	1,201,237	61.06	77	985,767	30.02
South Dakota.....	130	3,284,080	0.55	15	650,263	19.80	38	1,648,060	50.18	77	985,767	30.02
SOUTH ATLANTIC.....	1,615	47,343,587	7.90	914	34,085,435	71.99	300	8,127,096	17.17	401	5,131,066	10.84
Delaware.....	49	1,247,330	0.21	42	1,151,430	92.31	7	3,347,901	100.00	7	55,909	7.89
District of Columbia.....	107	3,847,961	0.55	107	3,847,961	100.00	58	1,401,634	16.11	102	1,233,646	14.29
Florida.....	306	8,702,937	1.45	146	6,037,657	69.60	58	1,401,634	16.11	102	1,233,646	14.29

Georgia.....	231	7,791,902	1.30	136	5,685,454	72.64	36	1,113,999	14.30	59	994,449	12.76
Maryland.....	266	6,888,142	1.15	211	6,091,450	88.29	22	445,638	6.47	33	361,054	5.24
North Carolina.....	187	6,406,440	1.07	77	3,829,551	59.78	54	1,833,746	28.62	56	743,143	11.80
South Carolina.....	115	2,466,066	.41	29	1,012,724	41.07	40	958,930	38.86	46	494,932	20.07
Virginia.....	171	6,000,927	1.00	103	4,715,604	78.58	34	852,991	14.21	34	492,732	17.04
West Virginia.....	183	4,491,573	.75	63	2,205,604	49.10	56	1,521,098	33.86	64	765,171	17.04
<b>EAST SOUTH CENTRAL</b> .....	696	24,381,447	4.07	335	16,530,418	67.80	159	4,849,769	19.89	202	3,001,260	12.81
Alabama.....	193	6,452,425	1.08	87	4,102,876	63.59	63	1,720,471	26.56	48	629,078	9.75
Kentucky.....	218	5,852,165	.93	108	3,616,002	64.78	42	1,961,857	17.23	66	1,004,306	17.96
Mississippi.....	84	2,504,891	.42	13	595,477	22.61	41	1,505,634	60.11	30	432,780	17.28
Tennessee.....	198	9,841,966	1.64	127	8,245,063	83.77	13	661,907	6.73	53	935,098	9.80
<b>WEST SOUTH CENTRAL</b> .....	1,563	49,388,238	8.24	568	29,903,361	60.55	307	9,805,605	19.85	633	9,679,272	19.60
Arkansas.....	109	4,541,426	.76	34	3,097,862	68.21	23	712,069	15.68	52	731,495	16.11
Louisiana.....	123	5,412,747	.90	74	3,875,920	71.61	27	1,172,515	21.66	27	394,312	6.73
Oklahoma.....	487	12,828,768	2.14	121	6,119,070	47.70	112	3,221,450	25.11	254	3,488,243	27.19
Texas.....	833	26,605,207	4.44	339	16,810,509	63.19	145	4,699,671	17.66	355	5,086,217	19.15
<b>MOUNTAIN</b> .....	712	19,360,147	3.23	218	7,980,873	41.27	196	6,051,090	31.26	395	5,318,184	27.47
Arizona.....	73	2,836,925	.39	35	1,583,116	67.74	18	1,134,070	17.28	38	753,800	32.26
Colorado.....	261	6,563,035	1.10	123	4,247,078	64.69	52	1,850,508	51.02	96	1,183,878	18.03
Idaho.....	74	2,684,992	.44	14	412,261	16.27	18	1,801,688	82.91	56	1,309,394	48.98
Montana.....	101	2,534,486	.43	14	412,261	16.27	40	1,407,881	87.19	47	330,242	20.82
Nevada.....	115	1,467,670	.08	46	1,748,418	87.66	11	407,881	87.19	4	339,508	12.51
New Mexico.....	61	1,482,666	.23	46	1,748,418	87.66	20	806,704	94.21	41	678,902	43.79
Utah.....	59	1,092,548	.23	46	1,748,418	87.66	4	83,271	4.17	9	162,869	38.17
Wyoming.....	63	1,315,910	.22	46	1,748,418	87.66	24	670,714	51.05	44	643,202	48.95
<b>PACIFIC</b> .....	2,399	70,023,300	11.68	1,415	48,630,112	69.45	361	11,115,654	15.87	623	10,277,624	14.68
California.....	1,866	64,746,510	9.13	1,169	39,699,323	72.46	266	7,651,474	13.98	441	7,422,713	13.56
Oregon.....	203	6,076,949	1.01	82	3,088,240	50.82	38	1,293,394	21.29	91	1,694,715	27.89
Washington.....	323	9,203,441	1.54	164	5,872,549	63.81	70	2,170,696	23.58	91	1,160,196	12.61

CENSUS OF DISTRIBUTION

TABLE 1D.—ESTABLISHMENTS AND SALES, BY STATES AND GEOGRAPHIC DIVISIONS, AND BY SIZE OF CITY  
GARAGES AND REPAIR SHOPS

DIVISIONS AND STATES	UNITED STATES TOTAL			CITIES OVER 30,000 POPULATION			CITIES 10,000-30,000 POPULATION			PLACES UNDER 10,000 POPULATION		
	Stores	Sales	Percent of United States sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales
United States total.....	66,763	\$785,000,636	100.00	21,188	\$356,994,938	45.47	5,523	\$70,214,275	8.94	40,082	\$357,851,425	45.59
<b>NEW ENGLAND.</b>	13,276	189,694,087	24.19	6,121	110,091,830	57.97	1,082	14,989,732	7.88	6,073	64,862,545	34.15
Connecticut.....	863	10,778,488	1.37	424	16,477,877	57.63	273	4,108,682	12.72	1,084	11,703,155	36.24
Maine.....	635	7,617,306	1.97	31	1,118,989	14.68	36	1,016,666	13.57	550	4,384,743	42.07
Massachusetts.....	1,522	23,187,632	2.95	768	13,873,989	59.53	280	3,110,666	13.57	424	5,346,224	22.94
New Hampshire.....	376	4,637,288	.59	32	1,285,634	7.83	76	1,687,179	25.69	248	2,374,493	66.88
Rhode Island.....	357	4,317,383	.56	218	2,807,875	65.03	88	3,066,069	14.73	333	3,873,809	90.24
Vermont.....	352	3,895,860	.50		2,807,875		25	322,682	3.39		3,366,368	91.61
<b>MIDDLE ATLANTIC.</b>	13,276	189,694,087	24.19	6,121	110,091,830	57.97	1,082	14,989,732	7.88	6,073	64,862,545	34.15
New Jersey.....	2,240	82,288,914	4.11	6,018	16,477,877	67.02	404	1,481,201	3.38	2,592	28,003,334	27.60
New York.....	4,402	164,482,983	12.82	3,466	68,013,438	67.02	404	1,481,201	3.38	2,592	28,003,334	27.60
Pennsylvania.....	4,644	56,153,120	7.15	1,737	25,600,525	45.59	400	6,399,539	9.62	2,507	25,153,056	44.79
<b>EAST NORTH CENTRAL.</b>	12,663	149,771,709	19.08	4,359	76,588,398	51.14	969	11,771,551	7.86	7,383	61,411,760	41.00
Illinois.....	3,468	53,342,534	2.70	1,420	34,354,930	64.40	214	3,252,890	8.10	1,795	13,734,714	25.54
Indiana.....	2,216	21,925,969	2.70	601	7,226,071	32.96	240	2,976,337	13.57	476	11,734,561	53.47
Michigan.....	2,006	23,693,282	3.06	655	11,205,342	46.70	147	1,673,519	6.98	1,204	11,114,241	46.32
Ohio.....	3,582	35,437,508	4.52	1,353	18,333,286	51.68	264	2,609,653	7.35	1,945	14,534,560	40.32
Wisconsin.....	1,420	15,032,416	1.91	391	5,468,769	36.33	104	1,259,152	8.38	984	8,304,496	55.24
<b>WEST NORTH CENTRAL.</b>	9,251	90,708,837	11.56	1,906	28,585,901	31.51	677	7,718,514	8.51	6,668	54,404,422	59.98
Iowa.....	1,783	16,127,823	2.08	270	4,245,679	26.33	147	2,177,612	7.92	1,368	10,804,532	65.75
Kansas.....	1,560	14,357,564	1.83	174	2,107,484	14.68	203	2,198,629	15.31	1,182	10,051,441	70.01
Minnesota.....	1,519	15,917,927	2.03	416	5,879,335	36.94	65	1,030,249	6.47	1,001	9,008,444	56.59
Missouri.....	2,453	25,770,950	3.28	838	13,246,237	51.40	102	1,125,042	4.37	1,001	9,008,700	44.23
Nebraska.....	955	9,334,498	1.19	187	2,809,913	30.10	74	1,102,722	7.61	694	5,813,683	62.29
North Dakota.....	466	3,937,723	.50				41	682,562	17.33	425	3,915,161	82.67
South Dakota.....	515	5,292,353	.67	21	297,263	5.65	45	692,798	13.16	449	4,272,292	81.19
<b>SOUTH ATLANTIC.</b>	6,773	63,417,733	8.08	1,511	24,899,423	39.26	494	4,923,048	7.76	4,768	33,895,315	52.98
Delaware.....	161	1,651,833	.49	68	3,888,518	100.00				93	3,888,518	57.92
District of Columbia.....	1,166	10,637,138	1.36	330	3,747,436	35.23	114	1,167,483	10.98	712	5,732,239	53.79
Florida.....	1,567	10,637,138	1.36	330	3,747,436	35.23	67	1,167,483	10.98	712	5,732,239	53.79
Georgia.....	1,047	8,288,315	1.05	231	3,686,603	44.34	67	1,736,781	8.91	749	3,865,526	46.75

Maryland.....	711	8,605,569	1.10	245	3,923,473	45.59	18	258,157	3.12	447	4,413,989	51.20
North Carolina.....	1,171	10,890,555	1.38	171	3,793,008	34.90	75	707,604	6.51	918	6,368,743	58.69
South Carolina.....	584	3,545,974	1.17	43	3,580,116	16.36	82	582,802	16.43	465	3,383,266	67.21
Virginia.....	1,084	9,165,716	1.17	208	3,224,865	35.18	71	797,682	8.70	805	5,143,229	56.12
West Virginia.....	743	6,804,725	.87	98	1,400,392	20.58	66	662,739	9.74	579	4,741,595	69.88
EAST SOUTH CENTRAL												
Alabama.....	3,884	34,496,987	4.39	652	9,054,218	26.25	293	4,129,818	11.97	2,939	21,312,951	61.78
Arkansas.....	986	8,129,555	1.03	151	1,952,583	24.02	66	817,879	10.80	769	5,299,044	65.16
Kentucky.....	1,190	9,411,339	1.20	195	2,231,393	23.71	91	1,018,957	10.83	904	6,160,980	65.46
Mississippi.....	692	5,751,860	1.73	33	331,484	6.81	92	1,524,132	28.60	587	3,837,744	66.69
Tennessee.....	1,016	11,294,632	1.43	273	4,478,738	39.87	44	708,060	6.33	699	6,017,124	58.70
WEST SOUTH CENTRAL												
Louisiana.....	6,940	72,799,012	9.27	1,408	22,861,178	31.40	546	7,504,288	10.31	4,986	42,433,566	58.29
Oklahoma.....	770	6,453,787	.82	67	2,684,224	10.56	43	952,401	14.71	658	4,838,162	74.74
Texas.....	720	6,868,075	.88	186	3,376,493	34.50	31	607,697	7.36	512	4,004,620	58.14
MOUNTAIN												
Arizona.....	1,358	12,800,809	1.77	182	3,294,004	23.26	160	2,081,337	14.84	1,043	8,607,628	61.90
Colorado.....	4,086	45,530,231	5.80	1,003	10,566,622	36.39	310	3,980,968	8.74	2,773	24,983,156	54.87
Idaho.....	2,639	33,334,788	4.25	532	7,339,541	22.02	225	3,876,131	10.73	1,882	22,419,116	67.25
Utah.....	392	4,891,670	1.61	91	2,051,880	42.31	61	577,859	6.05	911	2,769,846	57.89
Wyoming.....	894	9,245,953	1.22	325	3,735,729	39.27	10	432,455	31.88	468	2,719,815	54.66
PACIFIC												
California.....	4,822	9,734,723	.48	21	423,536	7.88	77	1,403,940	25.37	373	3,509,317	88.52
Oregon.....	80	1,634,711	.20	0	0	0	33	463,914	25.16	362	3,067,317	96.89
Washington.....	289	2,924,874	.37	95	1,125,446	34.39	34	501,101	17.13	216	2,423,713	81.87
Yonking.....	283	3,272,910	.42	95	1,125,446	34.39	1	10,392	1.32	189	2,151,072	65.29
.....	140	1,860,138	.25	0	0	0	15	216,840	10.95	181	1,763,288	89.06
.....	7,263	96,764,910	12.33	3,186	54,397,866	56.22	607	7,472,130	71.72	3,410	84,894,223	36.06
.....	4,033	68,210,692	8.69	2,226	4,457,119	6.52	458	5,016,724	7.35	2,063	21,706,119	31.52
.....	1,026	12,024,624	2.03	433	5,412,737	42.81	39	826,239	6.34	641	6,388,438	50.89
.....	1,274	16,010,533	2.03	433	7,488,020	47.04	115	1,628,147	10.24	706	6,794,666	42.72

