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Volume Author/Editor: George J. Stigler

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CHAPTER 4

RETAIL TRADE

THE retail shops of the United States number almost 2 million, their proprietors and employees about 9 million. Of all service industries, not excluding government, this is the largest and the most ubiquitous, and yet, as we have seen, it is still growing rapidly. The variety and complexity of our retail industry are such that no brief analysis can pretend to comprehensiveness, let alone thoroughness. We must therefore be content to survey the long-term trends in employment in all trade, then examine, so far as the data permit, the changing types and organizations of retail trade, and finally treat with some factors in the growth of trade.

1. The Growth of Trade

We know fairly little, and that none too certainly, about the growth of trade, for all its vast size. The population censuses are the only source of comprehensive information before 1929, and even they yield no industry data in 1900 or 1920. Yet the general picture of rapid growth since 1900 that can be pieced together from the population censuses commands considerable confidence (Table 22).[1] To the figures for trade must be added those in eating and drinking establishments, where only very rough estimates can be made (Table 23).[2]

The considerable difference between the industry and occupational censuses with respect to the level of employment is a reason for our meager confidence in the data. The two sources differ in numerous respects: for example, the industry censuses exclude unemployed persons, and sometimes unpaid family workers, and do include part-time workers (possibly two or more times). Barger

[1] We made estimates of trade, differing in minor details of coverage, before Carson's figures became available, and the two series agree fairly well:

	1900	*1910*	*1920*	*1930*	*1940*
Carson	2,460	3,366	4,064	6,033	6,997
Preliminary	2,191	3,435	4,179	5,905	6,756

The two estimates serve to emphasize the fact that before 1910 the figures are less reliable.

[2] These figures are rounded averages of estimates made by two procedures: (1) the average number of workers per "keeper" was estimated from 1935 and 1939 data and extrapolated backward by the number of "keepers"; and (2) the "waiters and bartenders" series was used in conjunction with the 1940 ratio of these occupations to all workers.

TABLE 22

The Labor Force in Trade, 1900-1950
(thousands)

	CENSUS OF OCCUPATIONS (1)	CENSUS OF DISTRIBUTION		
		Total (2)	*Wholesale Trade* (3)	*Retail Trade* (4)
1900	2,460	...	...	...
1910	3,366	...	...	...
1920	4,064	...	...	...
1929	...	7,431	1,696	5,735
1930	6,033	...	...	...
1939	...	8,052	1,696	6,356
1940	6,997[a]	...	...	...
1948	...	11,267	2,627	8,640
1950	9,608	...	...	...

[a] Adjusted to 1930 base.

Column — Source

1 *1900-1940*: Daniel Carson, "Changes in the Industrial Composition of Manpower since the Civil War," *Studies in Income and Wealth, Volume Eleven*, National Bureau of Economic Research, 1949, p. 47. *1950*: Harold Barger, *Distribution's Place in the American Economy since 1869*, Princeton University Press for National Bureau of Economic Research, 1955, Table 1.

2 Barger, *op. cit.*, Table A-1.

3 *Census of Distribution, 1930*, Bureau of the Census, Vol. II, Table 1, p. 65; *Census of Business, 1939*, Vol. II, Table 1A; and *Census of Business, 1938*, Vol. IV, Table 1A, p. 1.02.

4 *Census of Distribution, 1929*, Vol. I, Table 1A, p. 47; *Census of Business, 1939*, Vol. I, Table 1A, p. 57; and *Census of Business, 1948*, Vol. IV, Table 1A, p. 1.02. Figures include Barger's adjustments of employment in distribution. All adjustments are assumed to apply to retail trade employment (see Barger, *op. cit.*, Table A-1).

has made a reconciliation of the two series which serves to harmonize tolerably well their direction of movement, although not their absolute levels.[3] Yet both types of census agree that the number in trade, already vast in 1930, grew by more than half in the next two decades.

The numbers in trade are by no means completely reported in Tables 22 and 23. We shall notice later (in Chapter 7) the con-

[3] Harold Barger, *Distribution's Place in the American Economy since 1869*, Princeton University Press for National Bureau of Economic Research, 1955. The reconciliation is somewhat forced: unpaid family workers are omitted; *all* employees of manufacturers' sales branches are assumed to be misreported in the population census; etc.

TABLE 23

The Labor Force in Eating and Drinking Places, 1900-1950
(thousands)

	Census of Occupations	*Census of Retail Trade*
1900	350	
1910	475	
1920	425	
1929		619
1930	675	
1935		908
1939		1,114
1940	1,215	
1948		1,709
1950	1,800	

Source: *Census of Business, 1939*, Bureau of the Census, Vol. I, Table 1A, p. 57; Alba M. Edwards, *Comparative Occupational Statistics for the United States, 1870 to 1940*, Bureau of the Census, 1943, Tables 2 and 8; and *Census of Population, 1950*, Vol. II, Table 130.

siderable number of persons who are occupied with the wholesale distribution of goods even though they are reported in other industries. In addition there are minor retailing industries which have not been included. Perhaps the largest is hotels: in 1948, about 49 per cent of the receipts of hotels were from the sale of drinks and meals, and if a corresponding percentage of the 425,000 employees and proprietors were so occupied, we should add another 210,000 to eating and drinking establishments.

In 1900, then, about 1 person in every 10 worked in wholesale or retail trade (including eating and drinking establishments); in 1950 the proportion had risen to 1 in 5. The growth in numbers was therefore large relative to the growth of the labor force. Employment in trade, and also in government, usually calls forth mingled emotions: pleasure at the jobs that are supplied; concern at possible waste in the use of resources. We shall not discuss this high problem, but we shall try to form a more detailed notion of where the rise in employment has taken place and what the main parts of the explanation for the rise are.

2. *Kinds of Business and Forms of Organization*

We shall deal at a later point with the changing composition of goods sold at retail, and the effects of this composition upon em-

ployment in trade. Here we wish to set forth only what few broad facts are available on the general structure of retail trade, and a background discussion of the far-reaching organizational changes that have taken place in this century.

