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CHAPTER 6

Trends in Margins

As outlined in the preceding chapter, the business of measuring the cost of distribution falls into two parts: identification of the channels through which goods flow during the course of being distributed, and estimation of the wholesale and retail margins to which the goods are subject in each channel. Once we have these two kinds of information, we can multiply the value of the goods passing through each channel by the relevant margins, in order to obtain estimates of value added by distribution; or we can average the margins, in percentage form, using values of the goods as weights. The two operations are of course equivalent.

A preliminary view of the manner in which we identified the channels used was given in Chapter 5, and more detailed information of a technical sort will be found in Appendix B. The purpose of the present chapter is to offer detailed data on retail and wholesale margins (Tables 24 and 25) and to describe how the material was assembled.

Retail Margins

Retail margins, as a per cent of retail value, are shown in Table 24 for the thirty-two types of retail outlet used in this study. The rise in over-all distribution cost reported in Chapter 4 will have prepared the reader for an upward tendency in margins by individual store types. However, the fact noted in Chapter 4, that distribution cost as a whole has risen less rapidly than some individual margins can now be further illustrated. For instance, we find that department-store margins rose far more rapidly than those for any other classification. On the other hand, the margins for some kinds of outlet actually have declined: this is true for meat markets, bars, liquor stores, cigar stores, and sporting-goods stores. In comparing the trend of retail margins in Table 24 with the movement of distribution cost as a whole (Chapter 4), we should of course remember that the latter is not simply an average of the data in Table 24; both wholesale margins and the relative importance of wholesaling have to be considered.

Table 24

RETAIL MARGINS BY KIND OF STORE, 1869–1947 [a]

(per cent of retail value)

	1869	*1879*	*1889*	*1899*	*1909*	*1919*	*1929*	*1939*	*1947*
Grocery, independent	18.0	18.5	19.0	19.5	19.5	19.5	19.5	19.0	18.0
Grocery, chain	...	...	...	...	17.0	18.0	18.5	18.2	17.5
Meat	29	29	29	28.0	26.8	25.8	24.7	23.6	20.3
Candy	35	35	35	35	35	35	35	35	35
Country general	17.5	17.5	17.8	18.1	18.7	19.0	18.4	17.9	17.9
Department	...	...	22.2	25.6	29.3	32.8	33.4	36.4	35.6
Mail order	...	...	24.4	25.0	25.6	26.2	26.8	27.4	28.0
Dry goods	18.7	18.7	19.2	21.4	27.0	29.0	28.0	28.0	28.0
Variety	...	...	...	31	33.3	34.7	34.7	34.6	36.0
Apparel	21.1	23.2	25.4	27.5	29.6	31.8	34.1	36.0	37.7
Shoes, independent	21.4	23.1	24.7	26.3	28.0	29.5	31.2	32.9	34.5
Shoes, chain	...	...	...	...	33.5	32.0	30.5	28.9	27.6
Furniture, independent	30	30	30.6	31.2	31.2	39.0	41.2	41.2	40.0
Furniture, chain	...	...	...	...	44.0	44.0	44.0	44.0	44.0
Household appliances	37	37	37	37	37	37	37	37	37
Vehicles [b]	23	23	23	23	23	23	23.0	23.0	23
Automobile accessories	...	...	...	...	26.5	26.5	29.1	32.6	32.6
Filling stations	...	...	...	...	22.0	14.0	16.5	19.0	19.5
Coal and lumber	18.0	18.5	19.0	19.5	20.5	22.5	24.0	25.0	25.8
Hardware	25.2	25.2	23.7	22.2	23.6	25.0	26.4	27.8	29.0
Farm implements	23.0	21.4	19.6	18.0	18.0	19.2	20.6	21.9	23.0
Restaurants [c]	52	52	52	52	52.0	52.4	54.3	56.3	58.0
Bars	46	46	46	46	46	...	...	43	43
Drugs	28.4	28.4	30.2	31.8	33.6	34.6	34.6	33.0	33.0
Liquor	35	35	35	35	35	35	...	29	29
Books and stationery	22.0	22.0	22.5	24.2	26.5	29.6	32.8	35.3	35.3
Cigars	33.0	33.0	31.8	30.4	29.0	27.4	26.0	24.5	24.5
Jewelry	31.7	31.7	31.8	31.9	33.8	38.2	43.0	41.7	40.0
Cameras, luggage, toys, and sporting goods	38.6	38.0	37.2	36.5	35.8	35.2	34.4	33.6	33.0
Musical instruments	same as furniture								
Other	17.5	17.5	17.8	18.1	18.7	19.0	18.4	17.9	17.9

... = not applicable.

