

# **Costs of Retailing Milk**

*Among a Group of Grocery Stores  
in Portland, Oregon*

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## Foreword

Retail grocery stores perform an essential service in the distribution of agricultural products. In general, the quality of food sold to consumers has improved because most grocery stores use modern equipment and practice up-to-date merchandising techniques. Yet retail prices paid by housewives for food have on the average risen less in the last 15 years than either wholesale food prices or prices received by farmers. This means that retail grocery stores are rendering an improved service with lower margins.

The sale of milk and other dairy products through grocery stores accounts for only a small part of the total retail food business. In all likelihood, however, improvements in retail merchandising of recent years also are reflected in the costs of handling dairy products. The dairy industry and retail food merchants have been quick to see that efficient marketing and selling is in their interest as well as the interest of the general public.

The costs of retailing milk through grocery stores have been discussed considerably in the recent past, but more acceptable cost data appeared to be needed. This bulletin presents the facts as they were found by well-trained research specialists for use by persons interested in this method of milk marketing.



Dean and Director

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The assistance of Mrs. Ethel G. Vatter is appreciated in accomplishing much of the field work.

# Costs of Retailing Milk

## *Among a Group of Grocery Stores in Portland, Oregon*

By

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### Introduction

This study was undertaken to determine the costs of handling milk in retail grocery stores and to analyze the factors affecting those costs. Costs were determined for individual stores. Comparisons of costs also are made by size groups and between independent and chain store outlets.

It is hoped that individuals and groups of individuals representing consumers of milk, retailers, wholesalers, and dairy farmers may gain a fuller understanding of the costs and problems involved in retailing milk through grocery stores. The information contained herein may be useful to the operators of retail grocery stores because little information has been available concerning costs of handling milk or any single food item.

Insofar as the law provides, these data may be used as a guide by public agencies in establishing reasonable margins for milk sold in retail grocery stores. Unduly wide margins may mean unreasonably high prices for consumers. These high prices may be accompanied by reductions in the consumption of milk which is not in the interest of the consuming public, milk distributors, or dairy farmers. Also, relatively wide margins for milk may mean milk sales in the store are subsidizing the sale of other items. On the other hand, unduly low retail store margins for milk mean other items sold in the store must subsidize the sale of milk if the business is to continue operating successfully.

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## Procedure<sup>1</sup>

### General

For the purpose of this study the term "milk" was used to include all the fresh and fluid milk items commonly handled by retail grocery stores which were as follows:

Standard milk	Table cream
Homogenized milk	Whipping cream
Premium (or 5 per cent milk)	Skim milk
Half-and-half (or 10 per cent milk)	Chocolate drink
Buttermilk	

Each of the above-mentioned items in each of the sizes carried by the retail stores included in the study was counted as a unit. Cost allocations were made to those units.

None of the retail grocery stores included in this study was engaged primarily in the sale of milk. Retail grocery stores incur expense for labor and facilities in order to sell a great many items of which milk accounts for only a small part. The problem of determining the costs of retailing milk involves the measurement and allocation to milk of its share of the various operating expense items for each store. The various store operating expenses which were obtained for the purpose of making allocations to milk included the following: wage expense<sup>2</sup>, refrigerator expense, checking stand expense, advertising and promotion, heat, light, telephone, water, laundry, office, legal and other professional services, bad check losses, donations and dues, taxes and licenses, and rent or building ownership expense.

The month of June 1950 was selected as the time period for the study because it was prior to the Korean outbreak. Sales and expense data were gathered and/or computed for this period.

### Allocation to cost elements

The eight cost elements into which costs were divided are described below:

**REFRIGERATOR EXPENSE.** Part of the refrigerator expense was allocated to milk items. In all stores the refrigerator was also used for other purposes, which meant that it was necessary to charge milk with a fair share of this cost. This was done on the basis of

<sup>1</sup>Detailed information concerning the procedure involved in allocating costs to milk items may be obtained by writing to the Department of Agricultural Economics, Oregon State College, Corvallis.

<sup>2</sup>Wage expense includes the manager's salary or an allowance was made for the value of owner-operator's time when a regular salary was not being received.

space used by milk items. Refrigerator expense includes such items as share of rent space, depreciation, maintenance, and electricity.

**DIRECT LABOR TO MILK.** Some labor was directly chargeable to milk. This included checking in the milk, stocking the refrigerator, and handling empty bottles where glass containers were used. Also a share of the labor cost in cleaning the refrigerator was included.