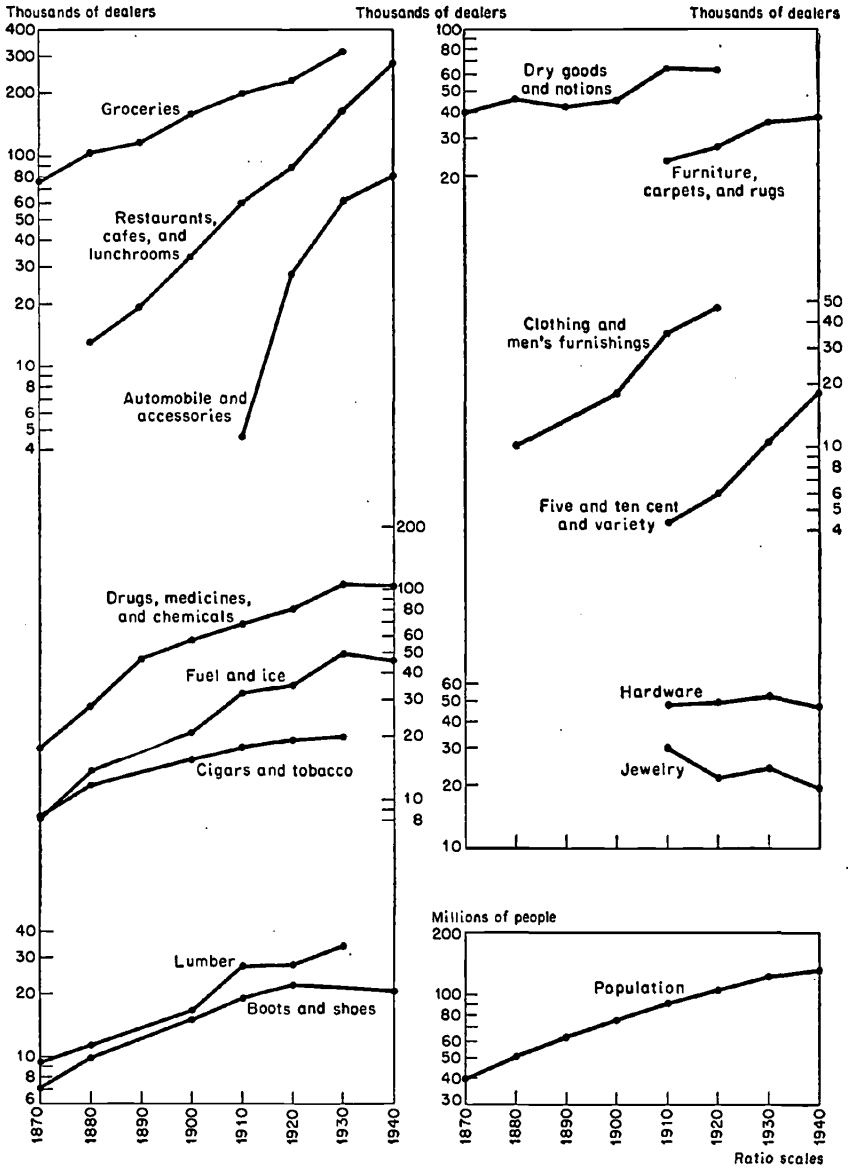
Employment in the various kinds of business, or sub-industries, that constitute retailing is unknown before 1929. The most we can do is collect a few fragments from the occupational census on "keepers," that is, the number of proprietors and managers. The most important of these series are given in Chart 17. The number of keepers is a reliable source of information on employment trends only if average employment per store does not change greatly over time, and we simply have no direct information on this score. But if the change in the number of keepers is very marked, in general one would expect employment to move in the same direction even if not in the same proportion.

Grocery stores grew more rapidly than population but much less rapidly than eating places, and it is probable that there has been a substantial shift from home-prepared to restaurant-prepared meals (as the data in Table 23 also suggest). Several lines of business that increased less rapidly than population—cigars and tobacco, jewelry, dry goods—did so because their function was partly taken over by grocery, drug, and department stores. The impact of the automobile upon dealers in automobiles and accessories, on the one hand, and upon dealers in hardware, implements, and wagons, on the other, is very clear. The trends in drugs, shoes, and furniture did not differ much from that of population, while clothing, fuel and ice, and lumber all grew more rapidly than population.

Even in the two decades for which censuses are available, some interesting indications of trends may be found (Table 24). The food lines, which amount to about one-third of all retail trade, have changed little in relative importance, but there has been a rapid growth of employment in drinking places. (Since total employment in trade has been growing rapidly since 1939, however, the food stores and eating places have grown relative to population.) The trend of the earlier period toward prepared meals has continued. The clothing, dry goods, and furniture and appliance group amounts to another three-tenths of the total employment in trade, and the general merchandise (chiefly department) stores are still gaining slowly relative to the others. The stores selling durable

CHART 17

Dealers in Retail Trade, 1870-1940



Source: Alba M. Edwards, *Comparative Occupation Statistics for the United States, 1870 to 1940*, Bureau of the Census, 1943, Table 3, p. 59, and *Census of Occupations, 1900*, Bureau of the Census, Table III.

TABLE 24

Percentage Distribution of Employment in Retail Trade by Kind of Business, 1929-1948

	1929	*1935*	*1939*	*1948*
Food	20.53	23.14	21.17	17.50
Eating places	10.76	12.22	12.30	13.57
Drinking places	0	4.72	5.61	6.17
General stores (with food)	4.44	2.80	1.60	.73
General merchandise	15.08	14.26	14.54	16.07
Apparel	8.64	7.51	7.58	7.91
Furniture, appliances	5.58	3.93	4.12	5.27
Automotive	8.35	6.68	7.09	8.21
Filling stations	4.29	7.19	7.52	5.57
Lumber, building material, hardware	7.09	4.75	5.12	6.54
Drug	4.08	3.89	3.85	3.87
Other	11.16	8.91	9.51	8.59
Total	100.00	100.00	100.01	100.00
Number (millions)	5.72	5.34	6.21	8.66

Note: Excluding employees in chain store warehouses and central offices.
Source: *Census of Business, 1939*, Bureau of the Census, Vol. I, Part 1, Table 1A, and *Census of Business, 1948*, Vol. I, Part 1, Table 1C.

goods—automobiles, furniture, and building materials—fell substantially in the 1930's and had not regained their 1929 shares as late as 1948.

As we have already noticed (in Chapter 3), the retail trade even today is organized chiefly in single-store businesses, usually operated by an individual assisted by his family and two or three employees. In 1860 this form of organization was almost universal. To be sure, occasionally a store grew to great size; contemporaries were properly impressed when A. T. Stewart, the owner of the great New York dry goods store, paid a tax on an income of $1,843,637 in 1862. But the mere fact that only a small fraction of the population lived in large cities was enough to make large stores uncommon.

Three new forms of organization—the chain store, the mail-order store, and the department store—began in the 1860's and 1870's. They were eventually to take over large shares of retailing and to influence greatly the surviving traditional single proprietors. Their contemporary rise is no doubt partly due to the growth of urbanization and improvements in communication we discussed in

Chapter 2. But interesting as are the problems in economic development that these new forms of organization raise, we shall restrict our discussion chiefly to their effects upon employment in trade.

CHAIN STORES

The origin of the chain store is commonly traced back to 1859, when the first store of what later became the Great Atlantic and Pacific Tea Company opened. This chain is said to have had 25 stores by 1865 and 100 by 1880, and other chains emerged during the period, but only after 1900 was growth large in absolute terms. The period of rapid growth escaped contemporary statistical measurement, but it may be illustrated by the growth of some of the great modern chains in the retailing of food and variety goods (Charts 18 and 19). (We also give comparable data on department store chains at a later point.)

The grocery chains' sales (in constant dollars) sweep upward at a breath-taking pace to 1929, and there is no general evidence of retardation in this period.[4] The rate of growth suddenly diminished after 1929 and, after a decade of relatively slow growth, again expanded after World War II. The (undeflated) sales of the leading variety store chains grew perhaps even more rapidly to 1929 and resumed their rise sooner in the 1930's. In both lines of business the sales of chains did not become large until after World War I.

When in the early 1930's the Federal Trade Commission made its extensive study of chain stores, an attempt was made to piece together the general history of their growth, chiefly from the histories of companies reporting for 1928 and 1929. Unfortunately only the number of retail stores was obtained. The estimates are explicitly incomplete, and on balance they probably overstate the rate of growth throughout the period.[5] We reproduce these estimates in Chart 20.[6] It is clear that after 1910 the growth was simply enormous; at its peak absolute rate of growth (in 1925), for example, the A&P opened 50 new stores a week for an entire year.