[a] For source see text and Appendix C. This tabulation does not include milk dealers; the retail and wholesale spreads could not be separatelv estimated, and the combined margin was taken as 52 per cent of retail value in all years.

[b] Retail sales of new cars, parts, accessories, and service less cost of first three, as percentage of sales; sales value of new cars measured after deducting loss on used cars traded in. If a new car is sold for $2,000 and paid for with $1,500 cash and a $500 trade-in allowance, and if the dealer sells the used car for $400, we regard the true retail price as $1,900; if the new car cost the dealer $1,550, we reckon the margin at $350. We treat the used car business of automobile dealers as incidental to sale of new cars, include used cars neither in sales nor in cost of goods sold, and define the used car margin as zero. Data for 1933–1939 permitted this treatment: we lack data for 1947 and used the 1939 margin (the actual 1947 margin was doubtless higher and unrepresentative). Before 1933, we used reported margins on new cars; the needed adjustment may be small, for used cars commonly sold "at cost or slightly less" (*Automobile Trade Journal,* April 1909, p. 81). We have no information on used horse-drawn vehicles.

[c] Not including tips.

The noticeable variation both in level and in movement among the margins for different types of store calls for comment. A few suggestions only will be offered here. Relatively high margins are found where the product is varied and large stocks must be carried (e.g. furniture stores), or where the commodity is sold in conjunction with services (restaurants), or the outlet is specially taxed (bars). Relatively low margins result where the turnover is rapid and little or no free service is furnished (e.g. filling stations and grocery stores) or where a high price tag makes selling costs low percentagewise (automobiles).

The trend in margins can sometimes be explained by a change in the character of retailing. Among those few cases that we have been able to document may be mentioned the following. The increase in department-store margins has been much discussed; the rise prior to World War I seems to have been connected with the assumption of wholesaling functions and the more recent rise with the extension of some services, such as return privileges. The rise in mail-order margins is due, in part at least, to "trading up" (i.e. a switch in emphasis from price to quality), to the advent of testing laboratories, and to the trend toward orthodox store distribution by the mail-order companies.[1] Again, the rise in variety-store margins was certainly influenced by the introduction of prepared food around 1909. The rise in jewelry-store margins may perhaps be due to the trend toward more liberal credit.[2]

Among those few types of retailing in which margins have declined, we may note meat markets, chain shoe stores, cigar stores, and the camera, luggage, toy, and sporting-goods group. Only for meat markets and cigar stores can we offer an explanation; in both cases a change would seem to have occurred in the retailer's function. Butchers did not give up slaughtering and the manufacture of their own meat products until well into our period, and their transfer to the factory was not completed until after 1900.[3] The progressive restriction of the butcher's function to the distribution of products already prepared, and even packaged, at the packing house naturally allowed a cut in margins. To what extent retailers manufactured their own cigars at the opening of our period we have been unable to form any definite opinion. Certainly the variety of goods sold by cigar stores was greater (it included snuff and a wider variety of imported products) and fewer of them were packaged by the manu-

[1] See Boris Emmet and John E. Jeuck, *Catalogues and Counters,* University of Chicago Press, 1950, especially Chaps. XIV, XXI.

[2] These observations are mostly based upon opinions in the trade.

[3] New York butchers, for instance, established a cooperative abattoir as recently as 1904 (*Butchers' Advocate,* June 1, 1904, p. 23).

facturer. Moreover, chain cigar stores entered the field about 1900 and doubtless effected economies.[4]

A rough attempt has been made to indicate the order of accuracy of the data. As will be seen, the estimates for candy stores (a small group, however), household appliances, bars, and liquor stores are especially rough. In the case of appliances, lack of accuracy is due not so much to sparseness of data as to its wide dispersion; in the other cases, information was scarce. Because of the extremely heterogeneous nature of the source material (see below), it is not possible to offer any measures of dispersion within categories for the data in Tables 24 and 25. An oblique test of the value of our kind-of-store classification could be made, however, with the help of Canadian data. Thus the Canadian census of distribution for 1935 collected data on margins and published the within-group dispersion for a store classification roughly the same as our own.[5] For the Canadian data the variance between was several hundred times the variance within categories; and the dispersion among mean margins for different kinds of store was undoubtedly significant in a statistical sense. We may therefore have some confidence that at least the larger differences reported in Table 24 have a real existence.

