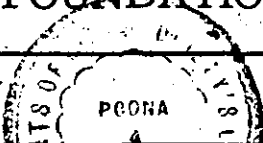


PUBLICATION OF THE GRADUATE SCHOOL
OF BUSINESS ADMINISTRATION
GEORGE F. BAKER FOUNDATION—HARVARD UNIVERSITY

VOLUME XXVII, NUMBER 4
JUNE, 1940



BUREAU OF BUSINESS RESEARCH
BULLETIN NUMBER 112

EXPENSES AND PROFITS OF
LIMITED PRICE VARIETY CHAINS
IN 1939

BY

ELIZABETH A. BURNHAM



PRICE \$1.00

HARVARD UNIVERSITY
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
BUREAU OF BUSINESS RESEARCH
SOLDIERS FIELD, BOSTON, MASSACHUSETTS

**PUBLICATION OF THE GRADUATE SCHOOL OF BUSINESS
ADMINISTRATION — Individual Issues**

BUSINESS RESEARCH STUDIES

No. 1.	Merchandising of Cotton Textiles — Methods and Organization, by M. T. Copeland and E. P. Learned (1933)	\$1.00
No. 2.	Raw Material Prices and Business Conditions, by Melvin T. Copeland (1933)	\$1.00
No. 3.	The Behavior of Consumption in Business Depression, by Arthur R. Tebbutt (1933)	\$1.00
No. 4.	Department Leasing in Department Stores, by Stanley F. Teele (1933)	\$1.00
No. 5.	International Raw Commodity Prices and the Devaluation of the Dollar, by Melvin T. Copeland (1934)	\$1.00
No. 6.	Managing Cloth Inventories in the Cotton Textile Industry, by John J. Madigan (1934)	\$1.00
No. 7.	Truck Selling: Simultaneous Selling and Delivery in Wholesale Food Distribution, by Lars J. Sandberg (1934)	\$1.00
No. 8.	The Effect of Size on Corporate Earnings and Condition, by William Leonard Crum (1934)	\$1.00
No. 9.	Management and the Worker: Organization in an Industrial Plant, by Roethlisberger and Dickson (1934)	Out of Print
No. 10.	Corporate Earning Power in the Current Depression, by William Leonard Crum (1935)	50 cents
No. 11.	A Test of the Consumer Jury Method of Ranking Advertisements, by N. H. Borden and O. S. Lovekin (1935)	\$1.00
No. 12.	The Use of Statistical Techniques in Certain Problems of Market Research, by T. H. Brown (1935)	Out of Print
No. 13.	The Distribution of Wealth: A Survey Based Upon Federal Estate-Tax Returns, by W. L. Crum (1935)	Out of Print
No. 14.	Law and Labor Relations: The Industrial Disputes Investigation Act of Canada, by E. M. Selekman (1936)	\$1.00
No. 15.	Unemployment and Prospects for Reemployment in Massachusetts, by D. H. Davenport and J. J. Croston (1936)	Out of Print
No. 16.	Determination of Confusion in Trade-Mark Conflict Cases, by Neil H. Borden (1936)	\$1.00
No. 17.	The Compensation of Executive Officers of Retail Companies, 1928-1935, by J. C. Baker (1937)	Out of Print
No. 18.	Organization, Functions, and Financing of State Public Utility Commissions, by C. O. Ruggles (1937)	Out of Print
No. 19.	A Raw Commodity Revolution, by Melvin T. Copeland (1938)	Out of Print
No. 20.	The Co-operative Banks of Massachusetts, by Donald H. Davenport (1938)	\$1.00
No. 21.	The Risk of Unemployment and Its Effect on Unemployment Compensation, by James W. Horwitz (1938)	\$1.00
No. 22.	Merchandise Testing as a Guide to Consumer Buying, by Mabel T. Gragg with N. H. Borden (1939)	\$1.00
No. 23.	Executive Compensation Practices of Retail Companies, 1928-1937, by John C. Baker (1939)	Out of Print
No. 24.	Portfolio Policies of Commercial Banks in the United States: 1920-1939, by Pearson Hunt (1940)	\$1.50
No. 25.	Recent and Prospective Developments in Accounting Theory, by William A. Paton (1940)	\$1.00

BUREAU OF BUSINESS RESEARCH: RECENT BULLETINS

CHAIN STORES

No. 112.	Expenses and Profits of Limited Price Variety Chains in 1939, by Elizabeth A. Burnham	\$1.00
No. 110.	Expenses and Profits of Limited Price Variety Chains in 1938, by Stanley F. Teele	\$1.00
No. 107.	Expenses and Profits of Limited Price Variety Chains in 1937, by Stanley F. Teele	\$1.00
Expenses and Profits of Limited Price Variety Chains: 1935, No. 103; 1934, No. 98; 1933, No. 95; 1932, No. 93; 1931 and 1929, No. 89		\$1.00 each
No. 101.	Operating Results of Department Store Chains and Ownership Groups: 1929, 1931-1934, by S. F. Teele	\$1.00
No. 99.	Expenses and Profits of Food Chains in 1934, by Carl N. Schmalz	Out of Print
No. 94.	Chain Store Expenses and Profits: An Interim Report for 1932, by Malcolm P. McNair	\$1.00
No. 90.	Expenses and Profits of Department Store Chains and Ownership Groups in 1931, by Malcolm P. McNair	\$1.00
No. 87.	Operating Results of Drug Chains in 1929, by Carl N. Schmalz	\$1.00
No. 86.	Operating Results of Shoe Chains in 1929, by Carl N. Schmalz	\$1.00
No. 84.	Expenses and Profits in the Chain Grocery Business in 1929, by Malcolm P. McNair	\$1.00

CONSUMER CO-OPERATIVES

No. 108.	Operating Results of Consumer Co-operatives in the United States in 1937, by Carl N. Schmalz	\$1.00
----------	--	--------

DEPARTMENT STORES (See also CHAIN STORES)

No. 111.	Operating Results of Department and Specialty Stores in 1939 by Malcolm P. McNair	\$2.50*
No. 109.	Operating Results of Department and Specialty Stores in 1938, by Malcolm P. McNair	\$2.50*
No. 106.	Operating Results of Department and Specialty Stores in 1937, by Carl N. Schmalz	\$2.50*
No. 102.	Operating Results of Department and Specialty Stores in the Pacific Coast States: 1935	50 cents
Operating Results of Department and Specialty Stores: 1935, No. 100; 1934, No. 96; 1933, No. 92; 1932, No. 91; 1931, No. 88; 1930, No. 85		\$1.00 each
No. 61.	Department Store Operating Expenses for 1926 (Prelim.), and Financial Ratios for 1923, 1924, 1925	50 cents
Operating Results of Department and Specialty Stores: 1927, No. 74; 1926, No. 63; 1924, No. 53; 1922, No. 37		50 cents each

(Earlier Bulletins are listed on inside back cover)

*To firms furnishing figures for the department store studies, to members of the National Retail Dry Goods Association, which financed the work, and to educational institutions, etc., the list price of Bulletins Nos. 106, 109 and 111 is \$1.00, and the regular discounts apply.

Orders for the several issues of the Publication of the Graduate School of Business Administration should be addressed to the Bureau of Business Research, Harvard Business School, Soldiers Field, Boston, Massachusetts. Whenever possible the remittance should accompany the order. Checks should be made payable to the Bureau of Business Research.

Trade, quantity, and educational discounts on application. The prices of these publications are revised from time to time. Lists showing the prices current at any time may be obtained from the Bureau of Business Research.

**EXPENSES AND PROFITS OF
LIMITED PRICE VARIETY CHAINS
IN 1939**

BY

ELIZABETH A. BURNHAM



**HARVARD UNIVERSITY
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
BUREAU OF BUSINESS RESEARCH
SOLDIERS FIELD, BOSTON, MASSACHUSETTS**

HARVARD UNIVERSITY
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

GEORGE F. BAKER FOUNDATION

WALLACE B. DONHAM, *Dean*

HOWARD T. LEWIS, *Director of Research*

Copyright, 1940

BY THE PRESIDENT AND FELLOWS OF
HARVARD COLLEGE

Publication of the Graduate School of Business Administration, Harvard University. Issued at Soldiers Field Station, Boston, Mass., six times a year, during the months of January, March, May, June, July, and November. Entered as second class matter, May 17, 1913, at the post office at Boston, Mass., under the Act of August 24, 1912.

FOREWORD

The report provided in this bulletin presents the results of the Bureau's ninth annual survey of operating margins, expenses, and profits of limited price variety chains. To the officers of the Limited Price Variety Stores Association the Bureau and the School wish to express appreciation for the financial aid which made it possible to continue this study. We are particularly indebted to Dr. Paul H. Nystrom for his interest in the work. The Bureau is also grateful for the support given to the research by executives of the individual chains. The many operating details provided by these officers constitute the basic materials for the study.

The bulletin herewith presented is one of a series published by the Bureau on distribution costs. In accordance with the established practice in such studies, the statements received in connection with the research are considered as confidential and no one outside the small Bureau staff has access to the figures of cooperating firms. Nor is the identity of these firms disclosed without first securing their permission.

The current study has been made under the direction of Miss Elizabeth A. Burnham, the Bureau's Research Supervisor.

HOWARD T. LEWIS
Director of Research

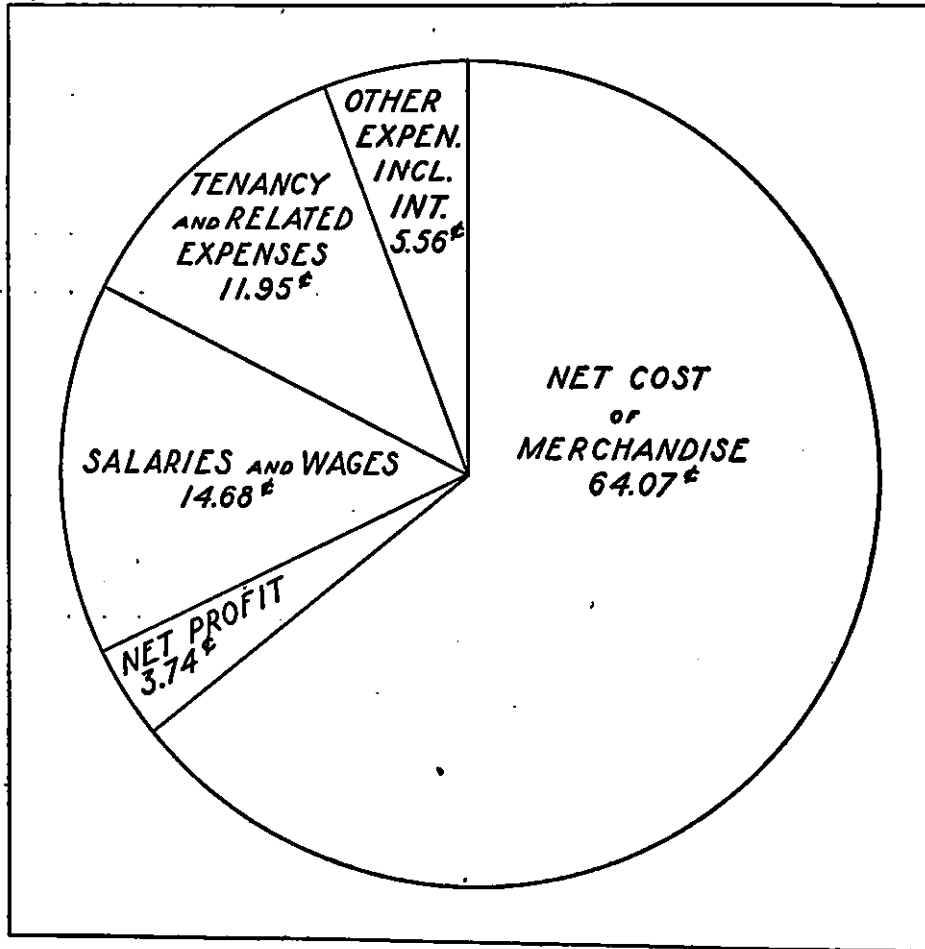
BOSTON, MASSACHUSETTS
JUNE, 1940

CONTENTS

	PAGE
Summary	1
Year-to-Year Trends	
1939 Earnings Greater Than in 1938	3
Expenses Climb	5
Factors Underlying Fluctuations in Sales Volume	6
Operating Results for 1935-1939 Classified by Volume Groups	7
Retail Inventory and Stock-Sales Ratios	8
 Chart: Summary Statistics: 1924-1939	 3
 Tables: Operating Percentages for 15 Chains: 1929, 1931-1939	 4
Per Store Operating Figures for 15 Chains: 1929, 1931-1939	5
Distribution of Stores of 15 Chains According to Size of City: 1932-1939	6
Operating Results Classified by Volume: 1935-1939	7
Stock-Sales Ratios and End-of-Month Inventories: 1934-1939	8
 Productivity of Employees	
Number of Persons Employed	9
Sales per Employee and per Employee-hour: 1939	11
Trend in Employee Productivity: 1937-1939	12
 Tables: Number of Employees per Store	 9
Sales per Employee and per Employee-hour: 1939	10
Sales per Employee and per Employee-hour: 1937-1939	12
 Basic 1939 Tables	
Sale Volume per Store Varies within Wide Limits	13
Sales of Apparel and Accessories Important	14
Operating Results for All Reporting Chains	14
Operating Results Classified According to Total Volume of Sales	16
Operating Results Classified According to Number of Stores	21
Operating Results Classified According to Sales per Store	21
Operating Results Classified by Merchandise Emphasis	25
 Tables: Distribution of Stores According to Sales per Store	 13
Sales by Merchandise Lines	14
Tables Showing Detailed Operating Figures for:	
All Chains Reporting	15 and 16
Chains Classified According to Sales per Chain	18 and 19
Chains Classified According to Number of Stores Operated	23
Chains Classified According to Average Sales per Store	24
Goal Figures for Chains Classified According to Sales per Chain	22
Stock-Sales Ratios and End-of-Month Inventories Classified According to Sales per Chain	20
 Appendix	
Explanatory Notes	27

SUMMARY OF PERFORMANCE OF VARIETY CHAINS IN 1939

A. Disposition of the Consumer's Dollar



**B. Combined Results of 47 Chains
Operating 5,695 Stores**

Net Sales	\$921,276,295	100.00%
Net Cost of Merchandise Sold	\$590,291,314	64.07%
Salaries and Wages	135,191,498	14.68
Tenancy Costs and Related Expenses ..	110,125,818	11.95
Other Expense	51,249,017	5.56
Total Cost	\$886,857,647	96.26%
Net Profit	\$34,418,648	3.74%
Total Net Other Income	28,655,262	3.11
Net Gain	\$63,073,910	6.85%

EXPENSES AND PROFITS OF LIMITED PRICE VARIETY CHAINS IN 1939

SUMMARY¹

The results for the year for 47 limited price variety chains taken collectively are given on the facing page. The data are shown in dollars, in percentages of net sales, in cents out of the consumer's dollar, and in graphic form.

Year-to-Year Trends

Comparison of the data provided for 1939 with those available for earlier years yields the following significant facts.

(1) Limited price variety chains achieved total net sales greater in 1939 than in any other year of the period 1924 through 1939, and between 5% and 6% higher than in 1938.

(2) Following the tendency for moderate expansion characteristic since 1934, chains increased their number of outlets slightly. The total number of such units operated by well-known established chains was higher than that recorded in any prior year. Since 1934 the percentage of new units opened in small cities has exceeded the percentage opened in more populous centers.

(3) Average sales per store amounted to somewhat less than \$200,000 in 1939, some 4% or 5% higher than in 1938 and roughly the same as in 1937 in which year the highest sales per unit since 1929 had been secured. Sales per store, however, were still more than 10% below predepression levels.