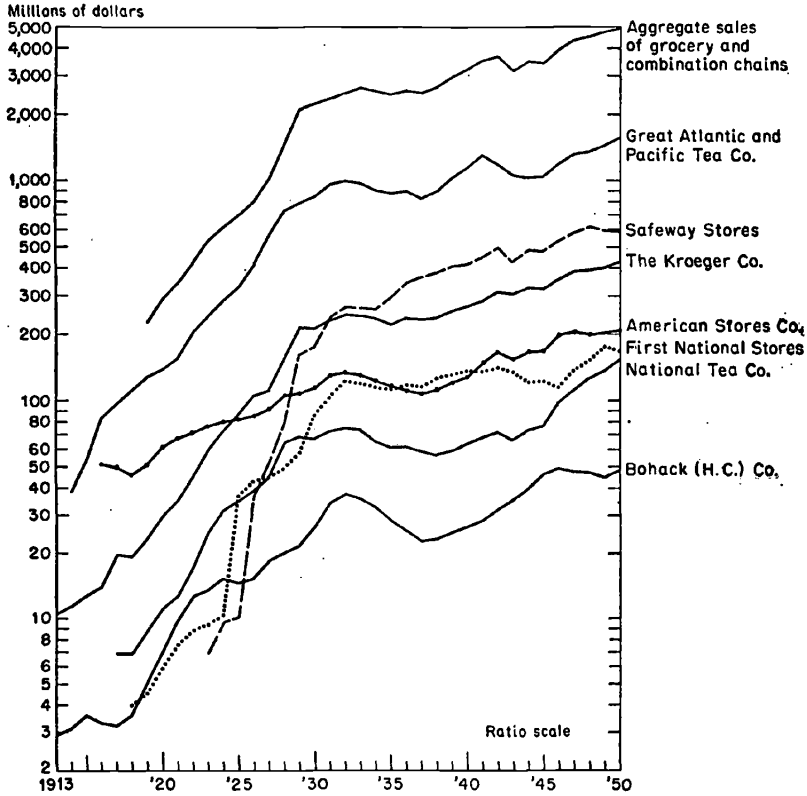
[4] We have deflated sales by the Bureau of Labor Statistics index of retail prices of food in order to emphasize the growth in volume of goods sold.

[5] All chains that failed and many (but not all) that merged with other chains were omitted, and this bias reinforces that of including the largest and most successful chains.

[6] The number of stores per chain was 4.8 in 1900, 11.2 in 1910, 23.7 in 1920, and 37.4 in 1928.

CHART 18

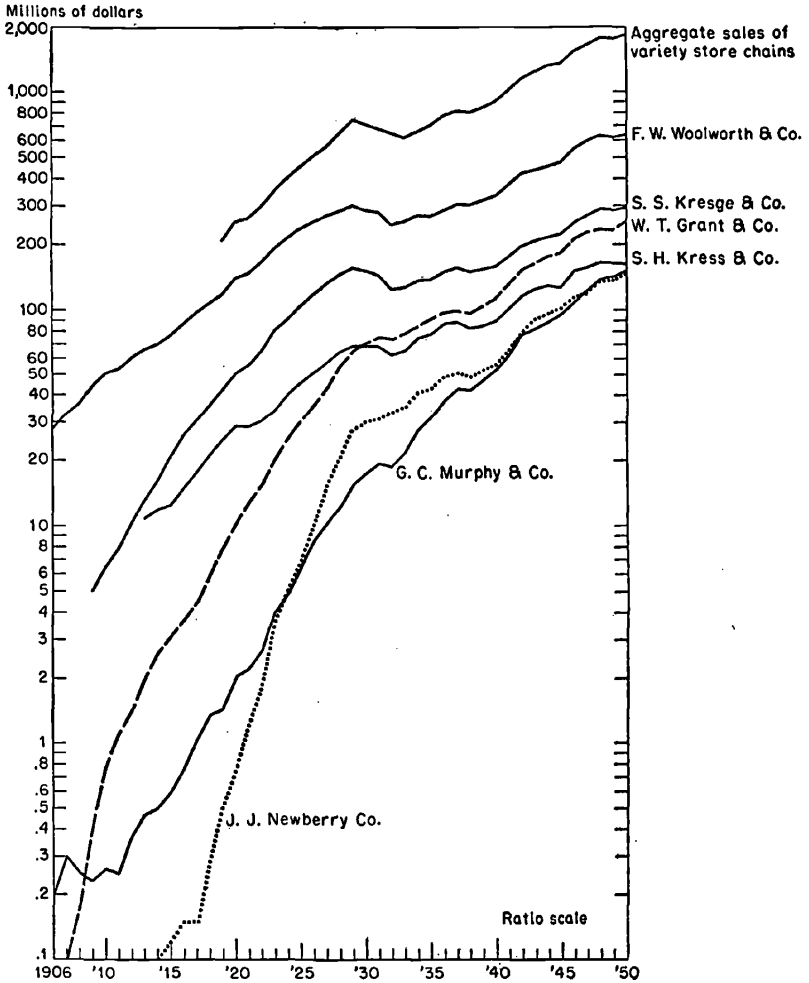
Growth of Combination Grocery Chains, 1913-1950; Volume of Sales
(value of sales in constant dollars, based on 1935-1939 retail food prices)



Source: Companies' annual reports; *Moody's Industrials; Surveys of Current Business*, Dept. of Commerce.

CHART 19

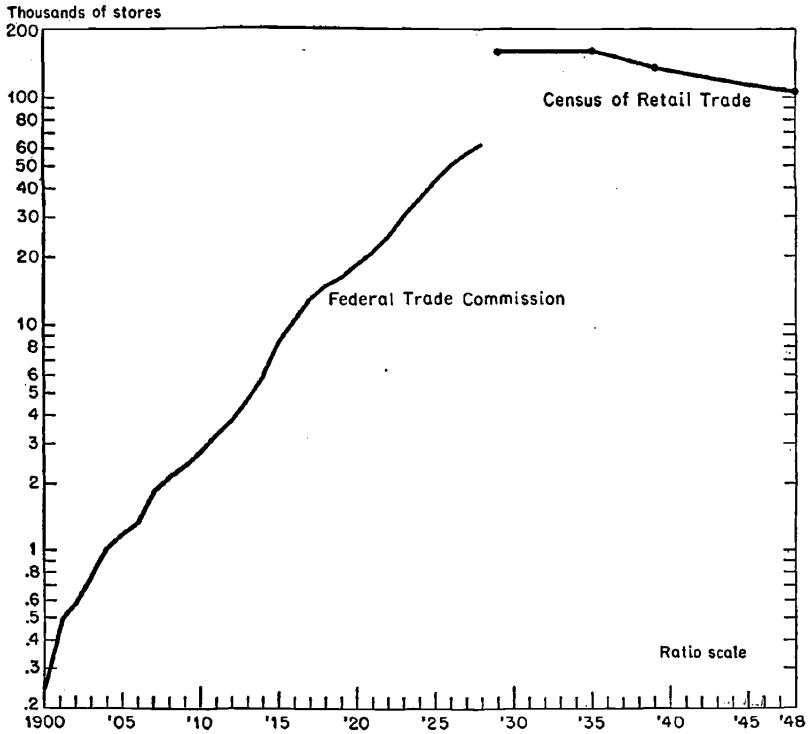
Growth of Variety Store Chains, 1906-1950; Volume of Sales
(value of sales in current dollars)



Source: Same as in Chart 18.

CHART 20

Growth of Chain Stores, Number of Stores, 1900-1948



Source: *1900-1928: Growth and Development of Chain Stores*, Report of the Federal Trade Commission, S. Doc. 100, 1932, Table 35. *1929-1948: Census of Distribution, 1929*, Bureau of the Census, Vol. I, Part 1, Table 5A; *Census of Business, 1939*, Vol. I, Part 1, p. 32; and *Census of Business, 1948*, Vol. I, Part 1, Table 3A.

