

THE FINANCIAL EFFECT OF A CHANGE IN  
MARKET CONCEPT IN THE COIN LAUNDRY INDUSTRY

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## INTRODUCTION

Successive changes in the nature of the self-service laundry industry have affected the investment required in the individual store. The introduction of the service laundry in the 1940's, followed by the coin laundry in the 1950's and the fabric maintenance centers in the 1960's are examples of the expanding marketing concept. Concurrent with these developments, a trend toward more elaborate store interiors and innovations in machine installations became evident. By 1963 the large fabric maintenance centers, incorporating professional as well as coin-operated laundry, drycleaning and finishing services, appeared in many areas of the United States. During the period of change in market concept, the number of store installations increased dramatically.

This change in marketing concept brought financial problems with it. The increase in number of stores intensified competition locally. Newer stores were more costly than earlier types with the same machine capacity. The amount of capital investment per store rose significantly. Operating costs climbed, which compounded the problem. These factors worked to precipitate a financial adjustment in the coin laundry industry.

### History and Setting

The beginning of self-service laundry stores may be traced to the development of the automatic washing machine. The single load washer was featured in the automatic laundry stores which opened after World War II. Many automatic washers together with large commercial dryers which held up to five loads of wash were provided at each store. Employees were usually

on the premises of the store either to assist the patrons in doing their laundry or to do it for them entirely. The convenience of using many machines simultaneously, thereby completing the week's wash in just one cycle's time, was the selling feature of these stores. Washers used were identical to the home appliance washer. Gradually, a trend toward depositing the whole laundry bundle at the store predominated. The automatic laundry became identified as a service laundry. This drop-off and pick-up-later trade made up the bulk of the automatic store's business.

By the mid 1950's a new, but closely related, concept in laundry stores for the consumer appeared. Building upon the earlier idea of grouping many single load washers and the big dryers, the new stores metered these machines. This change permitted unattended operations, with a resulting reduction in cost to the store owner. The coin laundries emphasized arrangement of the equipment for the patron's use so as to facilitate the use of the machinery by many customers in the store at the same time.

Previously, the equipment arrangement often was designed to enable the employees to turn out the greatest amount of laundry in the shortest time. The new layout subtly catered to the customer in several ways. More machinery was available. Auxiliary equipment, such as money changers, soap and beverage vending machines, was added. Since the customer spent more time in the store, folding tables for the laundry and chairs for waiting became common.

While the concept had changed for the customer, it also changed for the owner or manager. Service store management was largely occupied with doing the customer's wash. But in the coin laundry, the emphasis shifted to

equipment engineering and supervision. Since the management was not actually doing the wash in the early coin laundry, its attention was focused on keeping the increased number of machine units running smoothly. In addition to this, keeping the store clean was even more important than in the service stores since the unattended store became dirty quickly. Regular schedules of housekeeping routine were necessary to compensate for the lack of continual attendance.

With the addition of coin drycleaning machines in 1960, further refinements in the concept of clothing care were introduced. As more coin laundries were opened across the country, a distinct trend to more elaborate installations was evident. This evolution, from a back workroom atmosphere of the early automatic stores to the increasingly fancy stores opening in 1960 and 1961, was due partly to a reaction to charges that the unattended store was an attractive nuisance to its community. By upgrading the atmosphere of the stores through decorator-designed interiors and installations, while simultaneously stressing greater convenience and economy to the consumer, the coin laundry industry improved its community standing.

Not only had managerial duties changed for the owner, but even more significant was the changing competitive situation he faced. The number of laundry stores in 1946 has been estimated at 538.<sup>1</sup> For each year thereafter until 1956, the industry increased by about 500 stores annually. The majority of these were service stores. In 1956, 8,519 stores were included in Department of Commerce and industry figures. Consensus of trade journals

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<sup>1</sup> The Appendix contains sources of all data and further information on the breakdown of store types.

was that 3,800 of these were coin laundries. By 1958 coin laundries became increasingly popular as an investment. There were 8,300 coin laundry stores in 1958 according to one manufacturer. Four years later in 1960, just before coin drycleaning was introduced across the country, 23,800 stores were in operation.

Coin drycleaning was promoted in several ways by manufacturers and distributors. This resulted in installations in existing coin laundries, in separate stores as a single service, and in some instances in commercial drycleaning outlets. The idea of coin drycleaning met with great opposition from some commercial cleaners at first, but by 1961 estimates show 1,500 installations of coin drycleaning. A year later, 7,000 stores were featuring coin drycleaning. Some of these stores were combination laundry and cleaning stores, and were therefore included in the 33,800 installations listed as coin laundries. Others were coin drycleaning only stores.

#### Objective of the Study

Two points may be restated from the above. During the period of study, 1958 to 1963: (1) an observable change occurred in the marketing concept of fabric maintenance; and (2) the number of business establishments which offered these services increased dramatically. The increase in the number of stores created severe competition. To the extent that the new type of store featured coin laundry and drycleaning, new services were being offered to the existing patronage. But at the same time, customers from service laundries and commercial drycleaners were being actively cultivated by the coin-operators.

An examination of comparative investments which were necessary in typical stores in 1958, 1961, and 1963 will lay the groundwork for evaluating the

financial effect of the change in store concept. Not only did the initial investment cost increase, but the operating expenses also began to climb noticeably.

The purpose of this report is to analyze the financial effect of these changes through the testing of the following hypothesis:

"The rapid increase in the number of stores in the coin laundry industry and the additional investment required due to the change in marketing concept tended to lower the rate of return on invested capital during the period 1958-1963."

Certain implications may be drawn from a casual observation of the variables included in the hypothesis. Ease of entry was a significant factor in the number of stores which opened in such a few years. Also, great attraction to invest in this area must have existed. As with any area in the economy, funds will be attracted if the promise of high return seems real. The ability to buy a store must be accompanied by the willingness to do so.

A change in concept had repercussions. The earlier stores had to learn to live with the innovation in their market. The new stores had to be tested from the market and financial points of view. The hypothesis states that the rate of return to owners of these establishments was adversely affected by the developments in the period under study. This report is not intended to make a value judgment regarding the satisfactory level of return on funds invested. In the process of testing the hypothesis, an attempt was made to isolate those factors which came to bear significantly on the industry situation, and to suggest that a better appreciation of these is essential to good management of all funds committed to this area.

### Methodology

Testing of the hypothesis was done through the construction of hypothetical models for each of the three years. Each model included a schedule of initial investment cost, potential revenue, and operating expenses. Since individual stores may differ in many respects, the use of an hypothetical model with an accompanying discussion of variables affecting the situation was felt to be of general value.

The years 1958, 1961, and 1963 were selected as representative of the market change. By 1958 the early form of the unattended coin laundry was well developed in the field. Although the coin drycleaning machine was first introduced in Arkansas in 1959, it was not until 1961 that a sufficient number of installations were actually in operation to be considered part of the coin laundry picture. The year 1961 represents both the addition of coin drycleaning and the then well-developed trend toward elaborate interiors. The year 1963 is used because it was the most recent, and also because of the growing number of fabric maintenance centers which were opened.

The term "fabric maintenance center" is now associated with the installation which offers some hybrid combination of coin laundry and coin drycleaning, finishing or pressing service on the premises, and perhaps an outlet for the commercial services of both the professional drycleaner and power laundry plant. Most common is the shirt finishing service, either on the premises or as a pick-up point. Usually these installations involve a far greater investment than early or even contemporary stores with fewer services. But they are all offering services in the fabric care market,

though somewhat differentiated, and can be subjected to the same type of scrutiny.

A comparison of the investments required of the typical store in these three key years, tied to an analysis of operating revenues and expenses, should give a clue to the effect of the concept change. The early focus of those who promoted these stores was on individual pieces of equipment. Later, store concept was merchandized. The last, the fabric care center, is essentially a system of textile maintenance.

Sometimes, this approach is referred to as a "market-minus", or an inductive method of determining equipment selection and installation layout. Such a system begins with the consumer and his fabric care needs. It tries to fit the store design to his habits of shopping. The store concept is then evolved from this, rather than trying to attract the consumer to an existing laundry store type.

Each type, however, must meet the test of financial feasibility from an investor's point of view.

#### MONOPOLISTIC COMPETITION

The theory of monopolistic competition is useful in analyzing the coin laundry industry. As an economic model, it offers a meaningful description of activity in the market place for the coin laundry. An appreciation of the characteristics of a monopolistically competitive industry is necessary to understand the relationship between the significant factors which were instrumental in bringing about the change in the return on investment.

E. H. Chamberlin's classic work on monopolistic competition sets forth certain conditions which obtain in this type of market.<sup>1</sup> The three primary assumptions are:

1. The number of sellers is sufficiently large that there is no feeling of mutual interdependence among them. Each firm acts independently, without regard to any effect its actions may have on competitors.
2. Products of the various sellers are differentiated, customers having preferences for the products of particular sellers.
3. Entry into the industry is unrestricted, new firms being able to commence production of very close substitutes for the existing brands of the product, even though they cannot make items which are exactly identical, in the eyes of the purchasers, to existing brands.<sup>2</sup>

#### Characteristics

By assuming a large number of sellers no industry leaders emerge. The policies of the individual firm will result from the seller's estimate of the demand situation which faces him and a cost schedule derived from his operation.