**LICENSE AND FEES.** Part of this cost was directly chargeable to milk sales because all stores handling milk pay a \$1 fee each year to the Oregon Milk Marketing Administration. Also a tax of one-tenth of one per cent of total sales must be paid to the city of Portland.

The above three cost elements were called direct costs because they relate quite directly to milk sales.

The five cost elements which follow were more difficult to determine because these costs were common to all the items handled in the store. These costs were allocated to milk items on the basis of proportion of milk sales to total sales in the store. For example, if 5 per cent of the total sales were milk sales, then 5 per cent of these costs were charged to the milk items.

**CHECKING STAND EXPENSE.** This cost category contains all the costs connected with checking. This includes the labor of the checkers, depreciation, space, and supplies for the checking island.

**STORE SERVICES.** This category includes light, water, heat, office expenses (including cost of labor), cleaning, bad checks, laundry, parking lot, taxes, legal and professional fees, and telephone.

**ADVERTISING.** A share of the cost of advertising was allocated to milk even though some stores actually may not have spent any funds in advertising milk items.

**ADMINISTRATIVE OVERHEAD.** This category will be found only in chain stores that practiced integration. A part of the cost of the labor force and other expenses incurred away from the individual outlets of the chain was charged to the store and to milk items handled in the store.

**MISCELLANEOUS.** This includes the cost items that could not be classified or were of minor importance.

### Sample

Data from 31 retail grocery stores were collected and are reported in the study. These stores were selected in order to reflect the differences among stores which may affect the costs of retailing milk items. The factors considered and reflected in the sample include sales volume, geographical location, and independent as con-

trusted with chain operation.<sup>1</sup> The stores included in the sample range from very small to very large, are well distributed over all parts of Portland, and reflect both chain and independent store operations.

### Limitations

Interpretation of the data presented in the study and conclusions drawn from those data must be made with care and in the light of the conditions under which most retail grocery stores are operated. Some of the more important of those conditions are: First, retail grocery stores carry many items and milk is a small percentage of the total business of the store. Second, most costs which are allocated to milk are joint or overhead costs which the enterprise incurs for all items and as a part of a complete service. There is no completely satisfactory method of allocating a fair share of these overhead or joint costs to milk items. Third, for pricing purposes cost is only one of the items ordinarily considered and then it is commonly considered in terms of costs for large groups of items.

## Unit Costs of Handling Milk

### Average of all stores

The weighted average unit cost of handling milk items among the 31 grocery stores included in the study was 2.02¢ (Figure 1). The costs ranged from a high of 7.15¢ per unit for the smallest store to a low of .97¢ for the largest store. In this study size has been measured in terms of total sales volume.

It may be noted that 21 of the stores had costs above the weighted average and only 10 below. Several of the high cost stores had relatively little influence on the average because they were smaller than some of the stores with relatively low costs. For example, one of the largest stores that had costs considerably below the average had a total sales volume equal to the combined total sales volume of the 15 smallest stores.

It is important to note that most of the small stores had high unit costs while most of the large stores had low unit costs. Volume of business was an important factor affecting the costs of handling milk in grocery stores. While 11 of the smallest stores had unit costs above 2¢, it can be seen that some of the larger stores also had relatively high costs. Volume may not be the only important factor affecting the costs of retailing milk items.

<sup>1</sup>Only retail grocery stores doing the bulk of their business on a cash and carry basis were included in the sample. While no census data were available for Portland concerning the importance of credit business, it was believed to be minor. One Portland food broker, in a position to have a competent opinion, indicated that 5 to 10 per cent of the grocery business was done on a credit basis.

### Importance of sales of milk items in total sales

The sales of milk items as a percentage of total sales were almost three times greater among small than large stores (Figure 2). There appears to be a logical explanation for relatively large milk sales in small stores. Often small neighborhood stores remain open longer and are more conveniently located than some large stores. This gives consumers an opportunity to buy some items that might be needed when other stores are closed or are more distant. Milk and cream are believed to fall in this category.

### Costs by Size Groups

In this section the stores were classified according to three size groups—small, medium, and large. The costs within each size group are compared and comparisons also are made between the averages of the size groups. Table 1 shows the average unit costs for the three size groups by cost elements and the average for all stores. Detailed unit costs for each size group are shown in the appendix tables.