Wholesale Margins

Margins are shown in Table 25 for the nineteen types of wholesaler handling finished goods or construction materials for eventual distribution through some kind of retail outlet. As in Table 24, substantial differences of level are recorded, but the general standard of precision, indicated by the number of significant figures given, is much lower. The reason is that we uncovered far less information in the wholesale than in the retail field. In many cases the absence of trend results from our necessary assumption that where evidence to the contrary was lacking, margins in early years were the same as in later years. Fortunately, so far as our major results are concerned, the inferior precision of Table 25 is tempered by several circumstances. Because wholesale margins are on the whole smaller than retail, a given proportionate error in Table 25 has less absolute effect in dollar terms than the same error in Table 24. Again, only

[4] *American Grocer*, December 10, 1902, p. 5; December 17, 1902, p. 7. *Smokers' Magazine*, April 1903, p. 126. We have not separated chain and independent cigar stores in our analysis because, at least recently, they seem to have had similar margins. This fact would not prevent the advent of chains from having lowered the margins of independents, but the suggestion cannot be documented.

[5] The United States censuses of distribution for 1929 and 1939 did not collect information on margins, and for expense ratios they afford no measure of within-group dispersion.

Table 25

WHOLESALE MARGINS BY KIND OF BUSINESS, 1869–1947 [a]

(per cent of wholesale value, except adjustment)

	1869	*1879*	*1889*	*1899*	*1909*	*1919*	*1929*	*1939*	*1947*	*Required Adjustment* [b]
Grocery	11	11	11	11	11	11	11	11	11	1.48
Meat	13	13	13	13	13	13	13	13	13	none
Candy	23	23	23	23	23	23	23	23	23	none
Dry goods	14	15	16	17	18	18	18	18	18	1.26
Apparel	16	16	16	16	16	16	16	16	16	1.20
Shoes	14	14	14	14	14	14	14	14	14	none
Furniture	14	14	14	14	15.0	16.2	18.0	22.0	22.0	1.20
Household appliances	20	20	20	20	20	20	20	20	20	none
Vehicles	10	10	10	10	10	10	10	10	10	none
Automobile accessories	...	...	...	...	25.0	25.0	25.5	24.0	23.0	0.91
Gasoline and oil	...	...	...	...	18.0	16.0	17.8	17.5	16.5	none
Lumber	10	10	10	10	11.5	13.0	14.2	16.0	17.0	1.23
Hardware	19	19	19	19	20.0	22.0	23.0	24.0	24.0	1.10
Farm implements	17	17	17	17	17	17	17	17	17	none
Liquor	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	1.18
Drugs [c]	10	11	12.2	13.6	15.2	16.6	16.0	15.2	15.6	1.64
Books and stationery	24	24	24	24	24	24	24	24	24	1.30
Cigars	8	8	8	8	8	8	8	7.6	7.2	1.16
Jewelry	24	24	24	24	24	24	24	24	24	none

... = not applicable.

[a] For source see text and Appendix C. This tabulation does not include milk wholesalers; the retail and wholesale spreads could not be separately estimated, and the combined margin was taken as 52 per cent of retail value in all years.

[b] The data in this table refer to the margins realized by regular wholesalers. Before they can be used to estimate value added by wholesalers, they have to be adjusted because (1) other types of wholesaler (e.g. manufacturers' sales branches) in some cases have a higher or lower margin than regular wholesalers and (2) some commodities are handled by more than one wholesaler. The adjusted margin was obtained in each case by multiplying the data here shown by the ratio at the end of each line. The need for adjustment was established, and the required ratio obtained, by studying the distribution of sales and the expense ratios (assumed proportional to the margins) for different types of wholesaler in the 1929 and 1939 censuses (see Appendix B).

[c] General-line wholesalers only; the much higher margins of specialty wholesalers are accounted for through the adjustment.

a fraction of all goods distributed ever are handled by wholesalers. For these reasons the effective accuracy in the final calculations of the data in Table 25 is not so much inferior to Table 24 as might appear.