TABLE I E.—ESTABLISHMENTS AND SALES, BY STATES AND GEOGRAPHIC DIVISIONS AND BY SIZE OF CITY  
FILLING STATIONS

DIVISIONS AND STATES	UNITED STATES TOTAL			CITIES OVER 30,000 POPULATION			CITIES 10,000-30,000 POPULATION			PLACES UNDER 10,000 POPULATION		
	Stores	Sales	Percent of United States sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales	Stores	Sales	Percent of State sales
United States total.....	121,513	\$1,787,423,087	100.00	32,381	\$737,809,445	41.28	11,088	\$231,910,284	12.87	76,036	\$817,696,395	45.75
NEW ENGLAND.....	7,758	104,281,652	5.83	2,461	53,357,153	51.17	1,226	20,512,561	19.67	4,071	30,411,938	29.16
Connecticut.....	1,695	26,387,410	1.48	543	12,631,409	47.87	184	3,829,277	14.48	868	9,858,733	37.65
Maine.....	671	6,987,760	0.39	68	1,531,285	21.91	84	1,569,334	22.89	519	3,857,141	55.20
Massachusetts.....	3,794	52,319,468	2.93	1,474	31,707,452	60.60	672	10,233,728	19.00	1,988	10,368,288	19.80
New Hampshire.....	633	5,318,179	.30	96	1,607,765	30.23	85	1,536,837	28.00	432	2,178,557	40.87
Rhode Island.....	623	8,879,971	.49	280	5,879,242	66.21	102	2,049,145	23.08	181	961,884	10.71
Vermont.....	502	4,388,855	.24				39	1,281,220	28.51	463	3,137,635	71.49
MIDDLE ATLANTIC.....	18,841	298,108,020	16.68	5,816	148,262,320	49.74	1,698	38,015,056	12.75	11,327	111,830,634	37.51
New Jersey.....	3,265	54,549,594	3.05	946	26,254,005	43.45	394	8,612,837	15.79	1,927	27,332,732	40.76
New York.....	8,815	140,957,573	7.89	3,036	80,507,668	57.14	729	14,232,662	10.00	5,050	43,434,443	32.77
Pennsylvania.....	6,761	102,570,853	5.74	1,834	43,997,657	42.89	575	15,199,557	14.70	4,352	43,406,459	42.32
EAST NORTH CENTRAL.....	24,824	452,524,304	25.32	9,214	228,547,990	50.50	2,375	55,246,600	12.21	13,310	168,729,705	37.29
Illinois.....	6,008	110,462,634	6.18	2,124	56,999,533	51.59	621	13,430,342	12.16	3,173	40,052,707	36.25
Indiana.....	2,436	51,214,796	2.87	1,071	21,831,732	41.93	416	8,110,743	15.64	1,949	21,272,310	41.58
Michigan.....	2,375	109,068,913	6.10	2,233	58,063,085	53.24	405	10,360,663	9.50	2,737	40,639,165	37.26
Ohio.....	7,230	132,796,326	7.43	2,796	72,619,087	54.61	631	16,076,693	12.11	3,303	44,200,556	33.25
Wisconsin.....	2,775	48,961,655	2.74	825	19,128,508	39.07	302	7,268,169	14.54	1,648	22,564,958	46.09
WEST NORTH CENTRAL.....	14,680	247,855,320	13.87	3,232	66,416,415	26.80	1,417	31,231,488	12.60	10,011	150,207,917	60.60
Iowa.....	2,050	45,341,448	2.71	513	10,197,637	21.90	227	6,791,255	14.05	2,116	31,352,576	64.36
Kansas.....	2,904	44,944,911	2.48	412	6,449,181	14.54	336	4,425,329	19.00	2,056	29,470,401	66.46
Minnesota.....	2,273	46,720,813	2.61	755	17,134,064	36.67	349	4,623,523	9.90	1,343	24,963,236	53.43
Missouri.....	3,028	53,419,690	2.99	1,302	26,983,361	50.52	186	3,131,950	5.86	2,440	23,209,379	43.62
Nebraska.....	1,430	23,413,579	1.31	235	4,306,821	14.64	130	3,359,126	11.42	1,065	21,747,632	73.94
North Dakota.....	1,503	10,765,926	0.60				93	1,908,420	17.72	433	8,858,506	82.28
South Dakota.....	686	14,848,433	.83	35	1,340,361	9.03	79	2,991,905	20.15	558	10,516,187	70.82



TABLE 2.—POSITION INDEX FOR 5 KINDS OF RETAIL DEALERS IN AUTOMOTIVE PRODUCTS  
(States arranged in the order of their position)

MOTOR VEHICLE DEALERS (NEW AND USED)			AUTOMOBILE DEALERS WITH FARM IMPLEMENTS AND MACHINERY			ACCESSORIES, TIRES, AND BATTERIES			FILLING STATIONS			GARAGES AND REPAIR SHOPS		
States	Per- cent of sales to total retail sales	Posi- tion In- dex	States	Per- cent of sales to total retail sales	Posi- tion In- dex	States	Per- cent of sales to total retail sales	Posi- tion In- dex	States	Per- cent of sales to total retail sales	Posi- tion In- dex	States	Per- cent of sales to total retail sales	Posi- tion In- dex
United States.....	12.82	100	United States.....	0.23	100	United States.....	1.22	100	United States.....	3.64	100	United States.....	1.59	100
1. Nevada.....	18.86	147	1. North Dakota.....	3.95	1717	1. Florida.....	1.72	141	1. Oklahoma.....	6.26	172	1. Nevada.....	3.05	192
2. Wyoming.....	18.19	142	2. Montana.....	2.49	1053	2. California.....	1.71	140	2. Kansas.....	5.96	164	2. Oregon.....	2.77	174
3. Oklahoma.....	17.51	137	3. South Dakota.....	2.43	1057	3. Indiana.....	1.65	135	3. Florida.....	5.93	163	3. Vermont.....	2.56	161
4. Idaho.....	17.43	136	4. Kansas.....	1.49	648	4. Oklahoma.....	1.62	133	4. North Dakota.....	5.81	160	4. Maine.....	2.43	156
5. Vermont.....	17.09	133	5. Nebraska.....	.98	426	5. Ohio.....	1.57	129	5. North Carolina.....	5.78	159	5. New Mexico.....	2.44	153
6. Arizona.....	16.97	132	6. Iowa.....	.79	343	6. Tennessee.....	1.53	125	6. Nebraska.....	5.22	143	6. Arizona.....	2.42	152
7. Utah.....	16.47	128	7. Minnesota.....	.77	353	7. Illinois.....	1.45	121	7. South Carolina.....	5.07	139	7. Montana.....	2.27	143
8. Texas.....	16.35	127	8. Idaho.....	.63	270	8. Rhode Island.....	1.42	116	8. Iowa.....	4.93	137	8. Texas.....	2.23	140
9. New Mexico.....	16.00	126	9. Wisconsin.....	.62	270	9. Colorado.....	1.41	115	9. Michigan.....	4.80	135	9. Idaho.....	2.21	139
10. Kansas.....	15.97	125	10. Wyoming.....	.53	190	10. Iowa.....	1.40	113	10. Colorado.....	4.80	135	10. New Hampshire.....	2.19	138
11. New Hampshire.....	15.45	121	11. Mississippi.....	.43	191	11. Texas.....	1.39	113	11. New York.....	4.63	127	11. New Hampshire.....	2.09	131
12. Colorado.....	15.43	121	12. Vermont.....	.35	152	12. Kansas.....	1.33	109	12. Ohio.....	4.63	127	12. New York.....	2.09	131
13. Colorado.....	15.47	120	13. Connecticut.....	.29	120	13. Tennessee.....	1.32	109	13. Tennessee.....	4.58	122	13. South Dakota.....	2.06	129
14. North Dakota.....	15.33	120	14. Oklahoma.....	.29	126	14. Oregon.....	1.29	106	14. North Dakota.....	4.41	121	14. Florida.....	1.95	123
15. Nebraska.....	15.33	120	15. Oklahoma.....	.29	126	15. South Dakota.....	1.28	105	15. Utah.....	4.41	121	15. Florida.....	1.95	123
16. Michigan.....	15.32	119	16. Maine.....	.22	92	16. Missouri.....	1.27	104	16. Arkansas.....	4.29	118	16. Kansas.....	1.83	121
17. South Dakota.....	15.18	118	17. Maryland.....	.20	87	17. Nebraska.....	1.27	104	17. California.....	4.29	118	17. Wyoming.....	1.80	120
18. Oregon.....	15.14	118	18. Delaware.....	.20	87	18. Wyoming.....	1.27	104	18. Georgia.....	4.19	115	18. Indiana.....	1.78	112
19. Mississippi.....	15.07	118	19. Illinois.....	.19	83	19. Michigan.....	1.25	102	19. Montana.....	4.19	115	19. Missouri.....	1.75	110
20. California.....	15.06	117	20. North Carolina.....	.19	83	20. New Mexico.....	1.24	102	20. Indiana.....	4.18	115	20. New Jersey.....	1.75	110
21. Montana.....	14.91	114	21. Texas.....	.18	78	21. Alabama.....	1.23	101	21. Missouri.....	4.14	114	21. Missouri.....	1.75	110
22. Washington.....	14.59	114	22. Ohio.....	.18	78	22. Georgia.....	1.22	100	22. Arizona.....	4.14	114	22. Tennessee.....	1.74	109
23. Indiana.....	14.49	113	23. Arizona.....	.16	70	23. Alabama.....	1.22	100	23. Delaware.....	4.11	113	23. Tennessee.....	1.67	106
24. Arkansas.....	14.28	111	24. Indiana.....	.16	70	24. New Jersey.....	1.21	99	24. Wyoming.....	4.11	113	24. North Carolina.....	1.67	106
25. Iowa.....	13.89	108	25. Missouri.....	.15	65	25. Delaware.....	1.21	99	25. New Mexico.....	4.02	110	25. Iowa.....	1.66	104
26. South Carolina.....	13.74	107	26. California.....	.15	65	26. Pennsylvania.....	1.20	98	26. West Virginia.....	4.02	110	26. Utah.....	1.66	104
27. Tennessee.....	13.74	107	27. New Mexico.....	.15	65	27. Arizona.....	1.18	97	27. Wisconsin.....	3.95	109	27. Nebraska.....	1.65	104
28. Ohio.....	13.59	106	28. South Carolina.....	.15	65	28. Massachusetts.....	1.18	97	28. Louisiana.....	3.94	108	28. Delaware.....	1.65	104
29. Georgia.....	13.41	105	29. Virginia.....	.14	61	29. Illinois.....	1.16	95	29. Virginia.....	3.93	108	29. Kentucky.....	1.60	101

