A SURVEY OF VENDING MACHINE FIRMS IN HOUSTON, TEXAS

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by

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CHAPTER I

THE PROBLEM AND ITS SETTING

Statement of the Problem

The problem of this study is to survey the activities of 14 vending machine operators in Houston, Texas, in order to study the problems with which these operators are confronted and to determine the effectiveness and potential effectiveness of advertising and sales promotion in solving these problems.

Sub-problems are: (1) to secure data concerning the type of business being operated, the size of the company, and other operating information; (2) to obtain personal evaluations as to the adequacy of and the need for advertising and sales promotion to educate customers to the use of vending equipment and to acquaint them with vendible merchandise; (3) to determine the factors that are important to location-owners in their decisions to use machines rather than the more conventional methods of making goods available; and (4) to determine what advertising and sales promotional efforts on the part of the vending operator may prove the most productive, both in terms of income and in creating a better public image for the vending industry.

Purpose of the Study

The primary purpose of the study is to gain information which can be utilized to improve the advertising and sales promotional efforts of vending machine operators. Some of the big operating corporations have launched strong campaigns to sell vending service to both locations and the public.[1] The information gained from the study can then be utilized to help build a better advertising and sales promotional program for vending operators.

Sources of Data

The main source of primary data was the information gained from the 14 vending machine operators through interviews and questionnaires. Coin Machine Operators Association, Inc., of Harris County furnished a list of the vending machine operators in Houston. This was used to select the operators to be interviewed.

Another source of primary data was the information gained from eight locations at which the vending machine operators had vending installations. The operators interviewed furnished the names of the locations to be visited.

Sources of secondary data include: *Automatic Merchandising*, by Martin V. Marshall; *Journal of Retailing*;

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[1] Harvey Carr, "Personnel Changes Reflect . . . Vending's Growth," *Coin Machine Journal*, Vol. 55, No. 2, p. 3.

Journal of Marketing; *Sales Management*; *Business Week*; *Management Review*; *Printers Ink*; *Fortune*; and the leading publications of the vending industry.

The National Automatic Merchandising Association and the Texas Merchandise Vending Association furnished information about the vending industry on the national and state levels respectively.

Limitations of the Study

This study has been limited to metropolitan Houston, which is located in Harris County, Texas. It is limited to 14 vending machine operators which co-operated in the survey. It is limited to the eight locations which the 14 vending operators listed as possible installations to visit.

The study was limited primarily to food items sold through vending machines, such as confections; consisting of candy, peanuts, crackers, cookies and gum, (when sold through multi-vend machines); coffee and hot chocolate; soft drinks; hot and cold foods; milk; ice cream; and pastries. The largest item sold through vending machines, cigarettes, is also included.

The music, novelty, amusement, and bulk vending operations are excluded.[2]

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[2]These lines are included only in the general information section. They are excluded from the rest of the study.

Definition of Terms

Terms as they are used in this study are defined as follows:

1. Vending operator refers to the person or firm who owns and operates vending machines through which his goods are sold.

2. Location-owner refers to the person or firm that has vending machines operating on his premises and usually receives some type of remuneration for allowing the machines to be placed on his property.

3. Vending installation refers to a number of machines that are located in a group so that the customer has a variety of items to select from. Coffee, cold drinks, cigarette, and candy are the basic machines located as a group. In locations where the vending machines are providing a major source of food for a number of people, such as employees of a firm, sandwich and prepared food as well as pastry, ice cream and milk machines are usually included in the installation.

4. Retail location refers to sites where vending machines are placed so that the general public has access to them. Such places as stores, service stations, lounges, apartment houses and theaters are retail locations.

5. Industrial location refers to a plant, refinery, or office building where the general public usually does not

have access to the vending machines. The vending machines are located in these places to feed the employees and workers within the confines of the company without their having to leave the place of work.

Method of Investigation

A combination of the personal interview method and the questionnaire method was used. The questionnaire was completed on the spot with the aid of the manager or owner of the vending firm. In this way the interviewer was able to explain the purpose of the survey and explain in detail any questions which were not clear. The questionnaire was used to guide the interview and many points were brought out in the discussion that were not specifically asked for in the questionnaire. This provided a better over-all look at the operations and problems of each individual operator.

The questionnaire is divided into three major sections: (1) General Information; (2) Retail Locations; and (3) Industrial Locations.

The General Information section was designed to obtain data about the general operations of the vending firm such as the size of the company, type of ownership, type of activity engaged in, the number of machines in operation, the number of employees, and total sales. All 14 vending operators completed this section.

The Retail Locations section was designed to obtain information about the activities carried on by the vending operator at such sites as stores, service stations, lounges, apartment houses, and theaters. These are locations to which the general public has access. Only those vending operators that worked this type of location completed this section.

The Industrial Locations section was designed to obtain data about the activities of vending operators at plants, refineries, and office buildings. These are sites to which the general public usually does not have access. Only those vending operators that worked this type of location completed this section.

In some cases the vending operator had both types of locations. These vending operators completed the entire questionnaire.

Organization of the Study

This study is organized along two lines; (1) the survey of 14 vending machine operators in Houston, Texas; and (2) the survey of eight locations visited by the present researcher where the vending operators had vending installations.

Chapter III is devoted to the survey of the 14 vending machine operators, obtaining information about their present efforts in the field of vending, with emphasis on the advertising and sales promotion being done. This gave some insight into what problems the vending operators are faced with and what steps they are taking to solve these problems and to improve their position in the industry.

Chapter IV is devoted to the survey of the eight locations. It points out the factors that were important to the location-owners in considering methods to use in providing their employees and customers with needed services, primarily food. Also information was obtained from the location-owners about the strong and weak points of their particular vending installations.

With the surveys of 14 vending operators and of eight vending installations completed, Chapter V consists of the summary, recommendations, and conclusions derived from the study. The survey of the activities and efforts of the vending operators, accompanied with a report on what services the location-owners want and expect, furnished a background of the present status of vending in Houston, Texas. By evaluating these two circumstances, recommendations and conclusions can be made for strengthening and improving the operators' vending programs.

Background Information about Houston, Texas[3]

Background information about Houston, Texas, is offered here to illustrate the setting in which the vending

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[3]Taken from publications furnished by the Houston Chamber of Commerce. A complete list of these publications is included in the bibliography.

firms were operating. Such facts as the population, where the people are employed, and how they spend their money are pointed out. This gives some insight into the area's present situation and its potential.

The city of Houston is located in the southeastern portion of the state of Texas on the oil-rich Gulf Coast. Covering 349 square miles, it is connected to the Gulf of Mexico by way of a 50-mile ship channel which was dug in 1915. More than 4500 ships a year move almost 56.5 million tons of cargo through the port of Houston each year. Houston, the second largest port in the United States for sometime, is presently ranked third behind New York and New Orleans.

The city of Houston has a total population of 938,219 making it the sixth largest city in the nation.[4] Some 28,512 industrial-commercial establishments employ 518,185 persons, with an annual payroll of almost $3 billion.

The Houston area contains the world's largest petrochemical complex, 75 per cent of the total United States capacity. With the world's greatest refinery complex, 30 plants with some $2 billion invested can process 30 per cent of United States capacity, complemented by its petrochemical empire, the Houston-Gulf Coast's wide-spread industrialization is laced together by a system of inter-plant pipelines

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[4] _____ National Industrial Conference Board, Inc., "Roadmaps of Industry," No. 1299, November 18, 1960.

picturesquely called "The Spaghetti Bowl." These plants feed off each other; one plant's products become feed-stock for another plant. More than a thousand miles of chemical-carrying product lines tie together 63 major plants and seven underground salt domes that serve as reservoirs. Houston also has 38.2 per cent, $328,520,000 of the nation's oil-tool market.

Retailing ranges from exotic items in super-sophisticated shops to enormous department stores in the heart of Houston. The retail trade in Houston is divided among the establishments in the downtown area, the retail outlets in a large number of shopping centers at various suburban locations, and the downtown centers in the smaller towns and cities in Harris County. Houstonians spend about one-half of their retail dollar at food, automotive, and general merchandise stores.

To all of this is added the National Aeronautics and Space Administration's $123 million Manned Spacecraft Center. NASA expects to outlay $60 million a year for salaries and expenses and to invest some $200 million in plant and laboratory facilities in Houston.

Summary

The problem of the study is to survey the activities of 14 vending operators in Houston, Texas, to determine the strong and weak points of their operations. The study was made to gain information and to be used to improve and strengthen the vending operators' advertising and sales promotional programs.

Primary sources of data include the information gathered from 14 vending operators, eight locations visited that had vending installations, the National Automatic Merchandising Association, and the Coin Machine Operators Association, Inc., of Harris County. Secondary sources include business periodicals and the leading publications of the vending industry.

The study is limited to metropolitan Houston, Texas; it is limited to 14 vending machine operators; it is limited to eight locations visited that had vending installations; and it is limited primarily to food items with the inclusion of cigarettes.

<u>Vending operator</u> is the person or firm who owns and operates vending machines; <u>location-owner</u> is the person or firm that has vending machines operating on his property; <u>vending installation</u> is a number of machines located in a group so that the customer has a variety of items to select from; <u>retail location</u> is where a vending machine or installation is available to the general public; and <u>industrial location</u> is where a vending installation is available only to employees and workers of the firm where the installation is located. A combination of the personal interview and questionnaire method was used to gain the information from the 14 vending operators and eight locations.

The study is organized along two lines, a survey of 14 vending operators in Houston, Texas, and eight locations which had vending installations. By weighing the efforts of the vending operators against what the location-owners want, recommendations for improving and strengthening the vending operators' efforts can be made.

The site for this study, Houston, Texas, is one of the nation's most fertile areas for the expansion of automatic vending. Virtually untouched as yet by automatic restaurants, Houston is wide open for this type of feeding service. The heavy concentration of industry in the rich Gulf Coast region offers potential for a booming market for industrial food services. Houston itself covers 349 square miles and has a population of 938,219 persons with an annual payroll of almost $3 billion. Trends are moving toward Houston becoming the retail center of the Southwest. The National Aeronautics and Space Administration has recently located its $123 million Manned Spacecraft Center in Houston and this portends further growth.

CHAPTER II

A BRIEF HISTORY OF VENDING

The growth and development of the vending industry has been prompted by new inventions, better equipment, and improved techniques. All of these factors are important today in the further expansion of the industry. This brief history of vending shows what developments have taken place in the past and what the future may hold for automatic vending.

Early Developments

> The practical impact of the vending machine on our economy was not generally recognized prior to the middle and late 1940's. But the idea of selling things from machines is nearly as old as recorded history, and the beginning of the modern vending industry came in the last half of the Nineteenth Century.[1]

In 215 B.C., the mathematician Hero in a book entitled Pneumatika, described and illustrated a coin-actuated device to be used for vending sacrificial water in Egyptian temples. The device was completely automatic and was set in operation by the insertion of "a coin of five drachmas," equivalent in modern money to approximately 75 cents.[2] It is not known if the device was widely used.

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[1] G. R. Schreiber, *A Concise History of Vending in the U.S.A.* (Chicago: Vend Magazine, 1961), p. 9.

[2] *Ibid*.

Little else was done with selling machines until 1615, when snuff and tobacco vending boxes appeared in English taverns and inns. These vending boxes were somewhat less developed than Hero's device. The English brought a number of these early devices to the colonies.

1822 to 1890

The period from 1822-1890 saw experiments carried on with crude vending machines. The first attempt to vend a product other than tobacco or snuff was made in England. In 1822, when a struggle was taking place to establish freedom for the English press, a writer named Richard Carlile conceived the idea of selling books through machines in order to avoid being arrested. The vendor was a clock-type device, with book titles written on a dial, which was activated by the insertion of a coin.[3] The device did not prevent Carlile from being arrested, and his conviction for selling censored literature ended the usefulness of the device.

The first automatic selling device to be patented was designed by Simeon Denham in England in 1857.[4] The device was a postage stamp vendor which dispensed a single stamp upon the insertion of a penny. It did not develop

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[3]Martin V. Marshall, *Automatic Merchandising* (Boston: Harvard University Graduate School of Business Administration, 1954), p. 6.

[4]Schreiber, *op. cit.*, p. 12.

beyond the idea stage until a decade later when the practice of selling stamps automatically was more feasible.

The first U.S. patent went to W. H. Fruen in 1884, for a dispensing device similar to Hero's holy water dispenser.[5] In 1886, Percival Everitt designed a postal card vender that proved to be very popular with the British public.[6] He also designed other vending machines, including a penny ticket scale. Everitt's inventions attracted the attention of other machine designers who saw the possibility of their application to other products.

The real beginnings of vending in the U.S. came in 1888 when Thomas Adams acquired the American patent rights to Everitt's penny ticket scale and converted it to sell Tutti-Frutti gum on New York City's elevated railroad platforms.[7] The last decade of the Nineteenth Century saw a rash of new vending inventions in the U.S. and abroad. This began the first wave of vending machine companies to be formed and the development of the vending industry began on a large scale. On November 25, 1887, the Sweetmeat Automatic Delivery Company, Ltd., was registered in England--the first company organized to install and maintain automatic vending machines as its principal business.[8]

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[5] Ibid.