Product differentiation is a distinctive feature of this type of market structure. Two aspects of product differentiation may be examined with regard to differences in the physical product or service offered by the seller and by conditions surrounding the sale itself. Patents, trade marks, brand names, and franchise systems are examples of monopolistic influences. They all attempt to render the product unique in some manner. Spatial differentiation refers to the control over supply the seller has

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<sup>1</sup> E. H. Chamberlin, The Theory of Monopolistic Competition.

<sup>2</sup> John F. Due and Robert W. Clower, Intermediate Economic Analysis, p. 222.

by virtue of his location. The way in which the product or service is marketed at a specific location may give the seller an edge over his competitors.

Yet each is subject to competition of other, but similar, "products" sold under different circumstances and at other locations; this is the competitive aspect.<sup>3</sup> The monopolistic feature is seen in the individuality of the establishment itself and its location. Differentiated products combine the aspects of both competition and monopoly.

Pricing in monopolistic competition tends toward a middle course relative to the two extremes of monopoly and perfect competition. The monopoly element permits an upward pressure on price, made possible by achieving a preference for its service or product by its customers. But, again, competition comes into the picture by recognizing that substitutes affect the elasticity of demand for the product.

The cost curve for each individual seller usually is different from other sellers. This is partly due to the difference in the cost of the equipment and its housing cost. Accordingly an approximation of an industry cost curve is not realistic.

In monopolistic competition the demand curve facing the firm slopes downward to the right because of the monopoly influence. Product differentiation which encourages consumer preferences serves to limit the market for any other producer. The slope or elasticity of the demand curve is affected by the strength of differentiation and the strength of attachment of customers to particular products or services.<sup>4</sup>

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<sup>3</sup> Chamberlin, op. cit., p. 63.

<sup>4</sup> Due and Clower, op. cit., p. 223.

The relation of the cost curve to the downward sloping demand curve facing the seller is very important. Whereas in competition excess economic profits may be eliminated in the long run with all firms operating and selling at the low point on their average cost curve, monopolistically competitive industries do not follow this pattern. The seller in monopolistic competition attempts to maximize his profits by operating at the volume indicated by the intersection of the marginal cost and marginal revenue curves. With a downward sloping demand curve, however, the average revenue and marginal revenue curves are not identical.

Because of the downward sloping demand or average revenue curve, the individual firm will not be operating at the lowest level of average cost. If there is free entry, the average cost curve will be tangent to the average revenue curve. Since any attempt to increase output to reach lower average cost would cause the price reduction to exceed the cost per unit reduction, the firms do not fully realize economies of large-scale production. Existing plant facilities are not used to capacity.

Selling costs and promotional activities are significant in monopolistic competition. The uniqueness of the product is promoted through an attempt to encourage buyers to prefer the particular seller's product, that is, to prefer it over close substitutes. A concerted effort made to sell the product raises the average cost curve from that which it might be under competitive circumstances.

The price charged and the sales obtained depend partly on the skill in differentiating the product and attracting buyers. While the seller can raise price without losing all of his customers due to their preferences,

price reductions will not bring unlimited volume increases since there also exists a preference for the competitor's product. If the preferences are strong, demand will be relatively inelastic.

Unrestricted entry of firms exists in monopolistic competition. Capital requirements for commencement of operations usually are low, and the volume of output necessary for reasonably low cost is not likely to be great. The rapid flow of firms into and out of the grocery and small restaurant business is an illustration of this aspect of monopolistic competition.<sup>5</sup>

There are significant modifications to be made to this primary assumption regarding entry. Adjustments toward equality of price with average cost when the product is differentiated may be checked by the reputation of firms already in operation. While the efforts of newcomers at creating sufficient consumer preference may be such that they enter freely and cover their own costs, but they still will not take sufficient business from the well-established firms to destroy the latter's excess profits.<sup>6</sup> The adjustment toward long-run equilibrium does not proceed as under purely competitive circumstances.

#### Operating Condition of the Market

In the early stages of the market entry of firms is convenient. Product differentiation is effective in pairing buyers and sellers due to uniqueness of the product or service itself and of the setting in which it is offered. The particular share of the existing market for the product depends largely upon the skill of the seller in non-price competition. Due to differing

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<sup>5</sup> Due and Clower, op. cit., p. 225.

<sup>6</sup> Due and Clower, op. cit., p. 228.

average cost schedules, the firm holding the largest share of the market may not be the profit leader.

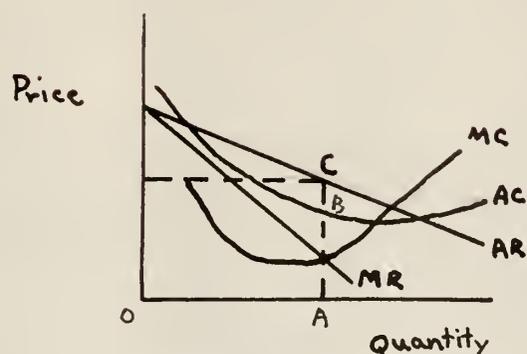


Fig. 1. Monopolistic competition excess profits.

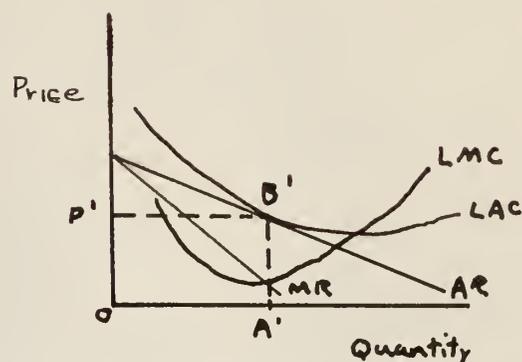


Fig. 2. Monopolistic competition long-run adjustment free entry.

Figure 1 shows a position of excess economic profits under monopolistic competition. Production is set at A, the intersection of the marginal revenue and marginal cost curves. Average cost is covered at point B with excess profits per unit existing from B to C. As the number of firms entering drive the average cost up and the per-firm share of the market down, the excess profits disappear. This adjustment is found to have differing effects on the individual firm. For the firm with an average cost above the market price it is able to obtain, the operation becomes a losing one. Either it must reduce its costs, attempt to increase its share of the market, or face leaving the industry with its losing operation.<sup>7</sup>

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<sup>7</sup> It is recognized that the share of the market might be increased without raising total costs through the selection of different expenses.

The entrenched firm which has established its clientele, due to preferences for its product, may still be operating in a position where its price is in excess of its average cost. The average situation depicted in Fig. 2 may not apply to it even in the long run. Its monopolistic control over the supply of its differentiated product permits it an edge over general market conditions.

For the individual firm the problem is to select the proper product mix, whose cost will attract the largest possible total profit. Each producer is a monopolist in a group, yet the market is interwoven between the competitors so that none is truly isolated.<sup>8</sup> All producers share the common market but in differing ratios.

Usually long-run adjustment necessitates a drop in market price as equilibrium is approached. But under monopolistic competition this may not result. The pressure on the declining individual shares of the market may be eased by the exit of losing firms to balance the entry of new firms. In addition, price cutting may be effected by improving the product. While a price change is not apparent to the consumer at first, the seller may have to improve his product, thereby raising his cost curve and narrowing his margin. The drop in share of the market as sellers become more numerous has the effect of raising the cost curve since less output is actually sold. Prices may be sticky for some reason, so that all adjustments must take place behind the scene.<sup>9</sup> Adjustments by reduced volume sold and not by price change

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<sup>8</sup> Chamberlin, op. cit., p. 81.

<sup>9</sup> Chamberlin, op. cit., p. 108.

result in excess productive capacity in the industry for which there is no automatic correction.<sup>10</sup> Chamberlin labels this situation typical "wastes of monopolistic competition".<sup>11</sup>

#### Coin Laundries and Monopolistic Competition

The large number of sellers under monopolistic competition is observable in the coin laundry industry. As a result of the ease of entry due to low capital and managerial requirements and a fast developing market, the number of establishments increased by about 400% in the period 1958 to 1963. Each firm was free to set its own price, but the nature of metered operation prevented any true flexibility. Product differentiation is characteristic of coin-ops. While a common service is being offered to the consumer, the differences in the machinery used in the individual stores varied widely, particularly in the later years of the period under study.

In the earlier years examined in this paper the condition suggested in Fig. 1 above did prevail. Before competition became severe due to the remarkable increase in number of stores, the high volume of capacity utilization in the individual store resulted in substantial profits. As the number of stores increased, the growing market was shared by more operators. Where concentration of stores was high, per store share of the market was greatly reduced. Denver, Colorado is often used as an example of this with regard to coin drycleaning.

Further product differentiation, other than actual differences in machinery, was apparent in the trend to more elaborate store installations.

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<sup>10</sup> Ibid., p. 109.

<sup>11</sup> Ibid., p. 109.

Unusual layouts of equipment and fancy interior designs were encouraged to improve the image of the coin laundry in the community. A major trade magazine promoted a "store beautiful" contest as a step in the right direction. The face lifting process gave the new type store a competitive edge over the earlier utilitarian-type installation.

This change often was built around a greater number of washers and dryers. Early stores tended to a combination of twenty washers and four fifty-pound dryers. Later the ratio of washers to dryers changed to three to one, or approximately twenty washers and eight dryers. With the new ratio prevailing, the total number of washers used per store also increased as forty to sixty washer stores opened across the country. Larger premises were needed to house these giant size installations, raising the rental fees and investments in real estate.