30. Florida	13.32	104	30. Alabama	.11	48	30. Minnesota	1.16	95	30. Washington	3.74	103	30. Arkansas	1.57	99
31. Alabama	13.26	103	31. Michigan	.11	48	31. Louisiana	1.13	93	31. Oregon	3.70	102	31. Alabama	1.53	96
32. Wisconsin	13.25	103	32. Oregon	.11	48	32. Maryland	1.11	91	32. Idaho	3.69	101	32. Virginia	1.52	96
33. Louisiana	13.17	103	33. West Virginia	.11	48	33. Arkansas	1.10	90	33. Missouri	3.50	96	33. Minnesota	1.51	95
34. North Carolina	13.12	102	34. Louisiana	.09	39	34. Wisconsin	1.09	89	34. Alabama	3.43	94	34. West Virginia	1.48	93
35. Virginia	13.07	102	35. Florida	.07	30	35. Vermont	1.06	87	35. Connecticut	3.38	93	35. Pennsylvania	1.45	91
36. Delaware	12.87	100	36. New Hampshire	.05	22	36. Montana	1.04	85	36. Dist. Columbia	2.98	82	36. Louisiana	1.44	91
37. Kentucky	12.87	100	37. Pennsylvania	.05	22	37. Utah	1.01	83	37. Illinois	2.96	81	37. Illinois	1.44	91
38. Connecticut	12.75	99	38. New York	.04	17	38. West Virginia	1.01	83	38. New Jersey	2.94	81	38. New York	1.40	88
39. Minnesota	12.42	97	39. Kentucky	.03	13	39. Dist. Columbia	1.00	82	39. Tennessee	2.89	79	39. Connecticut	1.38	87
40. West Virginia	12.31	96	40. Arkansas	.02	9	40. Virginia	1.00	82	40. New Hampshire	2.88	79	40. Maryland	1.36	86
41. Missouri	12.09	94	41. Georgia	.02	9	41. North Carolina	.98	80	41. Vermont	2.82	77	41. Mississippi	1.30	82
42. Rhode Island	11.91	93	42. New Jersey	.02	9	42. Kentucky	.95	78	42. Kentucky	2.79	77	42. Rhode Island	1.24	78
43. Massachusetts	11.75	92	43. Tennessee	.01	4	43. Nevada	.93	76	43. Rhode Island	2.76	76	43. Georgia	1.22	77
44. New Jersey	11.60	90	44. Connecticut			44. New York	.86	69	44. Maryland	2.69	74	44. Ohio	1.18	74
45. Pennsylvania	11.10	87	45. Dist. Columbia			45. North Dakota	.84	69	45. Pennsylvania	2.68	74	45. Wisconsin	1.15	72
46. Illinois	10.92	85	46. Massachusetts			46. South Carolina	.82	67	46. Nevada	2.54	70	46. South Carolina	1.13	71
47. Maryland	10.71	84	47. Maine			47. South Carolina	.76	62	47. Massachusetts	2.27	62	47. Dist. Columbia	1.08	68
48. Dist. Columbia	10.43	81	48. Nevada			48. Maine	.65	53	48. Maine	2.27	62	48. Massachusetts	1.13	71
49. New York	8.96	70	49. Rhode Island			49. New Hampshire	.61	50	49. New York	1.99	55	49. Michigan	1.08	68
			49. Utah			49. Mississippi	.61	50						

CENSUS OF DISTRIBUTION

TABLE 3.—OPERATING EXPENSES OF RETAIL DEALERS IN AUTOMOTIVE PRODUCTS, BY KINDS OF BUSINESS AND BY SIZE OF CITY

KIND OF BUSINESS	EMPLOYEES		PAY ROLL			Value of proprietors' services	Total wage cost	Total wage expense (including rent)	Total operating expense per \$100 of sales	Stocks on hand		
	Num-ber of stores	Proprie-tors	Full-time	Part-time	Total						Total pay-roll cost per \$100 of sales	Part-time
Motor-vehicle dealers.....	43,884	41,826	337,881	12,161	\$540,739,007	\$3.59	\$4,109,441	\$65,416,910	\$9.63	\$514,001,081	\$22,879,910	
Auto salesrooms.....	40,797	38,790	330,617	11,413	528,987,607	8.60	3,863,888	60,617,274	9.58	469,945,210	604,321,610	
Used-car dealers.....	3,097	3,036	7,274	748	11,805,400	8.33	2,565,553	4,799,636	11.78	14,055,871	16,463,900	
Motor-vehicle dealers (new and used).....	43,884	41,826	337,881	12,161	540,739,007	8.59	4,109,441	65,416,910	9.63	514,001,081	622,789,910	
Cities over 30,000.....	10,980	6,629	2,140	288	263,499,950	9.24	888,402	16,503,310	9.76	288,890,428	266,045,280	
Cities 10,000 to 30,000.....	6,444	5,476	1,571	54	84,087,914	8.35	531,084	8,453,400	8.19	82,132,934	87,697,880	
Places under 10,000.....	26,470	29,721	117,995	8,450	153,205,143	7.73	2,729,955	40,430,560	9.66	143,007,688	228,641,950	
Automobile dealers with farm im-plements and machinery.....	1,407	1,685	5,079	848	8,217,289	7.25	220,300	2,267,409	9.25	7,855,840	19,014,180	
Cities over 30,000.....	20	13	238	6	478,235	11.22	373	37,248	12.31	354,012	26,76	
Cities 10,000 to 30,000.....	53	42	1,001	5	738,377	7.79	8,535	67,772	10.61	687,731	1,318,430	
Places under 10,000.....	1,334	1,581	4,920	807	6,946,867	6.87	210,782	2,164,369	9.01	6,844,097	17,462,860	
Accessories, tires, and batteries.....	22,313	20,961	50,886	4,330	76,103,776	12.70	1,238,174	30,769,945	17.83	77,133,109	94,682,540	
Accessory stores with tires and batteries.....	7,762	6,801	20,336	1,506	30,990,892	12.02	437,929	10,070,458	15.93	31,972,396	49,726,710	
Battery and ignitor—Drake re- pair shops.....	6,409	6,819	10,550	1,259	15,442,170	16.39	366,134	9,759,713	26.74	14,185,476	12,839,560	
Tire shops.....	8,142	7,361	20,000	1,568	25,671,214	12.00	434,111	10,939,774	16.42	30,975,257	24,366,270	
Accessories, tires, and batteries.....	22,313	20,961	50,886	4,330	76,103,776	12.70	1,238,174	30,769,945	17.83	77,133,109	96,682,540	
Cities over 30,000.....	12,169	10,549	35,788	1,991	56,382,822	13.73	611,357	17,907,169	18.10	56,297,454	63,455,810	
Cities 10,000 to 30,000.....	3,833	3,685	8,281	855	11,275,755	11.44	246,743	4,904,743	16.41	11,468,405	17,107,140	
Places under 10,000.....	6,311	6,727	6,817	1,484	8,445,199	9.36	380,074	7,958,041	18.19	9,407,250	16,119,590	
Filling stations.....	121,513	100,746	126,721	23,800	159,211,697	8.91	6,136,730	113,826,962	15.28	162,635,423	85,656,130	
Filling stations, gasoline and oil accessories.....	52,727	52,727	66,655	7,986	87,517,127	10.07	2,222,149	40,408,610	14.72	77,674,369	29,161,000	
Filling stations with tires and accessories.....	26,775	27,269	35,339	7,535	43,173,479	8.35	2,102,398	31,797,280	14.50	43,241,905	32,010,860	
Filling stations with other mer- chandise.....	42,011	41,196	24,727	8,279	28,521,091	7.10	1,812,163	41,620,072	17.47	31,719,139	22,483,270	
Filling stations.....	121,513	100,746	126,721	23,800	159,211,697	8.91	6,136,730	113,826,962	15.28	162,635,423	85,656,130	
Cities over 30,000.....	32,381	18,577	65,843	6,943	79,083,050	10.72	2,086,423	24,015,161	13.97	75,974,907	24,207,200	
Cities 10,000 to 30,000.....	11,096	7,562	17,187	2,594	22,246,131	9.59	740,515	9,480,062	13.87	19,546,684	10,778,640	
Places under 10,000.....	78,036	74,607	50,691	14,263	57,882,496	7.08	3,369,782	80,351,739	16.91	57,113,832	48,775,280	

	66,793	75,903	104,009	16,120	145,542,084	18.54	4,709,063	99,735,395	245,277,479	31.25	116,091,433	46.03	62,929,870
Garages and repair shops	3,379	3,754	9,596	1,083	15,288,921	33.16	379,001	5,788,446	21,077,367	45.71	6,962,900	60.82	3,124,200
Body, fender, and paint shops	60,627	69,746	88,357	14,636	131,237,445	17.50	4,739,310	90,435,668	211,693,113	30.54	97,253,283	44.58	53,375,210
Grasses, gas, oil, repairs, and	2,069	1,885	5,015	312	7,441,590	18.95	110,862	2,841,711	9,783,301	24.92	10,740,915	52.27	993,756
Stages, etc.	728	818	1,041	139	1,554,128	23.66	39,660	1,169,370	2,723,698	41.46	1,129,335	58.65	436,711
Parking stations and lots	66,793	75,903	104,009	16,120	145,542,084	18.54	4,709,063	99,735,395	245,277,479	31.25	116,091,433	46.03	62,929,870
Radiator shops, including re-	21,188	22,567	56,384	4,561	36,823,784	24.92	1,876,914	38,536,171	125,359,925	35.12	71,491,124	55.15	18,502,320
pairs.	3,523	6,408	10,449	1,362	14,218,881	20.25	436,831	8,452,152	22,671,033	32.29	9,963,696	46.48	5,644,350
Garages and repair shops	40,082	46,928	37,176	10,197	44,499,449	12.44	2,665,318	52,747,072	97,246,521	27.18	34,636,614	36.85	38,783,200
Chairs, etc.													
Cities over 10,000													
Places under 10,000													
Other stores selling accessories, tires, and batteries.													
Department stores without food departments	3,730	1,249	842,138	48,107	443,000,863	14.95	13,000,347	1,532,870	444,623,733	15.00	422,247,343	29.25	522,640,533
Mail-order houses	31	8	35,483	386	38,606,539	8.64	216,894	10,001	38,616,540	8.64	63,507,349	22.83	65,467,367
General merchandise without food departments	9,849	9,527	28,803	12,764	31,904,750	8.77	2,129,449	9,910,482	41,815,202	11.49	37,006,078	21.66	144,117,950

TABLE 4.—RENTAL COSTS IN LEASED PREMISES, BY KINDS OF BUSINESS<sup>1</sup>

KINDS OF BUSINESS	Num-ber of stores	Rent	Sales	Rent- al cost per \$100 of sales	KINDS OF BUSINESS	Num-ber of stores	Rent	Sales	Rent- al cost per \$100 of sales
Motor-vehicle dealers	28,219	\$79,580,580	\$4,426,073,430	1.80	Garages and repair shops	37,941	\$49,594,861	\$474,426,898	80.45
Auto salesrooms	26,819	75,601,173	4,304,664,658	1.77	Body fender, and paint shops	2,460	2,693,260	32,906,857	8.05
Used-car dealers	2,400	3,979,410	121,408,922	3.28	Garages (repairs, storage, gasoline, oil, etc.)	33,471	39,293,707	407,777,555	9.64
Motor-vehicle dealers (new and used)	28,219	79,580,580	4,426,073,430	1.80	Parking stations, lots, and garages	1,416	7,247,671	28,540,978	23.39
Automobile dealers with farm implements and machinery	641	685,404	57,836,399	1.19	Radiator shops (including repairs)	1,384	466,223	3,201,368	7.79
Accessories, tires and batteries	17,908	22,163,334	490,613,083	4.52	Department stores without food departments	3,296	70,208,674	2,367,416,466	2.97
Accessory stores with tires and batteries	6,110	8,774,389	207,457,231	4.23	Mail-order houses	22	4,091,670	379,188,375	1.08
Battery and ignition-brake repair shops	5,085	4,587,727	74,139,172	6.19	General merchandise stores without food departments	6,919	9,714,984	288,321,714	3.62
Tire shops	6,713	8,806,218	209,016,630	4.21					
Filling stations	51,249	46,854,302	875,569,455	5.35					
Filling stations, gasoline and oil	22,132	23,201,023	400,962,206	5.79					
Filling stations with tires and accessories	15,153	15,714,149	314,577,654	5.00					
Filling stations with other merchandise	13,964	7,939,130	160,029,695	4.96					

<sup>1</sup> This table includes only those establishments operated in wholly leased premises.