(4) For the last three years the largest increases in store volume were realized by chains with from 10 to 50 stores located chiefly in cities of less than 25,000 population.

(5) For the 15 chains which have reported for 1929 and 1931 through 1939, there has been in recent years an upward trend both in dollar expense per store and in percentage outlay. Percentage cost in 1939 was nearly 5% of sales higher than in 1929. Climbing expense percentages have been usual both for medium-size and for large chains.

(6) Since 1933 gross margin rates have fluctuated between 34.4% and 35.6% of net sales. The percentage achieved by the 15 chains in 1939 was more than $\frac{1}{2}$ of 1% above that for 1938 and slightly above the rates secured in 1936 and 1937.

(7) Percentage earnings for the 15 chains in 1939 exceeded those for 1938 but did not attain the levels reached in 1936 and 1937.

Goal Figures

(1) As was true in 1938, the most successful variety chains of small, medium, and large volume secured gross margin rates of more than 35% of sales.

(2) Within each volume group in 1939 the most profitable chains tended to be those which had a relatively high proportion of their stores in small cities where tenancy costs were relatively low.

Number and Productivity of Employees

For the third successive year the Bureau has prepared information relating to the number of employees and their productivity. Significant findings from these data are as follows:

(1) On the average there were about as many part-time as full-time employees in 1939, and practically all the part-time workers were engaged in store activities. In December, the number of part-time employees typically exceeded the number of full-time workers.

¹This page is designed to provide a succinct statement of the significant features of the operations of limited price variety chains in 1939. Qualifying phrases and interpretations have therefore been omitted. For a description of the basic materials used in preparing the report, see page 13; for a definition of items and a description of methods, see page 27.

(2) Except in the last two months of the year, 75% or more of the total work-hours was provided by full-time employees.

(3) The sales per employee per week for the midweeks of each of the 12 months averaged was \$100.60, and the corresponding figure for sales per hour was \$1.92.

(4) Among the chains there was a pronounced difference in the level of employee productivity. In general the figures were highest for firms operating relatively large-volume stores.

(5) Data on sales per employee-week and employee-hour varied from month to month roughly in accordance with fluctuations in sales per store.

YEAR-TO-YEAR TRENDS

During the years intervening between 1929 and 1939, the period covered by the Bureau studies for limited price variety chains, an increasing number of variety chains have participated in the research. Fifteen of the firms, however, with a combined volume of over \$350,000,000 in 1929, have submitted reports for 1929 and for each of the years 1931 through 1939. From averages prepared from these reports it is possible to draw some conclusions concerning year-to-year changes in operating results. As a supplement to these data, published sales and store statistics for seven large variety chains for the period 1924-1939 have been assembled from the Survey of Current Business and presented in index form in Chart 1.

It is obvious from this chart that total net sales as well as sales per store for the seven chains increased in 1939 over 1938, with total net sales reaching the highest point recorded for the 16-year period. Total dollar sales were 5% higher than in 1938, and sales per store advanced to almost the same degree. The growth in number of units operated was slight, as it has been since 1931.

In Table 1 indices prepared from the data for the 15 chains reporting to the Bureau show that these firms experienced similar increases in total

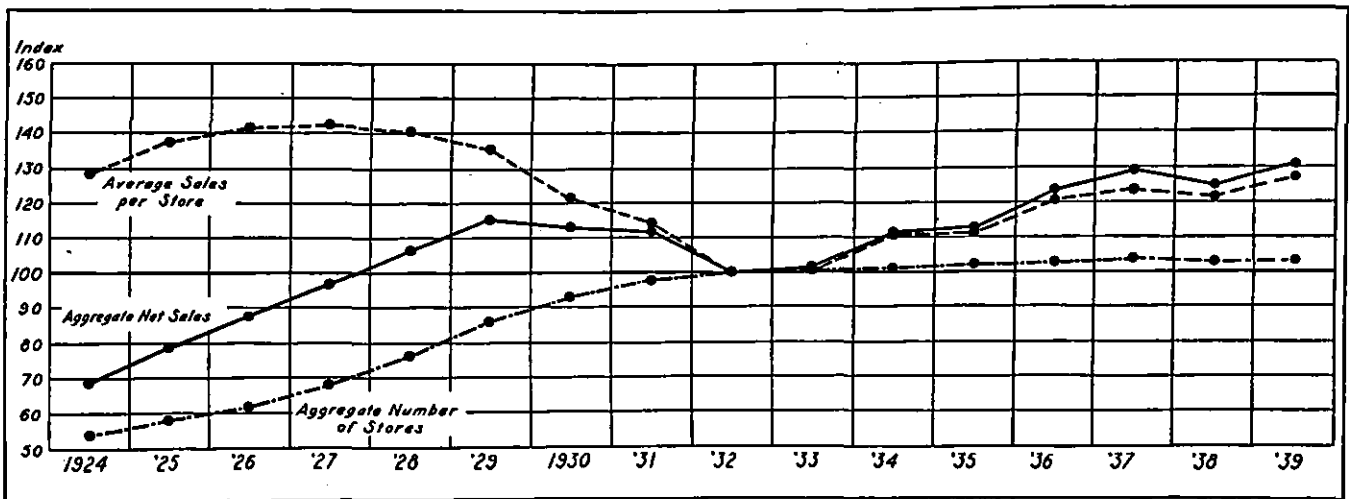
sales and in sales per store from 1938 to 1939. Sales per chain were higher than in any of the preceding 10 years and sales per store were only slightly lower than in 1937, the highest point since the depression.

1939 Earnings Greater than in 1938

In the 1938 report attention was directed to the fact that percentage earnings for that year were lower than for any other year since 1932. The chains have reversed the downward trend in earnings, in evidence since the year 1936, and have achieved net profits on merchandising operations and final net gains which are substantially better than those recorded for 1938.

An important factor in the improved showing was the increased gross margin rate. Gross margin amounted to 35.2% of sales for 1939, a rise of 0.64% of net sales over the 1938 figure. Except in the year 1933 when margins for retailers of general merchandise were raised substantially, the 1939 percentage is the highest on record for these limited price variety chains. Not only did the margin rate climb from 1938 to 1939, but also dollar margins per store increased. According to

Chart 1. Summary Statistics for 7 Variety Chains: 1924-1939



figures given in Table 2, the average dollar gross margin per store increased by about \$4,000, or more than 6%, from 1938 to 1939. This rise, of course, reflects not only the higher margin percentage but also the increased sales per store.

A secondary cause contributing to higher profit

percentages was a lowered total expense percentage resulting from declines in the percentages for most of the component expense items. It should be emphasized that these declines were in percentage costs only. According to data given in Table 2 total dollar costs per store increased in

Table 1. Operating Results for 15 Identical Variety Chains: 1929, 1931-1939
(Percentages Computed from the Aggregate Dollar Figures; Combined Net Sales = 100%)

Items	1929	1931	1932	1933	1934	1935	1936	1937	1938	1939
Aggregate Number of Stores...	1,579	2,085	2,185	2,188	2,217	2,261	2,303	2,341	2,374	2,395
Aggregate Net Sales (in thous.)	\$359,346	\$361,710	\$325,703	\$336,093	\$377,692	\$395,849	\$434,832	\$450,436	\$432,904	\$456,352
Average Net Sales per Chain (in thousands).....	\$23,956	\$24,114	\$21,714	\$22,438†	\$25,157†	\$26,390	\$28,989	\$30,029	\$28,860	\$30,423
Average Sales per Store (in thousands).....	\$228	\$173	\$149	\$154†	\$170†	\$175	\$189	\$192	\$182	\$191
Index of Change (1932=100):										
Number of Stores per Chain.....	72.27	95.42	100.00	100.14	101.46	103.48	105.40	107.14	108.65	109.61
Net Sales per Chain.....	110.33	111.05	100.00	103.34	115.86	121.54	133.51	138.30	132.91	140.11
Average Sales per Store.....	152.67	116.38	100.00	103.20	114.19	117.45	126.67	129.08	122.33	127.82
Net Cost of Merchandise Sold (including freight, express, postage, and truckage).....	67.32%	67.82%	68.52%	64.40%	65.04%	65.55%	65.00%	64.87%	65.44%	64.80%
GROSS MARGIN.....	32.68	32.18	31.48	35.60	34.96	34.45	35.00	35.13	34.56	35.20
Salaries and Wages.....	12.95%	13.09%	13.01%	13.86%	14.33%	14.14%	14.08%	14.72%	14.84%	14.74%
Tenancy Costs.....				10.28	9.35	9.11	8.75	8.72	9.40	9.19
Light, Water, and Power.....	8.82	11.41	13.13	1.11	1.05	1.04	1.00	1.02	1.12	1.08
Depreciation of Fixtures and Equipment.....				1.06	0.92	0.79	0.77	0.78	0.87	0.84
Supplies.....	1.62	1.45	1.29	1.35	1.34	1.40	1.35	1.39	1.06	1.02
Advertising.....	0.21	0.24	0.31	0.28	0.28	0.31	0.27	0.36	0.38	0.39
Insurance (except on real estate).....	0.36	0.32	0.44	0.41	0.42	0.42	0.36	0.38	0.39	0.39
Taxes (except on real estate or income):										
Sales.....	0.29	0.36	0.43	0.25	0.35	0.19	0.18	0.15	0.16	0.15
Other.....				0.44	0.47	0.51	0.61	0.92	1.14	1.05
Miscellaneous Expense.....	1.10	1.03	1.12	0.93	0.81	0.82	1.09	1.10	1.22	1.26
Total Expense before Interest..	25.35%	27.90%	29.73%	29.97%	29.32%	28.73%	28.46%	29.54%	30.58%	30.11%
Total Interest.....	1.40	1.51	1.62	1.72	1.61	1.61	1.49	1.48	1.60	1.55
TOTAL EXPENSE including Interest.....	26.75%	29.41%	31.35%	31.69%	30.93%	30.34%	29.95%	31.02%	32.18%	31.66%
NET PROFIT OR LOSS.....	5.93%	2.77%	0.13%	3.91%	4.03%	4.11%	5.05%	4.11%	2.38%	3.54%
Net Profit or Loss from Real Estate Operations.....	....	....	....	1.39%	1.19%	1.16%	1.36%	1.55%	1.55%	1.50%
Interest on Net Worth (except on real estate, leaseholds, and goodwill).....	....	....	....	1.65	1.65	1.65	1.49	1.47	1.58	1.55
Other Revenue, Net.....	....	....	....	L. 0.08	0.10	0.24	0.11	0.11	0.13	0.19
Total Net Other Income.....	2.68%	2.86%	3.23%	2.96%	2.94%	3.05%	2.96%	3.13%	3.26%	3.24%
NET GAIN before Income Taxes:										
Percentage of Net Sales.....	8.61%	5.63%	3.36%	6.87%	6.97%	7.16%	8.01%	7.24%	5.64%	6.78%
Percentage of Net Worth.....	20.05†	10.66	5.73	11.63	12.53†	12.76†	14.97†	13.93†	10.10	12.10
Rate of Stock-turn (times a year) Based on Beginning and Ending Inventories.....	5.24	5.32	5.13	4.86	5.00	5.04	5.14	4.92	4.90	5.13

† The statement of one firm did not cover a full fiscal year. This average is adjusted to reflect the sales for the entire period.

‡ Because of inadequate balance sheet data in the case of one chain, the figure for net gain as a percentage of net worth was not based on the reports of all the chains in the group.

1939 over 1938, and the dollar amounts for tenancy costs, light, power, and water, and depreciation as well as advertising were the highest reported for the 10 several years. If the total dollar expense for 1939 had been incurred without the accomplished sales increase, the expense rate would have climbed to nearly 33.0% of sales instead of dropping to 31.66%.

Expenses Climb

From data given in Table 2, it is clear that dollar expense per store has been rising since 1932. There was a slight dip in 1938, it is true, but in 1939 the outlay was in excess of that for the year 1937. Through the recovery years 1934, 1935, and 1936, sales increased faster than expenditures,

so that the total expense percentage decreased slightly from year to year as is shown in Table 1. In 1937, however, the increase in sales volume was diminished while expenses rose substantially. There was a consequent jump of roughly 1% in the total expense percentage in that year. Again, in 1939, when sales per store were at almost the same level as in 1937, dollar expense per store was higher. At \$60,326, it exceeded the average outlay per store for any of the years 1931-1938 and was only about 1% below the expenditure made in 1929. Store sales in 1939, however, were about 16% below those achieved in the boom year, and hence the level of percentage cost for 1939 was markedly above (about 5% of net sales) that for 1929.

Table 2. Operating Results per Store for 15 Identical Variety Chains: 1929, 1931-1939

Items	1929	1931	1932	1933	1934	1935	1936	1937	1938	1939
Average Sales per Store...	\$227,578	\$173,482	\$149,063	\$153,607	\$170,362	\$175,077	\$188,811	\$192,412	\$182,352	\$190,544
Net Cost of Merchandise Sold (includ'g freight, express, postage, and truckage).....	\$153,198	\$117,647	\$102,139	\$98,920	\$110,811	\$114,760	\$122,725	\$124,809	\$119,338	\$123,473
GROSS MARGIN.....	74,380	55,835	46,924	54,687	59,551	60,317	66,086	67,603	63,014	67,071
Salaries and Wages....	\$29,465	\$22,701	\$19,389	\$21,284	\$24,418	\$24,758	\$26,587	\$28,320	\$27,067	\$28,086
Tenancy Costs.....				15,790	15,929	15,952	16,515	16,791	17,143	17,511
Light, Water, and Power.....	20,076	19,789	19,573	1,711	1,782	1,814	1,886	1,960	2,043	2,058
Depreciation of Fixtures and Equipment				1,625	1,570	1,389	1,457	1,501	1,579	1,600
Supplies.....	3,687	2,523	1,929	2,072	2,284	2,463	2,557	2,678	1,938	1,944
Advertising.....	480	424	463	436	478	541	513	690	698	743
Insurance (except on real estate).....	819	559	650	630	710	730	688	731	718	743
Taxes (except on real estate or income):										
Sales.....	665	624	637	387	593	327	331	282	282	286
Other.....				680	791	887	1,144	1,775	2,074	2,001
Miscellaneous.....	2,491	1,790	1,671	1,422	1,387	1,436	2,062	2,116	2,223	2,401
Total Expense before Interest.....	\$57,683	\$48,410	\$44,312	\$46,037	\$49,942	\$50,297	\$53,740	\$56,844	\$55,765	\$57,373
Total Interest.....	3,198	2,613	2,414	2,644	2,748	2,820	2,813	2,847	2,922	2,953
TOTAL EXPENSE including Interest.....	\$60,881	\$51,023	\$46,726	\$48,681	\$52,690	\$53,117	\$56,553	\$59,691	\$58,687	\$60,326
NET PROFIT OR LOSS....	\$13,499	\$4,812	\$198	\$6,006	\$6,861	\$7,200	\$9,533	\$7,912	\$4,327	\$6,745
Net Profit or Loss from Real Estate Operations.....	.....	.....	.....	\$2,130	\$2,027	\$2,032	\$2,567	\$2,975	\$2,831	\$2,858
Interest on Net Worth (except on real estate, leaseholds, and goodwill).....	.....	.....	.....	2,539	2,813	2,889	2,819	2,840	2,884	2,954
Other Revenue, Net....	.....	.....	.....	L. 123	167	412	207	212	247	362
Total Net Other Income	\$6,095	\$4,961	\$4,820	\$4,546	\$5,007	\$5,333	\$5,593	\$6,027	\$5,962	\$6,174
NET GAIN before Income Taxes.....	\$19,594	\$9,773	\$5,018	\$10,552	\$11,868	\$12,533	\$15,126	\$13,939	\$10,289	\$12,919

The significance of changing dollar sales in relation to changes in percentage expense and earnings must not be overlooked. Variety chains with relatively high expenditures in the fixed items, such as tenancy and related costs, are particularly vulnerable to changes in dollar receipts.