The size of the initial investment in equipment and the increase in housing costs changed the entry fee. In 1958 a coin laundry installation for a twenty and four store could have been put in for \$13,000, excluding building and land. By 1962 a twenty, and by now, eight store ran closer to \$25,000. The more expensive interiors raised the housing cost of the equipment. This, in turn, raised the operating costs.

One reason for greater per store investment was the introduction of coin drycleaning. The cost of the drycleaning machinery ran about \$2,500 per wheel.<sup>12</sup> Most new stores began to use at least a pair of these wheels; in

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<sup>12</sup> A wheel is a cylinder in which the garments are cleaned. A coin drycleaning unit may have one or more wheels in a system.

some cases the installations were in banks of eight machines. This equipment called for specialized installations which again raised the housing costs. A salesmanager of one of the major equipment manufacturers put it this way:

While we do not have actual cost figures, we draw upon our industry knowledge when we say the current installations, which are much more elaborate than earlier ones, involve about three to five times the investment that earlier coin-operated laundries required.<sup>13</sup>

Further differentiation could be seen in the introduction of the medium size dryer. Early models held up to five loads of wash. Apparently, empirical studies showed that three loads of wash per dryer was a more realistic use factor. So the new size dryer was promoted. The price was lower than the old style dryer, but this usually did not lower the total investment in dryers since the trend was to use more of the medium size units. The ratio in later years shifted to two washers for every dryer. The shortened washer load time from thirty to twenty minutes made the availability of more dryer capacity a necessity.

The actual cost of each piece of equipment did not rise during the study period. In the case of the washers, it probably fell. Early models were eight pound capacity. By 1963 the twelve pound washer had become standard. The twenty pound or double-loader was being used with greater frequency. The 1958 eight pound washer cost approximately \$240, but by 1963 this was generally reduced to \$220 for a twelve pounder, depending upon the source of distribution. In 1958 the big dryer cost about \$500, but the new size dryer ran about \$428.

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<sup>13</sup> W. B. White, letter to author, January 21, 1964.

The change in market concept was the cause of a rise in the price of opening new coin laundries. More equipment capacity on the premises, expensive installation or housing costs of this equipment, and the trend of the addition of airconditioning added significantly to the cost of both installation and operation.

If the additional investment and increased operating costs due to the change in marketing concept were not accompanied by a proportional increase in revenues, then the rate of return must have fallen in general. Recalling the theoretical analysis of monopolistic competition, not all stores are affected in the same manner regarding cost curves. Their relative positions depend upon their success in achieving consumer preferences for their product. The new stores have a higher fixed cost or overhead in plant and equipment. Operating expenses had risen significantly. They faced in many areas an increasingly saturated market.

Long-run analysis indicates the correction will be to eliminate excess profits, with marginal operations ceasing. Maximum economies of scale are not realized where there is under-utilization of equipment. The trend of prices appeared to go up because some early stores with eight pound side-loading washers charged fifteen cents per load. The 1958 store usually charged twenty cents, but the introduction of the twelve pound washer brought with it the quarter wash. Thorough analysis must determine if this was truly a rise in price or a fall in price.

The individual pieces of equipment cost slightly less in 1963 than in 1958. Machine capacity offered to the consumer was fifty per cent more. Per load charge went up twenty-five per cent from twenty cents to a quarter. The per pound cost of washing had changed from \$.025 to \$.02083. The illusion

of a price increase was really a per pound price decrease at machine capacity. While the equipment itself did not cost more to purchase or to operate from a utilities point of view, the housing costs by this time had actually raised the total cost of operation significantly.

Introduction of a variety of machinery units, particularly different types of washers within the same establishment, with a variety of prices, did represent a price adjustment in the market. A study of the Detroit market revealed a market mix of equipment with the per pound cost of washing to the consumer declining with the corresponding increases in machine size. Eight, twelve, twenty, twenty-five, and fifty pound washers were observed in use in the trade area.<sup>14</sup>

If an operator could successfully combine in his new type store enough of the expensive new housing costs, with just the sufficient investment in equipment to attract consumers, he could keep his cost curve in better relation to the revenue curve. Better utilization of capacity could be attained. But, if the operator could not achieve this, the correction of monopolistic competition might find his operation beginning to show a loss.

The theoretical analysis recognizes there might be some entry restrictions built in to monopolistic competition by the assumption of product differentiation. This is particularly true of coin laundries. Such attempts to differentiate products tend to hold the excess economic profits intact.

The coin laundry industry has faced legislative battles resulting from vested interests attempting to block the development of this aspect of the

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<sup>14</sup> D. E. Paquette, "Variety is the Trend", COIN LAUNDERER & CLEANER, November 1963, p. 11.

fabric maintenance industry. New York and California are states where this is particularly noticeable. Coin drycleaning has been effectively hampered in both states. California requires that coin drycleaning stores have on the premises a licensed drycleaner at all times, even if it is a self-service operation. Drycleaners can only be licensed by the state board of drycleaners which is composed of commercial cleaners.

#### MODEL ANALYSIS

The financial effect of the change in the market concept of coin laundries is best seen in a presentation of equipment investment models and pro forma operating statements for the respective models. A basic equipment list will be devised as representative of each of the three years 1958, 1961, and 1963, with variations discussed in connection therewith. Each model has as its base twenty single load washers which are operating at seven loads per machine per day per thirty-day month.

No effort will be made to deal with real estate investment or building costs except as they are reflected in the rental estimate and in a discussion of housing cost trends. Financial charges are not included in the list of operating expenses, but their impact will be examined as the investments change. Freight charges are not included in equipment prices since they would be dependent on the location of an individual store with respect to the site of manufacture. An estimate of freight will be indicated in each model, and normally this cost would be amortized over the life of the equipment.

## Equipment Selection

When a coin laundry store is being designed, certain factors serve as a guide in the selection of equipment. The total cost of the store is primarily limited to the amount of capital available to the owner, his own in addition to that which he can expect to borrow. After the amount is determined, the investor must then allocate this amount between the equipment itself and the installation costs. The installation costs would include the connecting of the equipment, as well as all costs of readying the store interior and exterior for use.

A basic plan might first determine the total washer load capacity suitable for the market area as indicated by some preliminary estimation of the potential customers and the existing or anticipated competition. Next, the decision is made as to the use of single load, double load, or larger capacity washers. Following this, the number of dryers is based upon the ratio of washer to dryer capacity. The drycleaning units would also be selected on the basis of some market survey as with the laundry equipment.

After the basic major pieces have been chosen, the water heating system is keyed to the amount of hot water necessary to keep the washers supplied. The plumbing, heating, and electrical installation is then estimated on the basis of the equipment layout in the store, that is, the interior design. The auxiliary equipment, including money changing device, food and beverage vending units, and furniture, would be selected next. The interior decorating expenses would complete the allocation of the investment budget.

Once such a budget is defined, it may be that shifts in one type of equipment in favor of another might give the owner a balance which he feels would be a better competitive combination. The choice between two brands of washers or between two different capacity washers could release funds within the budget to permit the inclusion of extra facilities as they might be desired.

Two factors determine the specific choice of equipment pieces, the cost of the piece and its revenue drawing power when in use. The latter estimation is subjective, but some prediction as to the popularity of the machinery with the customers should be made for the equipment chosen.

#### Sources of Data for the Models

The source of data for the models of this paper is the same as that available to any investor contemplating opening a coin laundry. Industry information is communicated through several channels. The trade journals offer information as to equipment currently offered on the market by machinery manufacturers. Independent distributors, as well as franchised distributors, sell the equipment. Some manufacturers work through their own salaried factory representatives. All manufacturers print and distribute brochures on their equipment as to its specifications and general performance. Price lists are available through these same channels.

Equipment pieces from different manufacturers designed for the same purpose, such as single load washers, tend to be competitive in price within a certain range. For example, a single load washer tends to sell within the range of \$200 to \$260. The actual amount which changes hands between the

buyer and seller may depend on the quantity of washers purchased or the size of the whole equipment order placed with the distributor. Where one manufacturer prices his equipment at a premium over like brands, he may feel the pressure to meet the competitive price.

The author has priced the equipment pieces in the model on the basis of price lists from different manufacturers, on the inspection of invoices on equipment in stores in the Midwest area of the United States during the last seven years. This information has also been gathered from conferences with salesmen selling Norge, General Electric, Whirlpool, Westinghouse, Marquette, Speed Queen, Frigidaire, Wascomat, Philco-Bendix, Glover, Hammond, and other washers. Part of the last model in the series is based upon an investment brochure prepared by Whirlpool Corporation.

Correspondence with sales managers of Whirlpool Corporation and the Norge Division of Borg-Warner was also used in the preparation of the paper.

The trade associations are a source of current information and trends, as are the annual conventions at the regional and national level. Following the proceedings reports of these events are distributed to the members by mail.

It is recognized that prices on equipment may vary from region to region and perhaps from customer to customer within the same trade area, depending upon how hard a bargain is driven between the buyer and seller. The leveling effect of national distribution by the manufacturers and the highly competitive activities among these sellers causes the prices of like pieces to cluster within a certain range.

A knowledge of price lists and of offers of equipment at certain prices combined with inspection of invoices, then, forms the basis for the model computations. The relationship between the models is the important factor in the analysis. The same single load washer base is maintained with the additions being made of the extra capacity in keeping with the store fashion trends of the model years. The assumptions, set out in a subsequent section, regarding utilization of capacity are maintained in the three models to assist in the comparisons.