[6] Marshall, loc. cit.

[7] Ibid.

[8] Schreiber, op. cit., p. 13.

1891 to 1945

The years from 1891-1945 brought full development of vending businesses, primarily in the chewing gum and candy trades. It was during this period that one of the first fully automatic gum vending machines was developed. Improvements in the machines assisted the vending industry's development and growth. By 1910 there were over 50 companies engaged in penny or so-called bulk machine operations.[9]

In 1893, perfume vending was introduced in the United States and France. In Paris, the application of this device was considered for the dispensing of disinfectants and antiseptics in public places.[10]

By 1895 there was at least one automatic restaurant in operation in Germany; Richard Carlile's idea of book vending was being done on a large scale in Belgium; and the citizens of Corinne, Utah, were provided with the services of an automatic divorce machine.[11]

Horn and Hardart Baking Company opened its first Automat in Philadelphia, in 1902, nearly 20 years after the opening of automatic restaurants in Europe. The Automat of 1902, was the forerunner of the automatic cafeterias which now provide complete food service for millions of industrial

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[9] Marshall, *op. cit.*, p. 7.

[10] Schreiber, *Ibid.*, p. 20-21.

[11] Schreiber, *loc. cit.*

workers, for hospital staffs, and in colleges and office buildings.[12]

The United States Post Office Department, in 1905, appointed a committee to investigate the merits of vending machines to dispense postage stamps. The Department tested six stamp machines in 1908, and in the same year it began to manufacture coils of stamps suitable for use in the machines.

The early 1900's saw the development of the first operating companies in the vending industry. The operating company was formed to fill the need for service and maintenance of the vending machines. By the end of World War I, and the beginning of the 1920's, the idea of operating companies was well established. The companies would own and service vending machines and pay a commission to the outlets where they were placed.[13]

In 1925, the invention of a vending machine suitable for the selling of cigarettes was an important milestone in the growth of the vending industry. The price was 15 cents, making this the first attempt to sell an item for more than a nickel. Cigarette machine manufacturers originated most of the basic improvements in vending machines, such as: an effective slug rejector, mechanisms that would accept combinations of coins, and change makers.[14] These

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[12] *Ibid.*, p. 25.

[13] *Ibid.*, pp. 28-33.

[14] Marshall, *op. cit.*, p. 8.

improvements added to the versatility of the vending machine and increased its popularity as a method of selling.

Consolidated Automatic Merchandising Corporation appeared on the scene in the late 1920's. This was the first attempt to organize a diversified national operating company.[15] C.A.M.C.O. was a holding company controlling such firms as: General Vending Corporation of Virginia, Automatic Merchandising Corporation of America, Schermack Corporation of America, Remington Service Machines, Inc., and Sanitary Postage Service Corporation. The depression ruined C.A.M.C.O. and it went into bankruptcy in 1933.

N. Robert Harvey, a Pennsylvania grocer, experimented with vending machines located in apartment houses in 1931. His idea was to provide the apartment house residents with a 24-hour delicatessen. The machines held 30 different items in cans, glass jars, cartons and paper bags, and included such staples as coffee, sugar, canned vegetables, fruit, and ginger ale.[16] This was the first attempt to refrigerate and vend foodstuffs. The operation proved unprofitable and was discontinued.

The ever-amazing Clarence Saunders, founder of the Piggly Wiggly stores, opened a robot store in Memphis,

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[15] Schreiber, op. cit., p. 34.

[16] Ibid., p. 37.

Tennessee, in March of 1939.[17] The "Keydoozle" was a fully automatic grocery store. In operation it worked something like a dial telephone in which groceries take the place of numbers. In place of a dial the customer used a "key" loaded with paper tape. The customer picked up this key and entered a long showroom where groceries were spotlighted behind glass. When the customer saw an item he desired to purchase, he dropped the key into a slot beneath the display and pressed a button marked with the code letter of the desired merchandise. The customer then took the key to the cashier, who tore off the tape and fed it through a computing "translator" and handed the customer an itemized bill. The bill was stamped with his call number. As soon as the customer paid his bill, he waited in the lounge until his number was called; then he picked up his order.[18] The store was closed in 1949, because as Saunders put it, "It's too far ahead of the buying habits of the public. It was just too much for the average mind to grasp, too far in advance of public thinking."[19]

The 1930's saw the development of the candy, cigarette, and soft drink trades. New outlets such as service stations, grocery stores, and others became popular locations for

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[17]Charles R. Goeldner, "Automatic Selling--Will It Work?," Journal of Retailing, Vol. 39, No. 2, (Summer, 1962), pp. 41 & 42.

[18]*Ibid.*

[19]*Ibid.*

machines. On September 14, 1936, the National Automatic Merchandising Association was formed by a dozen of the vending industry's leaders in New York.[20] This was a sign of the successful and productive years which set the stage for the expansion of the vending industry following World War II.

The outbreak of World War II stopped the production of vending machines. The manufacturers turned their attention to the production of war materials. But the increase in the working force and the longer hours of work brought about by the increased production of American industry in its war effort, provided the vending industry with more business than it could handle.

After the war came a period of invention and promotion never before attained by the vending industry. Machines were introduced which sold everything from ice cream to shoe shines. Refrigeration and heat were technical improvements added to the machines so that hot and cold foods could be vended. As the business grew, it changed. Manufacturing companies, once family-owned enterprises, usually run by the inventive genuises who started them merged with one another and marketed their stock to the public. Operating companies, who began the Forties offering their customers one or two product lines, diversified so that they offered the customer

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[20] Schreiber, op. cit., p. 43.

complete vending services.[21] Vending had come a long way by 1946, but there was still a long way to go in respect to the growth and development of the industry.

1946 to the Present

Gambling devices were plaguing the vending industry in 1946. This problem became so serious that the industry began a long-range public relations program under the direction of the National Automatic Merchandising Association to combat it. Although the companies which made vending machines, did not make gambling machines, and those companies which installed and maintained merchandise vending machines, did not install and maintain gambling devices, the feeling persisted that vending machines were somehow slot machines and the men who operated them were suspect.[22] This program was intensified in the following years by the increasing number of vending companies who placed their stock on the market. Automatic Canteen Company lead the way by having its stock listed on the New York Stock Exchange in 1946.[23] This helped remove much of the mystery and secrecy and the accompanying suspicion from vending. This effort is still taking place as the vending companies are constantly trying

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[21] *Ibid.*, p. 46.

[22] *Ibid.*, pp. 23-32.

[23] Schreiber, *loc. cit.*

to build a better public image.

In Philadelphia, two young ex-servicemen, Lloyd Rudd and K. Cyrus Melikian formed a company to make and operate a hot coffee vending machine they had invented and perfected.[24]

Once a new process is put into use, it is continually improved upon and broadened. In the early Fifties, Leslie Arnett, who put the first self-contained cold cup drink machine in Lincoln Park Zoo, in Chicago, unveiled the first vending machine which made coffee from coffee grounds rather than liquid concentrate or instant dry ingredients.[25]

Refrigeration and heat were constantly being improved so that more and more hot and cold foods could be handled by the machines. The paper money changemaker has improved the outlook for vending substantially since 1960.

In the summer of 1960, Macy's, the New York department store, in conjunction with Universal Match Corporation introduced a currency-handling automatic merchandiser. The model was designed to dispense 36 separate items, 18 selections of one style of boxer shorts, and 18 selections of one style of men's T-shirts. It accepted 1 cent, 5 cent, 10 cent, 25 cent, and 50 cent coins, and United States $1 and $5 bills.[26] It was a prototype, not a production model, used to

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[24] Ibid., pp. 45-46.

[25] Ibid.

[26] _____ "Vending 1960 Macy's, New York, Sets Pattern for Retail Store Automation," Coin Machine Journal, Vol. 53 No. 4 (July, 1960), pp. 4-5.

experiment with the selling of soft goods and specialty merchandise through machines.

Grocerette Vending Machines, Inc., of Long Beach, California, has developed a multipurpose vending machine to be used to sell groceries. It is a ten-selection, weather-proofed vendor, that is available with or without refrigeration. It is coin-operated only and will vend from five cents to $1.14. Its most successful locations have been apartment houses, gas stations and bowling alleys.[27]

The year 1960 was the beginning of vending company mergers. By the end of 1961 more than 300 individual companies had been party to consolidations. Some ten national and regional operating companies absorbed more companies than were involved during any other post-war period.[28] This trend toward merging affected the vending machine manufacturers also. Diversified manufacturers added independent lines to their operations in order to offer their customers a full line of equipment.[29]

Also many smaller operating companies merged on a local basis seeking better opportunities for growth, but desiring to retain their local ownership, thus putting them

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[27] Alan R. Andreasen, "New Developments in Automatic Vending," *Journal of Retailing*, Vol. 37, No. 4 (Winter, 1961-62) pp. 19-21.

[28] _____ "Vending in 1961, Year of Realistic Reappraisal," National Automatic Merchandising Association, 1961.

[29] *Ibid.*

in a better market position to compete with the large national companies.

The Coca-Cola Company is an example of the action being taken by single-product operating companies. This company has moved into the full-line vending field, now offering their locations complete food lines as well as cold drinks.

The growth of food vending in the 60's prompted some of the large vending companies to acquire some of the largest catering firms in the nation in order to provide their locations with this additional service. The vending companies needed the food know-how which these catering firms could provide. Automatic Retailers of America's acquisition of the Slater Food Systems, Automatic Canteen Company's acquisition of Nationwide Food Service, and Interstate Vending Company's acquisition of the Brass Rail Food Service are examples of these consolidations. These combinations have led to increased food vending installations in the smaller office and plant locations. These locations previously had no food service or the service had proved inadequate; vending apparently has been a highly satisfactory answer.[30]

Finally, a sign of the progress and maturity of the vending industry was the beginning of a better understanding on the part of customers that vending commissions are directly related to the service and quality which an operating company

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[30] Ibid.

can furnish.[31] High commissions have a direct effect on the service provided, and location-owners are beginning to consider quality and service first, and commission rates second.

Chart I illustrates the growth of the vending industry through increased volume since 1946. In 1946, $6000,000,000 worth of goods were sold through vending machines. By 1952 this volume had increased by more than 130 per cent, to $1,400,000,000. The year 1956 with $1,900,000,000 sales showed an increase in sales of 36 per cent over 1952. In 1958, total sales of the industry for the first time exceeded the two billion dollar mark with a record high of $2,132,576,000. This was an increase of 12 per cent over 1956. Part of the reason for this growth is attributable to improvements being made in the coffee and cold drink dispensing machines. The years of the mergers, 1959, 1960, and 1961, saw increases to $2,377,400,000; $2,586,000,000; and $2,739,000,000 respectively. The percentage increases amounted to 11 per cent for 1959; 9 per cent for 1960; and 6 per cent for 1961. Total sales for 1962 amounted to almost 3 billion dollars, $2,956,000,000. This was better than a 7 per cent increase over 1961.

Tables I through VI present a breakdown of the vended

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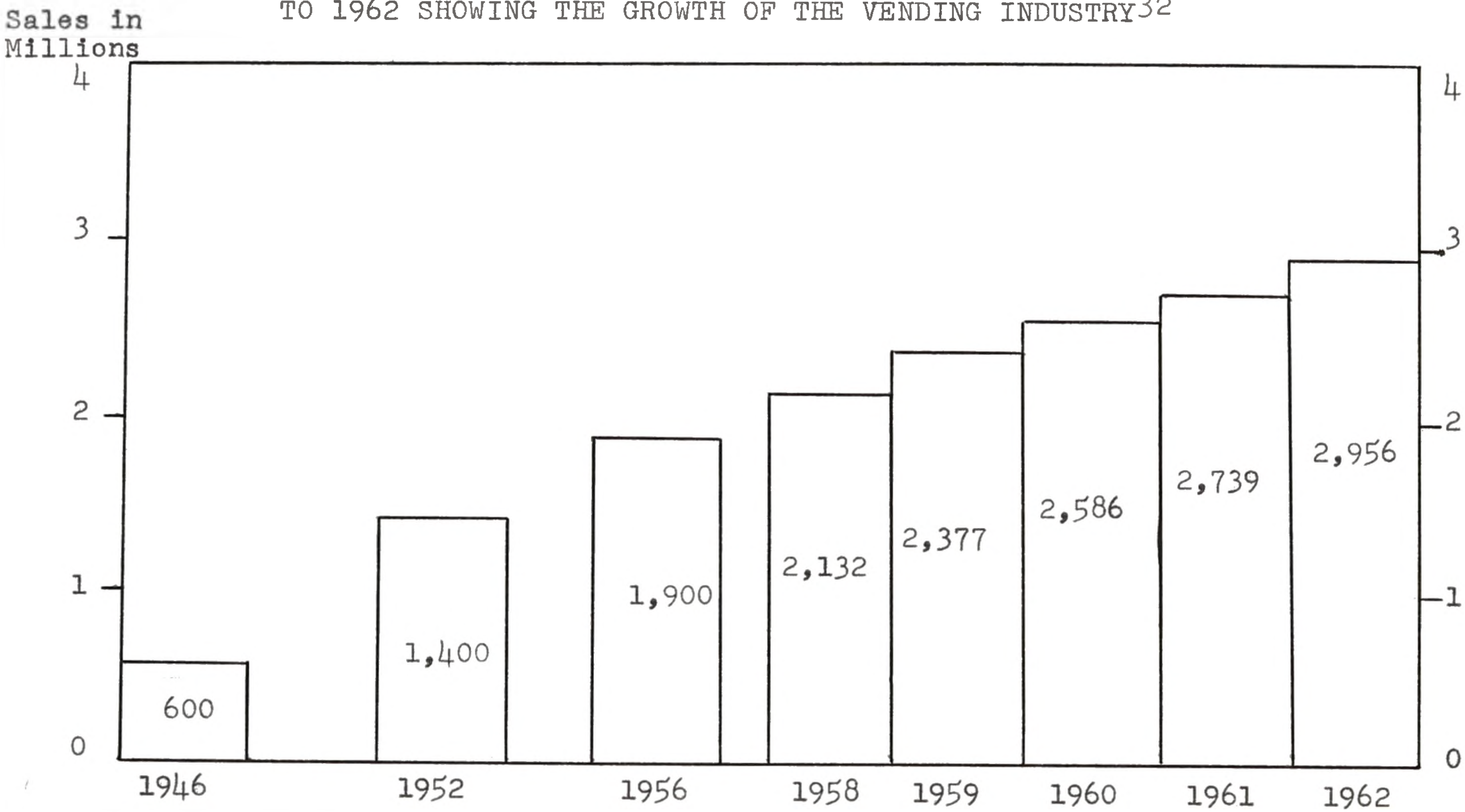
[31] _Ibid._