Factors Underlying Fluctuations in Sales Volume

Changes in sales per store in the variety chain field may result from several causes other than changes in general business. First in importance, perhaps, is the retail price level which may be expected to affect all chains dealing in similar merchandise in much the same way. Although no adequate price index is available for goods sold through limited price variety stores, it seems distinctly probable that a dollar's worth of sales in 1929 represented less merchandise than it did in 1939. If no severe changes occur in the retail price structure in the future, it seems possible that the record of 1929 will not be attained easily by variety chains.

A change in average sales volume per store also may result from an altered policy in regard to store locations. According to data presented in Table 3, there has been a marked tendency since 1932 to increase the number of units in cities with populations of less than 10,000. The 15 chains reported 23.71% more outlets in these small

shopping centers in 1939 than in 1932. This high figure compares with an average increase in total number of stores of only 8.32%. The potential sales in these cities necessarily are less than in more populous centers. During the past few years this expansion into small cities may have acted as a brake on the rise in average sales per store. On the other hand, there has been a substantial expansion in cities with populations from 500,000-1,000,000 which may have served to raise the volume per store.

A third factor affecting sales per store may be a change in customer buying habits. A shift from shopping in congested districts to suburban shopping for small-value items probably has taken place in the last few years. While this might not affect the total volume of sales in a chain store organization, it might result in pronounced changes in the figures for individual stores. Moreover, chains predominantly located in large cities may feel the effects of changing buying habits more than chains with units situated in cities of various sizes. Unfortunately for the large city operator, his fixed expenses account for a relatively larger share of total costs than is true for small city operators. Thus it is probable that chains with many stores located in metropolitan centers will find it difficult to keep expenses for such units in line if sales decline materially, as a result of decentralized buying.

Table 3. Distribution of the Stores¹ of 15 Identical Variety Chains According to Size of City: 1932-1939

Items	1932	1933	1934	1935	1936	1937	1938	1939
Number of Stores in Cities with Populations of:								
Less than 10,000.....	502	505	518	542	573	586	602	621
10,000-25,000.....	574	565	569	582	584	591	598	599
25,000-100,000.....	552	551	558	561	550	560	568	566
100,000-500,000.....	276	260	260	265	268	267	266	270
500,000-1,000,000.....	109	115	114	115	120	120	121	125
1,000,000 or more.....	209	210	216	224	229	235	239	226
Total.....	2,222	2,206	2,235	2,289	2,324	2,359	2,394	2,407
Index of Change (1932 = 100) in Number of Stores in Cities with Populations of:								
Less than 10,000.....	100.00	100.60	103.19	107.07	114.14	116.73	119.90	123.71
10,000-25,000.....	100.00	98.43	99.13	101.39	101.74	102.96	104.18	104.36
25,000-100,000.....	100.00	99.82	101.09	101.63	99.64	101.45	102.90	102.54
100,000-500,000.....	100.00	94.20	94.20	96.01	97.10	96.74	96.38	97.83
500,000-1,000,000.....	100.00	105.50	104.59	105.50	110.09	110.09	111.01	114.68
1,000,000 or more.....	100.00	100.48	103.35	107.18	109.57	112.44	114.35	108.13
Total.....	100.00	99.28	100.59	103.02	104.59	106.17	107.74	108.32

¹ The figures given in this table are based on the number of stores in operation at the end of each fiscal year; consequently the totals will not agree exactly with the figures given in Table 1 indicating the average number of stores in operation during each fiscal year.

Operating Results for 1935-1939 Classified by
Volume Groups

Table 4 presents trend material for the years 1935 through 1939 for chains with sales of \$500,000 to \$10,000,000 and those with sales of more than \$10,000,000. These data, presented for the first time in this bulletin, show that there has been a greater relative growth in the number of units operated by medium-size chains than there has been for large chains. At the same time the increase in sales per store was larger for the large-volume organizations. These facts may be interrelated; the probable lower sales volumes of new units may be reflected in the less rapid increase in sales per store for medium-size chains.

For both volume groups percentage margins have risen since 1935. Margin rates rose more sharply and were at a higher level for medium-size than for large firms. Percentage expenses in 1938 and 1939 were heavier for both groups than in 1935, although a decline from the high level of 1938 was common in 1939. Conspicuous among

the items contributing to increased expense was salaries and wages, which rose for chains in both groups.

Tenancy costs followed a differing trend for the chains in the two size classifications. Tenancy costs and light, water, and power were lower in 1939 than in 1935 for chains with sales of \$500,000 to \$10,000,000. For large organizations, those with sales of more than \$10,000,000, on the other hand, such occupancy expenses were 0.5% of sales higher in 1939 than in 1935. This rise, it should be emphasized, took place in the face of an increase during the period of 11% in average sales per store. Apparently there has been little change in the distribution of the stores of the seven large chains according to size of city. Hence the rise in the real estate cost percentage is not to be accounted for by expansion into large cities where dollar rental rates are high. The tenancy cost item, however, includes, in addition to rental charges, amortization of improvements to real estate. Meagre data on file indicate that for the chains in this group there was an increase in the

Table 4. Operating Results of Variety Chains with Net Sales of over \$500,000: 1935-1939
(Percentages Computed from the Aggregate Dollar Figures, Combined Net Sales = 100%)

Items	8 Identical Chains with Net Sales of \$500,000-10,000,000					7 Identical Chains with Net Sales of \$10,000,000-125,000,000				
	1935	1936	1937	1938	1939	1935	1936	1937	1938	1939
Aggregate Number of Stores....	377	402	420	430	439	1,777	1,815	1,847	1,872	1,886
Average Sales per Store.....	\$66,586	\$70,216	\$72,330	\$67,763	\$71,092	\$175,316	\$190,739	\$193,696	\$184,700	\$195,450
GROSS MARGIN.....	33.70%	34.28%	35.00%	34.93%	35.58%	32.65%	33.36%	33.43%	32.88%	33.48%
Salaries and Wages.....	15.90%	15.80%	16.30%	16.74%	16.77%	13.49%	13.51%	14.08%	14.18%	14.12%
Tenancy Costs and Light, Water, and Power.....	8.65	8.02	8.03	8.66	8.36	9.16	9.08	9.12	9.81	9.55
Depreciation of Fixtures and Equipment.....	1.08	1.06	1.04	1.15	1.13	0.77	0.79	0.81	0.91	0.88
Supplies.....	1.05	1.05	1.09	1.01	0.99	0.99	0.97	1.00	0.97	0.94
Taxes.....	0.75	0.75	1.06	1.09	1.10	0.58	0.74	1.00	1.21	1.12
Other Expense.....	2.21	2.46	2.46	2.58	2.29	2.17	2.17	2.39	2.25	2.24
Total Expense before Interest..	29.64%	29.14%	29.98%	31.23%	30.64%	27.16%	27.26%	28.40%	29.33%	28.85%
Total Interest.....	1.62	1.41	1.38	1.54	1.48	1.61	1.50	1.47	1.60	1.51
TOTAL EXPENSE including Int..	31.26%	30.55%	31.36%	32.77%	32.12%	28.77%	28.76%	29.87%	30.93%	30.36%
NET PROFIT OR LOSS.....	2.44%	3.73%	3.64%	2.16%	3.46%	3.88%	4.60%	3.56%	1.95%	3.12%
Total Net Other Income.....	1.61	1.49	1.83	2.05	1.93	2.62	2.79	2.95	3.01	2.94
NET GAIN before Income Taxes:										
Percentage of Net Sales.....	4.05%	5.22%	5.47%	4.21%	5.39%	6.50%	7.39%	6.51%	4.96%	6.06%
Percentage of Net Worth....	*	*	*	12.66	16.25	14.13	16.93	14.63	10.45	13.31
Rate of Stock-turn (times a year) Based on Beginning and Ending Inventories.....	4.29	4.25	4.15	4.07	4.44	5.05	5.08	5.01	5.01	5.09

* Data not available. See the paragraph on methods, Appendix, page 28.

dollar amounts allocated to amortization of improvements during the period. This, of course, dovetails with the facts published by *Chain Store Age*¹ showing the increasing expenditure for modernization programs in recent years. A further contributing cause of rising tenancy costs probably exists in an increase in real estate taxes.

Taxes, other than real estate and income levies, have climbed for both groups of chains during the five years surveyed and now amount to more than 1% of net sales.

Retail Inventory and Stock-Sales Ratios

Table 5 presents retail inventories per store in dollars as of the end of each month from January, 1934, through December, 1939. These figures are based on data furnished annually by an increasing number of chains. In using the material as a continuous six-year series, therefore, it must be remembered that the data for recent years represent a somewhat different group of chains than do the figures for earlier years.

Table 5. Average End-of-Month Retail Inventory per Store: 1934-1939

Month	1934	1935	1936	1937	1938	1939
No. of Chains	17	18	19	20	22	29
January.....	\$29,143	\$34,532	\$34,451	\$36,427	\$35,657	\$32,367
February....	35,539	35,382	35,314	38,865	36,694	34,953
March.....	37,220	38,280	37,274	41,586	39,482	38,900
April.....	40,199	38,532	37,494	44,180	38,551	38,326
May.....	40,296	38,395	36,980	43,592	38,306	37,483
June.....	38,528	37,219	36,445	42,840	37,015	36,874
July.....	31,758	36,044	36,355	41,571	35,066	36,627
August.....	37,052	36,509	40,002	43,538	36,322	39,686
September...	38,816	40,003	42,714	46,814	39,200	41,801
October.....	41,009	43,978	46,324	50,122	42,747	46,076
November...	42,946	45,593	48,061	50,930	45,616	48,579
December...	33,377	31,688	35,783	35,085	30,995	33,721

In each year taken by itself the figures reveal a pronounced seasonal swing. The highest stocks recorded were at the end of November in each year and the lowest stocks after the Christmas sales. Low inventories were also characteristic of the midsummer months of each year.

If the figures for the six years be studied in sequence, it becomes clear that from 1934 to 1937

¹ Frank E. Landau, "Chains Spend \$126,159,914 in 1939; Set Peak Modernization Record," *Chain Store Age*, Variety Store Executives Edition, November, 1939, p. 94.

there was a rising tendency in the amount of dollar inventory per store, with the highest investment appearing late in 1937. During this four-year period, sales per store were rising also with the rate of increase greater in 1935 and 1936 than in 1937. Indeed between 1935 and 1936 sales increased more rapidly than did inventories. This is shown by the stock-sales ratios in Table 6 and

Table 6. Stock-Sales Ratios: 1934-1939

Month	Ratio of Inventory for End of Preceding Month to Sales for Month					
	1934	1935	1936	1937	1938	1939
Number of Chains..	17	18	19	20	22	29
January.....	3.31	3.29	3.30	3.43	3.47	3.06
February.....	3.30	3.34	3.26	3.26	3.46	3.15
March.....	2.54	3.09	3.08	2.62	3.11	2.87
April.....	3.10	2.92	2.71	3.16	2.76	2.77
May.....	2.93	3.10	2.69	2.90	3.03	2.75
June.....	2.97	3.04	2.56	2.92	2.91	2.74
July.....	3.36	3.15	2.73	2.95	2.96	2.89
August.....	2.95	2.89	2.72	3.10	2.81	2.86
September.....	2.98	3.45	2.94	3.06	2.74	2.86
October.....	2.85	2.95	2.74	3.02	2.63	2.88
November.....	3.08	3.13	3.23	3.43	2.99	3.08
December.....	1.69	1.75	1.65	1.75	1.52	1.60

may be reflected in the slightly increased stock-turn rate indicated in Table 1 for the 15 chains. It probably was difficult for executives to foresee the retardation in the growth of sales per store in 1937 and consequently inventory investment was relatively high and the ratio of stock to sales climbed in that year.

As shown by the data in Table 5, dollar inventories per store for all the chains reporting the data declined during 1938, when sales per store were dropping. Inventories, however, decreased by more than the sales decline and there was a consistent drop in the stock-sales ratio from February to October of that year. This drop marked a reversal of the movement of the ratio during 1937. During the latter part of 1939 sales improved and there was a rise in the investment in inventory. The stock-sales ratio was maintained at a fairly stable level around 2.8 from March through October. With the pronounced seasonal movements in sales characteristic of this trade, the variations in the stock-sales ratio appear to be slight. It seems clear that on the whole the executives are controlling their stocks effectively.

PRODUCTIVITY OF EMPLOYEES

Over the past eleven years there has been a well-defined upward movement in percentage pay roll costs. Figures provided in Table 1 for the 15 chains reporting throughout the period, 1929 and 1931-1939, indicate that salaries and wages have climbed from 12.95% of net sales in 1929 to 14.74% of sales in 1939. Part of the change, it is true, was caused by a drop in the average sales volume per store in the eleven-year interval. The difference of 16% in the sales levels between the two years must not be forgotten. In the face of this 16% differential, salaries and wages in terms of dollars per store in 1939 were only 5% below the pay roll amount for 1929.

Retail prices in general are lower than before the depression, while the reverse may well be true of wage rates in retail stores. Recent wage and hour legislation probably has tended to raise dollar expenditures for personnel. In view of these facts it is particularly important that measures of employee efficiency should be made available to retail executives. It is difficult to establish such measures, however, because of the varying schedules of work-week hours and differing proportions of part-time and full-time employees.

Following the practice begun in 1937 and continued for 1938, information for selected weeks¹ is given concerning sales per week per employee as well as sales per employee-hour. In preparing the former averages the number of employees used as a base consisted of all the full-time employees plus the number of full-time weeks provided by part-time employees.

Not all the chains were able to report the material requisite for this part of the study. Seventeen of the firms, however, furnished data for the middle week of each month on the number of full-time and part-time employees and the number of hours worked by each group. An eighteenth chain reported the number on the pay rolls without indicating the hours worked. Sales data for corresponding weeks in the 12 months were re-

¹ For 1939 sufficient data were reported to prepare figures for twelve weeks rather than for the four weeks included in the two preceding studies.

corded by 14 firms, so that the monthly productivity data are limited to the figures for these 14 chains. Additional chains reported similar material on a quarterly basis as in 1937 and 1938, and thus trend figures for 12 identical chains are available for 4 weeks averaged in each of the years 1937 through 1939.

Number of Persons Employed

For the 17 firms reporting the number of full-time and part-time employees on the pay roll during 12 weeks of 1939, the aggregate number of hours worked was in excess of 1,000,000 hours each week and approached 2,000,000 hours in the week including December 15. During the first 10 months of the year from 75% to 80% of these hours was furnished by full-time help, while in November and December the percentage dropped below 70%. The average number of hours worked per week by full-time employees was in the neighborhood of 43 hours throughout the year, but the

Table 7. Number of Employees per Store for 18 Variety Chains: 1939
(Store, Office, and Warehouse Combined¹)

Week Including	Median ² Figures			Aggregate Figures		
	Full-time Employees	Part-time Employees	Total Employees	Full-time Employees	Part-time Employees	Total Employees
January 15..	5.71	5.52	11.00	20.46	15.76	36.22
February 15..	5.61	6.59	12.45	19.91	17.34	37.25
March 15....	5.61	6.69	12.98	19.97	18.25	38.22
April 15.....	5.86	6.78	13.15	20.92	18.67	39.59
May 15.....	6.48	7.70	14.95	21.24	19.58	40.82
June 15.....	6.88	6.95	13.34	21.58	18.84	40.42
July 15.....	6.95	6.49	12.74	21.23	18.02	39.25
August 15...	6.26	7.26	13.84	20.89	17.59	38.48
September 15	6.57	7.53	14.47	21.96	19.07	41.03
October 15..	6.39	8.25	14.56	22.76	20.59	43.35
November 15	6.91	9.55	16.49	23.86	22.00	45.86
December 15	9.25	17.61	28.35	*	*	*

* Data not available.