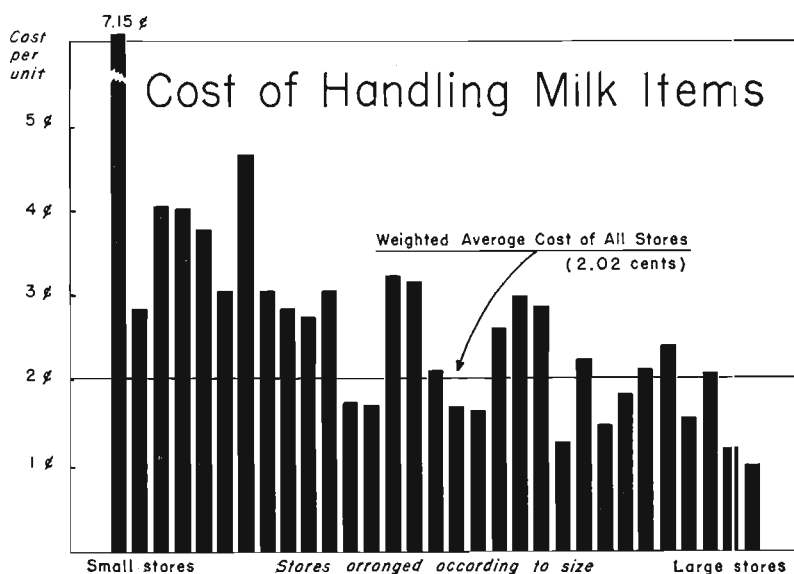


Figure 1. Unit costs of handling milk items in 31 Portland retail grocery stores, June 1950. Stores arranged according to size. The smallest store had the highest unit cost and the largest store the lowest unit cost.

Table 1. WEIGHTED AVERAGE UNIT COSTS OF HANDLING MILK ITEMS IN RETAIL GROCERY STORES BY SIZE GROUPS, PORTLAND, JUNE 1950.

Cost elements	Store size			All stores
	Small	Medium	Large	
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
<i>Direct costs</i>				
Refrigerator expense .....	.63	.27	.15	.22
Labor .....	.33	.47	.53	.50
Licenses and fees .....	.11	.06	.04	.05
Total direct .....	1.07	.80	.72	.77
<i>Indirect costs</i>				
Checking stand .....	1.77	.84	.51	.69
Store services .....	.71	.47	.24	.33
Advertising .....	.04	.15	.14	.13
Administrative overhead .....	....	.02	.07	.05
Miscellaneous .....	.02	.10	.03	.05
Total indirect .....	2.54	1.58	.99	1.25
Total unit costs .....	3.61	2.38	1.71	2.02

### Small size stores

A total of 10 stores were included in this category with a range in total sales in June 1950 from \$997 to \$4,500 and with an average of \$3,072 per store. The average cost per milk item was 3.61¢. For the five smallest stores in this group the average unit cost was still higher at 4.03¢. No store in the small group had costs of less than 2.74¢ per unit while the smallest one had costs in excess of 7¢ per unit.

Comparison of cost elements: The most important single cost element was checking stand expense which on the average was 1.77¢ per unit or 49 per cent of all the costs of handling milk.<sup>1</sup> (Table 2, Appendix.)

Store services were second in importance among the eight cost elements, amounting to .71¢ per unit or almost 20 per cent of the

<sup>1</sup>The share of checking expense that was charged to milk was in the proportion that milk sales bear to total sales. While this method has certain limitations, it is thought to be a reliable method of obtaining this cost. A sample study was made to determine the effect on the unit costs of handling milk if items rather than sales value were used to allocate a share of checking stand costs to milk. The results of that study indicated that the use of items rather than sales value would increase milk's share of the checking expense by a considerable amount. To the extent that the expense of performing the checking activity varies with items rather than dollar sales that method would give more satisfactory results. It must be noted, however, that an adequate and representative sample of the items, which were checked through the checking stands of each of the 31 stores during June of 1950, could not be obtained.