CHART I

ANNUAL VENDING SALES FOR CERTAIN INDICATED YEARS FROM 1946 TO 1962 SHOWING THE GROWTH OF THE VENDING INDUSTRY[32]



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[32] "Census of the Industry," <u>Vend Magazine</u>, Vol. 17, No. 6, March 15, 1963, p. 20.

volume and number of machines on location by products for the years 1956 through 1961.

Table I presents only the number of machines on location because the breakdown of the total vended volume by products was not available for the year 1956. Only the total sales figure for the industry, $1,900,000,000, is given. A total of 3,139,800 machines were on location in 1956, with bulk confections having the largest number of machines, 1,150,000; or 36.63 per cent of the total. Soft drinks (bottle) were second with 662,000 machines; or 21.08 per cent of the total, and cigarette machines were third with 565,000 machines; or 18.01 per cent. The remaining numbers of machines on location by product were: packaged confections, 510,000 machines, or 16.24 per cent; coffee, 76,000 machines, or 2.42 per cent; soft drinks (cup), 73,000 machines, or 2.33 per cent; cigars, 40,000 machines, or 1.27 per cent; ice cream, 29,000 machines, or .92 per cent; milk, 27,500 machines, or .88 per cent; and hot canned foods, 6,800 machines, or .22 per cent. The number of machines on location for prepared foods and the all others group were not available.

Table II shows the breakdown of total sales and the number of machines on location in 1957. Total sales for 1957, amounted to $2,049,258,000. Cigarettes led in total volume with $761,881,000, or 37.18 per cent of the total. The all others group was second with $438,000,000, or 21.37

TABLE I

TOTAL VOLUME OF VENDED MERCHANDISE AND NUMBER OF MACHINES ON LOCATION IN 1956 WITH NUMBER AND PER CENT OF EACH ITEM[33]

PRODUCT	VOLUME (1,000's)	PER CENT OF TOTAL	NUMBER OF MACHINES	PER CENT OF TOTAL
Packaged Confections	not given	not given	510,000	16.24
Bulk Confections	not given	not given	1,150,000	36.63
Cigarettes	not given	not given	565,000	18.01
Cigars	not given	not given	40,000	1.27
Soft Drinks (cup)	not given	not given	73,000	2.33
Soft Drinks (bottle)	not given	not given	662,000	21.08
Coffee	not given	not given	76,000	2.42
Ice Cream	not given	not given	29,000	.92
Milk	not given	not given	27,500	.88
Hot Canned Food	not given	not given	6,800	.22
Prepared Foods	not given	not given	not given	------
All Others	not given	not given	not given	------
TOTALS	1,900,000		3,139,800	100.00

[33](See Appendix A)

TABLE II

TOTAL VOLUME OF VENDED MERCHANDISE AND NUMBER OF MACHINES ON LOCATION IN 1957 WITH NUMBER AND PER CENT OF EACH ITEM[34]

PRODUCT	VOLUME (1,000's)	PER CENT OF TOTAL	NUMBER OF MACHINES	PER CENT OF TOTAL
Packaged Confections	244,000	11.91	533,400	16.00
Bulk Confections	57,000	2.78	1,100,000	32.99
Cigarettes	761,881	37.18	645,700	19.37
Cigars	6,405	.31	42,700	1.28
Soft Drinks (cup)	101,557	4.96	93,200	2.80
Soft Drinks (bottle)	258,055	12.59	737,300	22.11
Coffee	94,745	4.62	99,000	2.97
Ice Cream	22,765	1.11	31,400	.94
Milk	50,000	2.44	36,400	1.09
Hot Canned Food	14,850	.73	15,000	.45
Prepared Foods	not given	-----	not given	-----
All Others	438,000	21.37	not given	-----
TOTALS	2,049,258	100.00	3,334,100	100.00

[34](See Appendix A)

per cent. Third and fourth positions respectively were: soft drinks (bottle), $258,055,000, or 12.59 per cent; and packaged confections, $244,000,000, or 11.91 per cent. These four products totaled in excess of 80 per cent of the 1957 volume. The total number of machines increased by 194,300 over 1956, reaching 3,334,000 machines. All products showed an increase in the number of machines on location with the exception of bulk confections, which decreased by 50,000 machines. Despite this decrease, bulk confections remained first with a total of 1,100,000 machines, or 32.99 per cent of the total. The other products retained their relative position to that of the 1956 figures with the exception of milk and ice cream. Milk took over the ninth position with 36,400 machines, or 1.09 per cent, while ice cream dropped to tenth with 31,400 machines, or .94 per cent.

In 1958, the total vended volume was $2,132,576,000 and the total number of machines on location was 3,505,650, shown in Table III, both increases over these figures in 1957. All products increased their volume over their 1957 efforts with the one exception of milk, which decreased in volume by $4,075,000, to a total of $45,925,000, or 2.15 per cent. The first positions were again held by: cigarettes, $820,703,000, or 38.48 per cent; all others, $446,000,000, or 20.91 per cent; and soft drinks (bottle) $267,588,000, or 12.55 per cent; and packaged confections, $244,575,000, or 11.47 per cent. These four products again amounted to more

TABLE III

TOTAL VOLUME OF VENDED MERCHANDISE AND NUMBER OF MACHINES ON LOCATION IN 1958 WITH NUMBER AND PER CENT OF EACH ITEM[35]

PRODUCT	VOLUME (1,000's)	PER CENT OF TOTAL	NUMBER OF MACHINES	PER CENT OF TOTAL
Packaged Confections	244,575	11.47	543,500	15.50
Bulk Confections	58,500	2.75	1,125,000	32.10
Cigarettes	820,703	38.48	717,400	20.46
Cigars	7,952	.37	45,500	1.30
Soft Drinks (cup)	103,588	4.86	105,300	3.00
Soft Drinks (bottle)	267,588	12.55	764,500	21.81
Coffee	99,518	4.67	113,900	3.25
Ice Cream	23,299	1.09	31,700	.90
Milk	45,925	2.15	41,750	1.19
Hot Canned Food	14,928	.70	17,100	.49
Prepared Foods	not given	------	not given	------
All Others	446,000	20.91	not given	------
TOTALS	2,132,576	100.00	3,505,650	100.00

[35](See Appendix A)

than 80 per cent of the vended volume. The rank of the number of machines on location for each product remained unchanged, with the first four products, bulk confections, 1,125,000 machines, or 32.10 per cent; soft drinks (bottle), 764,500 machines, or 21.81 per cent; cigarettes, 717,400 machines, or 20.46 per cent; and packaged confections, 543,500 machines, or 15.50 per cent; totaling almost 90 per cent of the total number of machines on location in 1958.

From Table IV it may be seen that there was again an increase in the total vended volume and in the number of machines on location for 1959, $2,377,402,750 and $3,672,800 machines respectively. Cigarettes led with $1,037,760,000; the first time for a single product to reach the billion dollar mark, which amounted to 43.65 per cent of the total volume. The all others group decreased by $70,000,000 to $376,000,000, or 15.82 per cent of the total. Soft drinks (bottle) remained third with $272,550,000, or 11.46 per cent; and packaged confections, $271,293,750, or 11.41 per cent. The only other significant change was the fact that coffee, with $130,520,000, or 5.49 per cent; took over fifth place from soft drinks (cup) with $124,312,500, or 5.24 per cent. The first four products again had almost 90 per cent of the total number machines on location. Bulk confections led with 1,130,000 machines, or 30.77 per cent; followed by soft drinks (bottle) 790,000 machines, or 21.51 per cent; cigarettes, 786,500 machines, or 21.41 per cent; and packaged

TABLE IV

TOTAL VOLUME OF VENDED MERCHANDISE AND NUMBER OF MACHINES ON LOCATION IN 1959 WITH NUMBER AND PER CENT OF EACH ITEM[36]

PRODUCT	VOLUME (1,000's)	PER CENT OF TOTAL	NUMBER OF MACHINES	PER CENT OF TOTAL
Packaged Confections	271,293	11.41	569,100	15.49
Bulk Confections	58,760	2.47	1,130,000	30.77
Cigarettes	1,037,760	43.65	786,500	21.41
Cigars	8,675	.36	48,600	1.32
Soft Drinks (cup)	124,312	5.24	115,700	3.15
Soft Drinks (bottle)	272,550	11.46	790,000	21.51
Coffee	130,520	5.49	131,200	3.57
Ice Cream	25,575	1.08	34,700	.95
Milk	55,473	2.33	47,300	1.29
Hot Canned Food	16,483	.69	19,700	.54
Prepared Foods	not given	------	not given	------
All Others	376,000	15.82	not given	------
TOTALS	2,377,402	100.00	3,672,800	100.00

[36] (See Appendix A)

confections, 569,100 machines, or 15.49 per cent. The other products remained unchanged in rank.

The total vended volume in 1960 (See Table V) exceeded that of the previous year by $208,689,250 moving this figure to $2,586,092,000. Cigarette sales again totaled more than a billion dollars, reaching a high of $1,141,920,000. Cigarettes accounted for 44 cents of every vended dollar's worth of merchandise in 1960. The other three products in the double percentage figures were: all others, $385,000,000, or 14.89 per cent; soft drinks (bottle), $306,281,000, or 11.84 per cent; and packaged confections $304,647,000, or 11.78 per cent. The other products remained in their relative positions with the exception of milk and bulk confections. Milk took over the seventh position with sales of $61,630,000, or 2.38 per cent; while bulk confections dropped to eighth with $54,880,000, or 2.12 per cent; a decrease of some $3,880,000. The total number of machines on location in 1960, was 3,757,600. This was an increase of 184,800 machines over the number in 1959. Bulk confections led with a total of 1,120,000 machines, or 29.81 per cent of the total. The next three positions were again held by: soft drinks (bottle), with 825,000 machines, or 21.95 per cent; cigarettes, 793,000 machines, or 21.10 per cent; and packaged confections with 585,400 machines; or 15.58 per cent. The number of milk machines on location increased to 52,500, or 1.40 per cent of the total, taking over seventh place from cigars, which

TABLE V

TOTAL VOLUME OF VENDED MERCHANDISE AND NUMBER OF MACHINES ON LOCATION IN 1960 WITH NUMBER AND PER CENT OF EACH ITEM[37]

PRODUCT	VOLUME (1,000's)	PER CENT OF TOTAL	NUMBER OF MACHINES	PER CENT OF TOTAL
Packaged Confections	304,647	11.78	585,400	15.58
Bulk Confections	54,880	2.12	1,120,000	29.81
Cigarettes	1,141,920	44.16	793,000	21.10
Cigars	8,785	.34	50,200	1.34
Soft Drinks (cup)	132,338	5.12	122,300	3.25
Soft Drinks (bottle)	306,281	11.84	825,000	21.95
Coffee	142,940	5.53	149,800	3.99
Ice Cream	25,550	.99	36,500	.97
Milk	61,630	2.38	52,500	1.40
Hot Canned Food	22,121	.85	22,900	.61
Prepared Foods	not given	------	not given	------
All Others	385,000	14.89	not given	------
TOTALS	3,586,092	100.00	3,757,600	100.00

[37](See Appendix A)

dropped to eighth, with 50,200 machines, or 1.34 per cent of the total. All products increased the number of machines that each had on location with the exception of bulk confections, which decreased by 10,000 machines.