¹ A separate tabulation for 17 of the 18 chains indicated that throughout the year the median figure for office full-time employees per store was 6.77 or 6.78. On the aggregate basis corresponding figures ranged from 1.71 to 1.74. Only 4 chains reported employing nonstore part-time workers, hence it was not possible to prepare separate figures for the number of part-time employees in offices and warehouses.

² All the medians were set independently; therefore the sum of the individual items does not necessarily equal the total.

Table 8. Sales per Week per Employee¹ for 14 Variety Chains: 1939

Firm ^a	For the Week Including												Average for 12 Weeks
	Jan. 15	Feb. 15	March 15	April 15	May 15	June 15	July 15	Aug. 15	Sept. 15	Oct. 15	Nov. 15	Dec. 15	
A	\$60.85	\$69.15	\$66.57	\$55.24	\$81.76	\$76.15	\$76.16	\$60.69	\$63.47	\$56.93	\$73.91	\$60.93	\$66.82
B	60.47	75.70	69.83	70.67	83.79	97.31	71.72	68.72	76.00	89.02	77.29	111.16	79.31
C	66.37	82.99	66.74	74.56	94.07	77.70	76.75	82.07	70.90	81.46	74.14	125.56	81.11
D	70.76	72.54	72.16	98.25	90.54	85.26	77.33	76.72	76.15	80.07	76.36	119.02	82.93
E	66.99	84.76	76.12	89.93	86.71	94.76	80.56	99.92	93.15	87.07	79.13	115.28	87.86
F	74.73	82.62	79.21	85.63	113.09	88.47	82.31	80.71	90.48	86.37	72.05	209.07	95.39
G	82.55	93.31	90.93	116.01	103.38	102.08	94.14	92.63	97.03	101.95	101.28	120.66	100.41
H	81.77	89.86	92.63	87.73	128.45	90.70	94.61	96.42	92.94	111.43	91.49	151.30	100.78
I	61.69	101.22	79.39	97.65	109.21	107.94	99.54	90.24	98.81	120.32	112.73	158.93	103.14
J	92.47	100.11	83.35	78.17	96.36	95.34	124.32	113.99	126.48	118.67	83.87	161.38	106.21
K	87.06	99.11	96.13	91.37	119.83	121.86	117.06	102.65	115.65	118.69	112.52	160.78	111.89
L	90.03	97.81	100.43	95.39	139.19	126.40	115.84	112.89	104.81	126.46	114.75	176.63	116.72
M	114.57	115.86	98.70	126.48	138.67	136.52	123.10	132.28	132.38	131.97	117.84	*	*
N	126.34	81.54	98.06	154.12	164.74	147.40	151.31	115.07	106.91	167.69	133.09	205.01	137.61
Median	78.25	87.31	81.37	90.65	106.30	96.33	94.38	94.53	95.09	106.69	87.68	155.12	100.60

* Data not available.

¹ The figures in this table were derived from data on the number of hours worked by both full-time and part-time employees. The number of hours worked by part-time employees has been converted to a full-time equivalent.

² Since the designation by letter in this table is based on the average sales per employee per week secured by the firm for 1939, the letters in this table do not necessarily identify the same chains as do the corresponding letters in Tables 9, 10 and 11.

01

Table 9. Sales per Employee-hour¹ for 14 Variety Chains: 1939

Firm ^a	For the Week Including												Average for 12 Weeks
	Jan. 15	Feb. 15	March 15	April 15	May 15	June 15	July 15	Aug. 15	Sept. 15	Oct. 15	Nov. 15	Dec. 15	
A	\$1.27	\$1.43	\$1.39	\$1.15	\$1.70	\$1.59	\$1.59	\$1.26	\$1.32	\$1.19	\$1.54	\$1.27	\$1.39
B	1.28	1.60	1.48	1.49	1.77	2.06	1.52	1.45	1.60	1.88	1.63	2.33	1.67
C	1.27	1.63	1.44	1.71	1.67	1.79	1.55	1.92	1.79	1.64	1.52	2.26	1.68
D	1.38	1.72	1.39	1.55	1.96	1.62	1.60	1.71	1.48	1.70	1.54	2.62	1.69
E	1.49	1.52	1.52	2.06	1.90	1.79	1.63	1.61	1.60	1.68	1.60	2.49	1.74
F	1.45	1.58	1.52	1.65	2.19	1.70	1.58	1.55	1.74	1.66	1.39	4.02	1.83
G	1.11	1.80	1.42	1.75	1.96	1.94	1.79	1.62	1.78	2.17	2.04	2.88	1.85
H	1.63	1.78	1.85	1.75	2.56	1.81	1.89	1.92	1.86	1.97	1.83	3.03	1.99
I	1.82	1.97	1.66	1.56	1.92	1.92	2.51	2.30	2.53	2.38	1.69	3.29	2.13
J	2.09	2.27	2.33	2.17	3.10	2.81	2.47	2.51	2.38	2.94	2.55	3.69	2.61
K	2.07	2.35	2.29	2.18	2.85	2.90	2.79	2.44	2.75	2.83	2.68	3.66	2.65
L	2.37	2.39	2.04	2.62	2.87	2.82	2.55	2.74	2.74	2.73	2.43	*	*
M	2.48	2.80	2.73	3.30	3.11	2.83	2.60	2.56	2.62	2.75	2.73	3.24	2.81
N	2.63	1.69	2.04	3.21	3.43	3.07	3.15	2.40	2.23	3.49	2.77	4.27	2.86
Median	1.56	1.75	1.59	1.75	2.08	1.93	1.84	1.92	1.83	2.07	1.76	3.14	1.92

* Data not available.

¹ The figures in this table were derived from data on the number of hours worked by both full-time and part-time employees.

² Since the designation by letter in this table is based on the average sales per employee-hour secured by the firm for 1939, the letters in this table do not necessarily identify the same chains as do the corresponding letters in Tables 8, 10, and 11.

number of hours spent by part-time help increased from less than 20 in the first 10 months to 25 or more in November and December.

Table 7 presents on both a median and aggregate basis the average number of full-time and part-time employees per store in each of the 12 weeks reported for 1939. The difference in the level of the medians and aggregates results, of course, from the difference in the statistical method used. The aggregate figures are greatly influenced by the figures for large chains operating relatively large stores. The medians, on the other hand, give equal weight to the figures of all reporting chains, regardless of size. Among the 18 chains for which data are summarized in Table 7, 6 had fewer than 10 stores, 6 had from 10 to 50 stores, and 6 had 50 or more stores. On the basis of sales per store, 10 had average sales per unit of from \$30,000 to \$100,000, while 4 had lower, and 4 had higher, volumes.

One of the striking facts in the table is the increase in the number of full-time employees per store from the week including November 15 to that including December 15. The median figure jumped from 6.91 to 9.25, an increase of about 34%. Unfortunately one chain was unable to provide employee statistics for December. For the 17 that were able to give the data, the increase between the middle of November and the middle of December, on an aggregate basis, was about 40%.

A second striking fact is the close similarity between the number of full-time and the number of part-time workers per store during the weeks covered by the table. On a median basis there were about as many part-time as full-time employees in the first 10 selected weeks, with the number of the former exceeding the latter in the middle of November and December. On the aggregate basis, the number of part-time personnel was slightly below the number of full-time people for the first 11 weeks, and, for the 17 chains giving the data, was slightly below in the middle week of December as well.

Sales per Employee and per Employee-hour: 1939

Table 8 provides figures for sales per employee per week for 12 weeks of 1939 followed by averages based on the figures for the 12 weeks. Individual data for the 14 chains are given in separate rows, the position of the row being dependent on

the average sales per employee realized by the firm for the 12 weeks. This average ranged from \$66.82 to \$137.61, and the median experience was \$100.60. From data available for 10 of the 14 firms it appears that the value of the average transaction varied from 18 cents to 32 cents with a median of 25 cents. If the average of 25 cents be regarded as typical of the group, then the number of transactions per week per employee in the 12-week period was about 400.

There was a marked variation from month to month in the dollar sales per week per employee. The lowest figure was usual for the middle of January and by far the highest for the middle of December. Higher than average sales also were recorded in May and in October. For the most part changes in the sales per week per employee correspond with changes in the sales per store. In the week including November 15, however, sales per store rose above the level in the middle week of October yet the sales per employee dropped. It is possible that in November the additions to the number of part-time employees shown in Table 7 were greater than the sales increase in the period required. On the other hand, it may have been essential from an operating standpoint that at least some new people should acquire a knowledge of stocks and the selling techniques to be used before the height of the Christmas rush.

Because there were variations among the chains and among the months for individual chains in the number of hours constituting a full-time week, it seemed desirable to provide figures on the basis of sales per hour. These are given for the 14 chains in Table 9. On the average for the entire year the sales per hour ranged from \$1.39 to \$2.86, the median being \$1.92. Thus, assuming an average transaction of 25 cents, the employees completed between seven and eight transactions per hour. Here again, as in Table 8, the highest records were for the week including December 15 and the lowest were in January.

There is a slight suggestion in the data that sales per employee-hour may have been lower for firms with transactions of relatively small value than for those with higher average sales. This tendency is not well defined, however.

The 5 firms realizing the highest hourly sales per person for the average of the 12-week period also had the greatest productivity in 8 out of 12 individual months. Three of these 5 were the

chains with average sales per store of \$100,000 or more. This fact is consistent with the finding in 1937 and 1938 that sales per employee have tended to vary directly with the size of store operated.

Trend in Employee Productivity: 1937-1939

Tables 10 and 11 present data for the three years, 1937-1939, for 12 chains which have provided comparable figures for 4 weeks in each year. The firms included are not necessarily the same chains as those included in the more detailed tables covering 12 weeks in 1939. The purpose of these tables is to indicate the direction of year-to-year change in the productivity of personnel.

It is clear that over the three-year period there has been a narrowing of the range covered by the data submitted. In Table 10 the difference between the extreme low and the high items for 1937 was \$80.43, while in 1938 the difference was \$48.63, and in 1939, \$45.87. This narrowing has come at both ends of the range with about twice as much of the reduction coming at the high end

of the series as at the low. In both tables, it is noticeable that the firm having the lowest figure in 1937 has improved progressively in 1938 and in 1939 and that several chains which had better-than-average records in 1937 have lost ground in 1938 and again in 1939. It is possible, of course, that there has been some improvement in the quality of the personnel data submitted during the three-year period, which is reflected in this narrowing of the range of the figures. However, if the figures for the period are comparable, then more chains have consistently suffered decreasing personnel efficiency than rising efficiency. The medians in both tables indicate that the productivity in 1939 was less than in 1938. Yet from tables presented earlier in the bulletin it is clear that average sales per store for the year were better in 1939 than in 1938. Furthermore, examination of the sales data for the four middle weeks of March, June, September, and December indicated that in the majority of instances sales per store for the 12 chains were higher in 1939 than in 1938. It would have been reasonable to expect somewhat higher productivity per employee for 1939.

Table 10. Sales per Employee¹ per Week for 12 Identical Variety Chains: 1937-1939

Firm ²	Average of Four Weeks ³		
	1937	1938	1939
A	\$73.48	\$113.46	\$123.61
B	86.13	92.33	97.28
C	87.69	85.19	94.80
D	97.18	96.96	104.93
E	98.61	103.64	102.87
F	99.01	82.15	88.58
G	100.02	107.97	94.83
H	101.08	103.10	88.15
I	117.22	99.49	85.23
J	134.38	130.78	127.07
K	137.80	113.59	111.27
L	153.91	130.09	131.10
Median	99.57	103.37	100.08

¹ The figures in this table were derived from data on the number of hours worked by both full-time and part-time employees. The number of hours worked by part-time employees has been converted to a full-time equivalent.

² Since the designation by letter in this table is based on the average sales per employee secured by the firm in 1937, the letters in this table do not necessarily identify the same chains as do the corresponding letters in Tables 8, 9, and 11.

³ Including March 15, June 15, September 15, and December 15.

Table 11. Sales per Employee-hour¹ for 12 Identical Variety Chains: 1937-1939

Firm ²	Average of Four Weeks ³		
	1937	1938	1939
A	\$1.67	\$2.76	\$2.90
B	1.79	1.74	1.93
C	1.83	2.01	2.11
D	1.85	2.09	1.82
E	1.95	1.74	1.87
F	2.07	2.13	2.11
G	2.12	2.17	1.85
H	2.24	2.63	2.86
I	2.38	2.05	1.78
J	2.68	2.05	2.01
K	3.01	2.97	2.80
L	3.04	2.66	2.66
Median	2.10	2.11	2.06

¹ The figures in this table were derived from data on the number of hours worked by both full-time and part-time employees.

² Since the designation by letter in this table is based on the average sales per employee-hour secured by the firm in 1937, the letters in this table do not necessarily identify the same chains as do the corresponding letters in Tables 8, 9, and 10.

³ Including March 15, June 15, September 15, and December 15.

BASIC 1939 TABLES

The information presented in this report is based on statements submitted to the Harvard Bureau of Business Research by 47 limited price variety chains. The number of usable reports received is greater than for any of the nine prior years for which the Bureau has conducted surveys of this type, the gain of three reports as compared with 1938 being recorded for small chains. As in 1938, all the large United States variety chains are represented in the 1939 study. If figures for the 7 reporting Canadian chains be omitted, the sales of the 40 United States firms amounted to \$907,835,269, or almost 90% of the estimated total volume for variety stores in this country for 1939.¹

The 47 reports included figures for 18 chains with less than 10 stores, 13 chains with from 10 to 50 stores, 14 chains with from 50 to 500 stores, and 2 chains with more than 500 stores. A somewhat different size grouping was secured when dollar volume was used as a criterion, owing to the fact that the size of units operated by the several chains varied substantially. Thus, on an aggregate volume basis, 21 chains realized sales of less than \$500,000 each, 16 secured volumes ranging from \$500,000 to \$10,000,000, 8 secured

¹No exact figure for the percentage of the total variety business done by chains is available, but the chains account for a large proportion of such retail volume. It is probable that the Bureau figures represent more than 90% of the total variety chain volume.

volumes of from \$10,000,000 to \$125,000,000, and 2 had sales in excess of \$125,000,000.

Sales Volume per Store Varies within Wide Limits

For the first time in this series of studies, figures have been obtained classifying the stores operated by the individual reporting chains according to dollar sales per store. These data, available for 43 of the chains, are summarized in Table 12. Figures in the first column of this table clearly indicate that most of the chains, 41 out of 43, had stores with sales of from \$30,000 to \$100,000. Furthermore, stores of this size, as shown in the third column, constituted over 35% of the 3,095 stores represented in the table. These stores, important as they were in the organizations of most of the chains, accounted for but 13.02% of the total net sales volume. Stores with sales of less than \$30,000 were operated by 31 of the 43 firms, constituting 9.92% of the total number of stores but realizing only 1.20% of the total volume.

Most important, both from a standpoint of number of stores and realized sales, were the 1,511 stores with annual volumes from \$100,000 to \$500,000. Although such units were operated by only 17, or slightly less than 40%, of the chains, the sales realized amounted to 58.42% of the total volume of the 43 chains. It is significant that 6 chains operated 40 stores with sales of more than \$1,000,000 each, together contributing more than 10% of the total sales volume.