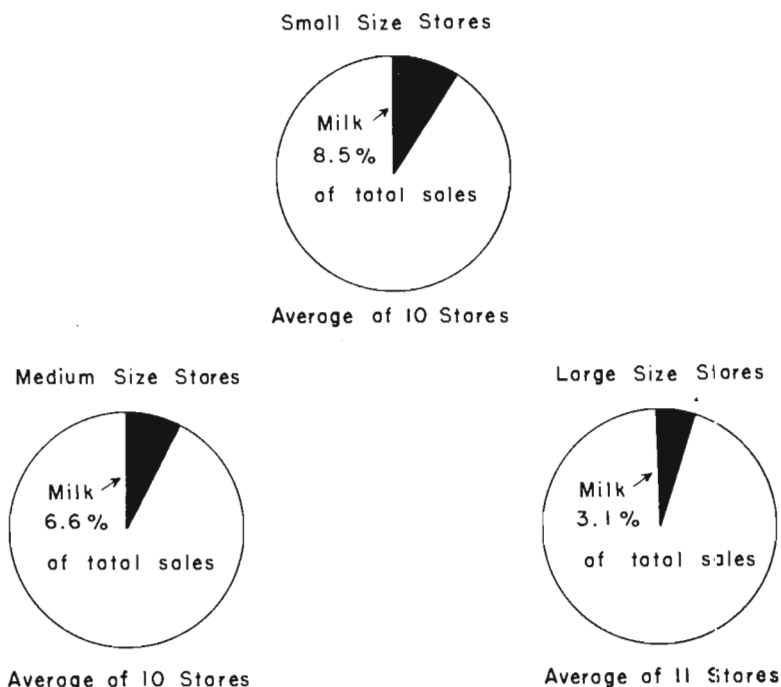


Figure 2. Sales of milk items as a percentage of total sales among small, medium, and large stores, Portland, June 1950.

total cost. Refrigerator expense was .63¢ per unit or 17 per cent of the total. In most cases a substantial part of the refrigerator space was used for milk and other dairy products which makes this a relatively important cost.

The labor needed to check in the items, handle the milk, empty bottles, and clean the refrigerator was an important cost in some stores and averaged .33¢ per unit for this group. All the other costs connected with milk sales were relatively unimportant for the small stores. The total of these minor costs was .17¢ per unit or only about 5 per cent of the total.

A comparison of the cost items for individual stores indicates that even some small stores may be able to reduce costs to some extent. For example, store number 10 had checking stand expenses of only 1.13¢ per unit and store number 2 had 1.30¢ per unit. These were considerably below the average for the 10 small stores. These

stores with relatively high costs may be able to streamline some of the store operations in order to improve their competitive position in the market and thereby increase incomes.

### Medium size stores

A total of 10 stores were included in this category with a range in total sales in June 1950 from \$5,750 to \$15,526 and with an average of \$10,310 per store. The 10 stores in this group were nearly three times larger than those in the small size group. The average unit cost for this group of stores was 2.38¢, which is about 1¼¢ per unit less than for the small stores (Table 3, Appendix).

No store in this group had costs greater than 3.23¢ per unit and four of the 10 had costs of 1.75¢ or less. Some of these stores had relatively low costs for handling milk.

Comparison of cost elements: On the average all of the important cost elements were lower for this group than for the small size store group. Checking stand costs were still the most important single cost element, being .84¢ per unit. However, this cost was almost 1¢ per unit less than for the small stores. On a percentage basis, checking stand costs were also lower for this group, being only 35 per cent of the total cost. Store services were next in importance, amounting to almost ½¢ per unit. This was about ¼¢ per unit less than for the small stores.

The average refrigerator expense was .27¢ per unit, which was less than one-half the cost for the small size stores. It is reasonable to believe that refrigerators may be used more effectively in larger stores because more volume can be handled without a corresponding increase in cost. A refrigerator twice as large as another usually does not cost twice as much initially or to operate.

The average direct labor cost for the medium size stores was .47¢ per unit compared with .33¢ for the small stores.<sup>1</sup>

All of the other costs were of minor importance but advertising and miscellaneous costs accounted for .25¢ per unit which was .19¢ more than the average of the small stores.

Four of the ten stores had checking stand costs in excess of 1¢ per unit. Two stores had checking stand expenses of .44¢ per unit or less. This wide variation among stores suggests that some may find it profitable to scrutinize carefully this important group of expenses. Reduction in refrigerator expense, direct labor, and store services also may be possible in some instances.

<sup>1</sup>It should be noted that the individual direct labor cost for the medium size stores showed wide variation, which tends to reduce the significance of the average for comparative purposes.