Table VI shows that the total vended volume for 1961, climbed to $2,739,992,000. In 1961, the volume for prepared foods was reported for the first time. This product accounted for $55,000,000, or 2.01 per cent of the total volume, which was eighth in rank of total sales. Bulk confections with $54,090,000, or 1.97 per cent, dropped to ninth. Hot canned foods remained in tenth place with $24,700,000, or .90 per cent; ice cream dropped from ninth to eleventh with $22,060,000, or .81 per cent; and cigars, with $9,539,000. or .35 per cent of the total, dropped to twelfth. The first four positions were again held by: cigarettes, $1,180,951,000, or 43.10 per cent; all others, $360,000,000, or 13.14 per cent; soft drinks (bottle), $328,315,000, or 11.98 per cent; and packaged confections, $321,557,000, or 11.74 per cent. The total number of machines on location in 1961 increased to 3,889,325. Also for the first time, the number of prepared foods machines on location was reported; 18,200, or .47 per cent. Bulk confections was first, with 1,127,000 machines, or 28.98 per cent. The next three products in order were: soft drinks (bottle) 845,000 machines, or 21.73 per cent; cigarettes, 814,000, or 20.93 per cent; and packaged confections, 612,800, or 15.75 per cent. The total number of

TABLE VI

TOTAL VOLUME OF VENDED MERCHANDISE AND NUMBER OF MACHINES ON LOCATION IN 1961 WITH NUMBER AND PER CENT OF EACH ITEM[38]

PRODUCT	VOLUME (1,000's)	PER CENT OF TOTAL	NUMBER OF MACHINES	PER CENT OF TOTAL
Packaged Confections	321,557	11.74	612,800	15.75
Bulk Confections	54,090	1.97	1,127,000	28.98
Cigarettes	1,180,951	43.10	814,000	20.93
Cigars	9,539	.35	52,700	1.36
Soft Drinks (cup)	156,800	5.72	137,700	3.54
Soft Drinks (bottle)	328,315	11.98	845,000	31.73
Coffee	161,100	5.88	163,900	4.21
Ice Cream	22,060	.81	38,300	.98
Milk	65,880	2.40	54,900	1.41
Hot Canned Food	24,700	.90	24,825	.64
Prepared Food	55,000	2.01	18,200	.47
All Others	360,000	13.14	not given	------
TOTALS	2,739,992	100.00	3,889,325	100.00

[38] (See Appendix A)

products reporting machines on location increased to 11 with the addition of prepared foods.

From Table VII it may be seen that the total volume of vended merchandise in 1962 amounted to $2,956,079,000. The first four products were again: cigarettes, $1,210,670,000 or 40.96 per cent; all others, $372,000,000 or 12.58 per cent; packaged confections, $342,046,000 or 11.57 per cent; and soft drinks (bottle), $335,400,000 or 11.35 per cent. Packaged confections took over third place by increasing its sales by over $20,000,000 while soft drinks (bottle) increased its total by only $7,000,000. Ice cream, $28,875,000 or .98 per cent, took over the tenth position from hot canned foods with $21,010,000 or .71 per cent. The other items remained unchanged in rank. Prepared foods remained in the eighth position but doubled its sales over the 1961 figures, from $55,000,000 to $111,500,000. The number of machines on location in 1962, increased to 4,010,275. Bulk confections led with 1,125,000 machines or 28.05 per cent of the total. The next three items were: soft drinks (bottle), 860,000 machines or 21.44 per cent; cigarettes 840,000 machines or 20.95 per cent; and packaged confections, 630,500 machines or 15.72 per cent. Prepared foods with 48,050 machines or 1.20 per cent of the total, took over the ninth position. Ice cream with 40,100 machines or 1.00 per cent, dropped to tenth, and hot canned foods with 27,050 machines or .67 per cent dropped to eleventh.

TABLE VII

TOTAL VOLUME OF VENDED MERCHANDISE AND NUMBER OF MACHINES ON LOCATION IN 1962 WITH NUMBER AND PER CENT OF EACH ITEM[39]

PRODUCT	VOLUME (1,000's)	PER CENT OF TOTAL	NUMBER OF MACHINES	PER CENT OF TOTAL
Packaged Confections	342,046	11.57	630,500	15.72
Bulk Confections	58,500	1.98	1,125,000	28.05
Cigarettes	1,210,670	40.96	840,000	20.95
Cigars	11,480	.39	55,200	1.38
Soft Drinks (cup)	186,880	6.32	149,800	3.74
Soft Drinks (bottle)	335,400	11.35	860,000	21.44
Coffee	204,960	6.93	176,300	4.40
Ice Cream	28,875	.98	40,100	1.00
Milk	72,758	2.46	58,300	1.45
Hot Canned Food	21,010	.71	27,025	.67
Prepared Food	111,500	3.77	48,050	1.20
All Others	372,000	12.58	not given	------
TOTALS	2,956,079	100.00	4,010,275	100.00

[39] "Census of the Industry," Vend Magazine, Vol. 17, No. 6, March 15, 1963, pp. 18-48.

Summary

The use of automatic vending machines dates back to 215 B. C., when a device was used to dispense holy water in Egyptian temples. The English were next to develop vending machines, but not until the Seventeenth Century. The English devices were very simple and were used primarily to vend snuff and tobacco products in taverns and inns.

The period from 1822 to 1890 saw experiments carried on with crude vending machines. In 1857, the first patent for an automatic selling device was awarded to Simeon Denham in England. The start of vending in the United States was in 1888, when Thomas Adams acquired the American patent rights to Percival Everitt's penny ticket scale invention and converted it to sell Tutti-Frutti gum on New York City's elevated railroad platforms.

The growth of the chewing gum and candy trades began the full development of the vending industry during the period from 1891 to 1945. By 1910, there were over 50 companies engaged in penny or so-called bulk machine operations. Improvements in the machines assisted the growth of the industry. The early 1900's saw the development of the first operating companies in the vending industry. The operating company was formed to fill the need for service and maintenance of the vending machines. In 1925, the application of the vending machine to the sale of cigarettes gave great impetus to the vending industry. The volume of cigarette sales has led the industry for many years. Also the cigarette machine manufacturers advanced the vending industry substantially by contributing most of the basic improvements in vending machines, such as an effective slug rejector, mechanisms that would accept combinations of coins, and changemakers.

In 1946, coffee vending began. Refrigeration and heat were constantly being improved so that more and more hot and cold food could be vended. The year 1960, saw the development of the paper money changemaker, and also in 1960, vending company mergers had their beginning. By the end of 1961, more than 300 individual companies had been involved in consolidations which had their effect on vending machine manufacturers also.

The growth of food vending in the Sixties prompted some of the large vending companies to acquire some of the largest catering firms in the nation in order to provide their locations with this additional service. Total vended volume in 1946, was $600,000,000. By 1962, this figure had climbed to almost $3,000,000,000.

CHAPTER III

A SURVEY OF 14 VENDING MACHINE OPERATORS IN HOUSTON, TEXAS

This chapter presents data obtained from 14 vending operators who were interviewed, and who filled out questionnaires. The questionnaire, shown in Appendix B, is divided into three major sections: 1) General Information, 2) Retail Locations, and 3) Industrial Locations. The data presented in this chapter will be divided in a similar manner.

Most of the vending operators showed some interest in the survey. Interviews usually lasted 45 minutes. The questionnaire was filled out during the interview, with the manager or owner of the vending firm providing the answers. In some cases, where the manager or owner was very busy, a questionnaire was left to be filled out and picked up later. However, this method did not prove satisfactory.

Twenty-five vending firms were visited, but only 14 were willing to co-operate. The 14, in the researcher's opinion, were men and women who are a credit to the vending industry. They were people who are devoted to the business of automatic merchandising and are proud of the fact that they chose this field for a career. The time spent with these vending operators was quite rewarding for the researcher.

GENERAL INFORMATION

The general information section was designed to procure from each vending operator the following information: type of ownership; number of years in operation; primary activity of company when founded; vending activities presently engaged in; number of machines in operation in each activity; total annual sales; annual sales per machine; and the number and classification of employees.

Type of Ownership

The three main types of ownership used for this classification are: single proprietorship, partnership, and corporation. According to *Vend Magazine* in its 1963 Census of the Industry, 48 per cent of the operating companies are proprietorships; 13 per cent are partnerships; and 39 per cent are corporations.

Table VIIIshows the classification of ownership of the 14 vending operators reporting compared to that of the national classification of ownership. The table reveals the following breakdown by type of ownership: proprietorship, five operators or 35.7 per cent; partnership, two operators or 14.3 per cent; and corporation, seven operators or 50 per cent.

A majority of the operators reporting the corporate type of ownership were closed corporations, either entirely self-owned or the holdings were kept within the family.

Number of Years in Operation

Table IX shows the breakdown of the number of years the 14 vending firms had been in operation. They are: 0-3

TABLE VIII

CLASSIFICATION OF TYPES OF OWNERSHIP FOR 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL COMPARED WITH PER CENT OF TOTAL FOR NATIONAL CLASSIFICATION

TYPE OF OWNERSHIP	NATIONAL CLASSIFICATION[1]	OPERATORS VISITED	
	PER CENT OF TOTAL	NUMBER	PER CENT OF TOTAL
Proprietorship	48.0	5	35.7
Partnership	13.0	2	14.3
Corporation	39.0	7	50.0
TOTALS	100.0	14	100.0

[1] ______ "Census of the Industry," <u>Vend Magazine</u>, Vol. 17, No. 6, March 15, 1963, p. 45.

TABLE IX

NUMBER OF YEARS IN OPERATION FOR 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

YEARS IN OPERATION	NUMBER	PER CENT OF TOTAL
0-3 years	3	21.4
4-7 years	4	28.6
8-10 years	1	7.1
11-15 years	4	28.6
Over 15 years	2	14.3
TOTALS	14	100.0

years, three operators or 21.4 per cent; 4-7 years, four operators or 28.6 per cent; 8-10 years, one operator, or 7.1 per cent; 11-15 years, four operators or 28.6 per cent; and over 15 years, two operators or 14.3 per cent. Of the three operators that reported having been in operation three years or less, one operator had been in the vending business for some 15 years, but his present business had been in existence only one year. The other two operators in this group had been in business for two years. Of the two firms in operation over 15 years, one had been operating for 31 years, and the other for 29 years. Both firms were exclusively cigarette vendors and were the largest in Houston.

Primary Activity of Company When Founded

The primary activity of the company at the time it was founded was obtained in order to determine what activities had been added or dropped since the establishment of the firm. Table X reveals that two companies or 14.3 per cent, began in the confections trade; eight companies or 57.3 per cent began with cigarettes; one company each, started in the following four trades: coffee, soft drinks, ice cream, and full-line vending, amounting to 7.1 per cent respectively.

Present Activities Engaged In

Table XI shows the activities that the 14 vending operators are presently engaged in. In the vending of cigarettes

TABLE X

PRIMARY ACTIVITY WHEN FOUNDED OF 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

TYPE OF OPERATION	NUMBER	PER CENT OF TOTAL
Confections	2	14.3
Cigarettes	8	57.3
Coffee	1	7.1
Soft Drinks	1	7.1
Ice Cream	1	7.1
Full-line	1	7.1
TOTALS	14	100.0

TABLE XI

PRESENT ACTIVITY ENGAGED IN BY EACH OF 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

TYPE OF OPERATION	NUMBER	PER CENT OF TOTAL
Confections	0	----
Cigarettes	7	50.0
Coffee	0	----
Soft Drinks	0	----
Ice Cream	1	7.1
Novelty & Amusement	1	7.1
Full-line	5	35.8
TOTALS	14	100.0

there was a decrease in the number of operators, from eight to seven. These seven operators represented 50 per cent of the total. Five full-line operators or 35.8 per cent, and one each of ice cream, and novelty and amusement, representing 7.1 per cent each, complete the activities of the operators. Although cigarette vending shows a decrease of one, this operator is still in cigarette vending but it is no longer his primary activity because he has since moved into full-line vending which includes cigarettes. The same is true of the two confections operators and the coffee vendor. The soft drink operator moved into the novelty and amusement field. One cigarette operator added music and novelty, but under a separate corporation. As a member of the National Automatic Merchandising Association, he was asked to do so. Another cigarette vendor added music as a secondary line.

Number of Machines

It was expected that the number of cigarette machines would constitute the majority of the machines on location because cigarette operators made up 50 per cent of the firms visited. Table XII shows the number of machines on location with a breakdown by the type of machine. The following information was revealed: confections, 840 machines or 14.3 per cent; cigarettes, 2,955 machines or 50.4 per cent; coffee, 265 machines, or 4.5 per cent; soft drinks, 625 machines or 10.6 per cent; food, 210 machines or 3.7 per cent; pastry,

TABLE XII

NUMBER AND TYPES OF MACHINES IN OPERATION BY 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL FOR EACH TYPE OF MACHINE

TYPE OF MACHINE	NUMBER	PER CENT OF TOTAL
Confections	840	14.3
Cigarettes	2,955	50.4
Coffee	265	4.5
Soft Drinks	625	10.6
Food	210	3.7
Pastry	195	3.3
Milk	190	3.2
Ice Cream	235	4.0
Chips & Fruit Juice	115	1.9
Music	130	2.2
Novelty & Amusement	115	1.9
TOTALS	5,865	100.0

195 machines or 3.3 per cent; milk, 190 machines or 3.2 per cent; ice cream, 235 machines or 4 per cent; music, 130 machines or 2.2 per cent; and chips and fruit juice; and novelty and amusement, with 115 machines each or 1.9 per cent respectively.