After 1929, the year in which the censuses of retail trade began, the relative growth of chain stores seems to have diminished abruptly (see Table 25). The decline in the number of chain retail units in the 1930's was largely due to two developments. The grocery chains shifted over to supermarkets (roughly, a grocery store with a meat market, usually with minimum service, and sales exceeding some arbitrary minimum, say $100,000 in 1939). For example, the number of stores in the A&P chain fell from 15,700 in 1927 to 5,900 in 1943. The petroleum-refining companies widely abandoned direct retailing of gasoline, partly as a result of chain store taxes, and leased their filling stations to the operators.

TABLE 25

Chain Store Organizations, 1929-1948

	1929	*1935*	*1939*	*1948*
Number of chains	7,046	6,072	6,969	6,159
Number of retail units	159,547	159,773	132,763	105,108
Percentage of all retail stores	10.8%	n.a.	7.5%	5.9%
Retail sales (millions)	$10,736	$8,459	$10,105	$29,737
Percentage of all retail sales	21.9%	25.8%	24.0%	22.8%
Officers and employees[a] (thousands)	1,083	1,071	1,228	1,799[b]
Percentage of all workers in retail trade	18.9%	20.1%	19.8%	20.8%[c]

[a] Excluding employees in warehouses.
[b] Including part-time employees.
[c] Excluding family workers.
n.a. = not available.

Source: *Census of Distribution, 1930*, Bureau of the Census, Vol. I, Part 1, p. 30 and Table 5A; *Census of Business, 1939*, Vol. I, Part 1, p. 32; and *Census of Business, 1948*, Vol. I, Part 1, Table 3A.

Total chain sales have also been falling relative to total retail sales since 1935, although the fall has not been rapid. This reversal of trend, following so quickly after a period of rapid growth, is attributable to various factors. Chains were subjected to increases of costs—such as chain store and social security taxes—that independent stores did not experience. One also gets the impression that the extraordinary growth of the chains during the 1920's set up counter-forces among retailers—such as cooperative wholesaling, shifting to self-service, introduction of the combination store, etc.—which have considerably diminished the chains' comparative advantages.

Even in 1939, however, the chains had substantially higher sales per employee than the independent stores in the same line of business, and much higher sales in certain lines if one takes account of the unpaid family workers in independent stores (Table 26). In the important grocery-meat line the ratio of chain to independent sales, per employee, was almost 2 to 1, in liquor stores it was almost 3 to 1, and in almost every line (lumber and building materials is the only near exception) the ratio was well above unity.

The difference in sales per employee is almost entirely due to the fact that chain retail units are larger than independent stores. For stores of equal size, sales per employee approach equality in the

TABLE 26

Sales per Employee in Selected Lines of Retail Trade, 1939

	CHAINS	INDEPENDENT STORES *Hired Employees and Proprietors*	INDEPENDENT STORES *All Workers*
Combination grocery-meat	$11,855	$8,184	$6,167
Department stores	8,137	6,675	6,674
Variety stores	4,355	4,026	3,318
Women's ready to wear	7,405	6,159	5,727
Filling stations	8,118	5,839	4,749
Lumber, building materials	10,103	9,635	9,340
Eating places	3,575	2,726	2,420
Drug stores	6,745	6,090	5,461
Liquor stores	30,117	14,952	12,652
Dairy products	6,857	5,807	5,224
All trade	7,902	6,467	5,474

Note: Chain employees include central office employees but exclude warehouse employees.

Source: Computed from *Census of Business, 1939*, Bureau of the Census, Vol. I, Part 1, Tables 20, 22, 6F, and 10C.

two types of outlets.[7] This suggests that chains have had their chief effect upon employment in trade by concentrating sales into larger establishments.

If one compares sales per employee (including proprietors and unpaid family workers), the growth of chains has led to a moderate drop in employment in trade, relative to what it would have been in their absence. Sales per employee are 30 per cent less in independent stores, and chains handle one-fourth of retail sales, so at most roughly 7 per cent more employees would have been required in the absence of chains.

DEPARTMENT STORES

The department store, selling a wide variety of goods and organized on a departmental basis, emerged in this country—and

[7] For example, in stores with sales of $50,000 to $100,000 in 1939, sales per employee were:

	Chain Stores	*Independent Stores*
Combination grocery	$11,782	$10,518
Shoe	9,871	8,954
Women's ready to wear	7,492	6,805
Filling stations	9,938	9,447
Drug	7,305	7,369

probably also in France—in the decade after our Civil War.[8] The successful stores achieved importance before either chains or mail-order businesses in the nineteenth century. Macy's, for example, had annual sales of $5 million by 1885; the A&P did not reach this figure until the end of the century. Chains of department stores also began early: Macy acquired an interest in a second store in 1893 and Wanamaker acquired a New York store in 1897. We give the sales of some famous department stores (chains), as well as the aggregate sales since 1919, in Chart 21. Since 1935, department store sales have not increased relative to total retail sales:[9]

Year	*Department Store Sales as Percentage of Total*
1929	7.14
1935	8.03
1939	7.56
1948	7.24

Unlike the chain stores, the department stores have made their chief appeals through convenience and service rather than through lower prices. Therefore we do not expect, or find, large differences in sales per worker between department stores, on the one hand, and the corresponding specialty stores, on the other. In 1939, sales per employee in department stores were $7,015. In a weighted average of the corresponding specialty stores (the weights being the composition of sales of department stores), the average sales were $6,423.[10] To the extent that department stores do their own wholesaling, however, the difference is understated. But taking the difference of one-tenth at face value, one may say that the department stores by their relative growth to 1929 tended to reduce the employment in trade, but only by a slight amount.

MAIL-ORDER STORES

Although ordering and purchasing by mail has early origins, the first store to handle a general line of merchandise and sell over a large area was founded in 1872 by Aaron Montgomery Ward. His first catalogue was a single sheet; by the 1890's it had 540 pages

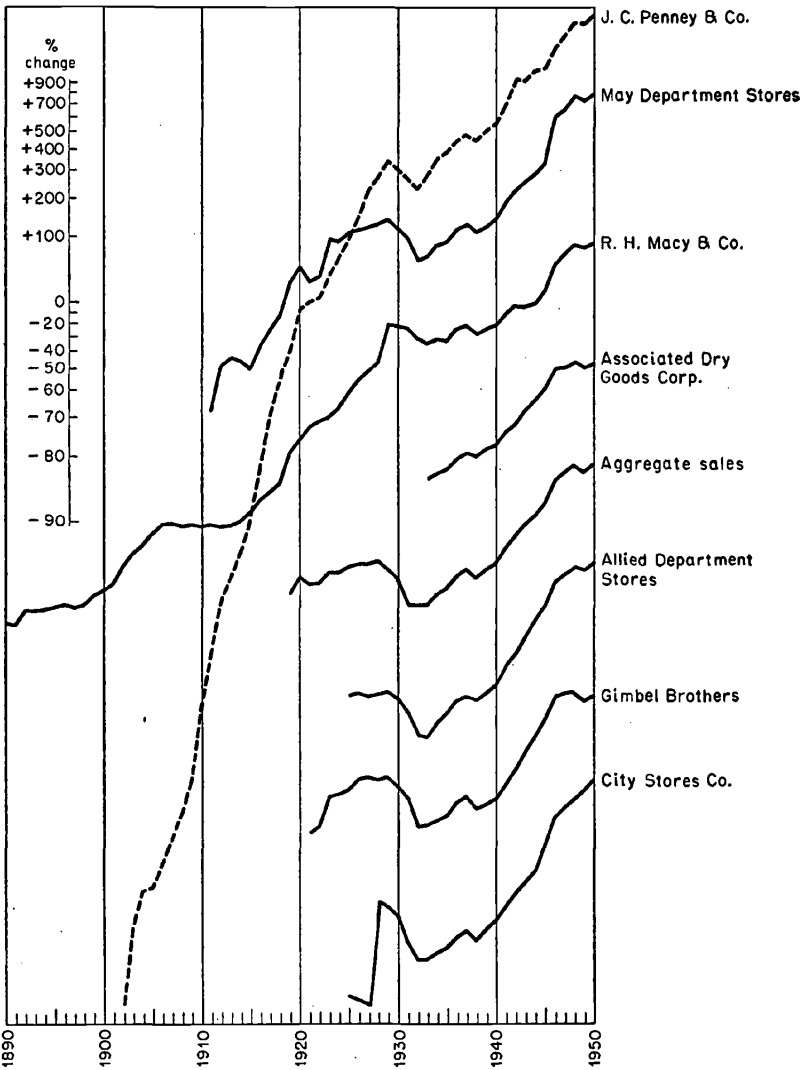
[8] See R. M. Hower, *History of Macy's of New York, 1858-1919*, Harvard University Press, 1943, Part II, Chap. VI.