Table 12. Distribution of Stores Operated by 43 Variety Chains According to Sales per Store: 1939
(Aggregate Figures)

Annual Net Sales per Store	Number of Chains Operating Stores of the Size Indicated	Stores Operated for the Entire Fiscal Year		Net Sales in Stores Operated for the Entire Fiscal Year		Average Sales per Store
		Number	Percentage of Total Number of Stores	Dollars	Percentage of Total Net Sales	
Less than \$30,000.....	31	307	9.92%	\$6,464,872	1.20%	\$21,058
\$30,000-\$100,000.....	41	1,102	35.61	70,233,756	13.02	63,733
\$100,000-\$500,000.....	17	1,511	48.82	315,160,706	58.42	208,578
\$500,000-\$1,000,000.....	8	135	4.36	91,633,942	16.99	678,770
\$1,000,000 or more.....	6	40	1.29	55,985,997	10.37	1,399,650
Total.....	43	3,095	100.00%	\$539,479,273	100.00%	\$174,307

Sales of Apparel and Accessories Important

Table 13 presents a classification of sales by merchandise lines. As in past reports, the figures are presented in two ways: at the left are percentage figures based on dollar aggregates for the 24 chains providing the data; while at the right are given medians prepared from the tabulated arrays of the percentages for each sales category for each individual chain. The aggregate figures, of course, give large-volume chains more weight than small chains. The medians, on the other hand, give equal weight to the percentages for all chains, and are not distorted by unusually high or low figures.

Table 13. Sales by Merchandise Lines for 24 Variety Chains: 1939
(Net Sales = 100%)

Merchandise Lines	Aggregates	Medians ¹
Apparel and Accessories.....	39.06%	32.42%
Dry Goods, Notions, and Domestic.....		15.27
Hardware, Electrical Supplies, Crockery, and Glassware.....	13.69	14.43
Toys, Games, and Books.....	12.47	5.46
Stationery.....		5.68
Drugs and Toiletries.....	9.77	9.70
Miscellaneous.....	8.74	5.67
Confectionery and Nuts.....	7.17	7.69
Soda Fountains, Luncheonettes, and Restaurants.....	7.10	3.48
Jewelry.....	2.00	1.94
Total.....	100.00%	100.00%

¹ All the medians were set independently; therefore the sum of the individual items does not necessarily equal 100.

The percentages in Table 13 are arranged in the order of their relative importance on an aggregate basis, percentage sales of apparel and accessories and dry goods, notions, and domestics appearing at the top of the list in 1939 as they have in past years. Comparison of the aggregate and median figures for these lines indicates, however, that the sale of apparel and dry goods is relatively less important in large chains than in smaller organizations. Complete details were not provided by all 24 chains on the division between apparel and accessories and dry goods. For the 23 chains giving the information, however, it appeared, on a median basis, that the sale of apparel and accessories was more than twice as important as that of dry goods, notions, and domestics.

Operating Results for All Reporting Chains

Table 14 presents results for the 47 variety chains reporting for 1939. In the first two columns of this table are the aggregate dollars for

each operating item and the percentages computed from these aggregates. The figures reveal that during the year the 47 chains took in over the counter \$921,276,000, or an average of \$162,000 per store¹ in the 5,695 units operated. Out of the money so received, the chains paid \$590,291,000, or 64.07%, for merchandise and its transportation to the stores. Out of remaining funds, \$296,566,000, or 32.19% of sales, was used to defray operating expenses (including interest on net worth). There was a resultant net profit on merchandising operations of \$34,419,000, or 3.74% of sales. When interest on net worth, previously charged as expense, was credited together with nonmerchandising revenue, the final earnings out of which income taxes and dividends were to be paid amounted to \$63,074,000, or 6.85% of sales.

Data for the last three columns of Table 14 were obtained by arraying from low to high the figures reported for each item by the 47 individual chains. As a supplement to this part of the table, complete arrays of the percentages reported for five significant items are given in Table 15, page 16. Thus, we see in Table 15 that the figures for gross margin ranged from 25.67% to 41.90% of net sales with the median, or twenty-fourth item, amounting to 34.54%. One-half the figures centered about this median ranged from 33.31% to 36.21%. The median figure and the range limits within which half the data fell are presented for all the items in the right-hand columns of Table 14. Thus it is possible for a chain store executive to compare his own operating figures with the medians, and to see whether or not his performance lies within a normal range.

In contrast to the aggregate figures which show how the consumer's dollar is spent, on the average, in the entire variety chain field, the median figures indicate the costs typically incurred by chain organizations, without regard to size of chain. While the aggregate data are heavily influenced by the experience of a few large chains, the medians give

¹ This average, it might be noted, is slightly lower than that given for all stores reported in Table 12. Two factors may cause this differential. First, the number of reporting chains is somewhat larger in Table 14 than in Table 12, and the number of stores represented is substantially larger. In the second place, stores operated less than a full year have been excluded from the data in Table 12, whereas the material in Table 14 includes sales for all units and presents in the aggregate number of stores, from which sales per unit is computed, a summation of the average number of units operated during the year by each chain.

Table 14. Operating Results for 47 Variety Chains: 1939
(Net Sales = 100%)

Items	Aggregate Figures		Median and Range Figures		
	Amounts (Dollar figures given in thousands)	Percentages Computed from the Combined Dollar Figures of the 47 Chains	Percentages Computed from the Figures in Each Chain Taken Individually		
			Median ¹ Figures	One-half the Reported Figures, Centered on the Median, Lay between the Limits Listed Below	
Aggregate Number of Stores.....	5,695	....	5,695	....	....
Aggregate Net Sales.....	\$921,276	100.00%	\$921,276	....	....
Average Net Sales per Chain.....	\$19,602	....	....	....	....
Average Sales per Store.....	\$162	....	....	....	....
Index of Change (1939/1938):					
Number of Stores per Chain.....	....	....	100.00	100.00	105.00
Net Sales per Chain.....	....	....	107.12	104.22	114.94
Average Sales per Store.....	....	....	104.85	102.38	109.63
Net Sales in Identical Stores.....	....	....	106.04	104.30	107.37
Net Cost of Merchandise Sold (including freight, express, post- age, and truckage).....	\$590,291	64.07%	65.46%	63.79%	66.69%
GROSS MARGIN.....	330,985	35.93	34.54	33.31	36.21
Salaries and Wages.....	\$135,192	14.68%	16.51%	15.06%	17.94%
Tenancy Costs.....	92,627	10.05	5.47	4.52	7.76
Light, Water, and Power.....	9,838	1.07	1.14	0.91	1.31
Depreciation of Fixtures and Equipment.....	7,660	0.83	0.97	0.77	1.15
Supplies.....	7,911	0.86	1.10	0.63	1.31
Advertising.....	2,163	0.23	0.29	0.19	0.60
Insurance (except on real estate).....	3,816	0.41	0.49	0.35	0.60
Taxes (except on real estate or income):					
Sales.....	1,432	0.16	0.00	0.00	0.16
Other.....	10,115	1.10	1.13	0.86	1.39
Miscellaneous Expense.....	11,008	1.19	1.42	1.13	1.82
Total Expense before Interest.....	\$281,762	30.58%	29.72%	27.86%	31.24%
Total Interest.....	14,804	1.61	1.57	1.41	1.86
TOTAL EXPENSE including Interest.....	\$296,566	32.19%	31.26%	29.46%	33.23%
NET PROFIT OR LOSS.....	\$34,419	3.74%	2.68%	1.54%	4.50%
Net Profit or Loss from Real Estate Operations.....	\$12,820	1.39%	0.10%	0.00%	0.38%
Interest on Net Worth (except on real estate, leaseholds, and goodwill).....	14,223	1.54	1.43	1.21	1.63
Other Revenue, Net.....	1,612	0.18	0.01	0.00	0.09
Total Net Other Income.....	\$28,655	3.11%	1.79%	1.49%	2.28%
NET GAIN before Income Taxes:.....	\$63,074	....	....	....	....
Percentage of Net Sales.....	....	6.85%	4.66%	3.40%	7.28%
Percentage of Net Worth ².....	....	13.59	14.74	11.38	22.92
Tax on Income and Undistributed Profits.....	*	*	0.84%	0.24%	1.22%
NET GAIN after Income Taxes:.....	*	*	3.69%	2.29%	5.93%
Percentage of Net Sales.....	....	*	11.77	9.15	14.41
Percentage of Net Worth.....	....	*	....	....	....
Rate of Stock-turn (times a year):					
Based on Beginning and Ending Inventories.....	....	4.89	3.94	3.47	4.56
Based on Monthly Inventories ³.....	....	4.47	3.51	2.75	4.54
Total Mark-downs and Shortages.....	*	*	2.17%	1.27%	3.04%
Freight, Express, Postage, and Truckage.....	*	*	2.52%	1.88%	3.53%
Distribution of Stores ⁴ among Cities with Population of:					
Less than 10,000.....	1,702	30.58%	....	....	....
10,000-25,000.....	1,341	24.09	....	....	....
25,000-100,000.....	1,046	18.79	....	....	....
100,000-500,000.....	587	10.55	....	....	....
500,000-1,000,000.....	312	5.61	....	....	....
1,000,000 or more.....	578	10.38	....	....	....

* Data not available. See the paragraph on methods, Appendix, page 28.
¹ All the medians were set independently; therefore the sum of the individual items does not necessarily equal the total.
² The figures for this item were based on the reports of the 42 chains giving balance sheet data.
³ The figures for this item were based on the reports of the 29 chains giving monthly data.
⁴ Location of stores by size of city was reported by 45 chains having 5566 stores.

**Table 15. Operating Percentages for 47
Variety Chains: 1939**

(Net Sales = 100%; medians in bold type)

NOTE: The percentages in each column are arranged in order of size and hence the percentages in each horizontal row are not figures for the same firm.

Gross Margin	Total Expense including Interest	Net Profit or Loss	Net Gain or Loss	Salaries and Wages
25.67%	24.13%	L. 2.69%	L. 1.19%	12.48%
26.47	24.72	L. 2.35	L. 0.76	12.90
29.61	26.62	L. 2.25	L. 0.52	13.12
30.17	27.27	L. 1.66	L. 0.13	13.90
30.54	27.50	L. 1.65	L. 0.05	14.10
30.74	27.80	L. 1.03	0.77	14.38
31.27	28.03	L. 1.02	0.90	14.39
31.49	28.34	L. 0.54	1.59	14.41
31.73	28.41	0.71	2.13	14.71
32.25	28.65	0.90	2.45	14.76
32.55	29.09	0.92	2.82	14.96
33.04	29.24	1.52	3.31	15.01
33.31	29.46	1.54	3.40	15.06
33.33	29.60	1.64	3.40	15.06
33.46	29.85	1.76	3.40	15.13
33.56	29.87	1.99	3.63	15.22
33.71	29.97	2.05	3.69	15.40
33.74	30.26	2.19	3.81	15.51
34.01	30.31	2.20	3.84	15.60
34.32	30.95	2.29	3.86	15.62
34.50	30.98	2.33	4.01	15.97
34.51	31.12	2.44	4.12	15.99
34.54	31.19	2.62	4.61	16.35
34.54	31.26	2.68	4.66	16.51
34.80	31.27	2.71	4.72	16.54
34.88	31.30	2.76	5.08	16.57
35.01	31.33	2.84	5.16	16.58
35.27	31.52	3.07	5.19	17.07
35.42	31.74	3.24	5.60	17.16
35.60	32.27	3.47	5.99	17.17
35.69	32.39	3.60	6.61	17.23
35.72	32.59	4.01	6.69	17.28
35.75	32.83	4.08	7.07	17.64
36.13	33.02	4.43	7.27	17.72
36.21	33.23	4.50	7.28	17.94
36.35	33.26	4.57	7.38	17.96
36.55	33.62	4.94	7.60	18.06
37.08	34.48	5.76	7.69	18.71
37.16	34.54	5.79	8.53	18.76
37.31	34.66	5.90	8.64	18.88
37.34	34.70	6.51	8.74	19.28
37.42	35.92	7.29	8.78	20.06
37.91	36.52	8.39	9.83	20.07
38.48	36.75	8.86	9.91	20.17
39.09	37.09	9.05	11.09	20.29
40.96	38.41	9.98	11.27	22.85
41.90	39.06	11.63	13.14	23.38
34.54% Median	31.26% Median	2.68% Median	4.66% Median	16.51% Median

equal weighting to all chains. On a median basis, the gross margin and total expense percentages were lower than the corresponding averages based on aggregates. Since the greater differential existed for gross margin, the averages based on aggregates showed a larger net operating profit than did the medians. While the total expense varied by roughly 1.0% of sales on the two bases, far greater

differentials were displayed by two of the component expense items, salaries and wages and tenancy costs. It is at once evident, as it has been in preceding years, that large chains paid a smaller proportion of their sales for pay roll and a larger proportion for real estate costs than did the smaller firms.

Despite the fact that net gain on the average basis was 6.85% of net sales in comparison to the lower median figure of 4.66%, net gain in relation to net worth was higher on the median basis. Typically the chains realized 14.74% on net worth, while throughout the combined variety chain field the average return was 13.59%. This result reflects the fact that large chains had somewhat greater net worth in relation to sales than did the small chains. Additional evidence of this fact is found in the item, interest on net worth.

Operating Results Classified According to Total Volume of Sales

The Groups Defined

Size of business has long been regarded as an important factor affecting retail operating statistics. Following the practice established in preceding surveys for variety chains, the data have been classified in turn according to three measures of size, the first of which is total net sales volume. In Table 16, page 18, are given percentage figures for chains in three groups, those with sales of less than \$500,000, those with sales of from \$500,000 to \$10,000,000, and those with sales of from \$10,000,000 to \$125,000,000.

In comparison with former years, there are a greater number of reporting chains with sales of less than \$500,000. In 1929, for example, 6 firms reported in this category; in 1936, 13; whereas for 1939 there are 21 chains, the largest number of chains of this size ever to have submitted data for one particular year. Obviously much greater reliance may be placed on the figures based on this large group of chains. In the group having sales of from \$500,000 to \$10,000,000 are classified 16 reporting chains. Of these, 15 also reported in 1938. For the group with sales of \$10,000,000 to \$125,000,000, the entire number of variety chains of this size in the United States is represented, as it has been since 1937.

Before studying the detailed operating figures, it is well to have in mind a clear picture of the chains in each group. In the first group, 20 of the 21 indicated the distribution of their stores by

size. None of these firms operated stores with sales of more than \$150,000, and in only one store of the 118 represented was the limit of \$100,000 surpassed. In 56, or almost half, of the stores the annual sales did not reach \$30,000. Thus it is not surprising to find in Table 16 that the median figure for sales per store was slightly less than, and the average based on the aggregate somewhat more than, \$30,000. From data provided at the bottom of Table 16, it is clear that the majority of the stores were located in cities with populations of less than 10,000. On the whole, these chains were small not only in number of stores per chain, but also in sales per store. They were small chains serving the needs of small communities.

The medium-size chains usually operated a greater number of stores than did the small chains, and rarely had units with annual sales of more than \$500,000. More than 88% of their stores achieved sales of less than \$100,000, and the average for all stores was in the neighborhood of \$50,000. About 83% of the stores were in cities with populations of less than 25,000.

The large chains, on the other hand, each operated more than 100 units and achieved varying sales volumes in these outlets. More than 60% of their stores, however, had sales between \$100,000 and \$500,000, while almost 2% had sales of more than \$1,000,000. The units were distributed among cities of all sizes, with more than 20% in cities of 100,000 or more.

Thus, it is obvious that large volume is a result not only of operating a large number of stores, but also of securing large dollar volume per store. Moreover, this large unit volume clearly is dependent to a marked degree on the potential market.