### Large size stores

Although no attempt was made to have an equal number of stores in each group, it happened that it was logical to classify 11 stores as being large. The average total sales in June 1950 for the 11 stores in this group was \$61,025 per store. These stores were, on the average, almost six times larger than those in the medium size group and about 20 times larger than the small stores. The average unit cost for these stores was 1.71¢ (Table 4, Appendix). This is about  $\frac{1}{2}$ ¢ less than the average for the medium size stores, and nearly 2¢ less than for the small stores.

It is important to note that no store in this group had costs greater than 2.87¢ per unit. Six stores, or more than one-half of the group, had costs considerably under 2¢ per unit. The largest store in the study had unit costs of slightly less than 1¢ per unit. The second largest store in the group had costs of only 1.17¢ per unit.

Comparison of cost elements: On the average, all of the important cost elements for the large stores were lower than for either the small or medium size stores except direct labor. The average direct labor cost for the large stores was .53¢ per unit, but individual stores showed wide variation above and below this figure. Direct labor costs of certain of the large size stores were not entirely comparable to the direct labor costs of stores in the smaller size groups. In some of the larger stores refrigerators were stocked by store employees whereas in most stores that job was done by distributors' milk delivery personnel. Most stores, therefore, had no direct labor costs in stocking their refrigerators with milk.

The next most important cost was the checking stand expense which averaged .51¢ per unit, or 30 per cent of the total. The checking stand expense was an important part of the total cost of handling milk, but was lower than for medium size stores and less than one-third as large as for the small stores. With the exception of one store, the checking stand expense of large stores did not show as much variation among individual stores as it did among stores in the medium size group. Most large stores were able to keep this important group of expenses between .30¢ and .50¢ per unit. While these costs appear to be relatively low, it still may be possible for some large stores to increase net returns by streamlining their checking stand operations.

Store services averaged .24¢ per unit, which was lower than for either of the other size groups. There was very little variation in this cost element among individual stores. The average refrigerator expense for the large stores was only .15¢ per unit. This was

only one-fourth as much as the average for the small stores and one-half the average of the medium size stores.

The average advertising cost for the large stores was .14¢ per unit. The advertising cost for the medium size stores was .15¢ per unit and .04¢ for the small stores. This undoubtedly reflects, in part, the fact that small stores often do not advertise as much as the larger stores. All of the other costs for large stores were of minor importance amounting to .14¢ per unit or 8 per cent of the total.

### Costs by Type of Outlet

On the average milk had about the same importance in total sales among independent stores as it did among chain outlets (Figure 3). On the other hand, it was indicated earlier that milk sales in proportion to total sales were much greater in small than in the large size store group. This suggests that the factor contributing to the importance of milk sales to total sales was total sales volume and not type of outlet.

The average unit cost of 23 independent grocery stores was 2.17¢ and the average for the eight chain outlets was 1.89¢<sup>1</sup> (Table 5, Appendix). This indicates that the average unit cost for all the independent stores in the sample was .28¢ higher than the average of the chain outlets. However, the average unit cost for the eight largest independent stores was 1.60¢ which is .29¢ less than for the eight chain outlets.

Comparison of cost elements: Although the average unit cost for independent stores was only about  $\frac{1}{4}$ ¢ more than for chain outlets there were important differences in some of the individual cost elements. For example, the refrigerator expense was nearly four times greater for independent stores than for chain outlets. Apparently chain stores, on the average, made more efficient utilization of refrigerator space than did independent stores.

Direct labor costs for chains on the other hand were about twice as high as for independent stores. This is mainly due to the fact

<sup>1</sup>There is some evidence available to indicate that the volume of chain store business in the sample was out of proportion when compared with the volume of the 23 independents. The eight chain outlets in the sample did 60 per cent of the business. According to the 1939 U. S. Census, chain stores in Portland did about 45 per cent of the total business. According to information contained in the Portland and Suburban Retail Grocery Route List prepared by the *Oregonian*, it was estimated that chains did about 45 per cent of the grocery business in Portland in 1950. If it can be assumed that chains had about 45 per cent of the business and independents the remaining 55 per cent, then some adjustments in the unit costs given above may be appropriate. The weighted general average cost as now shown in the report is 2.02¢ per unit. If the independents in the sample are adjusted so as to give them more weight, the adjusted weighted average cost would be 2.06¢ per unit or an increase of .04¢, which is insignificant. However, this does not mean that the sample can necessarily be considered to represent the market in all of its characteristics. Care should be exercised in the interpretation and use of the data in this report because the sample is small.