The total number of machines operated by the 14 vending firms was 5,865. The number of machines per operator ranged from as many as 1,500 for a full-line vendor to as few as 35 for a novelty and amusement operator. The average number of machines for the 14 vending operators was 419. The highest number of cigarette machines for any one operator was 650. The average number of machines for the seven cigarette operators was 286. The average number of machines for the five full-line operators was 664. This average is somewhat low because the machines of two vending firms were included, whereas only one operator had enough machines to be classified as a full-line operator. The reason for this situation is that these two firms had an agreement to the effect that one did not handle cigarettes and the other did not vend confections. The operator who did not handle confections was heavy in cigarettes, but since he had a few full-line machines he was classified as a full-line operator.

Table XIII compares the national ranking of vending operators with respect to the variety of machines that they operate with the operators in the survey. The table reveals that for the nation as a whole, 17 per cent of the operators

TABLE XIII

DIFFERENT TYPES OF MACHINES OPERATED BY 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL COMPARED WITH PER CENT OF TOTAL FOR NATIONAL FIRMS

	NATIONAL FIRMS[2]	OPERATORS VISITED	
MACHINES	PER CENT	NUMBER	PER CENT OF TOTAL
1 type of machine	17	7	50.0
2 types of machines	12	1	7.1
3 types of machines	9	1	7.1
4 or more types of machines	62	5	35.8
TOTALS	100	14	100.0

[2] ______ "Census of the Industry," Vend Magazine, Vol. 17, No. 6, March 15, 1963, p. 45.

handled only one type of machine; 12 per cent operated two types of machines; 9 per cent operated three types of machines; and 62 per cent operated four or more types of machines. The local survey revealed that seven operators or 50 per cent operated only one type of machine; one operator or 7.1 per cent operated two types of machines; one operator or 7.1 per cent operated three types of machines; and five operators or 35.8 per cent operated four or more types of machines.

Total Annual Sales

The number of vending operators in this particular section dropped from 14 to ten because four of the firms felt that this information should not or could not be disclosed. The total annual sales of the ten vending firms reporting amounted to $5,575,000. Table XIV reveals that: seven operators or 50 per cent had sales of less than $500,000; one operator or 7.1 per cent had sales of $500,000 - $1 million; two operators or 14.3 per cent had sales of over $1 million; and four operators or 28.6 per cent felt that this information was confidential. The total annual sales for these ten operators ranged from a low of $125,000 for one operator to a high of $2 million in sales for another operator.

Table XV reveals the annual sales per machine for the ten vending operators reporting. These figures ranged from $625 to $1,765 as a low and high per machine. The

TABLE XIV

TOTAL ANNUAL SALES OF 14 VENDING FIRMS

WITH NUMBER AND PER CENT OF TOTAL

SALES	NUMBER	PER CENT OF TOTAL
Less than $500,000	7	50.0
$500,000-$1,000,000	1	7.1
Over $1,000,000	2	14.3
Not Available	4	28.6
TOTALS	14	100.0

TABLE XV

TOTAL ANNUAL SALES PER MACHINE BY 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

SALES PER MACHINE	NUMBER	PER CENT OF TOTAL
Less than $1,000	1	7.1
$1,000-$1,500	7	50.0
Over $1,500	2	14.3
Not available	4	28.6
TOTALS	14	100.0

table shows the following breakdown: less than \$1,000, one operator or 7.1 per cent; \$1,000 - \$1,500, seven operators or 50 per cent; over \$1,500, two operators or 14.3 per cent; and four operators or 28.6 per cent did not reveal this information.

Employees

The 14 vending firms included in the survey employed a total of 116 employees. The number of employees in a vending company is directly related to the annual sales of the company. Using the rule of thumb that an operating company on average does \$40,000 in annual sales per employee, organizations with more than ten employees have sales close to or in excess of \$500,000; and companies with 20 or more have sales approaching or in excess of \$1 million.[3] Nine of the ten firms reporting fell in line with this rule of thumb. Only in one case did a firm have less than \$40,000 in sales per employee. The majority reported sales considerably in excess of \$40,000 per employee.

Table XVI compares the national average number of employees per firm to the number of employees per firm for the ten vending operators reporting. The national figures are as follows: no employees other than owner, 23 per cent;

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[3] "Census of the Industry," Vend Magazine, Vol. 17, No. 6 (March 13, 1963) p. 43.

TABLE XVI

NUMBER OF EMPLOYEES OF 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL COMPARED WITH PER CENT OF TOTAL FOR NATIONAL FIRMS

	NATIONAL FIRMS	OPERATORS VISITED	
NUMBER OF EMPLOYEES	PER CENT[4]	NUMBER	PER CENT OF TOTAL
No employees other than owner	23	-	----
1 part-time employee	10	-	----
2-3 employees	33	3	21.4
3.5-6 employees	16	6	42.9
6.5-10.5 employees	6	2	14.3
11-19.5 employees	6	2	14.3
20 or more employees	6	1	7.1
TOTALS	100	14	100.0

[4] ______ "Census of the Industry," *Vend Magazine*, Vol. 17, No. 6, March 1963, p. 44.

one part-time employee, 10 per cent; 1-3 employees, 33 per cent; 3.5-6 employees, 16 per cent; 6.5-10.5 employees, 6 per cent; 11-19.5 employees, 6 per cent; and 20 or more employees, 6 per cent. The table reveals the following breakdown for the 14 vending operators: no employees other than owner, none; one part-time employee, none; 1-3 employees, three operators or 21.4 per cent; 3.5-6 employees, six operators or 42.9 per cent; 6.5-10.5 employees, two operators or 14.3 per cent; 11-19.5 employees, two operators or 14.3 per cent; and 20 or more employees, one operator or 7.1 per cent.

The fewest number of employees for an operating firm was two and the largest number was 30.

Table XVII reveals the following breakdown of the positions held by the 116 employees: office personnel, 16 employees or 13.8 per cent; salesmen, 14 employees or 12.1 per cent; routemen, 69 employees or 59.5 per cent; servicemen, 15 employees or 12.9 per cent; and other, two employees or 1.7 per cent.

A majority of the vending operators did not use a definite classification for their employees other than office personnel. Over 50 per cent of the firms ask their routemen to do some sales, service, and repair work. Only two reporting operators had a definite separation of these activities. The two employees in the other classification group were painters. They remained at the warehouse of the

TABLE XVII

CLASSIFICATION OF POSITION OF 116 EMPLOYEES IN 14 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

TYPE OF POSITION	NUMBER OF EMPLOYEES	PER CENT OF TOTAL
Office Personnel	16	13.8
Salesmen	14	12.1
Routemen	69	59.5
Servicemen	15	12.9
Other	2	1.7
TOTALS	116	100.0

of the firm and repainted vending machines that were brought in from locations to be refinished.

RETAIL LOCATIONS

Only 12 of the 14 vending operators included in the survey reported that they were engaged in the operation of retail locations. One operator had moved into the novelty and amusement trade. He was therefore eliminated from the survey. His activities were reported only in the general information section. The other operator that was excluded from this section was a full-line operator who handled industrial locations exclusively. His activities will be covered in the industrial section. Seven of the reporting operators were cigarette vendors and five were full-line vendors.

The Retail Locations section of the questionnaire was designed to procure the following information: number of retail locations; where retail outlets are located; servicing of retail locations; size of routes; sales promotion work (pointing out what type was done, by whom, and how much); amount spent on advertising; suggestions for promoting industry; number of mass installations; number and types of machines; and method of location payment.

Number of Retail Locations

The reporting vending operators did not have a definite breakdown of their locations between retail and industrial as used in this survey. This was especially true of the full-line operators. The cigarette vendors in most cases, reported the same number of retail locations as they did machines in the previous section. One cigarette vendor mentioned that he had six cigarette machines in one location. Three of the full-line operators did not report exactly how many retail locations they had in operation. Two of these operators did say that approximately 50 per cent of their locations were of a retail nature. The other full-line operator reported that between 50 and 75 per cent of his locations consisted primarily of cigarette machines. The remaining two full-line operators reported 50 and 75 retail locations each. The cigarette vendors listed all of their locations in this section since there is really not enough difference between a retail and industrial location where individual cigarette machines are concerned. Three cigarette operators mentioned that at times they had agreements with some small offices and companies enabling several cigarette machines to be placed throughout the buildings for the vending of cigarettes at 30 cents a package. This is five cents less than the normal price. The companies paid the vending operator the five-cent difference. This was done for the benefit of the employees at the expense of the company. It was a service that the officials of the companies concerned thought was necessary in some cases. The machines were placed so that only the employees of the companies had easy access to them. This was a typical finding in cigarette industrial locations.

Where Retail Outlets are Located

The location of the vending machine is one of the most important factors in the selling of merchandise automatically. When asked the question, "What is the most important single factor taken into consideration when choosing a retail location?" the reply was, "Volume," by 100 per cent of the vending operators. The operators mentioned that there were other factors to be considered in choosing a retail location, but first and foremost, there must be a sufficient volume of customer traffic to warrant the placement of a vending machine. One operator, for example, used a guide for selecting his locations. A volume of 150 people must have access to the location or he will not place a machine for use in it. Some of the other factors he used were: care of equipment, protection of machines, type of business, and commission rate.

Table XVIII shows where the 12 vending operators had machines located. The total of 41 is explained by the fact

TABLE XVIII

CLASSIFICATION OF 41 VENDING LOCATIONS FOR 12 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

LOCATION	NUMBER	PER CENT OF TOTAL
Stores	10	24.4
Schools	8	19.5
Office Buildings	8	19.5
Lounges	8	19.5
Theaters	2	4.9
Apartment Houses	1	2.4
Others	4	9.8
TOTALS	41	100.0

that the operators reported having machines in more than one type of location. The breakdown by the type of location is as follows: stores, ten operators or 24.4 per cent; schools, eight operators or 19.5 per cent; office buildings, eight operators or 19.5 per cent; lounges, eight operators or 19.5 per cent; theaters, two operators or 4.9 per cent; apartment houses, one operator or 2.4 per cent; and others, four operators or 9.8 per cent. The four operators in the others group reported locations in hospitals, bowling alleys, motels and restaurants.

One of the reasons for retail stores being mentioned more often as a location is that of service and convenience to the retailer's customers. The vending operators related that quite often they are contacted by a store-owner or manager and asked to place a vending machine in his store. This would be an added service and convenience to the customers of the store. When a location asks for a machine, the commission rate is usually a little below normal. The vending operator will more readily place a machine here because he is allowed a wider profit margin to operate within. This sub-normal commission reduced the significance of the volume at the location. This was just one illustration of the many different factors that play a role in the selecting of a vending location, and in determining what makes one location a good one and another location not so good.

Servicing of Retail Locations

The servicing of vending installations is one of the biggest tasks with which a vending operator is confronted. The importance of this servicing cannot be over-emphasized. In 60 to 75 per cent of the cases where an operator has lost a location, the reason for the loss is nothing more than poor service on the part of the operator.[5]

Another significant aspect of servicing was pointed out by one operator. His company had initiated a policy of what he called "preventive maintenance." The routemen or servicemen would make periodic calls on locations without having been called, and check the machine. In many cases, the servicemen would discover some small disorder that was not causing a stoppage in the operation of the machine, but if allowed to persist, would have caused a major breakdown. The operator stated that this procedure eliminated 75 per cent of his service calls.

Service to a location not only means maintenance calls, but to a vending machine that vends edible merchandise, it means stocking the machine with merchandise. Usually both types of service are performed by the routeman or serviceman in his normal day's activities.

Table XIX lists the average frequency of service calls for the operators' locations. These are calls that the routeman makes to stock the machine with fresh merchandise.

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[5]Estimate of vending operator.

TABLE XIX

LOCATION SERVICING FREQUENCY OF 12 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

FREQUENCY	NUMBER	PER CENT OF TOTAL
Once a day	3	25.0
Twice a day	-	----
Once a week	5	41.7
Twice a week	3	25.0
3 times a week	1	8.3
Once a month	-	----
TOTALS	12	100.0

An average for each operator was in order because each operator's service calls varied from location to location, depending primarily on the volume of the location and the type of merchandise vended. The averages were: once a day, three operators or 25 per cent; twice a day, none; once a week, five operators or 41.7 per cent; twice a week, three operators or 25 per cent; three times a week, one operator or 8.3 per cent; and once a month, none.

The full-line operators have to service their machines more often than other vendors because of the perishable nature of their products. One full-line operator reported that there were several of his machines serviced three times a day. At the other extreme, one cigarette vendor serviced one of his locations only once a month.

Size of Routes

Table X X reveals the following breakdown for the number of machines that make up a vending route as reported by the operators: less than 50 machines, three operators or 25 per cent; 50-100 machines, five operators or 41.7 per cent; 101-200 machines, three operators or 25 per cent; and over 200 machines, one operator or 8.3 per cent.