It has come to the writer's attention that the only accurate measure of the cost of equipment is not the invoice sent, but rather the check that is sent the other way. It has happened that distributors send an invoice containing inflated prices against which the buyer borrows money. Then, only the understood amount is remitted to the seller. In effect, this permits the buyer to borrow a higher percentage of the total value of the equipment than he might have otherwise.

The plumbing and electrical installations in the 1958 and 1961 stores were taken from two stores actually installed in those years with approximately the same amount of equipment. This, then, is an actual amount having been expensed, but still is but one example of such installation costs. The 1963 model uses those amounts suggested in the Whirlpool brochure.

#### The Model Assumptions

The washers are metered for twenty cents for a single load in the 1958 model and for a quarter in the 1961 and 1963 models. The double load washer is metered for thirty-five cents, and the twenty-five pound washer is metered for fifty cents a load. A use factor of seven loads per washer

per day is assumed. The dryers are metered for ten cents per ten minute cycle, with total dryer loads assumed to equal total washer loads. Drycleaners are metered for two dollars for an eight pound load which runs between twenty and fifty minutes on the variable cycle machines.

In the 1961 model the drycleaners run three loads per machine per day. But in the 1963 model the loads per day were raised to five with net results for three and nine loads per day per machine also calculated. The basis for these assumptions regarding the drycleaning use factor is a study made in 1963.<sup>15</sup> Because of the large proportion of total investment required for drycleaning equipment, the net results upon which the rate of return is to be calculated are greatly influenced by the use factor. The study cited an average of sixty-eight per cent of the respondents had five loads or less per machine per day. Forty-six per cent showed three loads per day per machine. Only nine per cent had ten loads per machine per day.

Since many of the early drycleaners had a fifty minute cycle, ten loads per day per machine for a store open for fifteen hours would mean almost continuous operation. Customers do not enter the store and use the equipment in an orderly, consecutive fashion. They frequently tend to bunch up, so that they may have to wait for machines. The drycleaners have to be serviced at intervals, so they would not run without some short periods of inactivity. Ceaseless operation tends to overheat them. With later models having reduced cycle time, the greater use factor is more feasible from a mechanical point of view. Drycleaning experiences great seasonality which averages the annual load factor rather low.

This study indicates that eighty-seven per cent of the respondents had less than ten loads per washer per day. The early washers had thirty minute

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15 "Profile of the Coin-Op Industry 1964", COIN-OP, December 1963, p. 40.

cycles. The 1961 model uses a twenty minute cycle machine. With store hours running from 7 a.m. to 10 p.m. for a thirty-day month, the seven load level for the washer is from a strong store. The total investments are amortized over a five year period.

The 1958 model had initial expenses of freight of \$360, utility connections \$375, and supplies and miscellaneous expenses of \$168. Freight on the 1961 model was \$528, and miscellaneous initial expenses of \$1,000. These figures were taken from stores opened in April 1958 and December 1961, respectively, in a town in Kansas.

The 1963 model is adapted from an analysis from Whirlpool Corporation. Freight is estimated at four per cent of the investment. Initial promotional expenses of \$1,000 and supplies of \$1,465 are suggested.

Since the use factor for drycleaning is very important, results for alternative assumptions of three and nine loads were computed. A model assuming three loads per drycleaner per day gives a monthly net income of \$140 or a two per cent per year return on original investment. With nine loads of drycleaning per machine per day the monthly net income is estimated at \$2,432 or forty-six per cent return per year.

#### General Observations

The most significant observation to be made is the jump in store investment for installations typical of the years cited. This is in keeping with the letter mentioned earlier from the sales manager that stores were from three to five times more expensive to install than in earlier years. The models presented indicate the effect on the rate of

Table 1. Model for 1958 coin laundry store.<sup>1</sup>


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Investment Model for 1958 Coin Laundry Store		
20	Single load washers	\$ 4,800
4	Dryers	2,260
1	Water heater	1,095
1	Coin changer	140
2	Soap and bleach dispensers	150
1	Beverage vender	330
1	Laundry sink	50
	Furniture	50
	Plumbing installation	1,000
	Electrical installation	440
	Carpentry	150
	Total initial investment	<u>\$10,465</u>

Pro Forma Monthly Operating Statement for 1958 Store

Revenue:

Wash	\$ 840
Dry	420
Soap and beverage	85
	<u>\$ 1,345</u>

Expenses:

Rent	\$ 100
Insurance and taxes	40
Depreciation	174
Soap and beverage purchases	51
Janitorial services	100
Repairs	50
Utilities	200
Miscellaneous	50
	<u>\$ 765</u>

Net monthly operating income      \$ 580

Monthly income annualized:  $\frac{\$6,960}{\$10,465} = 66.5\%$  return

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<sup>1</sup> The Appendix contains additional information about the models.

Table 2. Model for 1961 coin laundry and drycleaning store.

Investment Model for 1961 Coin Laundry and Drycleaning Store		
20	Single load washers	\$ 4,400
1	25 pound washer	1,500
8	Dryers	4,400
4	Drycleaners	10,000
1	Water heater	1,000
1	Coin changer, vault type	358
2	Utility units	1,200
1	Multiple soap dispenser	112
2	Hair dryers	360
1	Beverage vender	430
	Furniture	200
	Sign, exterior	500
	Air conditioning, 8 tons, and heating	3,500
	Plumbing installation	2,500
	Electrical installation	2,000
	Total initial investment	<u>\$32,460</u>

## Pro Forma Monthly Operating Statement for 1961 Store

Revenue:

Drycleaners	\$ 720
Wash	1,155
Dry	462
Miscellaneous vending	160
	<u>\$ 2,497</u>

Expenses:

Drycleaning supplies, 30¢ per load	\$ 108
Rent, \$3 sq. ft., 1,500 sq. ft.	375
Insurance and taxes	50
Depreciation	541
Vending purchases	100
Janitorial, 5 hours daily, \$1.50 hr.	225
Repair and maintenance	100
Utilities	300
Miscellaneous	50
	<u>\$ 1,849</u>
Net monthly operating income	\$ 648

Monthly income annualized:  $\frac{\$7,776}{\$32,460} = 24\%$  return

Table 3. Model for 1963 coin laundry and drycleaning store.

Investment Model for 1963 Coin Laundry and Drycleaning Store		
8	Drycleaners	\$20,000
6	Double load washers	2,970
20	Single load washers	4,400
12	Dryers	6,240
1	25 pound washer	1,360
1	Extractor	570
1	Solvent extractor	540
1	Solvent pump	65
1	Drycleaning scale	10
1	Soap and bleach dispenser	480
1	Laundry sink	289
1	Coin changer, vault type	390
1	Water heater	2,760
1	Utility unit	1,600
	Furniture	900
	Air conditioning, 10 tons, and heating	4,000
	Signs	2,325
6	Laundry carts	150
	Spotting equipment	100
	Installation, plumbing, electrical, and carpentry at 25% of equipment	<u>12,288</u>
	Total initial investment	<u>\$61,437</u>
Pro Forma Monthly Operating Statement for 1963 Store		
<u>Revenue:</u>		
	Drycleaners	\$ 2,400
	Washer, single load	1,050
	double load	441
	25 pound	105
	Dryers	567
	Miscellaneous vending	250
		<u>\$ 4,813</u>
<u>Expenses:</u>		
	Drycleaning supplies, 30¢ per load	\$ 360
	Rent, 2,500 sq. ft., \$3	625
	Insurance and taxes	190
	Depreciation	1,024
	Vending purchases	175
	Janitor and attendants, 15 hrs. day, \$1.25 hr.	562
	Repairs	288
	Utilities	629
	Miscellaneous	50
		<u>\$ 3,903</u>
	Net operating income	<u>\$ 910</u>
Monthly income annualized:	$\frac{\$10,920}{\$61,437}$	= 17.7% return
Original investment:		

return on original investment. There are other expenses, such as interest on financing, which only compound the situation.

The second factor not readily observable, but easily deduced, is the greater initial cash requirement for the later model store. The 1958 store could easily be opened with \$4,500 to cover the installation costs, down payment on equipment, and initial supplies. But the Whirlpool model suggests \$22,784 for the initial cash requirement in the medium size store.

The financial and business risks are far greater in the later model. If the 1963 model store opened in a nearly saturated market, it was faced with the problem of capturing a share of the market big enough to give it high equipment utilization for breakeven operation. Whirlpool material suggests breakeven at five loads of all major pieces of equipment.

As the investments increased along with the operating expenses, the cash flow considerations became very important. In 1958 financing was available primarily through the distributor co-signing a three-year note with the owner for eighty per cent of the equipment cost. As the major equipment manufacturers who had existing finance subsidiaries became more active, financing also was available through this channel. With the introduction of the expensive drycleaning machinery, the problem was that the amortization of the equipment was over five years, but the money had to be paid back in three years.

To alleviate this problem the trend was to finance ninety per cent of the cost over a five year period. This lowered the down payment but increased the monthly repayments. Many stores found themselves in a cash bind because the interest on these notes was computed on the basis of the

full amount of the initial principal borrowed, similar to an auto loan at a commercial bank. This raised the effective rate of interest.

At first glance it seemed that the eighty and then ninety per cent financing was helping the problem, but it actually made it more acute. A store might be making a profit, depending on how the equipment was depreciated, but find itself almost insolvent due to high equipment payments. Some manufacturers' finance subsidiaries went so far as to forego payments during the summer months when drycleaning revenue drops significantly. This merely postponed the problem. It did not solve it.