TABLE 5A—ESTABLISHMENTS, SALES, AND EXPENSES OF WHOLESALER-RETAILERS (DISTRIBUTOR-DEALERS)

[(x) indicates amounts not shown to avoid disclosure of individual operations]

DIVISIONS AND STATES	Number of stores	EMPLOYEES		PAY ROLL		Value of proprietors' services at same rate as that paid full-time employees	Total wage cost (including proprietors' services)	Total wage cost per \$100 of sales	All other reported expenses (including rent)	Total operating expenses (per \$100 of sales)	Stocks	Net sales (1929)
		Proprietors and firm members (not on pay roll)	Full-time	Part-time	Total (full and part-time)							
United States total.....	500	87	24,449	208	\$48,475,795	\$121,373	\$9,878,629	\$5.87	\$49,569,984	\$11.45	\$62,100,778	\$657,751,83
NEW ENGLAND.....	38	5	1,904		3,487,480		3,446,418	5.73	4,125,984	12.60	4,085,545	60,103,366
Connecticut.....	8		250		538,785		538,785	6.52	590,325	13.67	1,751,684	8,260,747
Maine.....	6		166		337,775		337,775	6.75	369,314	14.12	344,479	5,005,796
Massachusetts.....	18	2	1,348		2,303,348		2,306,766	5.36	2,984,926	12.17	2,551,468	43,075,335
New Hampshire.....	2	(x)		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
Rhode Island.....	2	(x)		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
Vermont.....	2	(x)		(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
MIDDLE ATLANTIC.....	138	29	7,393		14,871,137		14,928,732	5.39	15,607,913	11.02	17,980,650	277,174,273
New Jersey.....	15	3	662		1,416,385		1,422,752	5.66	1,734,344	12.57	1,435,919	25,124,057
New York.....	63	8	3,536		7,304,316		7,320,844	5.28	7,321,247	10.56	8,525,425	138,713,916
Pennsylvania.....	60	18	3,195		6,150,486		6,185,136	5.46	6,562,322	11.24	8,019,306	113,336,300
EAST NORTH CENTRAL.....	113	25	7,365		14,697,610	203	14,747,697	5.69	13,030,593	10.71	18,956,273	259,397,835
Illinois.....	27	10	2,336	1	4,595,588	200	19,070	5.44	3,250,299	9.30	9,420,269	84,883,754
Indiana.....	10	1	498		952,401		954,313	5.40	3,383,564	10.68	894,260	17,671,235
Michigan.....	21	7	2,020		4,290,712		4,245,370	6.46	3,288,966	11.47	4,335,033	65,676,864
Ohio.....	5	1	957		3,705,018		3,714,483	5.47	4,437,092	12.01	3,187,314	67,845,257
Wisconsin.....	19	2	554		1,213,891		1,218,273	5.22	1,090,443	9.90	1,120,067	23,320,725
WEST NORTH CENTRAL.....	83	25	2,929	16	6,244,687	3,509	6,305,559	5.98	7,579,795	13.18	7,791,865	105,357,562
Iowa.....	24	2	299	3	1,276,193	880	25,608	6.02	1,301,801	11.62	2,438,021	21,640,126
Kansas.....	5	7	129		239,869		252,882	6.22	1,213,044	12.68	2,438,021	21,640,126
Minnesota.....	13	5	651		1,202,941		1,212,131	6.09	1,356,733	12.90	1,294,900	19,911,008
Missouri.....	12	1	736	1	1,460,272	95	1,462,256	7.82	1,513,107	15.91	1,836,542	18,699,011
Nebraska.....	16	4	862	12	1,598,135	2,584	1,605,539	7.05	2,605,262	18.49	1,042,165	22,770,331
North Dakota.....	8	174	335,405		131,871		337,338	2.06	493,202	5.08	28,349	16,350,330
South Dakota.....	5	78					133,562	6.97	135,507	14.04	269,361	1,917,412

AUTOMOBILE TRADES

SOUTH ATLANTIC											
39	5	1,166	2,024,925				2,053,100	1,976,847	12.70	2,913,423	31,584,011
1	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
4	1	169	286,582				282,242	273,159	6.75	709,794	8,214,880
4		234	449,892				449,592	449,592	14.99	707,142	5,243,395
4		188	266,110				263,110	327,208	15.69	393,892	8,781,447
1	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
9	2	215	358,134				361,466	460,785	15.11	418,641	5,439,484
5	2	90	149,181				146,363	112,383	19.88	94,046	1,301,270
9		222	367,849				367,849	379,004	11.68	399,073	6,394,937
EAST SOUTH CENTRAL											
8		345	578,410				578,410	601,509	11.18	1,030,377	10,553,444
1	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
1	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
Tennessee											
6		307	515,269				515,269	506,652	10.22	943,127	9,984,107
WEST SOUTH CENTRAL											
17	2	589	1,147,975	44		31,208	1,151,761	1,036,457	11.86	1,413,030	18,446,637
5		181	323,561				322,561	363,736	15.90	328,931	4,379,725
3		135	267,422				267,422	123,445	5.73	452,513	6,854,505
9	2	273	547,932	44		31,208	551,778	547,306	15.24	637,586	7,212,407
MOUNTAIN											
22	1	566	1,069,157	101		34,354	1,060,407	1,193,427	9.59	1,344,264	23,885,743
2	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
9		330	589,069				589,069	636,885	13.61	629,091	9,171,691
1	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
2	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
New Mexico											
2	1	30	37,505				38,755	42,933	11.05	63,234	739,198
3		101	256,007	100		34,177	256,007	254,138	5.08	449,271	10,050,922
Wyoming											
PACIFIC											
42	5	2,172	4,414,343	44		52,101	4,424,545	4,476,799	12.32	6,384,651	72,248,465
26	3	1,573	3,146,984	44		52,101	3,152,864	3,506,163	11.52	5,317,706	37,624,329
4		174	232,230				232,230	175,802	8.99	274,628	2,582,539
9	2	479	1,053,129				1,039,451	796,584	15.51	992,317	11,841,597

TABLE 5B.—RENTAL COSTS OF WHOLESALE-RETAILERS (INCLUDED IN "ALL OTHER EXPENSE" COLUMN IN TABLE 5)

DIVISIONS AND STATES	Rent paid for leased premises	Net sales of leased premises	Rental cost per \$100 of sales in leased premises	DIVISIONS AND STATES	Rent paid for leased premises	Net sales of leased premises	Rental cost per \$100 of sales in leased premises
United States total.....	\$7,710,918	\$766,629,453	0.98	SOUTH ATLANTIC—Continued.			
NEW ENGLAND.....				Georgia.....	\$47,980	\$3,781,447	\$1.27
Connecticut.....	639,693	58,145,820	1.05	Maryland.....	(X)	(X)	(X)
Maine.....	98,744	6,305,701	1.57	North Carolina.....	51,790	4,474,222	1.16
Massachusetts.....	53,033	5,005,796	1.05	South Carolina.....			
New Hampshire.....	431,736	43,072,835	1.00	Virginia.....	19,800	918,797	2.15
Rhode Island.....	(X)	(X)	(X)	West Virginia.....	55,222	5,646,150	0.98
Vermont.....	(X)	(X)	(X)	EAST SOUTH CENTRAL.....			
MIDDLE ATLANTIC.....				Alabama.....	85,728	9,736,499	0.88
New Jersey.....	2,795,432	244,933,398	1.14	Kentucky.....	(X)	(X)	(X)
New York.....	277,862	23,293,470	1.19	Mississippi.....	(X)	(X)	(X)
Pennsylvania.....	1,507,545	123,463,045	1.17	Tennessee.....	77,049	9,227,162	0.84
	1,010,025	93,176,883	1.08	WEST SOUTH CENTRAL.....			
EAST NORTH CENTRAL.....				Arkansas.....	186,452	17,698,933	1.05
Illinois.....	2,161,406	246,839,297	0.88	Louisiana.....	58,364	4,379,725	1.33
Indiana.....	591,149	84,833,754	0.70	Oklahoma.....	38,236	6,854,505	0.56
Michigan.....	109,000	17,671,255	0.62	Texas.....	89,852	6,434,703	1.40
Minnesota.....	483,706	60,689,975	0.80	MOUNTAIN.....			
Ohio.....	801,238	63,944,265	1.25	Arizona.....	118,992	14,223,092	0.84
Wisconsin.....	176,263	19,650,038	0.90	Colorado.....	(X)	(X)	(X)
WEST NORTH CENTRAL.....				Idaho.....	31,088	9,171,691	0.88
Iowa.....	765,319	92,290,491	0.83	Montana.....	(X)	(X)	(X)
Kansas.....	185,839	21,640,126	0.86	Nevada.....	(X)	(X)	(X)
Missouri.....	34,721	3,920,191	0.89	New Mexico.....			
Minnesota.....	174,459	19,911,068	0.88	Utah.....			
Missouri.....	295,346	18,699,011	1.21	Wyoming.....	18,058	1,913,447	0.94
Nebraska.....	97,633	23,770,331	0.43	PACIFIC.....			
North Dakota.....	19,447	3,493,412	0.57	California.....	645,383	72,246,465	0.89
South Dakota.....	27,874	1,917,412	1.45	Oregon.....	492,704	57,824,329	0.85
SOUTH ATLANTIC.....				Washington.....	34,500	2,582,539	1.34
Delaware.....	322,573	29,487,469	1.09		118,179	11,841,597	1.00
District of Columbia.....	(X)	(X)	(X)				
Florida.....	76,773	8,214,880	0.93				
	51,827	5,243,395	0.99				

TABLE 6.—ESTABLISHMENTS AND SALES OF RETAIL DEALERS IN AUTOMOTIVE PRODUCTS, BY SIZE OF BUSINESS

(Sales shown in thousands of dollars)

KIND OF BUSINESS	UNITED STATES TOTALS		ANNUAL SALES EXCEEDING \$1,000,000		ANNUAL SALES FROM \$500,000 TO \$699,999		ANNUAL SALES FROM \$300,000 TO \$499,999		ANNUAL SALES FROM \$200,000 TO \$299,999		ANNUAL SALES FROM \$100,000 TO \$199,999	
	Stores	Sales	Stores	Sales	Stores	Sales	Stores	Sales	Stores	Sales	Stores	Sales
Motor-vehicle dealers	43,894	\$6,294,149	594	\$842,808	1,691	\$1,156,306	2,861	\$1,088,008	3,616	\$877,540	8,874	\$1,256,065
Percent of stores and sales	00.00	100.00	1.15	13.39	3.85	18.37	6.52	17.29	8.24	13.94	20.22	19.96
Automobile salarooms	40,787	\$6,195,217	1,323	\$39,892	1,677	\$1,146,355	2,819	\$1,072,492	3,554	\$862,713	8,687	\$1,226,653
Percent of stores and sales	00.00	100.00	1.23	13.69	4.11	18.03	6.91	17.42	8.71	14.02	21.22	19.94
Used-car dealers	3,097	\$1,000,000	2	\$3,416	14	\$9,951	42	\$15,816	62	\$14,827	217	\$29,432
Percent of stores and sales	00.00	100.00	0.06	2.42	0.45	\$5,305	1.36	\$9,770	2.00	10.52	7.01	20.87
Automobile dealers with farm implements and machinery	10,407	\$113,363	9	\$13,254	9	\$10,672	1.89	\$8,770	04	\$15,451	271	\$26,960
Percent of stores and sales	23.31	\$1,816	0.01	\$11.36	0.64	4.98	1.89	8.62	4.55	13.63	19.26	32.63
Accessory stores, tires, and batteries	29,315	\$509,295	3	\$6,254	18	\$10,672	38	\$32,899	165	\$40,883	788	\$105,993
Percent of stores and sales	00.00	100.00	0.01	\$7,954	0.05	\$7,954	0.40	\$3,377	0.73	6.74	3.53	17.70
Accessory stores with tires and batteries	7,762	\$257,743	3	\$3,254	10	\$5,808	6.77	\$6,777	0.94	6.86	366	\$49,222
Percent of stores and sales	00.00	100.00	0.04	1.26	0.15	7.25	0.57	2.62	0.12	2.54	4.71	18.10
Battery and ignition shops and brake repair shops	8,409	\$94,288	2	\$1,372	0.02	\$1,372	0.06	\$1,011	0.19	\$3,010	7.01	\$9,305
Percent of stores and sales	00.00	100.00	0.02	\$1,372	0.02	\$3,591	0.38	\$13,060	0.80	\$16,080	1.09	\$17,466
The shops	8,142	\$247,314	0	0	0.00	0	0	0	0	0	0	0
Percent of stores and sales	00.00	100.00	0.00	0	0.00	1.43	0.42	\$16,665	0.98	\$27,136	3.52	\$47,466
Filling stations	121,513	\$1,787,423	1	\$1,000	9	\$5,933	44	\$16,665	117	\$27,136	805	\$108,190
Percent of stores and sales	00.00	100.00	0.00	0.06	0.07	0.33	0.92	\$2,143	0.70	1.51	6.91	19.19
Filling stations—gasoline and oil	52,737	\$389,081	1	\$1,000	0.00	0	0	0	0	0	0	0
Percent of stores and sales	00.00	100.00	0.00	0.11	0.01	0.51	0.06	1.40	0.13	1.05	0.77	6.01
Filling stations with tires and accessories	26,775	\$516,917	0.00	0	0.01	0.28	0.03	\$3,293	0.30	\$8,405	245	\$34,611
Percent of stores and sales	00.00	100.00	0.00	0.11	0.01	0.28	0.03	1.37	0.13	1.63	1.99	26.51
Filling stations with other merchandise	42,011	\$401,425	0.00	0	0.01	0	0	0	0	0	0	0
Percent of stores and sales	00.00	100.00	0.00	0.17	0.01	0.59	0.02	1.33	0.10	1.75	0.59	6.62
Garages and repair shops	66,793	\$785,001	1	\$1,354	7	\$4,650	0.01	\$13,735	10	\$2,492	135	\$17,391
Percent of stores and sales	00.00	100.00	0.00	0.17	0.01	0.59	0.02	1.33	0.10	1.75	0.59	6.62
Body, fender, and paint shops	3,379	\$46,106	0.00	0	0.01	0	0	0	0	0	0	0
Percent of stores and sales	00.00	100.00	0.00	0.20	0.05	2.86	0.02	4.49	0.03	7.20	0.23	22.90
Garages repairs, storage, etc.)	60,627	\$693,063	1	\$1,354	5	\$3,331	0.02	\$4,161	0.08	\$11,566	0.68	\$46,194
Percent of stores and sales	00.00	100.00	0.00	0.20	0.01	0.48	0.02	6.60	0.08	1.68	0.58	6.72
Parking stations, garages	2,059	\$39,262	0.00	0	0.01	0	0	0	0	0	0	0
Percent of stores and sales	00.00	100.00	0.00	0.20	0.01	0.48	0.02	1	0.01	1.68	0.15	\$1,968
Radiator shops	728	\$6,570	0.00	0	0.05	1.16	0.05	3.46	0.29	3.46	0.73	5.01
Percent of stores and sales	00.00	100.00	0.00	0.10	0.05	1.16	0.05	3.46	0.29	3.46	0.55	\$525