Since each chain report submitted to the Bureau is a consolidated statement covering all the retail outlets of the chain, it is impossible satisfactorily to evaluate the effects of size of city upon operating costs. This would be possible only from the study of individual store statistics which are not available. Undoubtedly, however, the location by size of city has an important effect on some of the items.

Significant Operating Results

In Table 16, for example, the high tenancy cost, over 8% of sales, for large chains develops primarily from the situation of stores in medium-size

and large cities in contrast to the small city locations common for smaller chains. There are no figures at hand on the rent per square foot paid by variety chains, but data of this type for independent department stores clearly indicate that real estate costs per square foot in retail shopping centers vary directly with the size of city. Although the large chains achieved relatively high sales per store, they obviously were unable to secure enough additional sales volume to compensate for the high dollar tenancy charges.

In the use of personnel, however, the large chains were more successful than were the small, paying less than 15% of sales for salaries and wages in contrast to the 17% approached by small and moderate-size firms. Figures in Table 17, page 19, show that the pay roll advantage enjoyed by large chains was not limited to store personnel, but was also usual in the case of administrative personnel. The store pay roll advantage probably came through securing larger dollar sales per selling employee while the lower nonstore pay roll resulted from large total chain volume.

Total expense, on the median basis, differed only slightly among the three volume groups. Since the chains with sales of more than \$500,000 were able to secure relatively high gross margins, they usually secured better profits on their retail operations than did the smaller chains. Firms in all three volume groups, however, earned more than 12% on net worth.

Table 17 provides for medium-size and large chains separately a classification of costs according to those incurred for store operation and those incurred for general overhead. As has been demonstrated in past studies, the total store expense constitutes more than 80% of the total operating expense, if interest is not included. A tabulation of data for the 7 small chains which reported functional expense allocations indicated that a somewhat smaller proportion, around 75%, of the total expense was chargeable directly to store operations. For this small group of chains total store expense on the aggregate basis amounted to only 23% of net sales, while administrative and general expense accounted for over 7% of net sales.

From Table 17 it appears that administrative costs were substantially lower for chains with sales over \$10,000,000 than for chains with sales of \$500,000-\$10,000,000. With the supplementary fragmentary data for small chains, it is clear

Table 16. Operating Results for 45 Variety Chains Classified According to Volume of Sales: 1939
(Net sales = 100%)

Items	Median ¹ Figures			Aggregate Figures		
	Percentages Computed from the Figures of Each Chain Taken Individually			Percentages Computed from the Combined Dollar Figures of the Chains in Each Sales Volume Group		
	Net Sales Volume			Net Sales Volume		
	Less than \$500,000	\$500,000-10,000,000	\$10,000,000-125,000,000	Less than \$500,000	\$500,000-10,000,000	\$10,000,000-125,000,000
Number of Chains	21	16	8	21	16	8
Average Sales per Store	\$28,900	\$41,887	\$213,433	\$34,407	\$53,523	\$197,417
Index of Change (1939/1938):						
Number of Stores per Chain	100.00	103.82	100.42	....	....	....
Net Sales per Chain	106.59	109.34	106.89	....	....	....
Average Sales per Store	104.40	106.32	106.44	....	....	....
Net Sales in Identical Stores	*	106.59	104.97	....	....	....
Net Cost of Merchandise Sold (including freight, express, postage, and truckage)	66.26%	64.45%	64.97%	66.33%	63.83%	66.28%
GROSS MARGIN	33.74	35.55	35.03	33.67	36.17	33.72
Salaries and Wages	17.16%	17.15%	14.86%	17.40%	16.92%	14.19%
Tenancy Costs	4.52	5.70	8.37	4.53	6.86	8.45
Light, Water, and Power	1.19	1.02	1.19	1.20	0.96	1.11
Depreciation of Fixtures and Equipment	0.97	1.09	0.87	1.02	1.21	0.88
Supplies	1.26	1.11	0.97	1.08	1.00	0.94
Advertising	0.46	0.29	0.26	0.54	0.34	0.39
Insurance (except on real estate)	0.52	0.48	0.50	0.60	0.51	0.49
Taxes (except on real estate or income):						
Sales	0.00	0.00	0.13	0.15	0.09	0.13
Other	1.15	1.09	1.06	1.22	1.22	1.01
Miscellaneous Expense	1.41	1.45	1.47	1.94	1.47	1.43
Total Expense before Interest	29.50%	29.64%	29.78%	29.68%	30.58%	29.02%
Total Interest	1.62	1.52	1.44	1.61	1.57	1.49
TOTAL EXPENSE including Interest	30.98%	31.16%	31.30%	31.29%	32.15%	30.51%
NET PROFIT OR LOSS	1.54%	2.69%	2.96%	2.38%	4.02%	3.21%
Net Profit or Loss from Real Estate Operations	0.00%	0.17%	0.94%	0.06%	0.29%	1.12%
Interest on Net Worth (except on real estate, leaseholds, and goodwill)	1.42	1.44	1.42	1.45	1.46	1.43
Other Revenue, Net	0.00	0.07	0.08	0.26	0.19	0.29
Total Net Other Income	1.50%	1.69%	2.32%	1.77%	1.94%	2.84%
NET GAIN before Income Taxes:						
Percentage of Net Sales	3.40%	4.39%	5.80%	4.15%	5.96%	6.05%
Percentage of Net Worth ²	12.03	15.11	14.68	16.09	18.53	13.60
Tax on Income and Undistributed Profits	*	0.84%	0.97%	*	*	1.09%
NET GAIN after Income Taxes:						
Percentage of Net Sales	*	3.31%	4.87%	*	*	4.96%
Percentage of Net Worth	*	12.36	12.59	*	*	11.15
Rate of Stock-turn (times a year):						
Based on Beginning and Ending Inventories	3.55	4.08	5.25	3.38	4.09	5.21
Based on Monthly Inventories ³	*	3.40	4.40	*	3.41	4.39
Total Mark-downs and Shortages	*	1.72%	1.95%	*	*	*
Freight, Express, Postage, and Truckage	3.36%	2.97	2.28	*	*	2.76%
Distribution of Stores ⁴ among Cities with Populations of:						
Less than 10,000 .....	....	....	....	80.87%	70.81%	29.16%
10,000-25,000 .....	....	....	....	3.48	12.92	27.62
25,000-100,000 .....	....	....	....	2.60	5.84	21.94
100,000-500,000 .....	....	....	....	8.70	4.22	10.80
500,000-1,000,000 .....	....	....	....	4.35	3.85	3.83
1,000,000 or more .....	....	....	....	0.00	2.36	6.65

* Data not available. See the paragraph on methods, Appendix, page 28.

¹ All the medians were set independently; therefore the sum of the individual items does not necessarily equal the total.

² The figures for this item for the chains in the first group were based on the reports of the 16 chains giving balance sheet data.

³ The figures for this item for the chains in the second group were based on the reports of the 12 chains giving monthly data.

⁴ Location of the stores by size of city was reported by 19 chains in the first group having 115 stores, by all 16 chains in the second group, and by all 8 chains in the third group.

Table 17. Store Expense, General Overhead Expense, and Total Expense for 23 Variety Chains
Classified According to Volume of Sales: 1939
(Net sales = 100%)

Items	Median ¹ Figures		Aggregate Figures	
	Percentages Computed from the Figures of Each Chain Taken Individually		Percentages Computed from the Combined Dollar Figures of the Chains in Each Sales Volume Group	
	Net Sales Volume		Net Sales Volume	
	\$500,000-10,000,000	\$10,000,000-125,000,000	\$500,000-10,000,000	\$10,000,000-125,000,000
Number of Chains.....	15	8	15	8
Average Sales per Store.....	\$41,554	\$213,433	\$53,190	\$197,417
Store Expense:				
Salaries, Wages, and Bonuses:				
Store Managers.....	4.16%	1.88%	*	*
Salespeople.....	*	7.83	*	*
All Other Store.....	*	2.95	*	*
Total Salespeople and All Other Store.....	9.32	11.01	*	*
Total Store Salaries and Wages.....	13.25%	12.82%	13.43%	12.11%
Tenancy Costs.....	5.63	8.23	6.73	8.30
Light, Water, and Power.....	0.99	1.18	0.94	1.09
Depreciation of Fixtures and Equipment.....	1.05	0.84	1.14	0.86
Supplies.....	0.96	0.85	0.89	0.82
Advertising.....	0.28	0.26	0.34	0.39
Insurance (except on real estate).....	0.41	0.49	0.41	0.47
Taxes (except on real estate or income):				
Sales.....	0.00	0.13	0.09	0.13
Other.....	0.90	0.80	0.98	0.82
Miscellaneous Expense.....	0.86	0.93	0.89	0.95
Total Store Expense before Interest.....	24.75%	26.73%	25.84%	25.94%
Administrative and General:				
Salaries and Wages:				
Officers and Chief Executives.....	*	0.56%	*	*
Buyers.....	*	0.49	*	*
District Managers.....	*	0.34	*	*
Total Administrative.....	2.21%	1.17	*	1.15%
Office.....	*	*	*	*
All Other.....	*	*	*	*
Total General.....	0.87	0.99	*	0.93
Total Administrative and General Salaries and Wages.....	3.26	2.17	3.47%	2.08
Tenancy Costs.....	0.18	0.13	0.17	0.15
Light, Water, and Power.....	0.02	0.02	0.02	0.02
Depreciation of Fixtures and Equipment.....	0.05	0.02	0.07	0.02
Supplies.....	0.12	0.13	0.13	0.12
Insurance (except on real estate).....	0.08	0.01	0.09	0.02
Taxes (except on real estate or income).....	0.18	0.15	0.23	0.19
Miscellaneous Expense.....	0.58	0.49	0.62	0.48
Total Administrative and General Expense.....	4.68%	3.16%	4.80%	3.08%
Total Expense:				
Salaries and Wages.....	17.07%	14.86%	16.90%	14.19%
Tenancy Costs.....	5.92	8.37	6.00	8.45
Light, Water, and Power.....	1.06	1.19	0.96	1.11
Depreciation of Fixtures and Equipment.....	1.10	0.87	1.21	0.88
Supplies.....	1.12	0.97	1.02	0.94
Advertising.....	0.28	0.26	0.34	0.39
Insurance (except on real estate).....	0.47	0.50	0.50	0.49
Taxes (except on real estate or income):				
Sales.....	0.00	0.13	0.09	0.13
Other.....	0.98	1.06	1.21	1.01
Miscellaneous Expense.....	1.47	1.47	1.51	1.43
Total Expense before Interest.....	29.72%	29.78%	30.64%	29.02%
Rate of Stock-turn (times a year):				
Based on Beginning and Ending Inventories.....	4.23	5.25	4.13	5.21
Based on Monthly Inventories.....	3.51	4.40	3.48	4.39

* Data not available. See the paragraph on methods, Appendix, page 28.
¹ All the medians were set independently; therefore the sum of the individual items does not necessarily equal the total.

that large volume results in lowering percentage administrative expense. The greatest saving, of course, is in the salary item which constitutes a substantial part of the overhead expense.

Retail Inventories and Stock-Sales Ratios

One of the characteristics accompanying differences in retail sales volume is a tendency for stock to turn more rapidly in large than in small stores. This is found in the variety chain field as well as among independent merchants. Thus the chains with sales of less than \$500,000 and average sales per store of about \$30,000 turned their inventories 3½ times annually while firms with total sales over \$10,000,000 and average sales per store of about \$200,000 achieved a turnover rate of more than 5. In order to have fairly complete stocks for customer selection, small chains had to maintain a minimum inventory which was high in relation to the sales realized. Since this was true it seemed desirable to establish monthly stock-sales ratios for chains of different volumes. Fortunately sufficient data were submitted for 1939 to make it possible to present such material in Table 18. The figures for small chains, however, are based on less than 40% of the reports and should be considered as suggestive only.

It is obvious from the figures that in every month the ratio is highest for the small chains and lowest for the large chains. At the beginning of every month except December, retail inventories were more than 4½ times the sales achieved by

Table 18. Stock-Sales Ratios¹ for 28 Variety Chains Classified According to Volume of Sales: 1939

Month	Net Sales Volume		
	Less than \$500,000	\$500,000-10,000,000	\$10,000,000-125,000,000
Number of Chains.....	8	12	8
January.....	5.03	4.51	3.12
February.....	5.41	4.17	3.22
March.....	5.14	4.16	2.90
April.....	4.80	3.85	2.80
May.....	4.61	3.65	2.78
June.....	4.94	3.64	2.76
July.....	4.77	3.73	2.92
August.....	4.68	3.62	2.93
September.....	4.59	3.60	2.96
October.....	4.71	3.65	2.97
November.....	5.03	3.89	3.12
December.....	2.31	2.03	1.59

¹ Ratio of retail inventory for end of preceding month to sales for month.

the small chains. Slightly lower ratios were usual for medium-size chains, while the large chains carried inventories approximately three times as great as monthly sales. Large chains had less variation in the monthly ratios than did the medium-size and small chains. For all firms, however, the lowest ratio was for December, while high ratios were found for January, February, and November.

In terms of dollar inventory per store, shown in Table 19, small and medium-size chains had similar investments in inventory per store, the investment being but 20% higher for the medium-size than for the small chains. The large firms, on the other hand, had inventories more than three times as large as those carried by the small chains. In all cases, dollar inventories were highest at the end of November in anticipation of Christmas demands.

Table 19. Average End-of-Month Retail Inventory per Store for 28 Variety Chains Classified According to Volume of Sales: 1939

Month	Net Sales Volume		
	Less than \$500,000	\$500,000-10,000,000	\$10,000,000-125,000,000
Number of Chains.....	8	12	8
January.....	\$12,008	\$12,909	\$36,839
February.....	12,892	14,932	39,571
March.....	13,517	16,565	44,612
April.....	13,779	16,717	44,179
May.....	13,771	16,524	42,969
June.....	13,506	16,442	42,490
July.....	13,399	15,942	42,536
August.....	14,093	16,735	46,689
September.....	14,764	17,694	49,242
October.....	15,565	19,180	53,118
November.....	15,688	20,045	56,087
December.....	11,764	13,906	40,197

Goal Figures

From Table 16 it was clear that the small chains usually had the lowest net profits. It was possible, however, for such firms to earn substantial profits, as is shown in Table 20, page 22. Figures for the 6 most profitable chains with total annual net sales of less than \$500,000 were combined to establish goal figures for small chains. These firms earned a net profit of over 7% of sales, and a final net gain of over 30% on their net worth. Medians and averages based on aggregates are presented for these successful chains and for the less profitable 15 firms of like volume. Similarly goal figures were prepared from the data for the most profit-

able firms with sales of \$500,000 to \$10,000,000 and \$10,000,000 to \$125,000,000.

The higher profits of the goal firms in the first group resulted both from relatively high gross margins and low total expense. Gross margin rates for these firms exceeded the rates secured by the successful largest chains. The saving in expense was chiefly in the tenancy cost item and it may be significant in this regard that these goal firms had no stores in cities over 500,000 and over 87% of their stores were in cities of less than 10,000. The less successful chains, on the other hand, had over 6% of their stores in cities of 500,000 to 1,000,000 population where dollar rental rates are known to be high. Yet although some stores were located in large cities, the average sales per store for the group as a whole was less than that realized by the goal firms. The successful small firms also had lower expenditures for light, water, and power, supplies, insurance, taxes, miscellaneous expense, and interest.

In the case of the medium-size chains profits resulted rather from lower expense rates than from more favorable margin rates. All items of expense except interest were lower in percentage of sales for the goal firms than for the 10 less successful companies. In particular, savings were made in the pay roll and tenancy accounts. The net profit for these firms was over 6% of sales and net gain was more than 20% of net worth.