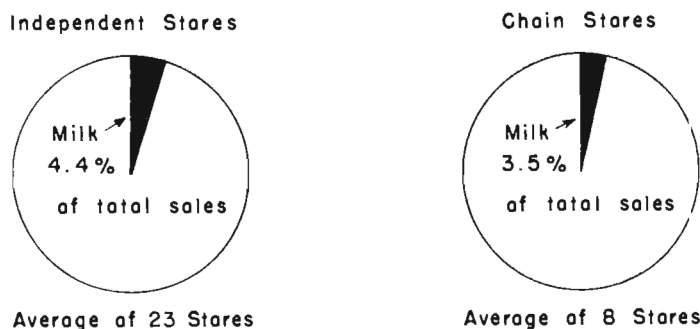


Figure 3. Sales of milk items as a percentage of total sales among independent and chain stores, Portland, June 1950.

that some chains did more with the milk after receiving it than did the independents. It was the practice for at least two chains to require store employees to stock the refrigerator rather than to have the milk distributor perform this service.

On the average, the checking stand cost and store services were both considerably lower among the chain outlets. But in several individual cases the independents had costs for performing these services that were as low as those in chain outlets. The small and medium size independent stores, when averaged with the large ones, tended to make these costs relatively high. If all the independents included in the average had been as large as the chain outlets, there is evidence to indicate that there may not have been much difference in their checking stand and store services costs.

Chain stores, on the average, spent more for advertising than independent stores. This study shows that the advertising of milk items cost independents an average of .10¢ and chains .16¢ per unit. Chain stores also had administrative overhead costs that were not found in independents. The additional cost of advertising and administrative overhead often was offset in part or in whole by lower costs elsewhere in the business.

## Conclusions

The average unit cost for handling milk in the 31 stores included in this study was 2.02¢. When the stores were arranged according to size, it was quite evident that there was a strong tendency for the smaller store to have the higher costs and the larger stores to have

the lower costs. The influence of volume of sales became even more apparent when the stores were grouped according to three size groups: small, medium, and large. The unit costs of handling milk for the small stores averaged 3.61¢, whereas the large stores had unit costs of only 1.71¢. The medium size stores had average unit costs of 2.38¢.

The small stores had checking stand costs that actually averaged higher than all the costs for the large stores. Checking stand costs were on the average the most important costs in the small and medium size stores. Direct labor costs were the most important in the large size group of stores. The average checking stand costs for small size stores was 1.77¢ per unit, .84¢ per unit for medium size stores, and .51¢ per unit for large size stores. On the average the store services cost also was lower for the large stores than for either of the other two size groups. Refrigerator expense followed the same pattern as store services. Of the important cost elements, direct labor was the only cost that averaged higher for large stores than for either small or medium size stores.

The average unit cost for 23 independent grocery stores was 2.17¢ and for 8 chain stores 1.89¢. This indicates the chain outlets had costs that were about  $\frac{1}{4}$ ¢ per unit less than the independent stores. However, the average unit cost for the eight largest independent stores was only 1.60¢, which is about  $\frac{1}{4}$ ¢ per unit less than the average of the 8 chain outlets.

Table 2. DETAILED UNIT COSTS FOR HANDLING MILK IN 10 SMALL RETAIL GROCERY STORES, PORTLAND, JUNE 1950

Stores arranged according to size	Direct costs				Indirect costs						Total unit costs
	Refrigerator expense	Labor	Licenses and fees	Total direct	Checking stand	Store services	Adver- tising	Adminis- trative overhead	Miscel- laneous	Total indirect	
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
1 .....	.72	1.43	.26	2.41	3.24	1.48	.....	.....	.02	4.74	7.15
2 .....	.91	.....	.14	1.05	1.30	.50	.....	.....	.....	1.80	2.85
3 .....	.34	.71	.17	1.22	1.92	.90	.....	.....	.01	2.83	4.05
4 .....	.74	.....	.12	.86	2.23	.87	.05	.....	.....	3.17	4.03
5 .....	.27	.26	.09	.62	2.18	.79	.16	.....	.02	3.15	3.77
6 .....	.46	.16	.09	.71	1.54	.72	.06	.....	.02	2.34	3.05
7 .....	1.18	.46	.07	1.71	2.09	.80	.02	.....	.04	2.95	4.66
8 .....	.64	.27	.11	1.02	1.49	.53	.01	.....	.01	2.04	3.06
9 .....	.45	.29	.08	.82	1.51	.45	.06	.....	.01	2.03	2.85
10 .....	.45	.41	.10	.96	1.13	.59	.....	.....	.06	1.78	2.74
Weighted average..	.63	.33	.11	1.07	1.77	.71	.04	.....	.02	2.54	3.61