TABLE 6.—ESTABLISHMENTS AND SALES OF RETAIL DEALERS IN AUTOMOTIVE PRODUCTS, BY SIZE OF BUSINESS—Continued  
 [Sales shown in thousands of dollars]

KIND OF BUSINESS	ANNUAL SALES FROM \$50,000 TO \$99,999		ANNUAL SALES FROM \$10,000 TO \$19,999		ANNUAL SALES FROM \$5,000 TO \$9,999		ANNUAL SALES OF LESS THAN \$5,000	
	Stores	Sales	Stores	Sales	Stores	Sales	Stores	Sales
Motor-vehicle dealers	9,435	\$682,929	3,566	\$87,216	4,086	\$59,454	2,086	\$15,188
Percent of stores and sales	10.85	3.52	8.11	0.99	9.31	0.64	2.086	\$7,212
Automobile salesrooms	2,670	\$600,300	3,226	\$79,188	3,39	\$31,669	3.40	0.11
Percent of stores and sales	21.64	87.6	7.93	1.29	8.67	0.84	1,664	\$5,699
Used-car dealers	21,464	\$29,630	10,66	\$8,028	17,09	\$7,785	4.08	0.09
Percent of stores and sales	14.98	4.3	10.66	3.70	17.09	5.52	2.11	\$1,513
Automobile dealers with farm implements and machinery	24.64	\$20,274	10.02	\$3,445	10.52	\$2,103	13.03	1.07
Percent of stores and sales	20.64	25.82	10.02	3.00	10.52	2.84	30	\$63
Accessories, tires, and batteries	2,071	\$141,735	2,470	\$59,777	4,573	\$65,156	1,36	0.05
Percent of stores and sales	9.28	23.65	11.38	9.97	20.49	10.53	3,900	\$14,682
Acessory stores with tires and batteries	932	\$64,558	1,090	\$23,652	1,633	\$23,603	1,12	\$3,732
Percent of stores and sales	12.01	25.05	14.04	9.14	21.04	9.12	3.30	\$1,513
Battery and ignition shops and brake repair shops	211	\$14,155	564	\$13,663	1,329	\$18,532	1,487	\$6,297
Percent of stores and sales	3.29	15.02	8.80	14.50	20.74	19.67	23.20	\$16,600
Tire shops	928	\$63,024	1,049	\$30,939	1,611	\$22,984	1,476	\$3,732
Percent of stores and sales	11.40	25.49	12.88	9.97	19.79	6.29	16.30	\$3,84
Percent of stores and sales	4,440	\$291,636	13,115	\$317,156	27,383	\$389,573	23,345	\$167,043
Filling stations	3,65	16.32	8,19	20.97	22.54	21.80	19.21	9.34
Percent of stores and sales	11.40	25.49	12.88	9.97	19.79	6.29	16.30	\$3,84
Filling stations—gasoline and oil	2,165	\$144,251	5,031	\$189,226	12,737	\$184,131	9,119	\$96,170
Percent of stores and sales	4.11	16.60	8.54	21.77	12.95	19.04	17.30	7.61
Filling stations with tires and accessories	1,547	\$89,782	3,168	\$119,747	4,453	\$106,343	5,273	\$38,450
Percent of stores and sales	5.78	19.30	11.83	23.16	17.61	20.57	19.69	\$14,051
Filling stations with other merchandise	1,728	\$47,583	1,132	\$65,922	7,199	\$69,089	8,953	\$82,423
Percent of stores and sales	1.73	6.62	3.16	16.42	6.00	16.11	21.31	15.55
Garages and repair shops	1,728	\$113,740	4,854	\$116,640	17,14	\$174,947	14,400	\$101,354
Percent of stores and sales	2.77	14.40	5.92	16.11	17.14	24.68	21.31	15.55
Body, fender, and paint shops	4,47	\$9,219	727	\$5,467	18.83	\$8,438	21.66	\$2,29
Percent of stores and sales	4.20	20.00	6.22	\$5,671	606	\$8,438	784	\$3,652
Garages (repairs, storage, etc.)	1,484	\$98,413	3,092	\$112,859	17.93	\$11,86	23.20	\$1,872
Percent of stores and sales	2.45	14.20	4.95	16.29	11.213	\$155,525	13,085	\$91,682
Parking stations, garages	88	\$5,639	706	\$1,82	18.30	\$2,44	21.50	\$3,23
Percent of stores and sales	4.27	14.41	14.62	\$1,40	32.56	\$9,547	400	\$2,959
Radiator shops	0.96	\$453	4.67	\$1,336	19.43	\$7.53	16.66	\$1,540
Percent of stores and sales	0.96	6.91	3.02	12.54	13.60	\$21.13	24.86	\$18.88







TABLE 8.—FILLING STATIONS AND SALES BY TYPE OF OPERATION AND BY SIZE OF CITY IN 9 GEOGRAPHIC DIVISIONS

	TOTALS			SINGLE-STORE INDEPENDENTS			TWO- AND THREE-STORE INDEPENDENTS (INCLUDES LOCAL BRANCH SYSTEMS)			LOCAL CHAINS		
	Num-ber of stores	Net sales	Per-cent	Num-ber of stores	Net sales	Per-cent	Num-ber of stores	Net sales	Per-cent	Num-ber of stores	Net sales	Per-cent
	121, 513	\$1,787,493,087	100.00	85,426	\$984,858,904	55.09	4,389	\$198,353,249	7.18	6,751	\$172,317,220	9.64
United States total												
Cities over 30,000	32,331	797,808,445	41.28	15,731	317,160,770	42.99	1,841	60,313,912	8.17	3,734	104,962,476	14.23
Cities 10,000-30,000	11,096	231,916,254	12.97	6,287	120,550,789	51.98	2,336	24,605,444	10.61	9,124	25,716,632	11.09
Places under 10,000	78,086	817,688,388	45.75	63,343	546,917,945	55.83	2,109	42,483,888	5.31	2,109	41,638,212	5.09
New England	7,738	104,231,652	5.83	5,727	58,267,423	41.48	361	7,844,913	7.62	2,552	7,804,113	7.49
Cities over 30,000	2,461	33,387,153	2.99	1,243	22,138,624	55.89	111	4,847,588	9.69	201	5,755,190	10.79
Cities 10,000-30,000	1,226	20,512,661	1.15	3,597	13,282,038	64.75	64	1,747,340	8.52	35	651,795	4.15
Places under 10,000	4,971	30,411,958	18.66	13,340	18,135,331	74.12	86	1,289,990	4.11	46	1,197,188	3.94
Middle Atlantic	15,814	148,297,236	8.32	2,970	36,166,945	24.33	880	2,473,166	7.38	1,431	46,146,895	13.48
Cities over 30,000	6,636	38,075,056	2.56	3,368	16,466,945	43.23	388	12,580,728	7.49	860	32,146,692	21.68
Cities 10,000-30,000	1,827	111,830,634	21.70	9,368	79,448,925	66.60	323	4,460,419	11.73	1,192	5,240,136	13.81
Places under 10,000	24,351	452,924,304	25.26	15,084	213,037,652	46.18	1,150	25,851,036	7.03	2,660	58,138,837	16.07
East North Central	11,827	111,830,634	21.70	6,598	38,880,042	38.76	1,629	18,460,706	5.07	1,820	36,684,536	16.97
Cities over 30,000	9,139	228,547,959	12.70	5,598	88,830,042	38.76	1,629	18,460,706	5.07	1,820	36,684,536	16.97
Cities 10,000-30,000	2,375	55,729,705	3.09	1,145	23,330,042	42.23	169	6,966,732	12.07	680	13,106,159	7.71
Places under 10,000	13,310	168,785,820	9.37	10,340	106,122,574	62.89	456	10,764,640	6.94	909	21,484,054	8.71
West North Central	14,080	247,855,820	13.87	8,195	116,814,705	47.13	670	17,215,934	6.75	307	7,075,784	10.65
Cities over 30,000	3,252	66,416,415	3.72	1,113	24,145,373	36.36	145	4,483,476	16.45	130	4,074,312	13.14
Cities 10,000-30,000	1,417	31,231,488	1.75	5,69	12,325,669	39.47	145	5,138,476	16.45	307	7,075,784	10.65
Places under 10,000	10,011	150,207,917	8.40	6,514	80,343,664	53.49	473	7,594,032	5.06	472	10,403,958	6.93
South Atlantic	16,256	184,075,593	10.30	12,736	109,344,605	59.40	379	10,328,651	5.61	310	8,759,412	13.27
Cities over 30,000	2,710	65,996,752	3.69	1,299	25,192,315	38.17	112	4,959,979	7.52	67	6,501,163	2.31
Cities 10,000-30,000	1,139	23,119,612	1.30	667	12,394,311	53.61	58	1,072,546	4.52	124	2,194,661	2.31
Places under 10,000	12,407	94,959,229	5.31	4,273	71,757,479	75.48	215	4,286,126	4.52	123	3,017,022	4.24
East South Central	6,757	71,073,600	3.93	4,222	8,870,619	36.07	60	2,388,393	9.71	77	2,921,837	8.77
Cities over 30,000	1,041	10,150,356	1.38	577	4,911,119	48.28	28	2,388,393	9.71	15	1,555,365	2.88
Cities 10,000-30,000	509	10,972,857	1.57	243	4,911,119	48.28	28	2,388,393	9.71	15	1,555,365	2.88
Places under 10,000	4,207	36,311,207	2.03	2,437	27,068,805	74.54	127	1,821,261	5.87	630	568,829	1.57
West South Central	16,522	108,916,214	10.12	12,272	108,302,769	99.86	535	10,611,112	11.12	690	11,081,306	6.10
Cities over 30,000	2,806	45,695,850	2.55	1,824	20,672,179	45.24	161	3,797,470	8.31	381	6,288,560	13.69
Cities 10,000-30,000	1,297	22,597,792	1.26	739	12,201,455	53.99	82	2,019,487	8.94	91	2,017,628	8.93
Places under 10,000	12,619	112,622,572	6.31	10,209	75,426,135	66.97	342	4,794,155	4.26	218	2,755,118	2.45
Mountain	4,207	65,491,360	3.66	3,189	41,976,218	64.09	224	5,633,857	8.60	211	5,507,739	8.41
Cities over 30,000	695	14,774,644	2.24	398	7,323,600	49.57	59	1,820,109	12.38	82	2,842,143	19.24
Cities 10,000-30,000	352	8,175,956	4.46	203	5,074,911	62.07	25	819,270	9.91	35	913,546	11.17
Places under 10,000	3,160	42,540,760	2.38	2,588	20,577,907	69.53	140	2,994,508	6.45	94	1,752,110	4.12
Pacific	12,668	183,066,334	10.24	10,541	139,234,669	76.04	455	11,814,758	6.45	238	4,639,694	2.53
Cities over 30,000	4,661	90,166,945	5.04	3,404	139,234,669	85.87	223	6,957,516	7.72	156	3,308,403	3.67
Cities 10,000-30,000	1,885	22,845,152	1.28	855	17,911,569	78.40	50	6,360,050	5.95	23	490,200	1.84
Places under 10,000	6,924	70,084,436	3.92	6,282	56,224,428	84.50	182	3,497,219	4.99	59	911,262	1.30