The data in Table 25 refer to regular (i.e. independent) wholesalers; if they were the only kind of wholesale distributor and if they sold only to retailers, then these percentages would immediately yield estimates of value added by wholesaling. There are in fact many other kinds of wholesaler—brokers, commission merchants, manufacturers' sale branches, and chain-store warehouses, to men-

tion a few.[6] Furthermore, what we may call "double wholesaling" is fairly common. That is to say, a commodity may travel the road: producer, broker, regular wholesaler, retailer; or perhaps, producer, manufacturers' sales branch, commission agent, retailer. The volume and distribution of sales of various types of wholesaler are reported for 1929, 1939, and 1948 by the wholesale census; and the relative size of margins for different types can be estimated from expense ratios. Using these data, we tested out the assumption that the figures for regular wholesalers in Table 25 really measure wholesaling's contribution to value added; and in each case where the assumption could not be justified, we devised the correction shown in the last column.

Sources of Data

With few exceptions the figures in Tables 24 and 25 represent realized margins and refer to kinds of store. They do not derive from a comparison of actual or quoted selling prices of, and prices paid for, individual commodities.[7] The main objections to the use of commodity data, aside from the impossibility of covering types of store which sell many items, are lack of certain knowledge as to the comparability of retail and wholesale quotations, uncertainty as to how freight is treated, and the impossibility of accounting for special discounts or shading of prices.

Our collection of data on realized margins comes from three main sources: census tabulations of an official nature, other published information, and unpublished records of individual enterprises. The complete bibliographical story will be found in Appendix C. In the remainder of this chapter the intention is merely to indicate roughly the nature and extent of the data and how we used them, and to highlight some special features of the field.

Census Inquiries

The federal government never has collected information on gross margins in its censuses of distribution. In 1929, 1939, and 1948 (as well as in 1933 and 1935) sales were asked for and also expenses (in the 1939 and 1948 retail censuses, only payrolls), but not the cost of goods sold. To pass from expense ratios to gross margins is a

[6] See Theodore N. Beckmann and N. H. Engle, *Wholesaling*, Ronald, 1937, Chaps. 11, 12, 14.

[7] The chief exceptions are (1) figures for retail lumber yards were supplemented in early years by comparisons of retail and wholesale quotations for coal, and (2) margins of gasoline wholesalers and filling stations had mostly to be derived from measures of spread in cents per gallon.

very tricky matter, and we made slight use of the federal censuses of distribution at this point. The need to do so was the less, since ample information was available from other sources for the period after World War I.

Only two instances have come to our attention in which censuses of distribution were undertaken by states: by Massachusetts for 1900 and by Indiana for 1879.[8] These inquiries are specially valuable to us not only because of their early date, but because (unlike the federal inquiries of a later day) they asked for the cost of goods sold as well as sales. The Massachusetts census of 1900 covers retail trade, but only in the four cities of Fall River, Holyoke, Pittsfield, and Worcester. The Indiana inquiry of 1879 was more ambitious, covered wholesale as well as retail trade, and ostensibly took in the entire state, although for some reason the tabulations omit Vigo County (Terre Haute). The Indiana data are of great value despite two weaknesses: retail and wholesale trade are not segregated, and the cost of goods sold was asked for in the shape of "purchases." It was not difficult to exclude wholesaling with the help of one or two quite plausible assumptions. Purchases differ from the cost of goods sold by the change in inventory values, and it is difficult to say whether the Indiana margins are biased on this account; but if so, the bias can hardly be important.[9]

Other Published Information

For the period since World War I surveys of retailers' and wholesalers' operating ratios are available for almost every type of merchandising, collected by university bureaus of business research, or by trade groups, or by both in collaboration. Of these the best known are the series of Harvard reports. In special areas, such as chain stores, the Federal Trade Commission has collected information. The representativeness of some of this material may be questioned. To judge from the 1929 census of distribution or from Harvard data for department and specialty stores, geographical dispersion may be neglected in this particular field. Nevertheless, margins do tend

[8] A third case is the Montana census of 1893, but this inquiry reported only sales and payrolls and covered only eight kinds of store.

[9] Most of the states had statistical bureaus by 1900, but they seem to have regarded distribution as among the less interesting fields of study. The Indiana inquiry was probably due to the personality of the director, one John Collett, who conducted the entire census by mail on an appropriation of $3,700. Mr. Collett's interests seem to have ranged very widely; also, he was a man of discretion. For instance, he estimated the numbers of dead beats, habitual drunkards, professional gamblers, and houses of ill fame in the sixteen principal cities of the state, but released only state-wide totals on the ground that figures for individual cities might appear invidious.

to vary by size of store and by size of city; moreover, those who choose to answer a survey inquiry select themselves.[10]