[9] Department store sales are computed from "Revised Indexes of Department Store Sales and Stocks," *Federal Reserve Bulletin*, December 1951, pp. 1468 and 1490.

[10] See *Census of Retail Trade, 1939*, Part 1, p. 44, and Table 2-A, p. 58.

CHART 21

Department Store Sales, Relative Growth, 1890-1950



Source: *R. H. Macy and Co.: 1890-1919*: Ralph M. Hower, *History of Macy's of New York*, Harvard University Press, 1943, pp. 109, 256, 390. *1921-1950*: Annual reports of the companies, and *Moody's Industrials*.

Aggregate Sales: Computed from "Revised Indexes of Department Store Sales and Stocks," *Federal Reserve Bulletin*, December 1951, pp. 1468 and 1490.

All Others: Annual reports of companies, and *Moody's Industrials*.

and offered 24,000 items. The greatest figure in the early industry, Richard Sears, began the mail-order sale of watches in 1886,[11] and gradually expanded to a general line of merchandise during the next decade. Sears was, for the time, a prodigious advertiser: in 1898 he spent $400,000 or 13 per cent of net sales; by 1908 he was issuing more than 6 million catalogues a year. His aggressiveness and skill in writing copy were even more outstanding. (At the end of an advertisement he often added: "Sears, Roebuck and Company are thoroughly reliable—Editor.")

The rapid growth of the rural population, the introduction of rural free delivery in 1896 and parcel post in 1913, and the low prices and variety of merchandise led to an enormous growth of mail-order business in the first two decades of this century, as the data in Chart 22 testify. With continued urbanization and the wide ownership of automobiles by farmers, in the 1920's the mail-order business began to lose ground rapidly relative to chains of retail stores, and both Sears and Ward entered this area with great success.

Sales by mail order (catalogue departments) have been declining relative to total retail sales in recent years:[12]

Year	*Mail-Order Sales as Percentage of Total*
1929	.925
1935	1.171
1939	1.113
1948	.972

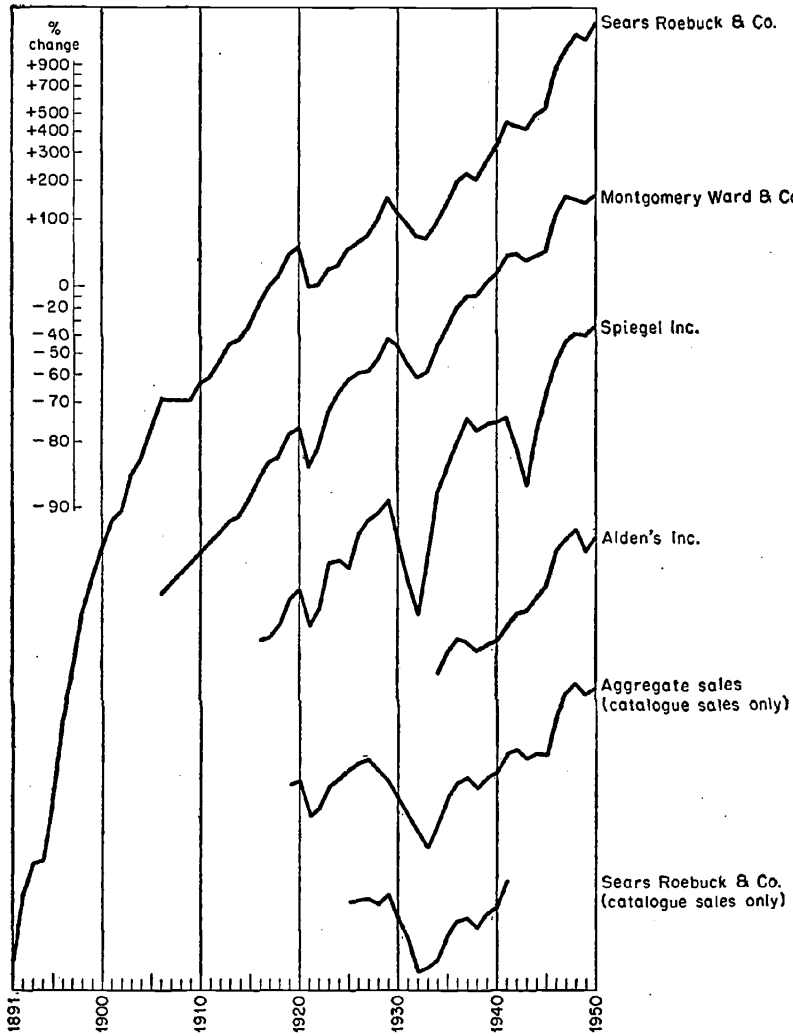
[11] Sears was a railway agent in North Redwood, Minnesota, when his merchant life began:

"Another device was shipping goods to fictitious addresses; when the stationmaster would write that the goods could not be delivered, the wholesaler would reply that, to avoid the cost of returning the goods, the agent could purchase them at 'half-price' and resell them at a considerable profit. The Chicago company in this specific instance offered Sears the watches at $12 each. . . . Sears proceeded to write to other agents along his line a description of the watches. He offered them to the agents at $14 each. . . . Within six months the trade in watches netted around five thousand dollars, and Sears abandoned railroading and moved to Minneapolis to found the R. W. Sears Watch Company in 1886." B. Emmet and J. E. Jeuck, *Catalogues and Counters*, University of Chicago Press, 1950, p. 25.

[12] Mail-order sales for 1929, 1935, and 1939 are taken from "Retail Sales of Chain Stores and Mail Order Firms," *Survey of Current Business*, Dept. of Commerce, February 1944, Table 2, p. 15; for 1948, from *Statistical Supplement, 1948, Survey of Current Business*, p. 47.

CHART 22

Mail Order Sales, Relative Growth, 1891-1950



Source: *Sears Roebuck and Co.: 1891-1903*: Boris Emmet and J. E. Jeuck, *Catalogues and Counters*, University of Chicago Press, 1950. *1904-1950*: Annual reports of the company, and *Moody's Industrials*.

Montgomery Ward and Co.: 1906: W. L. Brann, *Romance of Montgomery Ward and Co.*, Champbell, Starring, 1929. *1912-1950*: Annual reports of the company, and *Moody's Industrials*.

Spiegel, Inc. and *Alden's, Inc.: Moody's Industrials*.

Aggregate Sales: Survey of Current Business, Dept. of Commerce.

The percentage of mail-order sales to all retail sales of goods of the type sold by mail order is of course appreciably higher, since many important kinds of goods (especially foods) are not sold by mail in any considerable quantities. The percentage should be at least doubled to indicate the importance of mail-order sales in dry goods, furnishings, and other lines in which these stores specialize.