As the stores became more elaborate, the addition of some type of air conditioning was necessary to meet the competition of other stores which began to use it. In climates where summer temperatures and high humidity required the stores to be cooled, the owner found adequate cooling meant refrigeration units. The 1961 and 1963 models show this addition to investment in amounts of eight and ten tons which were considered adequate to combat the heat and moisture thrown off from the equipment itself as well as the climate outside the store. The utility bills increase noticeably when ten tons of cooling are being utilized.

Increasing housing costs show up primarily in the rental charge, in the portion of the utility bills for heating and lighting, and in the increased cost of store maintenance. The larger premises take longer to clean and cost more to decorate. The trend back to the attended operations with the introduction of coin drycleaning also raised the cost of operation significantly.

### Alternatives to the Models

The models demonstrate what happened to the size of the investment in coin laundry stores and the corresponding impact on the rate of return to the owner. To be a coin laundry and drycleaning store, the establishment basically must have a combination of washers, dryers, drycleaners, and a water heating system. Certain patterns of equipment selection and mode of operation appear as trends. Differences in stores are typical of monopolistic competition. They appear for two reasons.

First, the owner hopes to differentiate his product sufficiently to attract a high volume of customers. At the same time, he intends that his investment shall be the minimum necessary to achieve this goal. Secondly, the owner must decide which costs of operation will be necessary to get the revenue desired. These considerations lend themselves to many possible combinations.

The metered operation of these pieces of equipment determines what shall be the maximum revenue obtainable during hours of operation. Only the shortening of the time cycle and the price increase noted in the wash from twenty cents to a quarter were successful remedies to the limitations of metering equipment. As discussed in an earlier section, the increase from twenty cents to a quarter represented a reduction in per pound cost to the customer. At the same time, this nickel increased the revenue per cycle to the owner on a machine which cost the same to purchase and to operate. Additional benefits in this direction are not in view.

A further refinement of the marketing concept of the laundry stores was the addition of several professional services at the stores. Pick-up points

for commercial cleaning had earlier been a feature of the service stores. This trend reappeared in the later coin-ops. Finishing services on the premises necessitated the addition of pressing equipment to the basic equipment list of the models. Some estimates of this additional investment run as high as three per cent of the total equipment. This equipment was either attended or unattended as a coin-operated device.

#### ECONOMIC ANALYSIS

An appraisal of the effect of the change in market concept should begin with an examination of how the model stores were affected by this evolution in fabric care. Careful note of the problems which appeared for the owners during the study period will be made. Attempts to solve these problems will be indicated. The relationship between the problem as stated in the hypothesis of this report and the evidence that activity in the marketplace brings about solutions will be made clear.

#### Early Concept Stores

The older concept store of the period 1958 to 1960 is essentially the pre-drycleaning store. In the beginning of this period these stores realized very attractive rates of return on investment and positive cash flows. Operation was very simple. But as additional stores opened rapidly, early stores faced competition from operations similar to their own. This would have meant greatly reduced share of the market for each, except for one fact. In the 1950's the coin laundry with its new concept was developing a new market. Fortunately the market was cultivated as the number of stores

increased, so that in the early stage the effect of increased competition was somewhat mitigated.

The life cycle of the washer in these early high volume stores was a matter of great concern. Often the first store in a trade area had very high volume, which meant very hard wear. Overloading of washers created maintenance problems. As these washers aged, they required more frequent and higher cost repairs of major components. This problem raised the operating cost for the older store just when its share of the market began to show signs of erosion. The dryers were long-running and low-maintenance pieces of equipment, so they did not constitute a problem.

With the introduction of coin drycleaning, the older concept store faced a far more serious problem. When the earlier service laundry met the coin-op, the only effective solution was to convert to the new type of laundry operation. But a similar solution was not always available to the early coin-op when faced with the elaborate coin laundry and drycleaning store which began to open in numbers in 1961.

The earlier adaptation involved metering and rearranging the equipment with some addition of machinery. Coin drycleaning takes a very specialized and expensive installation. Most coin stores that were already three years old did not have the space to add this new type of operation. But in some cases single or double unit drycleaners were installed to meet the developing competition.

A general face-lifting by redecorating was one solution. Unattended coin laundries have only their physical environment to attract and hold their customers, since the human element is absent. Where the competition offers more elegant and pleasing physical environment, the customers may be

easily won away. Some of the newer stores, even though coin-operated, featured attendants. This served two purposes. It attempted to replace the former impersonal atmosphere. It also reassured the customer when using the unfamiliar coin drycleaning equipment.

The most obvious effect of the encounter between the older coin-op and the new concept fabric care center was a reduction in share of the market for the older store. Even though the operating costs, excepting machine repairs, were notably lower in the early store, the reduction in volume effectively reduced the value of the store investment.

There are some notable exceptions to this generalization which must be made. The evolution of the change in market concept which has been set forth in this paper is characteristic of the industry as a whole. To the extent that the local market has not yet experienced the full impact, the early stores remain unaffected. At first the merchandising approach to the installation of coin drycleaning was similar to the coin laundry store. But the fallacy of this is that while every consumer has a substantial quantity of launderable items, not everyone has drycleanable clothes in sufficient amount to be a potential coin drycleaning customer. So it was found, somewhat belatedly, that coin drycleaning often was not successful in very low income neighborhoods. Yet, the coin laundry of the earlier type continued to thrive in these areas.

If no attempt to change the nature of the earlier store was made, the one asset remaining was its economically efficient nature. The low operating cost and the low initial investment provided some barrier against the encroachment on its market by the elaborate new stores. Percentage-wise

this smaller type store could still achieve a higher rate of return. The measurement of the lower absolute amount had to be weighed against the larger financial and business risks of the larger type of investment.

#### Later Concept Stores

What of the present situation for the new concept store? It has typically a substantial investment in equipment and a high overhead commitment in a lease and leasehold improvements or real estate. By comparison, it has high operating costs and the necessity of high promotion and selling costs to achieve the high volume it must have to break even. It faces competition from four times as many competitors as the 1958 store faced. Further it faces in some areas restrictive legislation concerning hours of operation, attendants on the premises, and in some states local ordinances limit the size of drycleaning installations. It is true that where these restrictions are in effect they apply to new as well as to old concept stores. However, the 1958 store faced little or no regulation.

The burden of the cash flow problem in the large new concept stores brings the matter into sharp focus. The addition of the coin drycleaning equipment placed a financial burden upon the investment because of the very high equipment payments.

Problems concerning the best type of locations for coin drycleaning installations came to light. The lack of success of such stores in low-income neighborhoods was mentioned above. Another choice was whether or not coin drycleaning should be located alone, in small coin laundries, or

in large combination stores. A few rules of thumb have emerged, allowing for exceptions. It appears that coin drycleaning does best in conjunction with a very strong coin laundry. Strong in this case is not necessarily synonymous with large. It does refer to a high volume of patrons using the facilities in relation to the available equipment. Where the wash base is very strong, the chances of success for coin drycleaning with proper promotion are much more favorable.

The number of drycleaning wheels to install is also critical. First installations were often in banks of eight machines which ran from a central system. Multiple banks were frequently installed. As this proved to be excess capacity, other manufacturers produced independent units which permitted flexibility in equipment selection. Perhaps in defense against these big stores, yet mindful of the high cost of drycleaning equipment, some stores set in one or two wheels of cleaning. The problem lay in determining an optimum number of wheels to use. The answer was determined by the amount of trade generated by the location and the operating management.

The trend toward an average of four wheels seems to be a compromise. If the same amount of drycleaning revenue is obtained with four drycleaners as with eight or sixteen, it is obvious that this is one area where the investment can be redesigned to give a better return.

The matter of attendants has vehement supporters on both sides. Where they are required by law, there is no discussion involved. It is the position of the directors of the National Automatic Laundry and Cleaning Council that they should not be mandatory by law, but used at the discretion of the

management. The early concept of unattended stores was that this saving in labor cost permitted the owner to offer the use of the laundry facilities at lower prices. Bringing the labor cost back raises the cost schedule. If the revenue generated by the presence of the attendant is not in excess of the wage paid, then the management has put itself at a disadvantage.

There are three labor functions to be performed in a coin laundry store, unattended or attended. The unattended store requires the customer to assume the handling of the laundry process himself. In the attended store the attendant assists the patron or actually does the laundry or cleaning for the customer. This type of employee is often called a hostess or counselor.

A second labor function is required to keep the machinery in operating condition at all times. This takes technical skill. The cleaning of the premises and machinery is really a third and separate function and largely is rigorous janitorial work.

One manufacturer encourages strongly the use of the hostess or counselor system. But the person is envisioned as a very attractive, public relations, female advisor on fabric care. Such a function is incompatible with that of floor scrubbing and trash dumping of the janitor. Perhaps neither could service the drycleaning machines as is required periodically, nor repair the washers.

This discussion is intended to illustrate that labor costs returned in a substantial way with the later model coin laundry and drycleaning store. Again, the manager must determine from his specific situation which

costs are necessary to attract the desired revenue. If attendants are required by local ordinance, this is then in the nature of a fixed cost.

Viewing the 1963 model, it is clear that with a high volume per machine a substantial return on investment can be maintained. But a drop in dry-cleaning volume can place the burden for a return on the drycleaning investment really on the laundry operation. The trend to the additional services, such as pressing, is an attempt to strengthen the drycleaning operation and make it profitable for the owner.

The comment might be offered that the new stores would be better off without drycleaning since a store similar to the 1958 model can still be installed for about the same amount of investment as then. This is a possibility of where the market has created a new concept which the consumer now expects although he might not use. For new funds to be invested in old market concepts would be a questionable approach.