The number of machines per route for the full-line vendors was somewhat smaller than the number for cigarette vendors. The reason for this is that the maintenance of coffee and soft drink machines is more detailed than that of

TABLE XX

NUMBER OF MACHINES FOR SERVICE ROUTE CLASSIFIED BY SIZE FOR 12 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

NUMBER OF MACHINES	NUMBER	PER CENT OF TOTAL
Less than 50	3	25.0
50-100	5	41.7
101-200	3	25.0
Over 200	1	8.3
TOTALS	12	100.0

other machines. The number of machines per route ranged from as few as 40 to as many as 250.

Sales Promotion Work

Advertising and sales promotion, two areas that are important to any merchandising campaign, automatic or otherwise, are discussed here with respect to the amount being done, by whom, and where, for the 12 vending operators reporting. The vending industry as a whole has done much to promote the idea of automatic vending to the public. Such campaigns as the one put on by the local and regional associations, under the direction of the National Automatic Merchandising Association, in recognition of the 75th anniversary of automatic vending paid big dividends for the participating operators.[6] Here the individual efforts of the 12 operators were studied.

Table XXI is a combination of the 12 operators' responses to the questions: Do the routemen or servicemen do any sales promotion work? Is any advertising done at the point-of-sale, such as signs and display material? Is any advertising done out of this office to promote your products, machines, and company? Do you think that advertising a location is beneficial to that location? The table reveals

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[6] ______"Community Enterprise Phase Pays Off for Vendors in 75th Vending Anniversary," Coin Machine Journal, Vol. 56, No. 2 (May, 1961) pp. 6, 7, and 9.

TABLE XXI

TYPES OF ADVERTISING USED BY 12 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

TYPE OF ADVERTISING	YES NUMBER	PER CENT	NO NUMBER	PER CENT
Routemen or Servicemen do Sales Promotion	8	66.7	4	33.3
Point-of-Sale Advertising	4	33.3	8	66.7
Company Advertising	4	33.3	8	66.7
Advertise a Location	2	16.7	10	83.3

that eight operators or 66.7 per cent, had their routemen or servicemen do sales promotion work and four operators or 33.3 per cent, did not; four operators or 33.3 per cent, used point-of-sale material and eight operators or 66.7 per cent, did not; four operators or 33.3 per cent, advertised out of the office promoting the company and its products and eight operators or 66.7 per cent, did not; and two operators or 83.3 per cent did not feel that this was necessary.

Seven of the operators mentioned that the sales promotion work done by the routemen or servicemen consisted primarily of soliciting new locations. It was pointed out that the routeman or serviceman was the most direct connection that the company had with a location. These men have established, in many cases, a personal relationship with the location-owner that proves satisfactory to the location as well as to the vending firm. The routeman usually represents the vending firm to the location-owner and his efforts to satisfy the location-owner are important in the retention of the location.

The point-of-sale advertising that was reported was done by four of the five full-line operators. They did very little because as one operator put it, "Fifty per cent of the merchandise is of an impulse nature." The advertising consisted mainly of display material and placards that were furnished by the manufacturers of the merchandise. In one case the manufacturer subsidized the operator for the advertising that was used at the point-of-sale. Two operators used signs giving directions to where the vending machines were located inside the establishment. The seven cigarette venders reporting did not do any point-of-sale advertising. The operators reported that the main reason for this was the fact that cigarettes are pre-sold items. The national tobacco companies using the medium of television pre-sell their brands. All the operators can do in such cases is to make the merchandise available. One cigarette vendor's theory of cigarette vending was, "Our market consists primarily of purchases that are made away from home, when the person is out of cigarettes. When the wife goes to the supermarket, she picks up a carton of cigarettes for her husband and for herself, if she smokes. The man takes a pack or two to work with him each day. Only if he runs out during the course of the day will he make a purchase from a vending machine."

The advertising done out of the office to promote the company and its products was primarily that of newspaper ads. These were usually one page ads with a list of the business firms in the city that were supporting and sponsoring local events. For example, several of the operators mentioned this type of advertising was done in connection with the Houston Fat Stock Show. One operator reported that similar advertising was done by his firm in connection with the establishment of a new business in the community. The existing businesses would welcome a new business into the community by way of a one-page ad announcing its opening, accompanied by a list of the sponsoring businesses. A full-line operator also advertised in the publications subscribed to by the customers of a location. Such publications as trade journals, bowling magazines, and union papers were listed. Almost every operator was listed in the yellow pages of the telephone directory. Several of the operators listed decals placed on their machines as advertising. This, in most cases, seemed to be for identification of the machines rather than for advertising purposes. The ice cream vendor sent out a monthly letter (shown in Appendix C) to schools in the area in order to acquire new locations.

Advertising a location was done by two cigarette vendors. Again it was done in connection with the establishment of a new business. In both cases, the operators had a cigarette machine in new restaurants and they helped sponsor the advertising of the opening of the restaurants. Another cigarette vendor said that there were too many cigarette locations available for advertising a particular location to be of any benefit.

Amount Spent on Advertising

The amount that the 12 operators spent on advertising bore no relationship whatsoever to the amount of business that they handled. An operator with one of the highest total annual sales figures did almost no advertising, whereas one of the smaller operators listed $2,500 as his advertising expense. This can be explained partially by the fact that some operators charged certain items to the advertising expense that other operators did not. For example, one operator included the rental of uniforms for his routemen as advertising.

Table XXII shows a breakdown of the advertising expense reported by the 12 operators. The breakdown is as follows: $100-500, six operators or 50 per cent; $501-1,000, two operators or 16.7 per cent; over $1,000, two operators or 16.7 per cent; and none, two operators or 16.6 per cent. The two operators reporting no advertising expense, did advertise in the telephone directory. No operator could say exactly what his advertising expense was. All of the figures stated were approximations.

Suggestions for Promoting Industry

Each operator interviewed was asked his opinion on improving and promoting the vending industry. These suggestions all revolved around the idea of projecting a higher type industry for vending. Each mentioned that when vending first began, it was plagued with some rather notorious personalities, but since then the industry has grown and is now a well organized and respectable business. Several suggestions were made for improving the industry by

TABLE XXII

AMOUNT SPENT ON ADVERTISING BY 12 VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

AMOUNT	NUMBER	PER CENT OF TOTAL
$100-$500	6	50.0
$501-$1,000	2	16.7
over $1,000	2	16.7
none	2	16.6#
TOTALS	12	100.0

#This number is rounded off to make 100 per cent.

building a better reputation through affiliation with the national and state associations. Many operators made it clear that they did not consider the amusement and novelty fields part of the vending industry. "These operators do not offer the customer any merchandise, so how can they consider themselves vendors when they have nothing for sale."

Mass Installations

Only four of the five operators reported having mass installations of a retail nature as used in this survey. There was some overlapping of industrial locations in this group, but approximately 30 locations fit in this category. Table XXIIIillustrates what vending machines each operator had in an average retail installation. Operator A had the following number and types of machines: three confections, one cigarette, one coffee, one soft drink, and one cold food for a total of seven machines. Operator B had one confection, one cigarette, one coffee, two soft drinks, one milk, one ice cream, and one pastry for a total of eight machines. Operator C had one confection, two coffee, one soft drink, one milk, one hot food, one cold food, one snacks, and one pastry for a total of nine machines. Operator D had two confection, one coffee, one soft drink, one milk, one cold food and one pastry for a total of seven machines. The table shows that Operator C included more

TABLE XXIII

NUMBERS OF MACHINES BY TYPES IN MASS INSTALLATIONS FOR FOUR VENDING FIRMS

TYPE OF MACHINE	OPERATOR A	OPERATOR B	OPERATOR C	OPERATOR D
Confections	3	1	1	2
Cigarettes	1	1	-	-
Coffee	1	1	2	1
Soft Drinks	1	2	1	1
Milk	-	1	1	1
Hot Food	-	-	1	-
Cold Food	1	-	1	1
Snacks	-	-	1	-
Ice Cream	-	1	-	-
Pastry	-	1	1	1
TOTALS	7	8	9	7

food machines than the other three operators. This operator had larger locations. The other operators' locations were generally smaller and the machines usually offered only snack and refreshment items.

Coin and bill changers were used by two of the operators. The other three operators used only coin changers because they felt that the size of their installations did not warrant the use of bill changers. The two operators that used bill changers were quite pleased with their performance. One operator believed that an installation that had from 300-400 persons, the bill changer would increase sales by approximately two per cent. This operator revealed that the initial investment in a bill changer was approximately $1,000. But if a person were hired to do the same job as the bill changer, provide change for customers 24 hours a day, the wages would exceed $1,000 in about two months. Figuring in this manner the bill changer would pay for itself in two to three months. The only problem presented by the changers was reported to be the fact that approximately $300 in change must be maintained in the machine.

Method of Location Payment

One hundred per cent of the 12 vending operators reported that they used the commission basis for the payment of locations. The method of location payment is one of the areas of vending that is highly competitive. One operator can offer a location a higher commission rate and possibly get that location away from another operator. The rate of commission for the 12 vending operators ranged from a standard ten per cent of total sales at that location, primarily used by full-line vendors, to a sliding scale commission varying from two and a half cents to five and a half cents a pack, depending upon the volume of the location, used by the cigarette vendors. One full-line operator reported that the number of machines at a location was considered in determining the rate of commission. Two operators, speaking of the cigarette trade, related that part-time operators were making it hard to find locations because of the high commission rates they were offering. One operator stated, "This is a one-cent business. We operate on volume, and to have volume, you have to have the locations. Between the full-line operators, who have hurt us in industry by offering the companies a packaged deal, and the part-time operators who steal our locations by offering little or no service and a high commission, it's becoming hard for a full-time cigarette vendor to operate." Another cigarette vendor related this story; "I have a good location that makes about nine cents profit on every pack of cigarettes. I give the location four and a half cents per pack. Another operator (part-time) came in and offered the location six cents a pack. The location-owner turned him down. He (location-owner) told me later that anyone who was going to give him two-thirds of the profit was going to get it back in some other way, either by poor service or something else that would hurt his business. He had rather have "one-half of a good volume than two-thirds of nothing."

Another aspect of the method of location payment that the present researcher was not familiar with at the time was that of advanced commissions. One operator revealed that his income from advanced commissions alone amounted to approximately $40,000. This is one of the most competitive areas of location payments. When a machine is placed in a location, the vending operator advances to the location a certain amount of money. This money is repaid to the vending operator over a period of time, by the operator retaining a certain amount of the commission that would ordinarily go to the location. Six per cent interest is charged in most cases.

A contract was used in establishing a location by three of the operators. A copy of one operator's contract is shown in Appendix D. The majority of the operators did not use the contract method because, as they put it, "A contract is no better than the person who signs it." They listed various ways that a location-owner could get them out if he wanted to, even with a contract. False service calls was one of the most effective. The location-owner would persistently call the vending operator complaining about a breakdown of equipment. Finally, when the serviceman got tired of going out and finding nothing wrong, a legitimate service call would be made, and the serviceman wouldn't go, giving the location-owner grounds for terminating the contract. The feeling of most operators was that of, "I don't want to hold anybody to anything. If they don't want me, I don't want them. All I ask is that they give me sufficient time to move my equipment." The full-line operators leaned toward the contract method because of the larger investment in the equipment at their locations.

INDUSTRIAL LOCATIONS

The vending industry has just started in the in-plant feeding field and the future looks bright. Today over half of the country's work force eats at least one meal away from home; so do more than 10 million students. Figure they spend at least 30 cents a day buying this meal, and you have a feeding bill of approximately $15 million a day. If vending machines can handle only 20 per cent of this business, it means a $3,000,000-a-day business.[7] The automatic food service business has already exceeded the $1 billion mark and the total potential of this area has barely been touched.

The Industrial Locations section of the questionnaire was designed to procure the following information: number of industrial locations, type of industry located in, servicing

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[7]Eugene Miller, "Marketing By Machine," Think, (June, 1959), pp. 33-36.

of installations, number of customers, type of educational and promotional work, problems of industrial locations, and method of location payment.

Six of the original 14 vending operators included in the survey had industrial locations. One of these was an ice cream vendor exclusively, and his machines were included in some of the other operators' installations. Since this vendor did not operate any industrial locations of his own, he was excluded from this section.

Number of Locations

The number of industrial locations reported by the five vending operators totaled 129. Table XXIV reveals the following number of locations per operator: operator A, 75 locations or 58.1 per cent; operator B, 30 locations or 23.4 per cent; operator C, nine locations or 6.9 per cent; operator D, nine locations or 6.9 per cent; and operator E, six locations or 4.7 per cent. Approximately 20 of these locations were in office buildings, which in this survey were classified as industrial locations.

Type of Industry

Since the Houston area is saturated with oil refining and chemical plants, naturally a large portion of the locations were in these types of industries. These plants are included in the processing classification of Table XX V. The table

TABLE XXIV

NUMBER OF INDUSTRIAL VENDING LOCATIONS OPERATED BY EACH OF FIVE VENDING FIRMS WITH PER CENT OF TOTAL OF 129

OPERATOR	NUMBER OF LOCATIONS	PER CENT OF TOTAL
A	75	58.1
B	30	23.4
C	9	6.9
D	9	6.9
E	6	4.7
TOTALS	129	100.0

TABLE XXV

TYPES OF INDUSTRIES IN WHICH FIVE VENDING FIRMS OPERATED INDUSTRIAL VENDING LOCATIONS WITH NUMBER AND PER CENT OF TOTAL

TYPE OF INDUSTRY	NUMBER	PER CENT OF TOTAL
Processing	4	40
Manufacturing	3	30
Service	2	20
Other	1	10
TOTALS	10#	100

#Vending firms reported operating in more than one type of industry.

shows the types of industries in which the operators reported they had locations. They are: processing, four operators or 40 per cent; manufacturing, three operators or 30 per cent; service, two operators or 20 per cent; and other, one operator or 10 per cent. The two operators having service locations were located in the telephone buildings of which there are five in Houston.