	SECTIONAL CHAINS			NATIONAL CHAINS			OTHER TYPES OF OPERATION		
	Number of stores	Net sales	Percent	Number of stores	Net sales	Percent	Number of stores	Net sales	Percent
United States total	15, 118	\$306, 714, 144	17. 16	6, 748	\$1, 260, 172, 354	7. 06	2, 531	\$69, 207, 196	3. 87
Cities over 30,000	6, 937	170, 448, 201	23. 10	4, 069	84, 383, 056	11. 44	9	510, 030	0. 07
Cities 10,000-30,000	2, 185	43, 666, 814	18. 83	983	17, 177, 108	7. 40	15	199, 567	0. 09
Places under 10,000	5, 996	92, 599, 129	11. 32	1, 746	24, 612, 220	3. 01	2, 507	68, 497, 599	3. 38
New England	1, 670	21, 318, 536	20. 44	307	8, 354, 353	7. 99	5	712, 307	0. 68
Cities over 30,000	1, 670	14, 178, 958	26. 57	235	6, 421, 593	12. 03	1	14, 963	0. 03
Cities 10,000-30,000	185	3, 538, 063	17. 25	45	1, 018, 845	4. 97	7	74, 510	0. 36
Places under 10,000	273	3, 601, 515	11. 84	205	893, 980	2. 94	45	622, 834	2. 96
Middle Atlantic	1, 725	24, 885, 508	11. 70	1, 229	33, 662, 519	11. 29	200	8, 115, 119	2. 72
Cities over 30,000	247	5, 590, 290	13. 57	853	25, 240, 227	17. 03	5	88, 101	0. 23
Cities 10,000-30,000	810	9, 179, 131	14. 71	136	3, 505, 798	9. 22	195	8, 027, 018	2. 55
Places under 10,000	4, 070	9, 995, 709	8. 21	1, 806	4, 906, 494	4. 39	348	11, 834, 173	2. 55
East North Central	2, 358	63, 465, 734	21. 95	1, 292	28, 582, 095	6. 32	5	106, 526	0. 05
Cities over 30,000	560	12, 926, 246	23. 40	175	2, 959, 024	5. 35	343	11, 427, 647	6. 77
Cities 10,000-30,000	1, 152	22, 900, 729	13. 61	1, 339	4, 347, 956	2. 58	714	24, 515, 970	9. 89
Places under 10,000	2, 965	51, 898, 731	20. 94	1, 237	15, 896, 419	6. 89	714	24, 515, 970	9. 89
West North Central	1, 431	7, 614, 557	31. 86	645	2, 048, 474	14. 38	436	5, 067, 764	2. 76
Cities over 30,000	1, 409	23, 124, 660	15. 39	439	4, 226, 627	2. 81	436	5, 067, 764	2. 76
Cities 10,000-30,000	1, 409	33, 337, 545	18. 12	645	12, 521, 822	6. 89	436	5, 067, 764	2. 76
Places under 10,000	631	19, 655, 537	29. 78	368	7, 429, 009	11. 20	436	5, 067, 764	2. 76
South Atlantic	226	5, 013, 532	21. 68	121	2, 138, 060	9. 25	436	5, 067, 764	2. 76
Cities over 30,000	562	8, 688, 476	9. 15	156	2, 954, 733	3. 01	126	3, 824, 894	1. 55
Cities 10,000-30,000	715	11, 896, 947	16. 74	305	6, 444, 493	16. 84	2	380, 041	1. 55
Places under 10,000	306	6, 584, 191	22. 69	174	4, 329, 563	15. 66	124	2, 944, 953	8. 11
East South Central	196	2, 365, 551	8. 03	67	1, 873, 333	8. 42	499	11, 051, 903	6. 11
Cities over 30,000	233	2, 016, 977	13. 44	855	15, 243, 147	6. 99	499	11, 051, 903	6. 11
Cities 10,000-30,000	1, 023	3, 453, 458	15. 30	340	7, 405, 807	12. 61	408	8, 731	0. 04
Places under 10,000	290	3, 168, 775	12. 13	147	2, 892, 033	19. 20	408	11, 043, 172	9. 80
West South Central	886	13, 658, 775	6. 31	365	4, 942, 217	6. 29	106	4, 126, 550	6. 30
Cities over 30,000	202	4, 120, 727	3. 21	263	4, 116, 870	6. 29	106	4, 126, 550	6. 30
Cities 10,000-30,000	40	474, 829	6. 58	115	2, 236, 563	15. 54	1	23, 841	0. 29
Places under 10,000	23	537, 856	7. 33	63	815, 532	2. 36	104	4, 094, 509	9. 62
Mountain	1, 284	25, 195, 464	13. 76	101	1, 004, 784	0. 80	49	758, 210	0. 42
Cities over 30,000	130	17, 381, 657	11. 73	46	1, 453, 712	0. 69	1	4, 384	0. 02
Cities 10,000-30,000	832	2, 679, 281	7. 1	24	620, 698	2. 06	48	753, 826	1. 08
Places under 10,000	322	5, 334, 526	7. 1	31	363, 175	0. 52	48	753, 826	1. 08

TABLE 9A.—RETAIL ESTABLISHMENTS REPORTING SALES ON AN "ALL-CASH" BASIS, COMPARED WITH THOSE REPORTING "CASH-CREDIT" SALES

## AUTOMOBILE SALES ROOMS

(Sales expressed in thousands)

DIVISIONS AND STATES	TOTAL		ALL-CASH		CASH-CREDIT	
	Stores	Sales	Stores	Sales	Stores	Sales
United States total.....	36,423	\$5,386,051	4,939	\$516,962	31,484	\$4,870,089
New England.....	2,363	331,360	318	94,629	2,045	340,050
Connecticut.....	465	79,624	50	4,411	415	75,213
Maine.....	366	40,033	65	4,702	301	35,331
Massachusetts.....	948	179,844	131	17,746	817	162,098
New Hampshire.....	229	25,650	36	3,386	193	22,264
Rhode Island.....	156	32,155	20	3,236	136	28,919
Vermont.....	199	24,064	16	1,048	183	23,016
MIDDLE ATLANTIC.....	6,399	1,070,331	1,066	135,000	5,333	935,232
New Jersey.....	946	160,791	163	20,367	783	140,424
New York.....	2,686	544,064	358	59,432	2,298	484,632
Pennsylvania.....	2,707	365,476	515	65,260	2,262	310,226
EAST NORTH CENTRAL.....	8,862	1,260,367	1,061	104,882	7,801	1,155,485
Illinois.....	2,181	352,180	311	31,947	1,870	300,239
Indiana.....	1,227	164,527	164	14,760	1,063	139,777
Michigan.....	1,664	206,990	176	21,555	1,488	275,441
Ohio.....	2,263	334,831	218	22,034	2,045	312,797
Wisconsin.....	1,527	141,827	192	14,500	1,335	127,327
WEST NORTH CENTRAL.....	6,355	635,068	604	57,411	5,451	577,657
Iowa.....	1,411	123,730	210	12,037	1,201	111,793
Kansas.....	1,014	105,337	132	8,200	882	97,077
Minnesota.....	1,236	114,077	155	9,775	1,081	104,302
Missouri.....	1,033	162,116	181	12,119	852	139,997
North Dakota.....	820	75,432	136	9,333	684	66,099
Nebraska.....	386	32,947	32	1,739	354	31,168
South Dakota.....	455	31,429	58	3,148	397	28,281
SOUTH ATLANTIC.....	3,294	457,637	471	50,006	2,823	407,631
Delaware.....	81	12,985	12	979	69	12,006
District of Columbia.....	63	28,442	3	804	60	27,638
Florida.....	356	57,209	56	7,411	300	49,798
Georgia.....	497	74,430	48	5,331	449	69,099
Maryland.....	349	52,686	69	7,900	280	44,786
North Carolina.....	606	73,740	73	8,369	533	65,371
South Carolina.....	299	38,577	75	6,315	224	32,262
Virginia.....	613	72,977	69	8,227	544	64,750
West Virginia.....	430	46,591	66	4,070	364	41,521
EAST SOUTH CENTRAL.....	1,830	265,994	225	24,963	1,605	241,031
Alabama.....	363	63,747	41	5,801	322	57,946
Kentucky.....	606	67,794	71	4,669	535	63,125
Mississippi.....	407	56,207	64	7,320	343	48,887
Tennessee.....	454	78,246	49	7,327	405	70,919
WEST SOUTH CENTRAL.....	3,162	531,217	442	57,445	2,720	473,772
Arkansas.....	368	54,118	66	9,491	302	44,627
Louisiana.....	312	52,170	61	7,662	251	44,508
Oklahoma.....	812	120,769	76	10,808	736	115,961
Texas.....	1,070	298,160	439	29,684	1,431	268,476
MOUNTAIN.....	1,556	217,844	226	22,990	1,330	194,854
Arizona.....	165	29,833	23	3,123	127	26,710
Colorado.....	439	65,992	33	9,555	356	56,437
Idaho.....	225	24,064	45	4,180	180	20,478
Montana.....	284	34,173	21	1,958	263	32,215
Nevada.....	70	9,070	9	759	61	8,311
New Mexico.....	125	15,674	19	1,873	106	13,801
Utah.....	116	22,049	8	844	108	21,205
Wyoming.....	142	16,380	13	692	129	15,688
PACIFIC.....	2,002	566,233	226	28,037	2,376	537,590
California.....	1,670	406,951	135	18,768	1,535	388,183
Oregon.....	368	55,874	49	5,602	309	50,372
Washington.....	674	103,408	42	4,367	632	98,041

TABLE 9B.—RETAIL ESTABLISHMENTS REPORTING SALES ON AN "ALL-CASH" BASIS, COMPARED WITH THOSE REPORTING "CASH-CREDIT" SALES

USED CAR DEALERS  
(Sales expressed in thousands)

DIVISIONS AND STATES	TOTAL		ALL-CASH		CASH-CREDIT	
	Stores	Sales	Stores	Sales	Stores	Sales
United States total.....	2,823	\$129,529	521	\$12,812	2,302	\$116,717
NEW ENGLAND.....	271	9,428	63	1,065	208	8,363
Connecticut.....	61	1,902	12	191	49	1,711
Maine.....	37	724	9	153	28	571
Massachusetts.....	126	4,801	36	657	89	4,144
New Hampshire.....	15	293	3	54	12	239
Rhode Island.....	27	1,622	1	7	26	1,615
Vermont.....	6	116	2	3	4	113
MIDDLE ATLANTIC.....	305	21,429	127	4,364	268	17,065
New Jersey.....	59	2,369	28	637	31	1,732
New York.....	223	14,940	59	2,849	107	12,091
Pennsylvania.....	110	4,120	40	848	70	3,272
EAST NORTH CENTRAL.....	702	41,515	110	3,499	592	38,016
Illinois.....	195	12,941	44	2,037	151	10,874
Indiana.....	58	2,853	10	280	48	2,573
Michigan.....	180	12,395	16	694	164	11,701
Ohio.....	187	10,155	25	241	162	9,914
Wisconsin.....	82	3,171	15	217	67	2,954
WEST NORTH CENTRAL.....	343	10,616	70	1,181	273	9,435
Iowa.....	68	2,332	15	286	53	2,046
Kansas.....	70	1,271	14	99	56	1,172
Minnesota.....	29	811	7	40	22	771
Missouri.....	121	4,387	23	665	98	3,722
Nebraska.....	51	1,730	10	81	41	1,649
North Dakota.....	2	69	-----	-----	2	69
South Dakota.....	2	16	1	10	1	6
SOUTH ATLANTIC.....	179	6,171	34	294	145	5,877
Delaware.....	3	51	-----	-----	3	51
District of Columbia.....	17	1,089	2	38	15	1,051
Florida.....	64	1,832	11	125	43	1,707
Georgia.....	10	609	2	14	17	595
Maryland.....	35	1,579	9	38	26	1,541
North Carolina.....	12	240	3	21	9	219
South Carolina.....	16	266	4	17	12	249
Virginia.....	8	181	1	24	7	157
West Virginia.....	15	324	2	17	13	307
EAST SOUTH CENTRAL.....	40	1,595	4	28	36	1,567
Alabama.....	8	481	-----	-----	8	481
Kentucky.....	10	473	-----	-----	10	473
Mississippi.....	4	81	1	17	3	64
Tennessee.....	18	560	3	11	15	549
WEST SOUTH CENTRAL.....	248	8,646	29	834	219	7,812
Arkansas.....	10	221	1	31	9	190
Louisiana.....	8	420	1	14	7	406
Oklahoma.....	60	2,547	8	207	61	2,280
Texas.....	161	5,458	19	492	142	4,966
MOUNTAIN.....	96	2,224	16	182	80	2,042
Arizona.....	16	209	8	103	8	106
Colorado.....	53	1,389	7	77	46	1,312
Idaho.....	3	35	-----	-----	3	35
Montana.....	8	117	-----	-----	8	117
Nevada.....	2	7	-----	-----	2	7
New Mexico.....	3	67	1	2	2	65
Utah.....	7	299	-----	-----	7	299
Wyoming.....	4	101	-----	-----	4	101
PACIFIC.....	549	27,905	68	1,365	481	26,540
California.....	474	26,281	51	1,148	423	25,133
Oregon.....	32	747	7	111	25	636
Washington.....	43	877	10	106	33	771