For the period prior to World War I not much information is readily accessible. Bureaus of business research had not yet been founded, and few trade associations interested themselves systematically in distribution costs. We therefore turned to the trade press —the weekly and monthly publications written for the retailer. Of these we identified more than four hundred, although files of many of them could not be located (see Appendix D). A large part of the data for 1869–1919 comes from this source. Sometimes the results of trade association surveys are reported—or of discussions of distribution cost at annual gatherings of associations. At other times editors conducted surveys among their readers or readers wrote in to ask whether their operating results were typical. Much of the material is subject to obvious upward or downward bias. When discussions of distribution cost occurred in response to public criticism, as when living costs were rising, the dealers were obviously on the defensive; and the margins they give may safely be labeled "minimum estimates." At other times a retailer will boast of the size of his markup, justifying it by the character of the trade or the service he gives. Such data may confidently be classed as "maximum estimates." We plotted observations for each type of store upon a large-scale scatter diagram. Data of the kind indicated were labeled "maximum" or "minimum" and a trend line drawn to pass at some level in between. Even more valuable were editorial estimates of representative ratios, obviously made by men who knew the trade. The canvass of the trade press, though somewhat laborious, also yielded data on other topics than margins: the changing relative importance of different types of store as outlets for different commodities; the relative importance of wholesalers and direct sales by producers as sources of supply for retailers; and the functions performed by retailing at different periods. So far as concerns margins, we believe we have practically exhausted extant files of trade periodicals as a source of data.

Unpublished Records

Large numbers of retail and wholesale firms now in business have a continuous existence since as early as the first half of the nineteenth

[10] The fact that no recent census has asked for the cost of goods sold deprives us of the only really satisfactory means of checking the representativeness of sample data obtained from private surveys. One would expect successful firms to dominate such samples, i.e. the samples should exaggerate ratios of net profit to sales. However, it by no means follows that the gross margin will be similarly overstated. High net profits may result from low expenses as well as from high margins.

century. A cursory survey disclosed well over one hundred mercantile businesses in New York City alone founded before 1900. Here seemed to be a promising field.

Store executives were very willing to discuss the project, and even to search their archives, but it would appear that in the vast majority of cases operating records for more than three decades ago no longer exist, at least in the custody of the firms in question.[11] A small number of interesting series were placed at our disposal; but after canvassing about thirty of the more likely firms, we abandoned the approach as too expensive. Even in New York City we have not undertaken an exhaustive canvass of merchandising firms, which might possibly have records; and we believe that another with more persistence (or better luck) could, at the expense of considerable leg work, uncover some further materials.

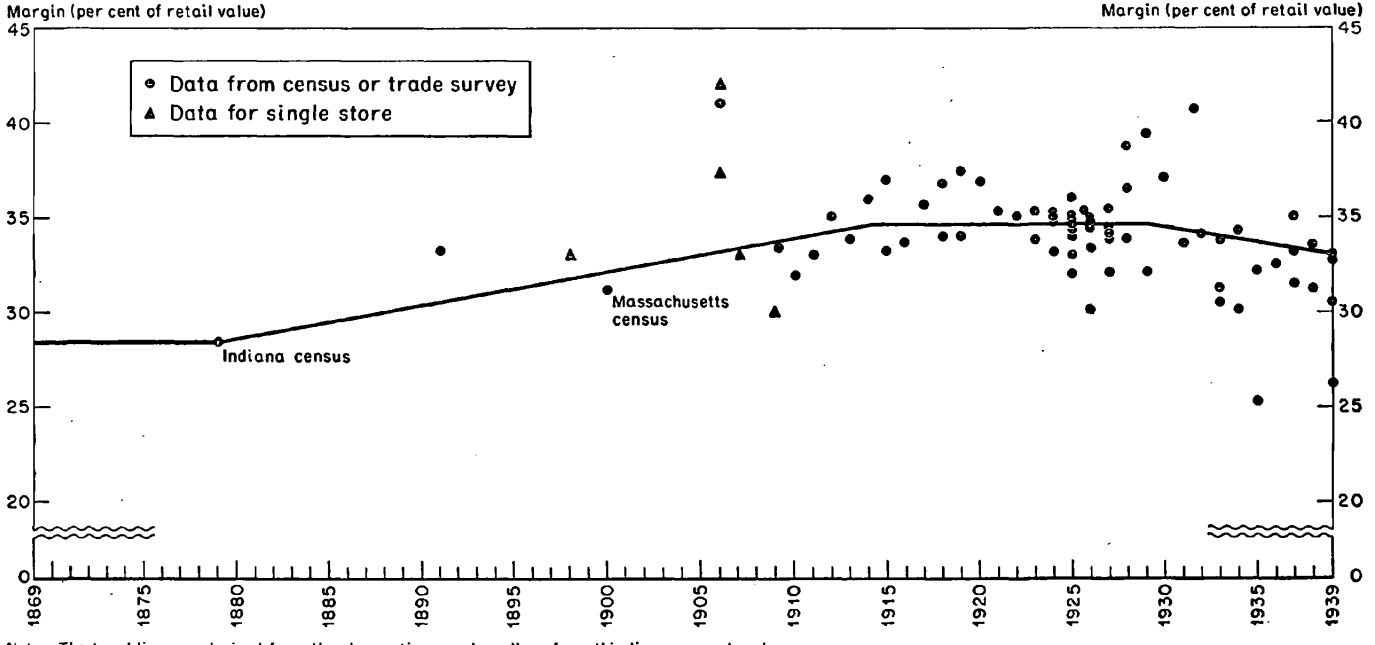
Most of our unpublished records were obtained by a different, and we think simpler, method. We located them in the hands not of the firms themselves but of their accountants. Where a firm is incorporated, its accounts commonly have been audited since incorporation and for some years preceding that event. Accountants, we found, as a profession have well-organized files. In most cases we were able to get permission to use the material, once we had located it. We were able quite rapidly to add about fifteen series to the six or seven we had obtained so laboriously by direct canvass. Material from accountants' files has the advantage that firms all over the United States can be covered from a central location such as New York or Chicago. Its disadvantage is that practically nobody in the merchandising field was incorporated before about 1905, and no records from the source can be expected before 1900. Beginning about 1905 or 1910, some material additional to that used here could probably be uncovered from this source without too much trouble.