#### Installation Activity

Is the dramatic increase in the number of stores opening continuing at the same pace? To quote again from the sales manager mentioned earlier:

... installation activity in 1963 was much lower than in the period from 1958 through 1961. Most of the equipment went into actual additional new stores. Less than half of the total sales went into replacement market in existing stores.<sup>16</sup>

The year 1963 seemed to have been a year of adjustment in the coin laundry and drycleaning industry. There are other ways of observing this in addition to these comments from the sales manager of one of the major equipment manufacturers. A study of the method in which the promotion of store installations is carried out is helpful.

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<sup>16</sup> W. B. White, letter to author, January 21, 1964.

In the middle of the 1950's salesmen combed the states merchandising the concept of coin-ops. One distributor after another covered even the smallest of towns. This was how the some 33,000 stores were installed and opened. Another approach was the use of advertisements in publications and newspapers where investors might take notice.

This latter approach is indicative of installation promotion activity. The number of ads in the Wall Street Journal appeared to be falling off in 1963. Further, the ads sometimes carried an opening comment as to whether or not it was too late to get into the coin laundry and drycleaning field. This defensive tone in the ad copy suggests an effort to refute the impression that good investment opportunities had vanished in this field.

A more striking analysis may be made from an inspection of the leading trade journal equipment ads in 1963. Store concept ads were replaced by specific equipment ads. Advertising of the store concepts were always exclusively used by the washer manufacturers. Since the advertising emphasis had made this change, the inference might be made that the sellers were no longer putting in stores at the earlier rate. Apparently they were now concentrating on part of the whole market.

Essentially the washer manufacturers were the moving force behind the installations from the very first. Other equipment was in effect auxiliary to the washers. The major washer manufacturers almost discontinued their store concept merchandising through this channel in the last half of 1963.

The army of salesmen covering the territory has largely disappeared. Several of the washer manufacturers have revamped their sales approach entirely. Independent distributors who still drop ship equipment to

customers are now busy selling coin-operated car washes. The adjustment period affected more people and organizations than just the store owner.

Surprisingly enough, there are indications of renewed efforts in 1964 to put in additional stores at a greater pace than in 1963. The forces in the market which brought matters to a slower pace in 1963 apparently now have turned more encouraging and are convincing new investors of additional opportunities. Of course, store installations did not cease in 1963, they just paused somewhat. As new trade areas develop, such as new shopping centers or new housing projects, a coin laundry and drycleaning store is almost always found in them.

#### Economic Significance

What was the economic significance of events transpiring during the study period, 1958 to 1963? For the consumer, an evolution took place in the type of service offered for fabric care. There was an increase in quality of service for a reduction in price. Coin drycleaning offered substantial savings in cleaning costs.

For investors during the period an adjustment of a financial nature took place. Increasing competition and more costly investments put pressure on the rate of return. Changing store concepts left some operators with outdated installations and a weakened competitive position. But this did not affect all owners in the same way. The earlier analysis on monopolistic competition gives insight into the situation where some stores prosper and some wither. Economic analysis suggests that capital must have an adequate return or it will leave the field. This departure tends to relieve the pressure for a time.

## CONCLUSION

Certain aspects of the changes in the self-service laundry industry have been established. These include the changes in the equipment used in the stores, the changes in the form of the services offered to the patron, financial considerations, and the competitive situation. Together they offer an explanation of the problem which developed in the industry during the period 1958-1963.

### Findings of the Paper

Changing concepts in store types have made the initial investment for coin laundries and coin drycleaning stores much higher. The cost of operating these stores has increased. Yet the revenue obtainable from a metered machine has not increased appreciably. As a result the rate of return for later concept stores has dropped as compared with the representative 1958 store. The use factor or capacity utilization is very important, particularly for the expensive coin drycleaning equipment. The model for 1963 shows in its alternate computations that the rate of return fluctuates greatly with a small change in the use factor for coin drycleaning.

### Summary of Adjustments

With the introduction of coin laundries, some service laundries converted to this new type of store. Existing equipment was frequently adapted by adding externally mounted meters. Other service laundries maintained their original style of operation and held onto the drop-off trade that still existed. When some of the older stores switched to coin-ops, it left the fewer, remaining stores to compete for the service market.

When the pioneer coin-op was faced with competition from the rapid increase in number of coin laundries that were of a far more elaborate nature, its previously comfortable share of the local market was usually adversely affected. Since the newer coin laundries represented a significantly greater investment, one defense possessed by the older coin store was its financial flexibility. Since the earlier rate of return had been so high, it could now afford to experience a drop in its return and still remain in operation in the same market as the larger stores. The rate of return on its investment might not be as high as during its early days of operation, but still the return might compare favorably with those of others.

The fabric maintenance stores with their very large initial investments and high operating costs generally found that two problems confronted them. They had to break in on established markets, and they had to educate the public to use the coin drycleaning equipment in sufficient volume to generate a high use factor. To the extent they were successful in these two respects, the rate of return on investment could compare favorably with the early period coin laundry.

However, the survey referred to earlier suggests that generally the high volume necessary on the coin drycleaning equipment was not being attained. The Whirlpool data suggested a breakeven point of just over five loads per day on all pieces of equipment. The survey cited found only thirty per cent of the respondents had this much volume in coin drycleaning. Apparently too many operators have insufficient volume in coin drycleaning for profitable operation with this expensive equipment.

The slack in new installations opened in 1963 could probably be attributed to a growing lack of investment interest in an industry situation where the earlier easy profits had disappeared. During this time of adjustment, relief from additional competition did permit existing stores to adapt to the current situation. Correspondence with sales managers of two of the largest washer manufacturers support this interpretation of the situation in 1963.

#### Role of Financial Management

The critical role of financial management must be reviewed. Time is always the demanding taskmaster for the financial manager. He evaluates the effectiveness of the management of the firm's assets as represented in figures. A proper interpretation of what is happening to the firm as time passes is essential to good stewardship of the assets employed. This information is essential in performing the liquidity and profitability function in the management of the firm.

In an industry that experienced the rapid metamorphosis as did the coin laundry and drycleaning business during the period 1958 to 1963, financial management was forced to play a key role for several reasons. First, the initial financing of store installations had to be accomplished. This had to be done with an eye to the sometimes delicate balance between equipment payments and funds generated by profits and depreciation. Few stores closed because of equipment failure. Operation aspects were not faulty as the concept of coin laundries was sound. But the financial situation developed in a rather unsophisticated manner.

Keeping pace with the trend in store fashion demanded greater and greater financial commitments. These greater commitments were being made in the face of an increasingly less favorable competitive situation than faced in the early years of the study. The financial risks had therefore increased. Because of this, careful control of operating costs became critical as margins narrowed.

Strategic financial management is called for at the present time. The purpose of this report is to point out the financial effect of a change in a specific industry. The financial manager must carefully examine the past, forthrightly appraise the present position of his firm with respect to an industry that changed, and point out the most favorable road to take in the future. While this may seem to be an academic description of the function of financial management, it is nevertheless a pressing need for the coin laundry industry at this time.

### Perspective

The pattern of the development of the coin laundry industry bears out the theory of monopolistic competition; the pressing out of excess profits as an industry matures is predicted.

Each firm must ascertain its position along the continuum of market development. A careful evaluation of the trend of the gross receipts is a guide to the firm's position in its local market. If the possibility exists that increased competitive effort will bring more profitable results, then a change in the firm's relative position in the market could be effected.

A careful examination of the whole competitive situation in the trade area should bring to light further information bearing on the future prospects

of the individual firm. Attention must be given to the market life cycle of the individual coin store location. Any exogenous factors which might cause the customers to lose interest in the location must be carefully evaluated. This is a more critical measure than the life cycle of the physical assets themselves. Customers who have gone elsewhere are not always easy to retrieve.

Certain developments in the external environment of a business are beyond the control of management. When these factors adversely affect future prospects, then management must be prepared to defend its position from further deterioration. The transformation of the capital employed in a business enterprise is sometimes effected at a cost. Selling out entirely or readjusting the store concept might be less expensive than a later loss when the customers have nearly disappeared. This cost of any indicated change must be weighed against the true cost of continuation of the present course.

The events described in this report show a trend within the coin laundry industry. The exact position enjoyed by each firm involves an individual assessment. Management should ask itself what it has lost as these changes have taken place. The incidence of the financial effect of a change in the market concept in the coin laundry industry is yet to be fully investigated.

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APPENDIXES

## APPENDIX A

Cumulative Number of Laundry Stores Established  
by All Manufacturers and Distributors

<u>Year</u>	<u>Number</u>
1946	538
1947	1,366
1948	2,171
1949	2,631
1950	3,014
1951	3,408
1952	3,933
1953	4,623
1954	5,313
1955	6,417
1956	8,519
1957	11,279
1958	14,346
1959	18,210
1960	23,692

Source: Department of Commerce

## APPENDIX B

## The 1958 Model

The Investment. The eight pound washer used is a Speed Queen. The Bendix and Westinghouse washers were used extensively during this early period, also. The washer in the model cost \$240 each. A Huebsch 37 x 30" gas dryer with an externally mounted meter is used. The water heater is a 600,000 B.T.U., vertical flue Weben boiler. There are many boiler manufacturers, but Weben was active early in the coin laundry market. Ace, Day and Night, and Ewing are but a few that supply the trade.