Sales by mail order sharply reduce employment per dollar of sales, even allowing for the high percentage of returned goods. In 1939 the catalogue sales were $11,347 per employee.[13] In 1939 the comparable lines of retail stores (essentially department stores) had sales of about $7,015 per employee, and the figure was no doubt much lower in the smaller communities, in which mail-order houses had their largest sales.[14] It seems probable, therefore, that the rise of the mail-order houses had some slight effect in reducing employment in trade.

The first half of the present century has thus been a period of extensive change in the organization of retailing. The direct effects of the new forms of organization upon employment in trade do not appear to have been large—very probably they have reduced employment relative to sales by less than one-tenth. The indirect effects, such as the stimulation of self-service by customers even in independent stores, have probably been equally important. Even this partial sketch of organizational changes suggests that retail trade's traditional reputation for conservatism and even stagnation is not merited.

3. Factors in the Rising Employment in Trade

We have seen that the growth of employment in trade has been large and sustained in absolute terms, and that the trade industries have been growing relative to the labor force. The growth of trade relative to population might conceivably arise because of growing inefficiency, although the basis economists usually give for secularly diminishing returns is the exhaustion of resources and this force is

[13] Sears' sales per employee were about $10,000 in 1925, and they were also at this figure in 1915, when goods were at a lower price level, which suggests that increasing service (or shifting composition of output) was offsetting further technological advance. Emmet and Jeuck, *op. cit.*, pp. 290, 294, and 295.

[14] In a sample of 10 Iowa cities with populations of 10,000 to 25,000, average sales per employee in specialty stores corresponding to mail-order business was $5,654 in 1939. See *Census of Retail Trade, 1939*, Part 3, p. 642.

inoperative in trade. But even our modest discussion of changing forms of business organization in trade suggests that technological advance, in the sense of handling given goods with less labor, has taken place on a substantial scale. The elaborate investigation by Barger points in the same direction: he estimates that the volume of goods handled by trade increased annually by 1.1 per cent per man-hour from 1869 to 1949.[15]

It is possible that the changing composition of retail services has brought about a rise in employment in trade. For example, if consumers shifted from hay to gasoline, and the latter required more labor per consumer, employment would rise. We shall investigate this question first, and find that on balance the changing composition and nature of retail services has had only a moderate effect upon employment in trade. Thereafter we shall examine a series of demand factors, such as income and urbanization, to see how far they explain the growth of employment.

THE COMPOSITION OF RETAIL OUTPUT

From 1899 to 1929 there was a rapid increase in the importance of consumer durable goods and a corresponding decline in the importance of perishable goods (Table 27). The purchase of consumer

TABLE 27

Percentage Composition of Finished Consumer Goods, 1869-1949
(*current values*)

	Perishable	*Semidurable*	*Durable*
1869	63.2	26.4	10.4
1879	63.8	26.5	9.7
1889	64.0	25.0	11.0
1899	65.5	23.6	10.9
1909	65.4	23.1	11.5
1919	61.7	24.3	14.0
1929	57.2	23.2	19.6
1929	58.5	23.2	18.3
1939	64.7	20.4	14.9
1949	62.7	19.0	18.3

Source: *1869-1929*: William H. Shaw, *Value of Commodity Output since 1869*, National Bureau of Economic Research, 1947. *1929-1949*: Estimated from consumer expenditures, from *National Income Supplement, 1951, Survey of Current Business*, Dept. of Commerce, Table 30.

[15] Barger, *op. cit.*, Chap. 3.

durable goods dropped sharply during the 1930's and rose again after the war.

Durable consumer goods, of which automobiles are much the largest single component, generally require less employment per dollar of sales than nondurable goods. One may roughly estimate the sales per worker (employees and proprietors) in 1939:[16]

Type of Goods	*Sales per Worker*
Perishable	$5,930
Semidurable	6,587
Durable	9,522

Therefore the increased relative sales of durable goods has diminished employment in trade per dollar of goods sold. The effect has not been large, however: between 1899 and 1929, when the growth of consumer durable goods occurred, sales per employee rose only about 4 per cent on this score.[17] It is improbable that other changes in the composition of goods passing through retail stores have had any large effect on employment.

The services of retailing consist not merely of moving particular goods to the consumer, but also of ancillary services such as providing attractive store facilities, delivery, extension of credit, etc. Although no quantitative estimate can be made of changes in these services, Barger argues convincingly that they have probably increased only moderately on balance. The modern store provides less of some services than its predecessor: there is more self-service by customers, less packaging (which has moved to the factory), and perhaps less credit (which has been taken over in part by financial institutions). But on the other hand, stores have improved greatly in their appointments; they are more generous in allowing free trials and returns of goods.

These two changes, in the composition of retail goods and the extent of ancillary services, work in opposite directions. The shift toward durable goods decreased retail services relative to the value of goods handled, and improvements in retail services had the opposite effect. We must look elsewhere for the major explanation of the rising fraction of the labor force in retail trade.

[16] *Census of Retail Trade, 1939*, Part I, Table 2-A.

[17] That is, the weighted average of the sales per employee, using the weights of Table 27, was $6,477 in 1899 and $6,740 in 1929.

INCOME

The effects of changes in income upon employment in trade are not easy to disentangle from many other changes which have accompanied and been causally related to income: urbanization, the composition of output, and the like. Our reasons for not trying to disentangle the relationship through cross-sectional data have already been given (Chapter 2); here we shall explore the relationship of employment in trade to national income since 1920.

A scatter diagram displaying total employment in trade and national income in constant dollars would show a close, approximately linear relationship, and only in war and early postwar periods would employment fall appreciably below the line. Since income, employment, and a host of other variables grew through time, however, we should be attributing to income the effects also of all other factors which had changed over the three decades. We reduce, but do not eliminate, this problem by expressing employment in wholesale and retail trade (separate data for the latter begin only in 1929) as a percentage of all employment, and national income in per capita terms (Chart 23).[18] Omitting 1919 and 1941-1946 because in each period the effects of wars are apparent, we may calculate the regression equation:

$$X_1 = 15.991 + \underset{(.00038)}{.00154X_2} + \underset{(.00624)}{.09625X_3}$$

where X_1 is the percentage of employment in trade, X_2 is per capita national income in 1939 prices, and X_3 is time (measured from 1931). The standard errors of the regression coefficients are given in parentheses below the coefficients; the coefficients are clearly significant.[19]

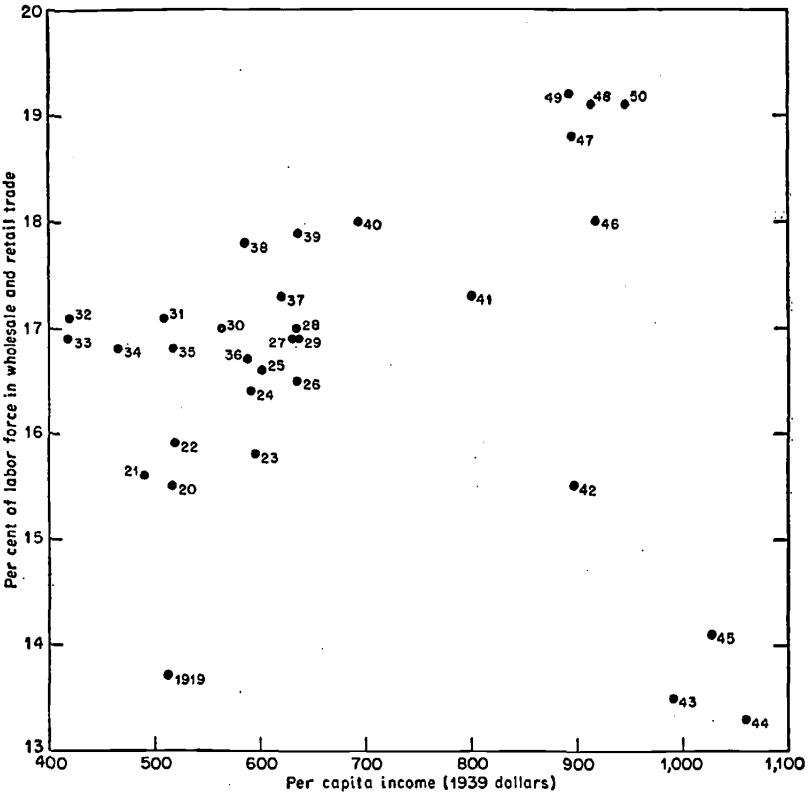
During these three decades there was a steady upward drift in the proportion of trade to all employment even when allowance is made for the rise of income. The income elasticity of the proportion, indeed, is only .06. This may be too small an estimate of the direct effect of income, but it is congruent with the belief that much of the