TABLE 9C.—RETAIL ESTABLISHMENTS REPORTING SALES ON AN "ALL-CASH" BASIS, COMPARED WITH THOSE REPORTING "CASH-CREDIT" SALES

AUTOMOBILE DEALERS WITH FARM IMPLEMENTS AND MACHINERY

(Sales expressed in thousands)

DIVISIONS AND STATES	TOTAL		ALL-CASH		CASH-CREDIT	
	Stores	Sales	Stores	Sales	Stores	Sales
United States total.....	1,301	\$103,286	96	\$8,178	1,205	\$97,117
NEW ENGLAND.....	18	1,108	2	95	11	1,103
Connecticut.....						
Maine.....	7	438	1	12	6	425
Massachusetts.....						
New Hampshire.....	2	95	1	83	1	12
Rhode Island.....						
Vermont.....	4	665			4	665
MIDDLE ATLANTIC.....	57	4,726	4	225	53	4,501
New Jersey.....	2	383			2	383
New York.....	31	2,572	2	202	29	2,370
Pennsylvania.....	24	1,771	2	23	22	1,748
EAST NORTH CENTRAL.....	270	21,374	21	1,350	255	20,024
Illinois.....	91	5,993	5	103	86	5,890
Indiana.....	26	1,669	1	189	25	1,770
Michigan.....	29	2,276			29	2,276
Ohio.....	45	4,432	7	375	38	3,857
Wisconsin.....	85	6,714	8	483	77	6,231
WEST NORTH CENTRAL.....	688	46,167	48	2,854	640	43,313
Iowa.....	103	7,117	10	363	93	6,754
Kansas.....	120	10,061	12	850	108	9,211
Minnesota.....	100	7,223	13	642	87	6,581
Missouri.....	38	2,251	1	152	37	2,099
Nebraska.....	86	5,425	4	110	82	5,315
North Dakota.....	133	8,702	3	192	130	8,510
South Dakota.....	102	5,388	5	145	97	5,243
SOUTH ATLANTIC.....	38	4,930	7	816	31	4,114
Delaware.....	2	203			2	203
District of Columbia.....						
Florida.....	4	344			4	344
Georgia.....	5	116	2	29	3	87
Maryland.....	7	1,366	1	306	6	1,060
North Carolina.....	9	1,220	1	73	8	1,147
South Carolina.....	3	458	1	24	2	434
Virginia.....	5	772	1	25	4	747
West Virginia.....	3	451	1	359	2	92
EAST SOUTH CENTRAL.....	22	2,238	1	7	21	2,231
Alabama.....	6	470			6	470
Kentucky.....	4	192	1	7	3	185
Mississippi.....	11	1,471			11	1,471
Tennessee.....	1	96			1	96
WEST SOUTH CENTRAL.....	51	6,419	5	393	46	6,026
Arkansas.....	1	75			1	75
Louisiana.....	3	453			3	453
Oklahoma.....	18	2,146			18	2,146
Texas.....	29	3,745	5	393	24	3,352
MOUNTAIN.....	109	9,089	7	408	102	8,681
Arizona.....	4	322			4	322
Colorado.....	16	1,340	2	62	14	1,278
Idaho.....	13	1,058	2	208	11	850
Montana.....	67	5,468	3	138	64	5,330
Nevada.....	1	284			1	284
New Mexico.....	1	181			1	181
Utah.....						
Wyoming.....	7	486			7	486
PACIFIC.....	47	7,154	1	530	46	6,624
California.....	24	4,688			24	4,688
Oregon.....	4	475			4	475
Washington.....	19	1,991	1	530	18	1,461

TABLE 9D.—RETAIL ESTABLISHMENTS REPORTING SALES ON AN "ALL-CASH" BASIS, COMPARED WITH THOSE REPORTING "CASH-CREDIT" SALES

FILLING STATIONS

(Sales expressed in thousands)

DIVISIONS AND STATES	TOTAL		ALL-CASH		CASH-CREDIT	
	Stores	Sales	Stores	Sales	Stores	Sales
United States total.....	91,072	\$1,223,780	43,589	\$442,680	47,483	\$781,120
<b>NEW ENGLAND.....</b>	<b>5,307</b>	<b>65,536</b>	<b>3,482</b>	<b>34,180</b>	<b>1,825</b>	<b>31,406</b>
Connecticut.....	973	18,441	621	11,002	352	7,340
Maine.....	542	5,230	370	2,693	172	2,538
Massachusetts.....	2,365	28,806	1,500	14,202	850	14,604
New Hampshire.....	531	4,820	407	2,620	124	2,200
Rhode Island.....	460	5,073	293	2,273	167	2,800
Vermont.....	430	3,201	282	1,286	154	1,915
<b>MIDDLE ATLANTIC.....</b>	<b>12,725</b>	<b>164,152</b>	<b>7,594</b>	<b>80,847</b>	<b>5,131</b>	<b>83,305</b>
New Jersey.....	2,020	24,655	1,294	13,265	726	11,397
New York.....	5,632	78,384	3,513	41,770	2,119	36,005
Pennsylvania.....	5,073	61,113	2,787	25,810	2,286	35,303
<b>EAST NORTH CENTRAL.....</b>	<b>17,358</b>	<b>202,561</b>	<b>8,020</b>	<b>107,946</b>	<b>9,320</b>	<b>184,615</b>
Illinois.....	4,281	74,770	2,322	34,012	1,959	40,167
Indiana.....	2,398	31,794	1,189	12,311	1,209	19,483
Michigan.....	3,441	64,527	1,580	23,035	1,861	40,692
Ohio.....	5,494	92,402	2,152	26,335	3,342	66,067
Wisconsin.....	1,744	29,059	786	10,753	958	18,306
<b>WEST NORTH CENTRAL.....</b>	<b>10,771</b>	<b>177,183</b>	<b>4,348</b>	<b>51,580</b>	<b>6,423</b>	<b>125,003</b>
Iowa.....	2,144	34,727	940	11,653	1,198	23,074
Kansas.....	2,313	34,111	805	8,044	1,508	25,467
Minnesota.....	1,390	28,310	489	6,402	910	21,008
Missouri.....	2,845	36,107	1,411	13,759	1,434	22,348
Nebraska.....	1,234	25,908	423	7,333	811	18,035
North Dakota.....	348	7,678	110	1,408	238	6,270
South Dakota.....	488	10,282	164	2,381	324	7,901
<b>SOUTH ATLANTIC.....</b>	<b>12,904</b>	<b>128,403</b>	<b>6,505</b>	<b>53,048</b>	<b>6,399</b>	<b>75,415</b>
Delaware.....	261	3,033	129	1,366	132	1,667
District of Columbia.....	116	5,083	54	2,700	62	2,383
Florida.....	2,335	24,252	1,290	9,491	1,045	14,761
Georgia.....	2,218	18,910	1,091	6,074	1,127	12,836
Maryland.....	570	7,075	332	4,093	247	2,982
North Carolina.....	3,419	29,230	1,562	11,290	1,857	17,940
South Carolina.....	1,429	11,505	836	5,383	594	6,122
Virginia.....	1,722	18,873	854	8,857	868	10,016
West Virginia.....	885	10,502	448	3,794	437	6,708
<b>EAST SOUTH CENTRAL.....</b>	<b>4,917</b>	<b>60,653</b>	<b>2,174</b>	<b>10,816</b>	<b>2,743</b>	<b>43,837</b>
Alabama.....	1,431	16,017	725	5,407	700	10,610
Kentucky.....	1,033	14,520	380	2,148	647	12,378
Mississippi.....	1,327	14,653	584	4,439	743	10,214
Tennessee.....	1,120	15,467	470	4,822	647	10,635
<b>WEST SOUTH CENTRAL.....</b>	<b>14,110</b>	<b>151,397</b>	<b>5,855</b>	<b>41,508</b>	<b>8,255</b>	<b>109,889</b>
Arkansas.....	1,641	16,783	647	3,870	904	12,907
Louisiana.....	1,471	15,110	708	4,840	763	10,264
Oklahoma.....	3,830	44,134	1,344	9,622	2,486	34,512
Texas.....	7,168	75,370	3,156	23,194	4,012	52,206
<b>MOUNTAIN.....</b>	<b>3,400</b>	<b>52,092</b>	<b>1,374</b>	<b>15,671</b>	<b>2,025</b>	<b>36,421</b>
Arizona.....	538	7,136	208	1,026	330	5,210
Colorado.....	1,083	16,392	411	3,638	672	12,454
Idaho.....	399	5,731	190	2,074	200	3,657
Montana.....	334	7,040	117	2,209	217	5,737
Nevada.....	93	1,104	47	438	46	666
New Mexico.....	330	3,057	117	1,047	222	2,610
Utah.....	429	6,537	186	2,621	243	3,916
Wyoming.....	194	3,589	80	1,418	105	2,171
<b>PACIFIC.....</b>	<b>9,511</b>	<b>131,693</b>	<b>4,138</b>	<b>41,004</b>	<b>5,373</b>	<b>90,629</b>
California.....	6,125	92,551	2,611	28,181	3,514	64,370
Oregon.....	1,264	13,454	670	5,928	586	7,528
Washington.....	2,122	25,688	848	6,095	1,274	18,733

TABLE 10.—SALES OF RETAIL DEALERS IN AUTOMOTIVE PRODUCTS AND OF AUTOMOBILE WHOLESALE-RETAILERS ARRANGED BY COMMODITY LINES