Table 3. DETAILED UNIT COSTS FOR HANDLING MILK IN 10 MEDIUM SIZE RETAIL GROCERY STORES, PORTLAND, JUNE 1950

Stores arranged according to size	Direct costs				Indirect costs						Total unit costs
	Refrigerator expense	Labor	Licenses and fees	Total direct	Checking stand	Store services	Adver- tising	Adminis- trative overhead	Miscel- laneous	Total indirect	
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
1 .....	.41	.82	.07	1.30	1.06	.59	.01	.....	.08	1.74	3.04
2 .....	.45	.43	.06	.94	.36	.42	.01	.....	.02	.81	1.75
3 .....	.48	.04	.06	.58	.44	.60	.01	.....	.06	1.11	1.69
4 .....	.26	1.64	.06	1.96	.73	.41	.11	.....	.02	1.27	3.23
5 .....	.35	.88	.06	1.29	1.27	.44	.09	.....	.08	1.88	3.17
6 .....	.13	.16	.06	.35	.82	.63	.24	.....	.09	1.78	2.13
7 .....	.18	.....	.05	.23	1.10	.36	.....	.....	.01	1.47	1.70
8 .....	.16	.25	.05	.46	.72	.38	.02	.....	.06	1.18	1.64
9 .....	.26	.46	.06	.78	1.01	.57	.08	.....	.18	1.84	2.62
10 .....	.23	.38	.05	.66	.72	.36	.74	.17	.35	2.34	3.00
Weighted average..	.27	.47	.06	.80	.84	.47	.15	.02	.10	1.58	2.38

Table 4. DETAILED UNIT COSTS FOR HANDLING MILK IN 11 LARGE RETAIL GROCERY STORES, PORTLAND, JUNE 1950

Stores arranged according to size	Direct costs				Indirect costs						Total unit costs
	Refrigerator expense	Labor	Licenses and fees	Total direct	Checking stand	Store services	Advertising	Administrative overhead	Miscellaneous	Total indirect	
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
1 .....	.24	1.43	.04	1.71	.49	.35	.09	.17	.06	1.16	2.87
2 .....	.30	.10	.04	.44	.41	.32	.09	.....	.....	.82	1.26
3 .....	.09	.91	.03	1.03	.52	.34	.10	.19	.07	1.22	2.25
4 .....	.12	.13	.04	.29	.50	.36	.33	.....	.....	1.19	1.48
5 .....	.12	.61	.03	.76	.49	.29	.09	.16	.04	1.07	1.83
6 .....	.08	.94	.03	1.05	.48	.31	.09	.17	.04	1.09	2.14
7 .....	.11	1.31	.04	1.46	.29	.25	.27	.....	.15	.96	2.42
8 .....	.53	.21	.04	.78	.29	.28	.19	.....	.01	.77	1.55
9 .....	.12	.38	.03	.53	1.04	.28	.20	.04	.....	1.56	2.09
10 .....	.33	.24	.04	.61	.34	.16	.06	.....	.....	.56	1.17
11 .....	.02	.29	.03	.34	.41	.08	.06	.07	.01	.63	.97
16 Weighted average..	.15	.53	.04	.72	.51	.24	.14	.07	.03	.99	1.71

Table 5. WEIGHTED AVERAGE DETAILED UNIT COSTS OF HANDLING MILK IN RETAIL GROCERY STORES ACCORDING TO TYPE OF OUTLET, PORTLAND, JUNE 1950

Type of outlet	Refrigerator expense	Labor	Licenses and fees	Checking stand	Store services	Advertising	Administrative overhead	Miscellaneous	Total unit costs
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Independent <sup>1</sup> .....	.37	.33	.06	.84	.44	.10	.....	.03	2.17
Independent <sup>2</sup> .....	.28	.19	.04	.57	.35	.14	.....	.03	1.60
Chain <sup>3</sup> .....	.10	.65	.03	.56	.24	.16	.10	.05	1.89

<sup>1</sup>Average of 23 stores.<sup>2</sup>Average of 8 largest independent stores.<sup>3</sup>Average of 8 stores.