[18] Employment data (which include entrepreneurs) and income data are both obtained by splicing Kuznets' data for 1920-1928 to the Department of Commerce data for 1929-1938. See Simon Kuznets, *National Income and Its Composition*, NBER, 1941, and *National Income Supplement, 1951*, *Survey of Current Business*, Tables 13 and 28.

[19] The coefficients of correlation are: $R = .962$; $r_{12} = .795$; $r_{13} = .955$; $r_{12.3} = .484$; and $r_{13.2} = .904$.

CHART 23

Relation between Per Cent of Labor Force in Trade and Per Capita Income, 1919-1950



Source: Simon Kuznets, *National Income and Its Composition 1919-1938*, National Bureau of Economic Research, 1941, Table 9, p. 153, and *National Income Supplement, 1951, Survey of Current Business*, Dept. of Commerce, Tables 13 and 28.

effect of higher income manifests itself indirectly through increased urbanization, changing family size, and other factors.

This expectation is confirmed by a combination of cross-sectional and temporal analysis. A correlation analysis was made of the percentage changes from 1920 and 1940 in each state of the following variables:[20] (1) gainfully occupied in trade, per 1,000 population;

[20] All the data except income are from the census of population; perforce occupational data had to be used for the measurement of trade. The 1920

(2) per capita income payments; (3) per cent of population that was urban. The differences among states in the growth of employment in trade were virtually uncorrelated with income ($r = .067$) but were fairly well correlated with changes in urbanization ($r = .543$). The state differences in income change were unrelated to urbanization changes ($r = -.083$), so the partial correlation coefficients are not significantly different.

URBANIZATION

When a family moves from the farm to the city, one expects that its purchases from retail establishments will rise. The family no longer raises much of its own food so this portion of its expenditures is now made in money rather than in labor, and to a much lesser extent this is also true of wood, ice, and other commodities. Many commodities and services like restaurant meals become more accessible, and commodities like men's suits become more essential. There may also be an increase in the demand for agricultural implements and supplies to offset the loss of farm labor.

The general effect of urbanization on retail purchases can be measured in a rough way from budgetary data. The retail purchases of urban, rural nonfarm, and rural farm families in 1935-1936 are estimated from total expenditures minus expenditures on certain categories not provided by retailing (Table 28). The two chief deficiencies in the estimates work in opposite directions: purchases of farm equipment also constitute a demand for retail services; and we are comparing farm families with urban families, whose nominal incomes (money and in kind) are equal but whose real incomes are smaller.[21]

There is no noteworthy difference between expenditures at retail between urban and rural nonfarm families above the $500 income level; average incomes in the highest income class differ considerably and thus explain much of the apparent difference in this single income bracket. But farm families at most income levels buy only about two-thirds as much as urban families in the same nominal income classes. In 1900, 35.6 per cent of families

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incomes are from M. Leven, *Income in the Various States*, NBER, 1925, p. 262; the latter data are from Dept. of Commerce.

[21] A given dollar income was worth perhaps one-seventh to one-fifth more on a farm than in a city in 1941. See N. Koffsky, "Farm and Urban Purchasing Power," *Studies in Income and Wealth, Volume Eleven*, NBER, 1949.

TABLE 28

Retail Expenditures per Family, by Income Class, 1935-1936

	RETAIL EXPENDITURES			PER CENT OF URBAN FAMILIES' EXPENDITURES	
	Urban Families	*Rural Nonfarm Families*	*Farm Families*	*Rural Nonfarm Families*	*Farm Families*
Under $500	$381	$280	$258	73.5	67.7
500-750	488	467	323	95.7	66.2
750-1,000	622	610	418	98.1	67.2
1,000-1,250	767	759	517	99.0	67.4
1,250-1,500	894	906	599	101.3	67.0
1,500-1,750	1,026	1,023	668	99.7	65.1
1,750-2,000	1,159	1,155	733	99.7	63.2
2,000-2,500	1,331	1,297	824	97.4	61.9
2,500-3,000	1,545	1,487	941	96.2	60.9
3,000-4,000	1,804	1,739	1,074	96.4	59.5
4,000-5,000	2,153	2,051	1,192	95.3	55.4
5,000-10,000	2,954	2,467	1,543	83.5	52.2

Source: *Family Expenditures in the United States*, National Resources Planning Board, 1941. "Retail expenditures" are total expenditures minus: all imputed income, housing, utilities, household service, laundry, automobile insurance, transportation other than automobile, admissions, personal services, and education.

lived on farms; in 1950, 14.7 per cent. We may calculate what the effect upon the expenditures at retail in 1950 would have been if 35.6 per cent of all families had still been on the farms. Expenditures would have been about 7.4 per cent less in 1950 than they actually were. This would suggest that roughly 750,000, or one-eleventh, of the increase in numbers in trade between 1900 and 1950 was due to increased urbanization. This rough estimate is too low in that it makes no allowance for the larger purchasing power of a given money income to farm families, nor does it allow for the fact that at high income levels the farm family spends less than two-thirds as much at retail as the city family of corresponding income.

We may make a somewhat more precise estimate for the most important category of retail expenditure, food. The differences among community sizes in the purchases of food are very marked (Table 29): the farm family spends less than half as much on food as the city family with equal money income, although the

TABLE 29
Food Consumed and Purchased per Family, by Income Class, 1935-1936

			CITIES		
	FARMS	VILLAGES	*Small*	*Large and Middle-Sized*	*Metro-politan*
			1. Value of Food Consumed		
$250-$500	$348	$222	$248	$271	...
500-750	401	291	308	315	$415
750-1,000	459	356	361	363	436
1,000-1,250	514	408	414	415	482
1,250-1,500	550	450	456	464	559
1,500-1,750	581	482	495	496	619
1,750-2,000	601	528	535	540	657
2,000-2,500	642	568	592	593	759
2,500-3,000	685	623	633	661	858
3,000 and over	772	728	711	851	1,163
			2. Value of Food Purchased		
250-500	147	188	227	246	...
500-750	156	252	278	293	379
750-1,000	179	319	345	350	418
1,000-1,250	200	369	397	400	468
1,250-1,500	217	409	440	450	550
1,500-1,750	233	444	479	482	610
1,750-2,000	250	482	520	528	645
2,000-2,500	270	521	573	580	749
2,500-3,000	298	562	618	643	841
3,000 and over	349	650	690	830	1,148
			3. Value of Food Purchased away from Home		
250-500	$5	$3	$1	$6	...
500-750	5	6	8	6	$19
750-1,000	6	11	12	16	24
1,000-1,250	9	17	15	24	36
1,250-1,500	10	23	22	33	55
1,500-1,750	13	33	35	48	72
1,750-2,000	19	39	50	63	90
2,000-2,500	25	56	65	84	122
2,500-3,000	30	75	98	111	153
3,000 and over	56	108	93	183	295

Note: Community sizes: villages: 0.5 to 5.2 thousand; small cities: 9.4 to 18.9 thousand; middle-sized and large cities: 30.6 to 301.8 thousand; metropolitan: 3,376 to 6,930 thousand.