KIND OF BUSINESS	Total	Automobile products sold to ultimate consumers <sup>1</sup>	Repairs and storage	Radios and equipment	Automobile products sold to dealers <sup>2</sup>	Miscellaneous merchandise <sup>3</sup> (including candy, cigars, etc.)
Total sales—retailers and wholesaler-retailers.....	\$10,608,609,758	\$8,450,758,512	\$901,220,609	\$38,426,424	\$1,083,945,548	\$125,240,575
Percent.....	100.00	79.07	9.27	0.36	10.13	1.17
Retail dealers in automotive products—total <sup>4</sup> .....	9,579,230,837	7,979,819,241	962,790,630	36,416,780	485,840,418	114,357,768
Auto salesrooms.....	6,153,216,567	5,216,006,650	443,289,252	6,483,756	467,540,601	10,890,209
Used-car establishments..	140,932,120	134,774,481	3,200,978	120,388	2,577,137	181,142
Auto dealers with farm implements and machinery.....	113,363,249	73,170,665	4,936,925	-----	-----	35,255,660
Accessory stores with tires and batteries.....	257,742,858	223,756,829	18,688,991	9,317,819	4,092,265	1,886,954
Battery and ignition shops—brake repair shops.....	94,238,218	53,371,542	31,035,900	6,268,564	893,016	2,668,595
Tire shops (including tire repairs).....	247,314,087	214,076,052	25,114,145	2,590,168	3,844,573	1,689,140
Filling stations—gasoline and oil.....	860,081,366	841,771,949	9,517,936	-----	-----	17,791,480
Filling stations with tires and accessories.....	516,916,621	485,586,868	25,969,471	1,070,734	966,982	3,322,580
Filling stations with other merchandise.....	401,425,111	354,949,438	16,636,783	7,100,936	936,130	21,801,815
Garages (gasoline, oil, repairs, and storage).....	693,063,270	354,942,577	320,006,760	3,455,415	4,952,385	8,806,133
Body, fender, and paint shops.....	46,106,104	12,650,232	32,092,383	-----	6,923	450,560
Radiator shops.....	6,569,523	1,897,047	4,535,194	-----	-----	137,282
Parking stations and parking lots.....	30,361,738	12,804,902	25,092,012	-----	20,817	404,107
All other retailers of automotive products <sup>4</sup> .....	261,627,586	254,425,105	7,202,481	-----	-----	-----
Department stores.....	82,774,242	82,714,251	59,991	-----	-----	-----
Mail-order houses.....	24,513,997	24,513,997	-----	-----	-----	-----
General merchandise stores.....	18,452,317	18,445,247	7,070	-----	-----	-----
Variety stores.....	3,049,628	3,049,628	-----	-----	-----	-----
Feed stores (flour, feed, etc.).....	1,496,608	1,491,738	4,870	-----	-----	-----
Coal and feed stores.....	1,351,108	1,310,288	40,820	-----	-----	-----
Radio and electrical stores.....	8,220,160	7,477,808	748,202	-----	-----	-----
Hardware stores.....	12,144,326	11,768,089	376,237	-----	-----	-----
Hardware and farm implements stores.....	20,273,891	19,956,558	317,333	-----	-----	-----
Furniture stores.....	1,554,393	1,525,123	29,270	-----	-----	-----
Family clothing stores.....	133,502	133,502	-----	-----	-----	-----
Farm implements, machinery, and equipment.....	54,251,982	53,816,701	435,191	-----	-----	-----
Lumber and hardware dealers.....	328,216	303,016	25,200	-----	-----	-----
Coal and wood yards.....	3,086,575	3,676,602	9,973	-----	-----	-----
Second-hand auto parts stores <sup>5</sup> .....	20,390,141	{ 20,822,593 }	{ 5,147,734 }	-----	-----	-----
All other retail stores <sup>5</sup> .....	-----	{ 3,419,814 }	-----	-----	-----	-----
Total retail sales of automotive products by all retail stores.....	9,204,243,457	8,284,244,540	969,999,111	-----	-----	-----
Wholesaler-retailers of motor vehicles.....	857,751,335	220,514,166	21,230,588	2,009,644	598,105,130	10,891,807

<sup>1</sup> For a breakdown of this column see table 11A.

<sup>2</sup> This classification includes among other merchandise such items as farm machinery, farm wagons, other farm and garden equipment, and fuel oil for which no specific inquiry was incorporated in the automobile schedule.

<sup>3</sup> This classification includes both retail and wholesale sales because no segregation could be made.

<sup>4</sup> Bicycle shops, motorcycle shops, boat dealers, and aeroplane dealers are in "all other retailers" of automotive products.

<sup>5</sup> Repairs and storage cannot be segregated.

TABLE 11A.—RETAIL SALES OF AUTOMOTIVE COMMODITIES (EXCEPT IN GENERAL STORES) BY RETAILERS OF AUTOMOTIVE PRODUCTS AND OF AUTOMOBILE WHOLESALE-RETAILERS

KIND OF BUSINESS	TOTALS INCLUDES TABLE (11-B)		PASSENGER AUTOMOBILES (NEW)		PASSENGER AUTOMOBILES (USED)		COMMERCIAL CARS AND TRUCKS (NEW)	
	United States total sales	Percent	United States total sales	Percent	United States total sales	Percent	United States total sales	Percent
Total, all retail sales.....	\$8,459,758,512	100.00	\$3,048,518,452	100.00	\$1,810,849,412	100.00	\$457,048,214	100.00
Percent.....	100.00		35.98		15.24		5.40	
All retail stores.....	8,234,244,346	97.33	2,911,838,380	95.67	1,254,020,825	95.71	448,865,271	98.20
Percent.....	100.00		35.36		15.24		3.45	
Automobile salesrooms—new and trade-in.....	5,216,006,659	61.66	2,899,322,145	95.28	1,125,118,123	85.83	420,823,978	92.07
Used-car establishments.....	134,774,481	1.59	104,205	(1)	124,308,460	9.52	61,450	0.01
Auto dealers with farm implements.....	73,170,665	0.86	10,906,680	0.36	179,706	0.05	27,303,734	6.02
Accessory stores with tires and batteries.....	223,756,829	2.64						
Battery and ignition shops—brake repair shops.....	53,371,542	0.63			14,148	(1)		
Tire shops.....	214,070,052	2.53	2,964	(1)	28,490	(1)		
Filling stations—gasoline and oil.....	841,771,849	9.95						
Filling stations with tires and accessories.....	485,886,868	5.74						
Garages (repairs, storage, gas, oil, accessories).....	354,949,488	4.20	168,450	(1)	328,216	0.03		
Body, fender, and paint shops.....	12,650,232	0.15	328,670	0.03	2,189,609	0.17	416,819	0.09
Radiator shops.....	1,897,047	0.02	5,456	(1)	83,624	0.01		
Parking stations and lots.....	12,864,802	0.15						
Department stores.....	82,714,251	0.97						
With food departments.....	13,837,728							
Without food departments.....	68,876,523							
Mail-order houses (catalog).....	24,513,997	0.29						
General merchandise stores.....	18,445,247	0.22						
Variety stores.....	3,049,628	0.04						
Feed stores (floor, feed, etc.).....	1,491,738	0.02						
Radio and electrical shops.....	7,477,868	0.09						
Coal and feed stores.....	1,210,288	0.02						
Hardware stores.....	11,788,089	0.14						
Hardware and farm implements stores.....	19,686,688	0.24						
Furniture stores.....	1,525,123	0.02						
Family clothing stores.....	1,183,502	(1)						
Farm implements, machinery, and equipment dealers.....	53,816,791	0.64						
Lumber and hardware stores.....	303,016	(1)						
Second-hand auto parts dealers.....	20,822,563	0.25			1,205,906	0.08		
Coal and wood yards.....	3,676,602	0.04						
All other retail stores.....	3,419,814	0.04						
Wholesale-retailers.....	225,514,166	2.67	181,679,862	4.33	23,161	(1)	29,290	(1)
Percent.....	100.00		38.39		24.89		3.64	
Wholesale-retailers.....								
Percent.....								

1 Less than 0.01 percent.

TABLE IIA.—RETAIL SALES OF AUTOMOTIVE COMMODITIES (EXCEPT IN GENERAL STORES) BY RETAILERS OF AUTOMOTIVE PRODUCTS AND OF AUTOMOBILE WHOLESALE-RETAILERS—Continued

KIND OF BUSINESS	COMMERCIAL CARS AND TRUCKS (USED)		TRACTORS		SPECIAL-PURPOSE VEHICLES		BUSES	
	United States total sales	Percent	United States total sales	Percent	United States total sales	Percent	United States total sales	Percent
Total, all retail sales.....	\$113,680,574	100.00	\$100,634,975	100.00	\$26,693,691	100.00	\$40,427,261	100.00
Percent.....	1.34		1.19		0.32		0.48	
All retail stores.....	105,104,032	92.46	100,634,975	100.00	26,468,791	99.12	40,301,980	99.69
Percent.....	1.28		1.22		0.32		0.49	
Automobile salesrooms—new and trade in.....	97,986,551	86.19	17,747,927	17.64	26,214,468	98.20	40,229,901	99.51
Used-car establishments.....	2,926,278	2.58	39,755	0.04	79,327	0.30	58,656	0.15
Auto dealers with farm implements.....	3,238,047	2.82	21,068,700	21.53	23,363	0.09		
Accessory stores with tires and batteries.....	256,043	0.23						
Battery and ignition shops—brake repair shops.....	10,395	0.01						
Fire shops.....	2,854	( )						
Filling stations with other merchandise.....	3,017	( )						
Garages (repairs, storage, gas, oil, accessories).....	31,417	0.28						
Body, fender, and paint shops.....	3,248	( )						
General merchandise stores.....								
Hardware stores.....			62,080	0.06				
Farm implements stores.....			159,832	0.16				
Farm implements, machinery, and equipment dealers.....			11,873,812	11.80				
Furniture and hardware stores.....			48,607,437	48.30				
Lumber and hardware stores.....			303,016	0.30				
Second-hand auto parts dealers.....	386,437	0.34						
All other retail stores.....	6,204	( )	173,404	0.17	25,597	0.10		
Wholesaler-retailers.....	8,576,542	7.54			284,900	0.88	125,261	0.31
Percent.....	3.80				0.10		0.06	

1 Less than 0.01 percent.



TABLE 12.—WHOLESALE SALES OF RETAILERS OF AUTOMOTIVE PRODUCTS AND OF AUTOMOBILE WHOLESALER-RETAILERS<sup>1</sup>

KINDS OF BUSINESS	TOTAL SALES	PERCENT	PASSENGER AUTOMOBILES (NEW)		PASSENGER AUTOMOBILES (USED)		BUSES		COMMERCIAL CARS AND TRUCKS (NEW)	
			Sales	Percent	Sales	Percent	Sales	Percent	Sales	Percent
Total, wholesale sales of retailers and wholesaler-retailers.....	\$1,094,980,222	100.00	\$913,074,463	100.00	\$12,223,611	100.00	\$1,062,922	100.00	\$61,606,060	100.00
Percent.....	100.00		83.39		1.12		.10		8.68	
Retail automotive group—total.....	465,933,265	44.38	391,290,730	42.85	9,144,094	74.80	913,885	85.98	44,194,950	71.74
Percent.....	100.00		80.52		1.88		.19		9.10	
Automobile salesrooms.....	467,640,601	42.70	391,276,364	42.85	6,612,518	54.10	913,885	85.98	44,185,217	71.74
Used-car dealers.....	2,577,137	.24			2,831,376	20.70			9,042	( <sup>3</sup> )
Accessory stores with tires and batteries.....	4,092,265	.37								
Battery and ignition shops.....	893,616	.08								
Tire shops.....	3,844,573	.35								
Garages.....	4,952,385	.45								
Body, fender, and paint shops.....	6,923	( <sup>4</sup> )								
Body, fender, and paint shops.....	6,923	( <sup>4</sup> )								
Parking garages and lots.....	29,817	( <sup>4</sup> )								
Filling stations.....	1,903,101	.17								
Dealers in second-hand parts and accessories.....	92,867	.01	14,366	( <sup>4</sup> )						
Automobile wholesaler-retailers.....	608,996,937	55.62	521,733,733	57.15	3,079,517	25.20	149,037	14.02	17,412,401	28.26
Percent.....	100.00		85.68		.51		.02		2.86	

KINDS OF BUSINESS	COMMERCIAL CARS AND TRUCKS (USED)		TRACTORS		AUTOMOBILE PARTS AND ACCESSORIES (EXCEPT TIRES AND TUBES)		TIRES, TUBES, AND TIRE ACCESSORIES		MISCELLANEOUS OTHER MERCHANDISE <sup>1</sup>	
	Sales	Percent	Sales	Percent	Sales	Percent	Sales	Percent	Sales	Percent
Total, wholesale sales of retailers and wholesaler-retailers.....	\$11,760,107	100.00	\$7,660,841	100.00	\$64,884,848	100.00	\$11,739,856	100.00	\$19,917,414	100.00
Percent.....	1.07		.70		5.93		1.07		.99	
Retail automotive group—total.....	797,007	6.78			31,706,890	48.86	7,867,813	66.97	25,607	.23
Percent.....	.16				6.52		1.62		.01	
Automobile salesrooms.....					23,606,302	36.38	149,308	1.27		
Used-car dealers.....					10,912	.02				
Accessory stores with tires and batteries.....					3,069,633	4.73	1,022,632	8.71	25,607	.23
Battery and ignition shops.....					179,129	.27	114,297	.96		
Tire shops.....					331,288	.50	3,143,290	31.60		
Garages.....					3,027,369	5.59	1,323,016	11.29		
Body, fender, and paint shops.....					6,923	.01				
Parking garages and lots.....					408,136	.63				
Filling stations.....					66,263	.10				
Dealers in second-hand parts and accessories <sup>3</sup> .....										
Automobile wholesaler-retailers.....	10,963,109	93.22	7,660,841	100.00	33,178,958	51.14	3,877,543	33.03	10,891,807	99.77
Percent.....	1.80		1.26		5.45		.63		1.79	

<sup>1</sup> For complete data on "Wholesale Trade" see the United States Summary of Wholesale Distribution.  
<sup>2</sup> This classification includes among other merchandise such items as farm machinery, farm wagons, other farm and garden equipment and fuel oil as well as the wholesale sales of special-purpose motor vehicles by retailers.  
<sup>3</sup> Included in "Other retail stores" in table 10.  
<sup>4</sup> Amount less than 0.01 percent.