The coin-changer is a Standard Change-Maker. The early models accepted either half dollars or quarters. Later models had three basic changers incorporated into one vault type frame. There are other manufacturers, particularly in the dollar bill changer category, but Standard is probably the industry leader.

In the early period the soap dispensers often were of the L&M design at \$75 each. These dispensers were sold through the L&M distributor or directly from the Texas headquarters. L&M was a firm which started in Texas and grew tremendously with the early coin-op period. When the brand name detergent makers discovered this market, they broke into it by lending free dispensers to those buying their products. The private brands and companies like L&M disappeared. There are many sources of venders, some good and some very poor.

Beverage venders are included in the model. The model used is a Vando Coca-Cola unit. The trend has been a remarkable increase in the price of

these units during the study period. Often the vender is owned and serviced by the bottling company. In this case the store operator receives only a commission and the gross receipts from the machine and cost of the merchandise sold through it would not be in the model.

In the early period laundry sink facilities were often overlooked. The idea of a streamlined unit was later picked up and sold at rather high prices. The 1958 model uses an old type laundry sink which plumbers would have available.

The plumbing and electrical figures used in the model are those of a store opened in Kansas in April 1958, with the same amount of equipment as the model. These early stores generally did not use the utility units of the later models, so that the plumbing and electrical work was custom designed based upon the arrangement of the equipment. The later utility units were portable metal frames to be used behind the washers. They contained the plumbing and electrical connections. Weben of Texas was an early manufacturer with many other firms following them into this market. The validity of these figures is based upon actuality, but it is recognized that local union wages may vary, as well as building codes, which would cause the installation figures to vary somewhat.

Early stores generally did not do very much about air conditioning. When the obvious need was accepted, the early solution was evaporative cooling units. But as the store investments grew, quality refrigeration installations began to be included.

The Revenue. Washer revenue is determined on the basis of equivalent loads times the amount charged. For example, twenty washers, running seven loads per day per thirty-day month equals 4,200 loads. With the machine metered for twenty cents, this gives \$840 for the wash revenue. With the dryer loads assumed to equal washer loads, the revenue equals 4,200 loads at ten cents a load, or half the washer revenue in this model.

The soap vends for ten cents a box. The Bendix stores sometimes used five-cent packets because a side loader takes much less soap. The two and one-quarter cases of soap sold in the model was taken from a month's operation at the assumed level of revenue from this same store. The amount of soap sold depends on two things basically. Is the store within close proximity to a supermarket, and are there many bachelor or non-homemaking customers in the clientele? Soap purchased through a vender is very expensive compared to the large boxes sold in the supermarkets. The mark-up is about two and one-half cents per box, so that it is not very lucrative for the operator. The beverage revenue is based on twenty-five cases sold, at ten cents a bottle. The hotter the weather, the more cold beverages are sold.

The Expenses. The rental figure is based on the rent for the store after which the 1958 model was patterned. It is, also, based on the survey from COIN-OP magazine which gave this as average for this size and age store. The insurance allowance of \$20 a month, or \$240 a year would be sufficient to carry a fire and extended coverage, a minimum comprehensive liability, and a money changer policy if it is available. The same amount of property tax on the equipment should be ample for most assessments.

The depreciation charge is based upon the five year amortization of the total investment.

The soft drink and detergent purchases are representative of the amount sold. The soft drink cost varies some with the amount of bottles lost through pilfering in the unattended store. This reduces the amount of refunds collected on the empty cases.

The janitorial service allows for \$3 per day approximately for hired help to clean the store. With a single store this charge could be avoided if the owner personally operated the store, but its value should still be recognized.

Utilities cover water, gas, and electricity to heat the store and operate the equipment. This allows for approximately four to five cents a load on the volume assumed.

The repairs and miscellaneous charge is an average based on experience in this size store during this period. The new equipment is not going to need immediate repair, but this permits an accumulation when these repairs begin to appear.

## APPENDIX C

## The 1961 Model

The Investment. This model incorporates several changes from the 1958 model showing the trend in the change in concept. The same twenty washers, but the single load washer is now a twelve pound model. By this time the early leaders, Speed Queen and Bendix, faced General Electric, Frigidaire, and many other manufacturers who now made a model for the coin-op market. Competition had put pressure on the price of the washer and \$220 per unit was more typical. With more brands to choose from, the investor could shop more selectively. The model uses a General Electric.

The twenty-five pound washer began to appear more frequently at this time. The model uses a Glover. Troy, Cook, Hammond, and later Hoyt put out comparable washers in this category. The list price was \$1,500 in 1961, but pressure forced this down as low as \$1,300 in some areas later.

The number of dryers used shows the change in ratio of washers to dryers. The same Huebsch dryer is used. At this time the medium-size began to appear. It cost about \$100 less than the bigger model. Many other dryer manufacturers became active in the coin-op market. Sahara, International Dryer, and Cissell are all big names in the dryer market. Several companies used dryers of these major manufacturers but labeled them with their private brand. Speed Queen and Marquette, for example, did this. This allowed them to merchandise a "complete line" of major equipment pieces.

The model uses Whirlpool drycleaners at \$2,500 per unit. This price has not been very susceptible to competitive pressure because of the tremendous development costs which the drycleaner manufacturers have been under. The Norge bank of eight drycleaners, operating from a single system when it was first introduced, sold for \$15,000. Later units were introduced as self-contained and could be purchased in fewer numbers than the earlier eight. At one time twenty-nine companies were making and selling coin dry-cleaning equipment. Many have disappeared already within the period under study. Glover of Kansas City, for one, has been under bankruptcy proceedings.

The water heater is essentially similar to the 1958 model. The only noticeable trend has been to larger capacity boilers. This does not necessarily mean more gallon holding capacity, but rather quicker heating capacity.

The detergent dispenser is one example of a purchased multiple column dispenser. A definite trend to the vending of detergent, starch, fabric softeners, plastic bags, and other related items was evident.

Hair dryers have been introduced with this model. Early models were in the \$250 category and even higher, but this came down quickly as the major makers of such equipment as is used in beauty salons moved into this market. The model uses a Helene Curtis air conditioned hair dryer at \$180 each.

The vault changer is included. Early models of the money changers were very susceptible to burglary, and insurance companies had very unsatisfactory experience with them. Some stopped covering the changers at all. When

Standard brought out this vault type changer, this problem was greatly alleviated. The early unattended store experienced a great deal of vandalism in the early period, particularly with the stores which were opened twenty-four hours a day.

The beverage vender reflects the increased price in this Vendo model. Vendo of Kansas City is one of the major beverage vender manufacturers. It might be noted that as the venders became more expensive, the return in this area was less attractive than earlier.

The increased budget for signs and furniture are but one sign of the trend to more elaborate stores. Eight tons of refrigeration are used to cool the store. The model uses two roof mounted units of four tons each. The tremendous amount of heat and humidity given off by the equipment when in operation causes high cooling bills in the summer time, but beneficially low heating bills in the winter months.

Utility units used here are priced at \$600 each. These units can be purchased in many combinations of washer layouts, such as ten units back to back, or twenty units in a single row. The plumbing and electrical work is based upon a store of this capacity.

It should be noted that the drycleaners take a specialized installation primarily to provide for careful elimination of the solvent fumes and proper ventilation. One estimate given the author by a factory representative was \$200 for each self-contained unit. The solvent, perchlorethylene, is attracted to gas flames. When it reaches any unit which is gas operated, it causes hydrochloric acid to form and deteriorates the metal of the equipment. This makes it mandatory to have well designed installations with respect to

ventilation and proximity to other pieces of equipment in the store. Accordingly, this is another example of why these stores became more expensive.

The Revenue. The washer is metered for a quarter in this model. This new price was slowly being introduced during this period. By 1963 the COIN-OP survey showed half of the respondents charged a quarter for a single load. The increased cost of the total investment undoubtedly encouraged this change. These washers have a twenty-minute cycle over the earlier thirty-minute cycle. Maytag and Speed Queen still produce a longer cycle model. The 25 pound washer will hold up to three loads, but since it is metered for fifty cents, it is converted to two loads for revenue computation purposes.

Drying revenue is based on the assumptions of the 1958 model. One trend to be noticed in this period is the quarter for a thirty-minute drying cycle. Previously the rate was for a penny a minute to dry whether the machine was metered for a nickel or a dime.

Drycleaners in this model operate at three loads per machine per day. Again this is based on the magazine survey and observations by the author as to equipment utilization information in the industry literature. This is a very significant point because underutilization of the expensive drycleaning equipment was a major factor in the drop in the rate of return. The later Whirlpool brochure indicates breakeven at five loads per piece of major equipment. Since the experience in the field on the average did not meet this, apparently this was the source of trouble. It must be remembered that coin drycleaning, particularly of the unattended variety, was revolutionary

in the field of fabric care. Its somewhat troubled start and the financial problems that resulted should be viewed in this context.

The breakdown on the miscellaneous vending is \$20 on the hairdryer, metered a quarter for thirty minutes. Soft drink purchases are \$100, and detergent and related products are \$40.

The Expenses. Industry figures and specifically Whirlpool information lists the operating cost of the drycleaners per load at thirty-five cents, including supplies and electricity. The seven cents electrical expense is incorporated into the utilities expense computation. The remaining twenty-eight cents is increased to thirty cents to allow for unexpected miscellaneous items. Thus, the model shows thirty cents for each of the 360 loads.