Servicing of Installations

The five operators reported that their industrial locations were serviced at least once a day. In most cases this was seven days a week. The perishable nature of the merchandise required this. Some operators reported servicing certain locations twice a day because of extremely heavy volume. Several operators reported that in some locations they had as many as six vending banks. A location this large required at least one man and sometimes more, to remain at the plant full time to maintain and service the machines. This serviceman was not equipped to supply all the machines, but he did carry some of the fast moving merchandise in case there should be a shortage during a rush period. His main job was to see that all the machines were operating properly.

Two of the operators broke their routes down by the type of merchandise. In other words, one routeman handled only soft drinks and coffee, another food and chips, another cigarettes and candy, and still another milk and pastries.

This meant that each man serviced only certain machines at each location. With each man more or less specializing in one or two lines, he became better acquainted with the needs of each location for his particular items. He could more readily identify slow-moving items and become familiar with the desires of customers for certain brands of his line. The other operators had one man service an entire location. The size of the location was usually the factor determining how a location could best be handled.

Number of Customers

The number of people using a vending installation naturally varies with the size of the plant where it is located. Table XXVI shows the number of customers reported having access to the installations for the five operators. These figures are averages for each operator because the number varies from location to location. They are: operator A, 1200 customers or 35.8 per cent; operator B, 1,000 customers or 29.9 per cent; operator C, 400 customers or 11.9 per cent; operator D, 350 customers or 10.5 per cent; and operator E, 400 customers or 11.9 per cent.

One operator stated that if out of 1,000 people, 15 or 20 per cent used the vending installation, then it was doing good. As far as competition with another type of food service was concerned, two operators reported that they had to compete with a catering service in several of their

TABLE XXVI

AVERAGE NUMBER OF CUSTOMERS AT INDUSTRIAL VENDING LOCATIONS OPERATED BY FIVE VENDING FIRMS WITH NUMBER AND PER CENT OF TOTAL

OPERATOR	NUMBER OF CUSTOMERS	PER CENT OF TOTAL
A	1,200	35.8
B	1,000	29.9
C	400	11.9
D	350	10.5
E	400	11.9
TOTALS	3,350	100.0

locations. The other three operators had no competition other than the people bringing their own lunches or eating out.

Problems of Industrial Locations

The main problem mentioned by the vending operators to overcome at an industrial location was to help the workers adjust to the change-over. In almost 100 per cent of the cases, the location had some other type of feeding previously, and was converted to automatic vending. It took from 3 weeks to 2 months for the workers to make the adjustment.[8] As the operators put it, "This is the critical period. You have to live with the installation almost day and night until this adjustment is completed. Get the workers familiar with the machines and their operation. Once this is done, 90 per cent of the job is completed."

Another problem was that of pricing. In almost all cases, vended coffee was priced at ten cents. The employees frequently had been getting their coffee for five cents, and most of the time the company was losing money. This additional five cents caused some resentment toward the machines. Satisfying the employees' tastes also presented a problem. Naturally everyone wouldn't be happy with the flavor, but that extra nickel seemed to make the coffee taste worse.

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[8]Estimates of vending operators.

Damage to equipment was sometimes a problem because it seems customary to kick a machine once or twice when it doesn't operate properly. Most companies have contained this problem rather well. The operators only mentioned isolated instances of damage being done to their equipment. Rush periods sometimes presented a problem but again the companies have solved this by staggering the lunch periods.

Type of Educational and Promotional Work

As previously mentioned, demonstration of the operation of the equipment was done by the vending operators. One operator said that he tried to get the workers familiar with the machines and to convince them that they are getting what they paid for. Several of the operators advertised in the industrial trade journals to which the workers and employees subscribed. This was almost necessary to keep the locations happy. Another operator had specials on each day. Ordinarily sandwiches are priced at 35 cents apiece. He would advertise two sandwiches for 50 cents on certain days. On other days he would run specials on salads and pastry. The advertisements consisted of handprinted signs pasted to the machines. The operator felt that these efforts proved satisfactory. Another operator passed out pamphlets to the employees two weeks before his installation was completed, giving instructions on the operation of the machine and informing the employees of the quality and freshness of the merchandise. When the installation went into operation the vendor reported only minor problems. He believed the pamphlets were helpful in preventing most of the problems.

Instructing the employees in the proper operation of the machines seemed to be the most important work done at an installation. To quote one operator, "The machine manufacturers do all they can by printing necessary instructions on the machines. Any other instructions and demonstration might seem unnecessary, but I've seen engineers, men responsible for the operation of millions of dollars worth of plant and equipment, almost tear a can-opener off the wall because they weren't using it properly."

Method of Location Payment

Here, as was true of retail locations, 100 per cent of the operators used the commission basis as the method of location payment. The only difference here was that the locations were not as interested in the rate of commission as they were in the service they got. In most cases the profits go into various employee welfare funds. One operator stated that the commission was a hold-over from the past days of vending and it did not fit into the industrial feeding picture. Since a service was being provided there should be no commission. Some operators reported receiving a subsidy from the location. If the vendor did not make a certain monthly income, the company made up the difference.

In some cases the location took a commission on only the top money-makers. They would let the vendor have the profit from certain items, and take a percentage only on fast-moving items.

SUMMARY

Fourteen vending operators were interviewed and filled out questionnaires which were designed to secure general information about their companies, information about their retail locations, and information about their industrial locations. The time spent with the vending operators was rewarding for the researcher. Cigarette and full-line vendors made up a majority of the firms contacted.

The corporate form of ownership was found to be the most widely used type. Many of these were closed corporations. A majority of the vending firms had been in operation four to seven years and 11 to 15 years. One firm had been operating 31 years. Cigarette vending was found to be the area in which most vending firms began their operations, and a majority of the vending firms had remained in cigarette vending. Several firms, however, had moved into full-line vending. The 14 vending firms operated a total of 5,865 machines for an average of 419 machines per firm. Cigarette vendors had more machines in operation than any other type of vending firm. Over 50 per cent of the vending firms operated a single type of machine. One-third of the firms operated four or more types of machines. One-half of the vending firms had total annual sales of less than $500,000. The average total annual sales per machine fell between $1,000 and $1,500. The greatest number of vending firms had from three to six employees. A majority of these employees were classified as routemen. It was found that a majority of the vending firms did not have a definite classification for their employees. Over 50 per cent had their employees do sales, service, and repair work.

Only 12 of the 14 vending firms operated retail locations. Seven of the reporting firms were cigarette vendors and five were full-line operators. The vending firms did not have a definite separation of retail and industrial locations as used in this survey. The cigarette vendors had approximately the same number of retail locations as they had machines. For the full-line vendors, approximately 50 per cent of their locations were of a retail nature. Stores, schools, office buildings, and lounges were the most popular sites for machine locations. Servicing a machine once a week was found to be the policy most widely used for cigarette vendors. The full-line vendors serviced their machines once and sometimes twice a day. The volume of the location usually determined the frequency of servicing. The size of the routes for the servicemen was determined by the amount of maintenance required by the machines. The full-line operators had smaller routes than the cigarette vendors. Fifty to one hundred machines was found to be the most widely used number of machines for a service route.

The majority of the sales promotion and advertising work was done by the full-line vendors. The cigarette vendors felt that their products had been pre-sold. The advertising out of the office consisted mainly of newspaper ads. Only a small amount of point-of-sale advertising was done because most of the items were of an impulse nature. The amount spent on advertising by the vending firms was not related to the volume of business done. Fifty per cent of the firms spent less than $500 on advertising. The suggestions for promoting the vending industry revolved around projecting a higher type of industry.

Only four vending operators had mass installations. Coin changers were used by all of the full-line vendors. Bill changers were used by only two. The commission rate was used by all of the vending firms as the basis for location payment. The method of location payment was found to be one of the most competitive areas of vending. A written contract was not used very often.

The five full-line vendors were the only firms reporting the operation of industrial locations. These five firms operated a total of 129 industrial locations of which approximately 20 were office buildings. Most of the industrial locations were in chemical and refining plants.

The industrial locations were serviced at least once a day and sometimes twice a day. Some of the operators separated their routes by the type of merchandise handled. The number of customers at industrial locations ranged from 400 to 1,200. This was an average for each vending firm because different size locations were operated by the firms. The main problems to overcome at an industrial location were those of adjusting the workers to the use of the vending machines and informing them about the machines. Instructing the employees in the proper operation of the machines was the most important work done at an industrial location. Some advertising was done by the vending firms through trade journals and union papers. The commission basis was the only method of location payment used by vending firms at industrial locations. The rate of commission was found to be less important in industrial locations than in retail locations. Industrial locations were more interested in service.

CHAPTER IV

A SURVEY OF EIGHT INDUSTRIAL VENDING LOCATIONS

In the survey of the 14 vending machine operators, each operator was asked to list one or two locations that the researcher might be allowed to visit. The purpose of these visits to locations was to interview the personnel directors and managers of office services in order to learn about their particular vending installations, ascertaining such things as: the number of employees using the installation, types of feeding that existed previously, factors important in considering the use of vending machines, descriptions of their particular installations, and uses of the installations.

Cameron Iron Works, Inc.

This location is a manufacturing plant located in northwest Harris County. At the time of the interview, the company employed approximately 1,500 persons. The plant was in operation 24 hours a day. The work load was divided into three eight-hour shifts of workers.

A cafeteria had been used for six or seven years previous to the plant's conversion to vending machines. In discussing the cafeteria, the personnel director said it was nothing but a constant headache. In the seven years the cafeteria had been in operation, it had had seven different managers. These were men who were well acquainted with food management. It was not their fault; the employees just did not support the cafeteria. Each time a new manager would be brought in, the cafeteria business would pick up. The different food being offered was praised by the employees. This would last for about three months. Business would then start trailing off, and finally it would return to its previous condition i.e., with almost no support at all from employees. This developed into a cycle, each new manager gained initial support, then after about three months when the newness wore off, there would be decreasing business.

Since the employees didn't come to the cafeteria, the company took the cafeteria to the employees. Men from the cafeteria went through the plant with carts filled with various food items prepared in the cafeteria. This presented its problems also. The men, at their work stations, anxiously awaited the arrival of the carts. This caused a slow-down in their work, while they looked for the carts. This was the main reason for discontinuing the use of the carts.

The company then installed five to six small vending banks and employed one man to manage their operation. This man was paid a salary of approximately $450 a month. The company became dissatisfied with this type of operation. They decided to try turning the entire set-up over to a vending firm. The personnel director is now convinced that vending is the answer to industrial feeding. One of the main reasons for his firm conviction about vending machines is the fact that the vending installation converted a $25,000 cafeteria loss into a $10,000 vending profit. This money went into an employees' club fund with which property was purchased and a clubhouse built.

The employees were notified of the closing of the cafeteria by signs placed in the cafeteria, and by a bulletin placed in the company paper. The cafeteria was closed in approximately one month. Six vending banks were scattered throughout the plant, with one bank located in the administration building. Each bank consisted of twelve machines, with the breakdown of machines as follows: pastry, hot food, cold food, coffee, cold drinks, cigarette, candy, chips, ice cream, cookies, milk, and cigar. The price of coffee and cold drinks had been kept at five cents, except for cold drinks with crushed ice which were ten cents. Approximately 250 employees had access to each of the six banks. One and five dollar bill changers were located in the administration building. One service man, an employee of the vending firm, remained in the plant all day. A ticket arrangement was attached to the side of one of the machines in each bank. When a machine failed to produce the desired item, the employee filled out one of these tickets, left it with the guard at the gate of the plant, and the next day he picked up the money left for him by the serviceman.

The vending banks were located in small areas; no lounging area was provided. The employees returned to their desks or work stations with the food or drink. The employees were given the liberty to get coffee or a snack at their own discretion. The personnel director revealed that this policy had worked out quite well. The employees had not taken advantage of their freedom of movement by loitering around the vending banks or taking an excessive number of coffee breaks.

The personnel director was primarily concerned with work stoppages and man-hours lost. He felt the vending banks contained this problem very well because there were no people behind the counter to "shoot the bull with." The employees took their food to their jobs and to a certain extent were still productive. They could sit at their work positions and review the work completed or plan the work ahead, and in the case of office personnel, answer the telephone and help persons who came in with minor problems.

Other factors of importance were: the service provided by the vending firm, the availability of the machines 24 hours a day, the quality and freshness of the merchandise, and the convenience for the employees.

Camco, Inc.

This location is a manufacturing plant that employed approximately 200 people at the time of the interview. The plant was in operation 24 hours a day. The company was engaged in the manufacture of oil field equipment.