Among the large firms there was not such a marked variation in operating expenses and profits as obtained among the smaller chains. Profits were realized by all eight chains, with the range from less than 1% to about 6.5% of net sales. The four most profitable firms achieved their better earnings chiefly through maintaining a higher margin than the other four large chains. Total operating expenses were about the same for the two groups.

It may be of some significance that for the most part the goal chains had higher rates of stock-turn than the less successful chains of like size. Also, the goal chains had better-than-average increase in dollar sales per chain and in two groups better-than-average increases in dollar sales per store.

Operating Results Classified According to Number of Stores

Operating results for chains classified according to the number of stores operated are given in

Table 21, page 23. The conclusions to be drawn from this table are much the same as those based on the data for chains classified by total net sales volume. One point clearly shown in this new table may be worth special mention, however. The largest increase in sales per store was found among chains with from 10 to 50 stores. This was true not only for stores in operation for two consecutive years or more, but also for all stores operated. This tendency has been shown in data previously published for 1936, 1937, and 1938. Approximately 80% of the stores in chains of this size are located in cities with populations of less than 25,000 with from 15% to 20% in cities of 10,000 to 25,000. It is interesting to speculate that the better-than-normal increase in sales volume per unit for these chains during the last four years may have occurred in suburban stores. During recent years there has been an increasing tendency generally noted for customers in the outskirts of large cities to shop for many small articles of merchandise in suburban stores. It may well be that variety chain stores located in such satellite cities have benefited by this change in customer buying habits.

Operating Results Classified According to Sales per Store

In Table 22, page 24 are presented figures for chains classified according to the third measure of size, sales per store. The limits to the groups, extended from previous studies, are average sales per store of less than \$30,000, \$30,000-100,000, and \$100,000 or more. The word "average" should be stressed here since it was impossible to classify consolidated reports each covering a number of units in such a manner as to show the exact relationship between cost and size of unit.

For example, 11 chains reporting data in the first group operated 75 stores having sales between \$30,000 and \$100,000, while only 2 had no units with sales of more than \$30,000. None of the 11 chains, however, had any stores with sales of more than \$100,000, and the average was about \$25,000. Somewhat less homogeneity was found in the second group. Although all the 21 chains reporting the distribution of their units by size operated stores with annual sales between \$30,000 and \$100,000, 17 had 106 units with sales of less than \$30,000, and 8 operated 99 stores with sales

Table 20. Operating Results and Goal Figures for 45 Variety Chains Classified According to Volume of Sales: 1939

Items	Median ¹ Figures (Net Sales = 100%)						Aggregate Figures (Net Sales = 100%)					
	Net Sales Volume						Net Sales Volume					
	Less than \$500,000		\$500,000-10,000,000		\$10,000,000-125,000,000		Less than \$500,000		\$500,000-10,000,000		\$10,000,000-125,000,000	
	Goal Figures Based on Reports of 6 Chains with Highest Rates of Net Profit	Comparative Figures for Remaining 15 Chains in Group	Goal Figures Based on Reports of 6 Chains with Highest Rates of Net Profit	Comparative Figures for Remaining 10 Chains in Group	Goal Figures Based on Reports of 4 Chains with Highest Rates of Net Profit	Comparative Figures for Remaining 4 Chains in Group	Goal Figures Based on Reports of 6 Chains with Highest Rates of Net Profit	Comparative Figures for Remaining 15 Chains in Group	Goal Figures Based on Reports of 6 Chains with Highest Rates of Net Profit	Comparative Figures for Remaining 10 Chains in Group	Goal Figures Based on Reports of 4 Chains with Highest Rates of Net Profit	Comparative Figures for Remaining 4 Chains in Group
Average Sales per Store.....	\$33,447	\$28,900	\$41,887	\$48,116	\$225,608	\$208,352	\$40,345	\$32,344	\$62,047	\$48,211	\$175,544	\$217,989
Index of Change (1939/1938):												
Number of Stores per Chain.....	100.00	100.00	110.10	102.38	100.00	101.25	....	....	....	....	....	....
Net Sales per Chain.....	111.34	104.17	114.19	108.55	107.49	105.00	....	....	....	....	....	....
Average Sales per Store.....	111.34	102.17	105.85	106.32	107.49	104.58	....	....	....	....	....	....
Net Cost of Merchandise Sold ²	63.96%	66.96%	63.83%	65.40%	64.80%	66.09%	63.66%	67.49%	64.01%	63.69%	64.84%	67.37%
GROSS MARGIN.....	36.04	33.04	36.17	34.60	35.20	33.91	36.34	32.51	35.99	36.31	35.16	32.63
Salaries and Wages.....	17.15%	17.16%	14.73%	17.44%	14.80%	14.04%	17.97%	17.15%	15.36%	18.17%	15.05%	13.53%
Tenancy Costs.....	3.97	4.97	5.26	6.30	8.37	8.48	3.45	4.99	6.80	6.91	7.91	8.87
Light, Water, and Power.....	1.09	1.26	0.89	1.19	1.27	1.11	1.01	1.29	0.88	1.02	1.18	1.06
Depreciation of Fixtures and Equipment.....	0.91	1.01	1.09	1.11	0.84	0.87	0.75	1.13	1.12	1.27	0.87	0.89
Supplies.....	1.22	1.26	1.10	1.11	0.80	1.06	0.89	1.17	0.92	1.07	0.78	1.06
Advertising.....	0.51	0.44	0.26	0.30	0.34	0.16	0.52	0.55	0.29	0.39	0.34	0.43
Insurance (except on real estate)....	0.27	0.62	0.46	0.49	0.56	0.48	0.29	0.73	0.44	0.57	0.53	0.45
Taxes (except on real estate or income):												
Sales.....	0.00	0.00	0.01	0.00	0.12	0.13	0.30	0.08	0.06	0.10	0.12	0.13
Other.....	1.04	1.15	0.94	1.14	1.09	1.00	0.99	1.33	0.94	1.44	1.05	0.98
Miscellaneous Expense.....	1.41	1.56	1.05	1.52	1.47	1.55	1.53	2.12	1.43	1.51	1.59	1.31
Total Expense before Interest.....	27.90%	30.17%	27.20%	31.02%	29.78%	29.96%	27.70%	30.54%	28.24%	32.45%	29.42%	28.71%
Total Interest.....	1.46	1.72	1.55	1.50	1.35	1.53	1.50	1.65	1.52	1.61	1.39	1.56
TOTAL EXPENSE including Interest..	29.42%	31.30%	29.06%	32.49%	31.30%	31.35%	29.20%	32.19%	29.76%	34.06%	30.81%	30.27%
NET PROFIT OR LOSS.....	7.09%	L. 0.54%	6.60%	2.12%	3.74%	2.39%	7.14%	0.32%	6.23%	2.25%	4.35%	2.36%
Total Net Other Income.....	1.37%	1.53%	1.97%	1.62%	2.30%	2.61%	1.53%	1.86%	2.23%	1.70%	2.51%	3.07%
NET GAIN before Income Taxes:												
Percentage of Net Sales.....	8.76%	1.59%	8.71%	3.75%	6.64%	4.67%	8.67%	2.18%	8.46%	3.95%	6.86%	5.43%
Percentage of Net Worth ³	40.96	5.39	30.08	14.11	20.74	12.27	32.12	8.30	22.86	13.98	19.50	10.55
Rate of Stock-turn (times a year) ⁴	3.50	3.52	4.37	3.86	5.46	5.02	3.77	3.24	4.34	3.91	5.48	5.04
Distribution of Stores ⁵ among Cities with Population of:												
Less than 10,000.....	....	....	....	....	....	....	87.88%	78.05%	72.70%	69.59%	37.40%	21.38%
10,000-25,000.....	....	....	....	....	....	....	0.00	4.88	11.43	13.88	26.67	28.53
25,000-100,000.....	....	....	....	....	....	....	6.06	1.21	7.30	4.90	18.01	25.65
100,000-500,000.....	....	....	....	....	....	....	6.06	9.76	5.08	3.67	9.25	12.27
500,000-1,000,000.....	....	....	....	....	....	....	0.00	6.10	2.54	4.69	3.94	3.71
1,000,000 or more.....	....	....	....	....	....	....	0.00	0.00	0.95	3.27	4.73	8.46

¹ All the medians were set independently; therefore the sum of the individual items does not necessarily equal the total.

² Including freight, express, postage, and truckage.

³ The figure for this item for the more profitable firms with sales of less than \$500,000 was based on the reports of the 5 chains giving balance sheet data. Similarly, the figure for the less successful small chains was based on the reports of 11 chains.

⁴ Based on beginning and ending inventories.

⁵ Location of stores by size of city was reported by 13 of the less successful chains in the first volume group having 82 stores, and by all chains in the other groups.

Table 21. Operating Results for 45 Variety Chains Classified According to Number of Stores: 1939
(Net sales = 100%)

Items	Median ¹ Figures			Aggregate Figures		
	Percentages Computed from the Figures of Each Chain Taken Individually			Percentages Computed from the Combined Dollar Figures of the Chains in Each Number-of-Stores Group		
	Number of Stores			Number of Stores		
	Less than 10 Stores	10-50 Stores	50-500 Stores	Less than 10 Stores	10-50 Stores	50-500 Stores
Number of Chains.....	18	13	14	18	13	14
Average Sales per Store.....	\$30,848	\$39,563	\$121,197	\$36,181	\$51,152	\$167,834
Index of Change (1939/1938):						
Number of Stores per Chain.....	100.00	102.63	101.25	....	....	....
Net Sales per Chain.....	106.88	109.05	107.49	....	....	....
Average Sales per Store.....	104.52	107.32	105.08	....	....	....
Net Sales in Identical Stores.....	*	107.18	104.97	....	....	....
Net Cost of Merchandise Sold (including freight, express, postage, and truckage).....	65.88%	66.20%	64.28%	65.75%	66.20%	66.05%
GROSS MARGIN.....	34.12	33.71	35.72	34.25	33.71	33.95
Salaries and Wages.....	17.45%	16.57%	14.99%	18.01%	16.10%	14.39%
Tenancy Costs.....	4.75	5.37	8.10	4.72	6.17	8.36
Light, Water, and Power.....	1.26	1.13	1.04	1.25	1.23	1.09
Depreciation of Fixtures and Equipment.....	0.95	1.07	0.99	0.91	1.05	0.91
Supplies.....	1.20	1.09	1.06	1.03	0.99	0.95
Advertising.....	0.50	0.28	0.27	0.54	0.47	0.38
Insurance (except on real estate).....	0.51	0.48	0.50	0.60	0.51	0.49
Taxes (except on real estate or income):						
Sales.....	0.00	0.00	0.11	0.17	0.08	0.12
Other.....	1.16	1.01	1.06	1.14	1.06	1.03
Miscellaneous Expense.....	1.33	1.54	1.44	1.59	1.50	1.44
Total Expense before Interest.....	28.84%	29.72%	29.78%	29.96%	29.16%	29.16%
Total Interest.....	1.63	1.51	1.44	1.65	1.61	1.49
TOTAL EXPENSE including Interest.....	30.62%	31.19%	31.30%	31.61%	30.77%	30.65%
NET PROFIT OR LOSS.....	1.54%	2.29%	3.04%	2.64%	2.94%	3.30%
Net Profit or Loss from Real Estate Operations.....	0.00%	0.05%	0.55%	0.07%	0.21%	1.07%
Interest on Net Worth (except on real estate, leaseholds, and goodwill).....	1.43	1.44	1.42	1.49	1.45	1.43
Other Revenue, Net.....	0.00	0.07	0.04	0.05	0.21	0.28
Total Net Other Income.....	1.50%	1.67%	2.26%	1.61%	1.87%	2.78%
NET GAIN before Income Taxes:						
Percentage of Net Sales.....	3.11%	4.01%	5.80%	4.25%	4.81%	6.08%
Percentage of Net Worth ²	11.41	15.59	14.82	15.40	17.46	13.87
Tax on Income and Undistributed Profits.....	*	0.73%	1.02%	*	*	*
NET GAIN after Income Taxes:						
Percentage of Net Sales.....	*	3.23%	5.16%	*	*	*
Percentage of Net Worth.....	*	12.36	12.52	*	*	*
Rate of Stock-turn (times a year):						
Based on Beginning and Ending Inventories.....	3.44	3.68	4.79	3.20	4.15	5.12
Based on Monthly Inventories ³	*	*	4.50	*	*	4.33
Total Mark-downs and Shortages.....	*	*	1.44%	*	*	*
Freight, Express, Postage, and Truckage.....	3.36%	2.64%	2.37	*	*	*
Distribution of Stores ⁴ among Cities with Populations of:						
Less than 10,000.....	....	....	....	82.90%	65.31%	38.53%
10,000-25,000.....	....	....	....	3.95	15.65	24.11
25,000-100,000.....	....	....	....	3.95	5.78	18.51
100,000-500,000.....	....	....	....	6.57	6.80	9.27
500,000-1,000,000.....	....	....	....	2.63	5.44	3.71
1,000,000 or more.....	....	....	....	0.00	1.02	5.87

* Data not available. See the paragraph on methods, Appendix, page 28.

¹ All the medians were set independently; therefore the sum of the individual items does not necessarily equal the total.

² The figures for net gain as a percentage of net worth in the first and second groups, respectively, were based on the reports of the 14 and 12 chains providing balance sheet data.

³ The figures for this item for the chains in the third group were based on the reports of 13 firms giving monthly data.

⁴ Location of stores by size of city was reported by 16 chains in the first group having 76 stores, by all 13 chains in the second group, and by all 14 chains in the third group.