The rent is based upon 1,500 sq. ft. of space at \$3 per sq. ft. This increase is substantially higher than the 1958 model and represents several things. First, the more expensive store had to find a prime traffic area, and often showed up in a shopping center. Where earlier stores might have been put into small leased spaces, the newer stores with their complicated installations could not settle for "hole-in-the-wall" arrangements. In some cases, rents of substantially higher figures were asked.

The insurance and taxes figure has been raised with the increased value of the investment. Three hundred dollars a year for each is allowed. The depreciation is based on the five year amortization.

Detergent purchases of \$30 and soft drink purchases of thirty-two cases at \$2.15 per case are allowed. There were some instances of the cost of beverages rising.

Labor is increasing in this second model. Though still unattended, five hours a day for cleaning the store and servicing the drycleaners contributes to this increase in expense. The repairs and maintenance figure includes allowance for parts and some labor beyond that of the regular store maintenance.

The utility bill was compared to a similar store in actual operation and the rates in the Whirlpool data.

## APPENDIX D

## The 1963 Model

The Investment. The last model reflects several changes over the earlier stores. The basic washer capacity of twenty single load washers is augmented by the addition of six double load washers. The model uses the Whirlpool Wash-a-Lot at \$495 each. Several manufacturers offered this size unit, including Speed Queen, Bendix, Vamco among others. The number of drycleaners has been increased to eight. Twelve dryers are used to keep pace with the increase in washer capacity. The price on the 25 pound washer is reduced over the 1961 model reflecting the drop as more of these units were used in the industry. With the addition of more drycleaners, auxiliary drycleaning service equipment, such as the solvent extractor, has been included in this Whirlpool model.

The water heater price shows a great increase over earlier models. More capacity is needed with the additional washers. Another trend seen in some installations is a double boiler system using two medium size units which operate either singly or together. Then, if one of the units is out of service, there still remains enough hot water to carry the store over until a repair is effected. With the hot water heater out of order, the laundry section would have to close. Included in the Whirlpool material, but not in the model, is a water softening system. This would increase the investment by \$1,300. Such a unit would only be necessary in locations where the local supply of water was very hard, or where the investor felt the feature of "soft water" would be a competitive advantage.

Ten tons of cooling are included in the model. The installation costs in the Whirlpool material average about twenty-five per cent of the total investment in equipment. This is a little above the rate in the earlier models and closely follows the trend to more expensive housing costs of the equipment as is mentioned in the earlier chapters of the paper.

The Revenue. The revenue for the single load and twenty-five pound washers is based upon the same metering as in the 1961 model. The double load washer, new with this model, is metered for thirty-five cents.

The drycleaner is still metered for two dollars per load, but the use factor is changed to five loads per day per machine. This is the breakeven point for this type of unit in the Whirlpool model. Since the other equipment is employed above the breakeven use factor, this accounts for the positive profit figure. Additional computation has been made for the three loads and nine loads per day per machine for the drycleaners. These figures were given in the model chapter. The expense of operation was recomputed for utilities and drycleaning supplies also. The resulting difference in the rate of return when this assumption of rate of use is changed is substantial and offers a key to the problem of the industry during this later period.

The Expenses. The computation for drycleaning variable expenses is as with the 1961 model. Rent is still at the three dollar rate, but the size of the store has been increased to 2,500 sq. ft. to accommodate the increase in the number of equipment pieces. The insurance and taxes are assumed directly from the Whirlpool model which is based on prevailing rates in Benton Harbor, Michigan. The vending purchases are keyed to the gross sales of these items. The Whirlpool model does not include auxiliary

equipment for vending food or beverages. Either way the results of the model are not changed significantly. They are included in this paper to suggest that this aspect of the store operation is often present.

The 1963 store is attended in operation. The labor bill rises correspondingly. Discussion of the labor function has been made in the text proper, but it should be noted that this expense covers customer assistance, janitorial services, and minor machine adjustments or repairs. The repair expense estimate includes from the Whirlpool model approximately \$40 per machine per year with \$30 allowed for parts and \$10 for labor.

The utility expense includes a basic \$233 to heat and light the store, \$84 variable cost to operate the drycleaners at the assumed five loads per machine, and \$312 to operate the laundry equipment based on five and one-half cents per load. At the three load computation for the drycleaners the utility bill was \$545 and the drycleaning supplies, \$216. At nine loads they were \$700 and \$648, respectively.

As with the other two models, the investment is amortized over five years.

APPENDIX E

U. S. Consumer Expenditures for Laundry Service

1956 - 1962

Year	Total expenditure	Self-service installations	Self-service expenditures	No. of households	Population	Expenditure per household	Expenditure per capita
	(\$ 000,000*)	(\$ 000)	(\$ 000,000)	(Add 000)	(Add 000)	(\$)	(\$)
1956	\$878	3,800	\$ 45,000,000	48,785	167,509	\$17.99	\$5.24
1957	885	5,100	70,200,000	49,543	170,499	17.86	5.19
1958	837	8,300	99,600,000	50,402	173,374	16.61	4.83
1959	858	13,200	158,400,000	51,217	177,000	16.75	4.84
1960	867	23,800	285,600,000	52,610	179,325	16.48	4.83
1961	875	29,700	356,400,000	53,291	182,331	16.41	4.80
1962	883	33,800	405,600,000	54,652	185,181	16.16	4.77
	Est.						

Source:

- \* Office of Business Economics - U. S. Dept. of Commerce. (Includes power laundries, hand laundries, and self-service laundries.)
- \*\* Industry and Trade Journal Consensus.
- \*\*\* U. S. Bureau of the Census.

APPENDIX F

U. S. Consumer Expenditure for Drycleaning Service

1930 - 1962

Year	Consumer expenditure : Add 000,000*	Number of coin-op installations **	Number of coin-op drycleaning volume **	Number of households : Add 000***	Population : Add 000***	Expenditure per household :	Expenditure per capita :
1930	\$ 420			29,905	122,275	\$14.04	\$ 3.42
1940	423			34,949	131,830	12.10	3.21
1950	1,462			43,554	151,132	33.55	9.67
1951	1,543			44,656	153,691	34.55	10.04
1952	1,608			45,504	156,421	35.34	10.03
1953	1,671			46,334	159,012	36.06	10.51
1954	1,677			46,893	161,761	35.76	10.37
1955	1,754			47,788	164,619	36.70	10.65
1956	1,821			48,785	167,509	37.33	10.87
1957	1,846			49,543	170,499	37.26	10.83
1958	1,866			50,402	173,374	37.02	10.76
1959	1,910			51,217	177,000	37.29	10.79
1960	1,997			52,610	179,325	37.95	11.14
1961	2,020	1,500	50,000,000	53,291	182,331	37.91	11.08
1962	2,143 Est.	7,000	200,000,000	54,652	185,181	39.21	11.57

Source: \* Office of Business Economics - U. S. Dept. of Commerce.  
 \*\* Industry Consensus.  
 \*\*\* U. S. Bureau of Census.

THE FINANCIAL EFFECT OF A CHANGE IN  
MARKET CONCEPT IN THE COIN LAUNDRY INDUSTRY

by

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Successive changes in the nature of the self-service laundry industry have affected the investment required in the individual store. The service laundry of the 1940's, the coin laundry of the 1950's, and finally the fabric maintenance center of the 1960's are examples of the expanding marketing concept. Concurrent with these developments, a trend toward more elaborate store interiors and innovations in machine installations became evident. During the period of change in market concept, the great increase in the number of store installations was remarkable.

The purpose of this report is to analyze the financial effect of these changes through the testing of the following hypothesis:

"The rapid increase in the number of stores in the coin laundry industry and the additional investment required due to the change in marketing concept tended to lower the rate of return on invested capital during the period 1958-1963."

The hypothesis is tested by the use of models of store investments typical of the years 1958, 1961, and 1963. The study focuses on the period 1958-1963 because this was a time of rapid change in the coin-operated laundry industry. Equipment investment, revenue based on stated assumptions regarding level of use, and operating expenses are constructed for each model. The resulting net income is used to determine a rate of return on investment.

The models as representative stores show an increase in investment from \$10,000 in 1958, \$32,000 in 1961, to \$60,000 in 1963. Part of the large increase in the 1961 and 1963 stores was the addition of coin drycleaning equipment. The marked trend toward more elaborately designed stores also added to the higher cost.

Cost of operation increased during the study period. As the size of the investment grew, the space necessary to house the equipment increased. Often the rental charges increased greatly. With more elaborate interiors, the cost of decorating rose. In the unattended coin laundry of the early type, there was a minimum of labor cost. But with the introduction of coin drycleaning as well as a trend toward offering more services, the labor bill grew significantly.

The study shows a 400% increase in the number of stores opened from 1958 to 1963. This was the cause of increased competition in local trade areas. The problem of earlier type stores competing in the same market with the later, more elaborate stores is examined in the study. The effect of a decrease in the share of the market for the representative stores as seen in the change in use factor of the equipment is noted.

The study concludes that the rate of return in the coin laundry and drycleaning industry dropped during the period 1958 to 1963. Assuming a uniform use factor for the major pieces of equipment, the rate of return for these representative stores was 66% in 1958, 24% in 1961, and 17% in 1963. The increase in the store investment, increase in operating costs, and increase in competition contributed to the drop in the rate of return.

The coin laundry and drycleaning field is typical of a monopolistically competitive industry. The movement toward an equilibrium position by the pressing out of excess profits is typical. The high return enjoyed by firms in the early period of the study attracted a great increase in the number of stores. The resulting adjustment in the market removed the high return.