The above-mentioned material relates mainly to large-city stores —department stores, apparel, furniture, mail order, a couple of variety chains, and here and there a wholesaler. From an entirely different source we were able to obtain half a dozen series for country general stores between 1890 and 1910. Thomas D. Clark has assembled a collection of original records at the University of Kentucky which we were allowed to consult. The material includes—besides ledgers—day books, cash books, and invoices. The latter

[11] Current operations of the average store have little practical need for early records except where invested capital was chosen as the base for excess profits tax computations. Several well-known stores recently have searched their files in vain for early operating records needed for this purpose.

Chart 4

DERIVATION OF GROSS MARGIN FOR RETAIL DRUGSTORES, 1869–1939



Note: The trend line was derived from the observations, and readings from this line were entered in Table 24 (see text and Appendix C).

furnished additional information as to buying habits, at least for these southern stores.[12]

Summary

Although the 1929, 1939, and 1948 censuses of distribution give no direct information about retail and wholesale margins, numerous and extensive surveys by trade associations and university research bureaus furnish a solid basis for estimating distribution cost during recent decades. The major investment of time and labor in the present study was applied to the task of carrying these results backward into the period before World War I.

The effort to uncover records of individual businesses met with only moderate success. Many valuable insights were obtained as a by-product in talking with executives of long memory or examining old documents. Yet it is safe to say in retrospect that the relatively small amount of unpublished operating data for the early period used in this study was obtained at disproportionate cost. Far more ample in volume, though still relatively expensive to assemble, were the fruits of our canvass—substantially an exhaustive canvass so far as files could be located—of the trade press. Finally, we used the results of the Indiana and Massachusetts censuses already mentioned. Detailed identification of all these published sources is provided in Appendix C.

For each kind of retail store and each kind of wholesaling, data were plotted on large scatter diagrams, and a freehand trend line was drawn. From the trend line, observations were read and entered in Tables 24 and 25. As an illustration the scatter for retail drug stores is reproduced in Chart 4.

The resulting series in Tables 24 and 25 indicate that a gradual rise occurred in gross margins for most kinds of wholesale and retail operation. However, separate retail and wholesale data do not of themselves tell us anything about the gross distributive spread, or value added by distribution as a whole, either by kind of retail outlet or by commodity group. To obtain such measures, we need to combine the data in Tables 24 and 25 with information about the proportion of retailers' purchases made from wholesalers and the proportion direct from producers. The results of such a synthesis are given in Chapter 7.

[12] Inspired by Clark, the author made some sporadic attempts to locate old records in the hands of country storekeepers in New York but without success. Possibly southern storekeepers are more sentimental about their records; more likely, Professor Clark's collection is a tribute to his pertinacity.