Table 22. Operating Results for 45 Variety Chains Classified According to Average Sales per Store: 1939
(Net sales = 100%)

Items	Median ¹ Figures			Aggregate Figures		
	Percentages Computed from the Figures of Each Chain Taken Individually			Percentages Computed from the Combined Dollar Figures of the Chains in Each Sales-per-Store Group		
	Sales per Store			Sales per Store		
	Less than \$30,000	\$30,000-\$100,000	\$100,000 or more ²	Less than \$30,000	\$30,000-\$100,000	\$100,000 or more ²
Number of Chains.....	14	22	9	14	22	9
Average Sales per Store.....	\$25,357	\$47,006	\$210,898	\$25,122	\$64,778	\$205,514
Index of Change (1939/1938):						
Number of Stores per Chain.....	100.00	100.00	100.85	....	....	....
Net Sales per Chain.....	105.22	109.34	106.59	....	....	....
Average Sales per Store.....	104.42	105.80	105.70	....	....	....
Net Sales in Identical Stores.....	*	106.91	104.26	....	....	....
Net Cost of Merchandise Sold (including freight, express, postage, and truckage).....	66.47%	65.46%	65.20%	61.80%	64.46%	66.33%
GROSS MARGIN.....	33.53	34.54	34.80	38.20	35.54	33.67
Salaries and Wages.....	16.10%	17.46%	14.76%	18.28%	17.16%	14.07%
Tenancy Costs.....	4.84	5.31	8.38	5.45	6.06	8.48
Light, Water, and Power.....	1.18	1.10	1.23	1.23	1.00	1.11
Depreciation of Fixtures and Equipment.....	0.99	1.04	0.89	1.50	0.98	0.89
Supplies.....	1.16	1.14	0.96	1.03	1.12	0.92
Advertising.....	0.53	0.28	0.29	0.52	0.19	0.41
Insurance (except on real estate).....	0.45	0.51	0.50	0.61	0.50	0.49
Taxes (except on real estate and income):						
Sales.....	0.00	0.00	0.10	0.18	0.12	0.12
Other.....	1.09	1.18	0.98	2.23	1.18	0.99
Miscellaneous Expense.....	1.40	1.45	1.49	1.73	1.62	1.42
Total Expense before Interest.....	27.63%	30.29%	29.55%	32.76%	30.83%	28.90%
Total Interest.....	1.74	1.50	1.48	2.15	1.45	1.49
TOTAL EXPENSE including Interest.....	29.75%	31.90%	31.12%	34.91%	32.28%	30.39%
NET PROFIT OR LOSS.....	2.52%	2.17%	3.24%	3.29%	3.26%	3.28%
Net Profit or Loss from Real Estate Operations.....	0.00%	0.06%	0.93%	0.05%	0.30%	1.14%
Interest on Net Worth (except on real estate, leaseholds, and goodwill).....	1.28	1.45	1.40	1.88	1.41	1.43
Other Revenue, Net.....	0.00	0.02	0.08	0.21	0.20	0.29
Total Net Other Income.....	1.52%	1.62%	2.36%	2.14%	1.91%	2.86%
NET GAIN before Income Taxes:						
Percentage of Net Sales.....	4.39%	3.84%	5.99%	5.43%	5.17%	6.14%
Percentage of Net Worth.....	*	14.77	15.16	*	18.16	13.59
Tax on Income and Undistributed Profits.....	*	0.50%	1.02%	*	*	1.13%
NET GAIN after Income Taxes:						
Percentage of Net Sales.....	*	3.13%	5.16%	*	*	5.01%
Percentage of Net Worth.....	*	11.82	11.77	*	*	11.08
Rate of Stock-turn (times a year):						
Based on Beginning and Ending Inventories.....	3.46	3.87	5.36	2.88	4.17	5.27
Based on Monthly Inventories ³	*	3.11	4.58	*	3.39	4.46
Total Mark-downs and Shortages.....	*	2.91%	1.39%	*	*	*
Freight, Express, Postage, and Truckage.....	3.82%	2.52	2.22	*	*	2.78%
Distribution of Stores ⁴ among Cities with Populations of:						
Less than 10,000.....	....	....	....	86.96%	63.40%	27.60%
10,000-25,000.....	....	....	....	2.54	18.43	27.35
25,000-100,000.....	....	....	....	1.81	8.25	22.45
100,000-500,000.....	....	....	....	6.88	3.48	11.42
500,000-1,000,000.....	....	....	....	0.72	3.87	4.29
1,000,000 or more.....	....	....	....	1.09	2.57	6.89

* Data not available. See the paragraph on methods, Appendix, page 28.

¹ All the medians were set independently; therefore the sum of the individual items does not necessarily equal the total.

² In preparing this table, data for the two largest chains have been omitted.

³ The figures for this item for chains in the second group were based on the reports of the 15 firms giving monthly data.

⁴ Location of stores by size of city was reported by 13 chains in the first group having 276 stores, by 21 chains in the second group having 776 stores, and by all 9 chains in the third group.

somewhat over \$100,000. The average for the group was \$47,006 on the median basis and \$64,778 on the aggregate basis. In the third group, 8 of the 9 chains classified their stores by size. The emphasis in this group was definitely on stores with sales of \$100,000 to \$500,000. All the firms, however, had units with sales between \$30,000 and \$100,000, while one had an even smaller unit. Units with sales of more than \$1,000,000 were also reported by chains in this group. The general average was slightly over \$200,000 both on the median and aggregate basis.

As shown at the foot of this table, the average sales per store clearly is dependent on the size of cities in which the stores are located. Any analysis of the influence of sales volume per store on operating percentages must take into consideration the population factor. Thus the high tenancy costs of large stores shown in this table reflect primarily the high rental rates usual in the shopping centers of large cities. In an attempt to isolate the effect of population, the tenancy expense for 10 chains having average sales per store of from \$30,000 to \$100,000 in cities of less than 25,000 was compared with that for 11 chains having similar sized stores in larger cities. The median tenancy figure in chains with stores in small cities was 4.58% of net sales, while that for chains with stores in larger centers was 7.12%. The difference in actual dollar expense is shown strikingly on a per-store basis, \$2,400 per store for the small city chains in contrast to over \$5,400 per store for the chains in more densely populated districts. Clearly, the experience of the 11 chains has forced average tenancy cost for the chains in the medium-size store group higher than that for the chains in the small-store group with units

located chiefly in cities with populations of less than 10,000.

Operating Results Classified by Merchandise Emphasis

Of the 47 chains only 24, as shown in Table 13, page 14, provided data on the sales by merchandise lines. It seemed desirable to classify the figures for these 24 firms on the basis of the extent of apparel and dry goods sales. Accordingly, three groups were established: 8 chains with less than 20% apparel and accessory sales and less than 40% apparel, accessories, and dry goods combined, 10 chains with more than 40% in dry goods and apparel combined but less than that in apparel and accessories only, and 6 chains with apparel and accessory sales of 40% or more and combined apparel, accessories and dry goods sales of 50% or more. Study of the operating data for these groups disclosed few significant differences in operating expense data, and hence the rather meagre figures are not reproduced here in tabular form. There was a slight tendency for pay roll percentages to be lower for firms with an emphasis on wearing apparel and dry goods. This may have developed from the higher value of the average sales which probably were characteristic in such stores. Mark-downs and shortages for these chains were about twice as great as in chains carrying less apparel and dry goods. The median figure for the 5 firms providing the data was 3.04% as compared with 1.34% and 1.39% for the 7 and 8 chains respectively, reporting the data in the two other groups. Gross margins for chains with an emphasis on apparel and dry goods was relatively low, being in the neighborhood of 33%, while the margins usual in the other groups exceeded 34% of sales.

APPENDIX

The Bureau follows certain accounting and statistical procedures for the purpose of obtaining comparability among reports from individual firms and for the purpose of making the published figures as representative as possible. Definitions of the accounting items and brief discussion of the more important procedures are covered in the following explanatory notes.

Base of Percentages. All percentages in this bulletin, unless otherwise indicated, are based on net sales as 100%.

Gross Margin. The term "gross margin" is increasingly used in preference to "gross profit." It represents the amount remaining after the deduction of net cost of goods sold from net sales. Net cost of goods sold is billed or invoice cost of goods sold, less cash discounts taken and allowances received, plus transportation charges, and plus proper charges for merchandise depreciation and stock shortages. The treatment of transportation charges as part of the merchandise cost makes the gross margin figure lower by the amount of such charges than it otherwise would be.

Transportation Charges. Variety chains ordinarily do not undertake extensive warehousing operations; most of their merchandise is shipped directly from manufacturers to stores. For this trade, therefore, all transportation charges are considered as part of the cost of merchandise, following the generally accepted accounting practice in other fields of retail business.

Salaries and Wages. The salary and wage classification embraces all items of pay roll expense both in stores and in the central organizations, including the compensation of chief executives. One change in the definition of the account made for the 1936 study and continued in following years should be noted. Pensions, included in the salaries and wages item in earlier studies, are now considered as miscellaneous expense.

Tenancy Costs. Tenancy costs comprise all expenses on property used in the business. They therefore cover, in the case of leased property, not only rentals paid but other payments made in lieu of rent, such as taxes, insurance, repairs, and amor-

tization of leaseholds. Charges on owned real estate included in this account comprise taxes, insurance, repairs, and depreciation on owned real estate, plus a fair charge for interest on equity in land, buildings, and improvements, as well as interest actually paid on mortgages. The definition of the tenancy cost account for 1939 differs in two respects from that for 1929, 1931, and 1932, but is the same as that obtaining in the years 1933 through 1938. Charges for amortization of major improvements on leased property, formerly combined with charges for depreciation on fixtures and equipment, have been allocated to the tenancy cost item. Also, since many of the firms lease stores for which heat is provided by the landlords, the cost of heat has been included with other real estate charges in order to assure comparability. In making comparisons between the figures given in this bulletin and those given in the bulletins for 1929, 1931, and 1932, allowance should be made for this change in definition.

Interest. In order to obtain comparability between businesses using different methods of financing, interest at the rate of 6% on the average net worth exclusive of real estate, leaseholds, and goodwill is considered as an expense, as well as interest actually paid other than mortgage interest. Interest computed on real estate equity and mortgage interest are considered as tenancy expense. From the sum of the actual interest payments and the interest on owned capital is deducted the amount of interest and dividends received.

Total Expense including Interest. Total expense including interest is the complete cost of doing business, comprising, in addition to the usual outlays, salaries of executives, proprietors, and partners; rental charges for owned real estate; and interest on owned capital.

Net Profit. The above procedure with respect to interest leads to a narrow definition of net profit as a theoretically residual sum over and above a customary interest return on invested capital.

Net Other Income. Net other income has three component parts: profit or loss from real estate operations; interest on net worth other than real

estate; and other revenue, net. In the first of these are included net profit or loss on owned real estate not used in the business, interest previously charged as expense on the investment in owned real estate used in the business, profit or loss on real estate which has been sublet, and profit or loss of any subsidiary real estate holding companies. Under interest on net worth is credited back the interest at 6% on the average net worth excluding real estate, previously included as an operating expense in arriving at the net profit on merchandising operations. Miscellaneous revenue, including such receipts as dividends from manufacturing and/or foreign subsidiaries, commissions from leased sections, and income from weighing machines and telephones, is considered as sundry revenue, net.

Net Gain. To arrive at the final net gain or net business profit, net other income is added to the net profit. Therefore the net gain figure, while not affording, from a statistical standpoint, so valid an interchain comparison as the net profit figure, may be taken as roughly approximate to net business profit in the commonly understood sense. Net gain is expressed both as a percentage of net sales and as a percentage of the average net worth. The use of the average net worth as a base for this figure introduces the complication of differing policies in regard to real estate. For a chain which, either directly or through a subsidiary real estate corporation, owns many of the stores operated, the total average net worth is large in proportion to the net sales volume; and as a result the rate of return on invested capital is low as compared with that for a chain owning little or no real estate.

Taxes. The tax account includes all tax expense except real estate taxes, included under tenancy costs, and federal and state taxes on net income, treated as a deduction from net gain. Where state or municipal taxes on sales or gross income are not collected directly from customers but are absorbed by the chain as expense, such cost is included under sales taxes, a subdivision of the tax account. Other tax expense includes special chain taxes, licenses, taxes on equipment and merchandise inventory, corporate taxes, the federal capital stock tax, payments for unemployment and old age taxes made in compliance with the Social Security Act, and other taxes not specifically mentioned elsewhere.

Rate of Stock-turn. The rate of stock-turn, or rapidity of merchandise turnover, is calculated by dividing the cost of merchandise sold by the aver-

age inventory at cost. For chain enterprises the average inventory includes merchandise both in stores and in warehouses. Stock-turn figures of two types have been computed: the first rate, available for all chains, is based on the average of the beginning and ending inventories; and the second rate, available for part of the chains only, is based on the average of 12 monthly inventories.

Methods. The 47 statements used in the study were carefully examined for comparability and completeness of data. Whenever questions arose concerning the omission of or the interpretation of material, letters were written to the individual firms requesting additional information. Usually the necessary material was forthcoming. In other cases when it seemed probable that the omission of a figure by a firm was equivalent to a zero entry, zero figures were used in arriving at the averages presented. When it was evident that one reported expense figure covered two or more accounts, adjustments were made to allocate the amount to the proper accounts. In still other instances where material was not reported, the averages were based on a reduced sample; usually medians only are presented in this latter case, and asterisks in the tables indicate the absence of averages for such items.

Aggregates and Averages. Some of the figures included in this report are averages based on aggregate dollar figures. Thus, for instance, in the second column of Table 14, where the gross margin is reported as 35.93%, this means that the aggregate gross margin of the 47 reporting chains bore that percentage relationship to the aggregate net sales of those chains. Such aggregate figures manifestly are weighted according to sales volume. These average figures based on dollar aggregates obviously do not afford a good year-to-year comparison unless only identical firms are used, since the averages are substantially affected by the omission or addition of one or two large firms.

Median Figures. Many of the other data presented in this report consist of median figures. These figures are based on percentages computed for each firm in the group individually. Such figures, therefore, give equal weight to each chain, irrespective of sales volume and number of stores. The median is the middle figure in an array of percentages listed in order from the smallest to the largest. Thus, in column 3 of Table 14, where the gross margin is stated as 34.54%, this means that when the gross margin percentages for the chains

were arranged in order from the smallest to the largest, 34.54% was the percentage which stood at the midpoint. In the interpretation of the median figures it should be noted that because of their statistical nature the medians for the individual

items of expense ordinarily will not add to the median total expense, and the median net profit as a rule will not correspond precisely to the difference between the median gross margin and the median total expense.

BUREAU OF BUSINESS RESEARCH: EARLIER BULLETINS IN PRINT

BUILDING MATERIALS

- No. 81. Operating Expenses of Building Material Dealers in 1928 \$1.00
Operating Expenses of Building Material Dealers: 1927, No. 75; 1926, No. 64 50 cents each

GROCERY—RETAIL (See also CHAIN STORES)

- Operating Expenses in Retail Grocery Stores: 1924, No. 52; 1923, No. 41; 1919, No. 18; 1914, No. 5 50 cents each
No. 13. Management Problems in Retail Grocery Stores (1918) 50 cents

GROCERY—WHOLESALE (See also CHAIN STORES)

- Operating Expenses in the Wholesale Grocery Business: 1923, No. 40; 1919, No. 19 50 cents each
No. 8. Operating Accounts for Wholesale Grocers (revised edition—1920) 50 cents

GROCERY—MANUFACTURERS

- No. 79. Marketing Expenses of Grocery Manufacturers for 1927 and 1928 \$1.00
No. 77. Marketing Expenses of Grocery Manufacturers for 1927 50 cents
No. 69. Marketing Expense Classification for Grocery Manufacturers (1928) 50 cents

JEWELRY—RETAIL

- Operating Results of Retail Jewelry Stores: 1927, No. 76; 1926, No. 65; 1925, No. 58; 1923, No. 47; 1922, No. 38;
1919, No. 23 50 cents each

PAINT AND VARNISH—WHOLESALE

- No. 66. Operating Expenses in the Wholesale Paint and Varnish Business in 1926 50 cents
No. 60. Preliminary Report on Operating Expenses in the Wholesale Paint and Varnish Business in 1925 50 cents

PLUMBING AND HEATING SUPPLY—WHOLESALE

- No. 72. Departmentizing Merchandise and Expense Figures for Plumbing and Heating Supply Wholesalers (1928) 50 cents
No. 71. Operating Expenses of Plumbing and Heating Supply Wholesalers in the Central States in 1927 50 cents

PUBLIC UTILITIES

- No. 68. Interstate Transmission of Power by Electric Light and Power Companies in 1926 50 cents

SHOE—RETAIL (See also CHAIN STORES)

- Operating Expenses in Retail Shoe Stores: 1922, No. 36; 1921, No. 31; 1919, No. 20 50 cents each
No. 10. Management Problems in Retail Shoe Stores (1913-1917) 50 cents

SHOE—WHOLESALE

- No. 6. System of Accounts for Shoe Wholesalers (1916) 50 cents

STATIONERY AND OFFICE OUTFITTING—RETAIL

- No. 80. Operating Results of Retail Stationers and Office Outfitters in 1928 50 cents

TEXTILES

- No. 17. International Comparisons of Prices of Cotton Cloth—January, 1919-March, 1920 50 cents

MISCELLANEOUS

- No. 82. Distribution of Hard Fibre Cordage (1927), by Howard T. Lewis 50 cents
No. 73. Operating Expenses of Wall Paper Wholesalers in 1927 50 cents
No. 62. Operating Expenses of Private Schools for the Year 1925-26 50 cents
Operating Expenses in the Wholesale Automotive Equipment Business: 1924, No. 51; 1923, No. 42 50 cents each
No. 25. Labor Terminology (1921) (In cloth) 50 cents