Source: Various bulletins, Dept. of Agriculture, Consumer Purchases Study.

value of its food consumption is higher.[22] The difference in the patronage of eating places is even more marked. We may summarize the differences by calculating what average expenditures per family would be if the distribution of income in each of the various types of communities were the same as the distribution of income for all families, thus eliminating differences in money income. The average figures (based on 1935-1936 expenditures) are:[23]

	AVERAGE VALUE OF FOOD PURCHASED	
COMMUNITY TYPE	*Consumed away from Home*	*Consumed at Home*
Farms	$14.65	$198.92
Villages	29.17	352.93
Small cities	30.18	386.48
Large and middle-sized cities	45.20	392.38
Metropolitan cities	68.46	440.06

If we assume that these dollar figures hold also for 1939, we may readily translate these differences into employment differences.[24] In 1939, sales per worker were $6,036 in food stores and $2,427 in eating places. Hence the shift of 1,000 families from farms to (say) large and middle-sized cities would give rise to an employment of 32.0 persons in food stores and 12.6 persons in eating places.

If we choose again the year 1900 as our base, we may say that if the same percentage of families (35.6) had been on farms in 1940 there would have been 5.3 million fewer urban families than there actually were. This shift of 5.3 million families to the city "explains" employment of 170,000 in food stores and 67,000 in eating places, or one-twelfth of the total number (2.7 million) employed in these industries in 1940.

[22] The Consumer Purchases Study used prices that would have to be paid neighbors in valuing home-grown food. It was stated that these prices were higher than either farm or wholesale prices. See *Family Food Consumption and Dietary Levels*, Dept. of Agriculture, Misc. Pub. 405, pp. 364 and 391.

[23] These general patterns hold also when the comparisons are restricted to families of a given size.

[24] The differences in money expenditure appear to lead to almost proportional differences in employment in different sizes of communities. There is no large variation by community size in sales per employee in either food shops or restaurants in cities over 25,000.

The increasing urbanization of the population therefore appears to have been a large source of employment in the retailing industries, and especially in the food-retailing industries. Our earlier discussion of urbanization (Chapter 2) indicates that this source of additional employment in trade will be of decreasing importance in the future.

OTHER POPULATION CHANGES

The total effect of a change in family size is compounded of three forces: (1) the changing age and sex composition of the family, and especially of the number of children; (2) the changing income per family member; and (3) the economies and diseconomies of persons' living together rather than separately. We have already roughly taken account of the second factor by using per capita income in our analyses.

The "economies of scale" in supplying consumer goods to families of various sizes are difficult to measure: one does not know how much income to add when the family has an additional member in order to keep real income per person constant. One could approximate this figure by various scales of "equivalent adults," but we shall use the cruder procedure of holding per capita income constant because we do not have detailed data on the composition of the families whose budgets we use. A comparison of spendings of two-, three-, and four-person families on this basis is made in Table 30. Housing is the only category in which per capita expenditures fall substantially with family size, and the only categories with rising expenditures are clothing—which is hard to explain—and "other" expenditures—such as recreation, education, and reading. It does not appear that "economies" of family scale are an important influence upon consumption patterns other than in housing.

Although the large family spends more on food than the small family, holding family income constant, it consumes most of its food within the home. Every parent knows why families with young children avoid restaurants. In addition to the expense of either taking the children or leaving them at home, in the former case one must anticipate spilled water, spurned food, energetic boredom following swiftly upon delays in service, hopeless efforts to achieve quiet, and loud denunciations of the custom of tipping. The innumerable turbulent scenes have left their imprint upon the sta-

TABLE 30

Expenditures per Person of Urban Families with per Capita Incomes of $800, 1941

EXPENDITURE CLASS	PERSONS IN FAMILY		
	Two	*Three*	*Four*
Food	$244	$223	$230
Housing	217	185	167
Household operations	34	28	30
Furnishings and equipment	41	53	43
Clothing	87	93	109
Transportation (inc. Auto)	76	100	95
Personal care	16	16	18
Medical care	37	40	32
Other	55	62	76

Source: *Family Spending and Saving in Wartime*, Bureau of Labor Statistics, Bull. 822, 1945, Table 20. The figures were obtained by linear interpolation.

tistics. Budget studies show lesser absolute expenditures on food consumed away from home, the larger the family.[25] Similarly, in cities where relatively many families have no young children, there is a higher ratio of restaurant workers to population.[26] Employment per dollar of receipts is almost three times as large in restaurants as in food stores, so the smaller food expenditures of the smaller family do not lead to anything like a proportional reduction in employment in trade.

The increase in the proportion of women in the labor force has

[25] The Consumer Purchases Study reported the expenditures on food consumed away from home by urban families in 1935-1936 as:

INCOME OF FAMILY	PERSONS IN FAMILY		
	2	*3-6*	*7 or More*
$750 to $1,000	$19	$11	$7
1,500 to 1,750	58	41	31
2,500 to 3,000	131	106	71

[26] In 1940 the ratios in cities over 100,000 varied as follows:

Percentage of Families with No Children under 18	*Number of Cities*	*Employed Restaurant Workers per 100 Population*
42-47	2	.63
47-52	28	.67
52-57	43	.91
57-62	10	1.17
62-67	8	1.15
67-72	1	1.98

apparently only a minor influence upon employment in trade. The chief impact—putting aside the effect that the increase in money income has on the family's spending pattern—is probably on food retailing. One would expect families with women in the labor force to purchase relatively more food in restaurants, and there is a definite trace of this effect in the data.[27]

4. *Conclusion*

Our survey of the factors influencing the growth of employment in trade seems to point strongly to the conclusion that certain population characteristics have been especially influential. Especially urbanization, but to a lesser degree also characteristics such as family size and the fraction of women in the labor force, have led to a rise in employment in trade relative to the labor force.[28] The growth of income seems to have been much less influential than these population characteristics in its direct effects, although of course both income and population characteristics are interrelated in many ways.

On the other side, the changing organization and activities of the retail industries have also had a substantial effect upon employment. The shifting composition of consumers' goods, and the standardization and packaging by producers, have served to decrease employment in trade per unit of goods handled. The new organizational forms, especially the chain store, have worked in the same direction. These new types of organization seem to have stopped growing relative to the traditional independent retailer, however.

Changes in consumers' "tastes," to use the economist's catchword for nonmonetary influences, seem to have been dominant in

[27] In 1940 the ratio of restaurant employees to population in cities over 100,000 varied as follows:

Percentage of Women 18 and over in Labor Force	*Number of Cities*	*Employed Restaurant Workers per 100 Population*
21-26	2	1.02
26-31	17	.73
31-36	39	.86
36-41	26	1.03
41-46	6	.93
46-51	2	1.29

[28] Certain other characteristics such as nativity, which we have not examined, may have worked in the same direction.

the growth of the fraction of the labor force in trade. Indeed, even the reductions in retailing services by way of persuading consumers to forgo service, delivery, credit, and the like can be considered to rest on changes in consumer attitudes. The determinants of consumer "tastes," however, are not—as is sometimes implied—necessarily subjective or capricious, and we shall find them useful also in dealing with the other consumer service industries.