A catering service by truck had been used for some time previous to the conversion to vending machines. The truck came by about four times a day, at 9 a.m., at lunch, at 4 p.m., and again at midnight. The truck had to be admitted at the gate and it was allowed in the area only at the designated time. This presented a small problem in itself, because someone had to go out to the gate each time the truck came. One of the main reasons the plant was converted to vending machines was poor service by the caterer. The plant was located near the end of the caterer's route. Very often by the time he had reached this company his supply was very low or he was completely out of several items. This caused the workers much dissatisfaction. It was decided to try the vending installation in an attempt to better serve the employees.

The work area was located just to the rear of the administration building. It was decided to place the vending bank in the workshop where it would be near both the office personnel and the shop workers. A new building had just been added to the plant that aided the management in relocating some of the work areas to make room for the vending installation. Portions of an assembly area, welding benches, and the entire tool-room were moved to the new building. This provided ample space for the vending machines.

The vending installation was made up of the following machines: pastry, hot food, cold food, cold drinks, cigarette, candy, chips, ice cream, and milk. A dollar bill changer was also included. A coffee machine was not in the installation because the company provided its own coffee. The eating area consisted of nine tables with benches on both sides. Each table would accomodate approximately ten people. The office personnel had a one-hour lunch period and they were allowed to leave the plant to eat if they so desired. The shop workers were given a 30-minute lunch period and they remained at the plant. The shop workers were on an hourly wage and their lunch period was considered working time. This vending installation was less than a month old and the manager did not know if it would work well or not. So far he was pleased with the service it was providing.

The manager's first concern was that of price. The price of 45 cents for a sandwich, which was the initial price charged was later reduced to 35 cents at the manager's request. The manager was willing to sacrifice profit in order to provide the workers with a good meal for a reasonable price, since the company's share of the profit from the vending installation was placed in an employee welfare fund anyway.

Columbia-Gulf Transmission Company

The Columbia-Gulf Transmission Company is located in a seven-story office building. The building was entirely company occupied at the time of the interview. It was a new building, having been completed only a year and a half earlier. Approximately 200 persons were employed here. The company owned another office building downtown, but because some of the offices were rented to tenants no vending installation was provided. Each office had its own individual machines.

The vending installation was located on the first floor of the building. It was installed just before the completion of the building and the construction workers had access to the machines while they were finishing the building. Since the installation was already in the building when the employees moved in, notice was made by way of an inter-office memorandum to the effect that the company had provided the facilities for the benefit of the employees.

The area in which the vending bank was located was designed as a lounge for the employees. The room was pleasantly decorated and the tables and chairs provided comfortable seating for the employees. The company desired to have this area as relaxing and pleasant as possible for the use of employees during coffee breaks and lunch. Coffee breaks were taken twice a day by the employees. These coffee breaks were alternated by floors. The first floor would go at a certain time, then return, and the second floor would go, then return, and so forth. This procedure was followed in order to prevent crowding of the lounge area. The lounge would accomodate approximately 75 people.

The installation consisted of the following vending machines: two coffee, one milk, one pastry, one candy, one cold drink, one cigarette, and one hot and cold food combined bringing the total to eight machines. The two coffee machines were located on each end of the bank so as to avoid any conjestion. The two coffee machines were provided to prevent long waiting lines. The relatively small number of employees did not warrant two separate food machines so the combination hot and cold food machine was used. Three waste receptacles were provided by the vending firm for placement in the lounge area.

The manager of office services listed service, convenience, and the economy of no additional personnel for the operation of the installation as the major reasons for the selection of vending machines as the means of providing the food services. The manager believed also that the machines provided for a more subtle acceptance of the merchandise than would be true of an operation where company personnel prepared and made available these items.

Diamond Alkali Company

The Diamond Alkali Company is engaged in the production of inorganic chemicals. Approximately 700 employees made up the work force at the time of the interview. This figure was exclusive of the contract workers who numbered from 50 to 200, depending upon the amount of construction being done at any one time.

The company in the past had a combination of machine vending and commissary service. Various types of vending machines were scattered throughout the plant. The commissary was located at the main entrance to the plant, just beyond the time-card station where the employees marked their work cards when entering and leaving the plant. The commissary was operated by a single individual with employees that manned the location 24 hours a day. The commissary was under the direction of the plant recreation association board. Some catering was done through the plant by employees from the commissary.

The commissary was operated at a loss and the company had to bare a portion of this loss. So in mid-December, after several months of study, the plant management closed the commissary and converted the plant to complete service through vending machines. It was reported that after two full months in operation, the vending installation had provided a $200 profit for the company.

The plant installed three major vending banks: one main location in the administration building, and two sub-locations within the plant. The main location, in the rear of the administration building, was situated in the same corridor where the commissary had been. The vending bank in the administration building consisted of the following machines: one coffee, two milk, one ice cream, one hot food (canned), one hot food (sandwich), one cold food, two candy, one chips, one pastry, one fruit juice, one cigarette and one cigar for a total of 14 machines. One coin changer was included in the bank and it was pointed out that the receptionist in the administration building kept an ample amount of change on hand for the changing of bills. Any money that was lost in the machines was refunded in the personnel office. Upon request of the employees, a machine had been added to the installation to vend Beechnut Chewing Tobacco at the price of 25 cents. This machine was an old sandwich machine that had been adapted to vend the chewing tobacco.

The plant was in operation 24 hours a day. There was no designated lunch period or coffee break. It was reported that the usual procedure was for one man to go to the vending installation and make purchases for his particular work group. The fact that the plant had a considerable amount of construction going on, had an influence on the monthly sales through the machines. The construction workers, in most cases, were from out of town, separated from their families and they had to eat the majority of their meals away from home.

The plant management reported that the main factors in considering the use of vending machines were service and profit. It was pointed out that the company was not in the food service business. That was why the company turned the operation over to a vending firm. The profit factor was important because the returns from the vending machines were turned over to the employee recreation association and it paid for certain employee activities such as dances and parties for which the company would otherwise have had to provide.

Federal Office Building

The Federal Office Building is located in downtown Houston. It houses the various agencies of the federal government. Approximately 5,000 people were in and out of the building at the time of the interview, but between 2,200 and 2,400 people were permanently officed in the building. The building was only two years old. The vending bank was installed at the completion of the building.

The vending installation was located on the first floor of the building. The following machines made up the vending bank: one ice cream, one cold food, one hot food, one chips, two coffee and chocolate, one milk, one cold drink, one candy, one pastry, and one cigarette for a total of eleven machines. One coin changer and one dollar bill changer were also included. There were eight chairs in the room where the installation was located. A majority of the employees returned to their offices with their purchases. Since the building was located in the downtown area, most of the employees ate their lunch at restaurants and cafeterias. A snack bar was located on the fifth floor of the building that provided the employees with lounging facilities and a more complete food service. The vending installation was used primarily as a source of quick snacks.

Humble Office Building

The Humble Office Building is a 44-story structure located in downtown Houston. The building is not completely occupied, but when it is entirely filled it will house approximately 8,000 people.

At the time of the interview vending installations were located on the twenty-first and thirty-third floors of the building. They were both operated as a supplement to small cafeterias located on each of these floors. The two installations were identical with one exception: on the twenty-first floor a dollar bill changer was included. The following machines were included in each vending bank: one cold drink, one coffee, one candy, one pastry, one juice, one ice cream, and one cigarette for a total of seven machines.

A large cafeteria was located on the first floor. The pastry items placed in the vending machines in the two vending installations were prepared in the cafeteria. The cafeteria and the vending installations were under the operation of one vending firm.

Before the vending installation was ready for operation, pamphlets were passed out to the employees informing them of the operation of the equipment. Other pamphlets were distributed to the employees telling them of the high quality and freshness of the merchandise with which the vending machines were stocked. This procedure was reported to have worked out very well. Little or no trouble was encountered when the machines went into operation.

Southwestern Bell Telephone Building

The Southwestern Bell Telephone Company has five office buildings in Houston. One is the main building and one is the long distance connection building. The other three offices service the various areas of Houston. The main telephone office employed approximately 900 people at the time of the interview. The building was in use 24 hours a day.

The vending installation had been in operation for three years. It was located on the seventh floor of the building. The machines in the vending bank were: two cold drink, two candy, one ice cream, one coffee and chocolate, one pastry, one chips, and one cigarette for a total of nine machines. One coin changer was included in the installation.

A cafeteria was located on the seventh floor also. One end of the dining room was converted to accomodate the vending machines. The vending machines were used to provide service for the employees 24 hours a day, since the cafeteria was open only during the day.

United Carbon Company

The United Carbon Company is located in the Chamber of Commerce building in downtown Houston. At the time of the interview the company occupied the fifth floor and a portion of the fourth floor in the building. Approximately 200 people were employed by the company. The company had just moved into this building from another location.

The vending installation had been in operation since October, 1962. From that time to March 26, the time of the interview, 31,000 cups of coffee had been vended. The vending bank consisted of: one coffee, one cold food, one pastry, one candy, one milk, and one cold drink for a total of six machines. One coffee machine was located on the fourth floor to serve the personnel there. A coin changer was not included, because a nearby receptionist kept plenty of change for the employees.

The employees had two coffee breaks a day, one in the morning and one in the afternoon. They were given the liberty to take their coffee breaks when they so desired since there was no designated time for the breaks. This helped to prevent any conjestion at the installation. Tables and chairs were located in the area of the vending bank for the convenience of the employees.

Since the office was located in the downtown area most of the employees ate their lunches in restaurants and cafeterias.

The manager stressed the idea of a streamlined bank. He wanted the vending installation to be neat and attractive in appearance. All of the machines were the same size and color. Two waste receptacles were built into each end of the bank. Service and convenience were important factors in considering the use of vending machines.

SUMMARY

Eight industrial vending locations were visited. Facts about these locations were learned from interviews with the personnel directors and office managers and by observation. Five of the locations were office buildings and three were chemical or manufacturing plants.

All three of the plants had some type of food service such as a cafeteria or catering service before they converted to complete vending. These other services proved unsatisfactory causing the companies to try vending machines. In all cases they were satisfied with the results.

The office buildings were new and in most cases the vending banks were installed during the completion of the buildings. Most of the office buildings located in the downtown area had small vending banks because a majority of the employees ate at cafeterias and restaurants.

Service was found to be the most important factor in considering the use of vending machines. Other factors of importance were: convenience for employees, quality and price of merchandise, profit, economy of operation, quick service, and the availability of the machines 24 hours a day.

In the plants, profits from the vending installations went into an employees' fund. Persons interviewed in office building locations were conscious of comfortable and pleasant surroundings while the persons interviewed in plants were concerned with work stoppages and lost man-hours.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This survey of 14 vending machine firms and eight industrial vending locations sought to gain general information about the vending firms' operations; to obtain information about their retail and industrial locations; and to secure information concerning the factors that were important to location-owners in their decisions to use vending machines. This information would be helpful in building a stronger advertising and sales promotion program for vending operators. Personal interviews and questionnaires were used with the 14 vending operators, and visits were made to the eight industrial locations to obtain the desired information.

The history of vending is crowded with the names of inventive men who founded small companies with a single creative idea. These small companies, in many cases, have developed into present day giant corporations. The conditions that prevail in the industry today are similar to those that existed in their time. The future of vending will be largely determined by the way in which present operators create new ways to solve old problems.

Although vending began as long ago as 215 B. C., the methods and procedures of vending have been constantly improved upon and broadened with the development of new and better equipment. The growth of the vending industry can be seen by the increasing volume of sales each year. Total vended volume increased from $600,000,000 in 1946 to $2,956,000,000 in 1962.

Summary of Survey Findings

The corporate form of ownership was the most widely used type with many of the vending firms being closed corporations. Most of the vending firms had been in operation either four to seven years or 11 to 15 years. One firm had been in operation 31 years. A majority of the vending firms began their operations with cigarette vending and most remained in that field, but several firms expanded to include full-line vending. A total of 5,865 machines were operated by the 14 vending firms for an average of 419 machines per firm. Cigarette vendors operated more machines than any other type of vending firm. Over 50 per cent of the vending firms operated a single type of machine and one-third operated four or more types of machines.

Among the 14 vending firms, one-half had total annual sales of less than $500,000, and the average annual sales per machine was between $1,000 and $1,500. Most vending firms employed from three to six persons, with a majority of the employees being classified as routemen. Over 50 per cent of the firms had their routemen do sales, service, and repair work.

Twelve of the 14 vending firms operated retail locations and seven of these were cigarette vendors; the other five were full-line operators. No definite separation of retail and industrial locations was made. For cigarette vendors, one machine constituted a location, whereas the full-line vendors had several machines in a location. Approximately 50 per cent of the full-line vendors' locations were retail. Stores, schools, office buildings, and lounges were the most popular sites for machine locations. Servicing a machine once a week was the policy most widely used by cigarette vendors. Full-line vendors serviced their machines once a day. The volume of the location and the type of merchandise handled usually determined the frequency of servicing. The size of the routes for the servicemen was determined by the amount of maintenance required by the machines. The full-line operators had smaller routes than the cigarette vendors. Fifty to one hundred machines was the most widely used number for a service route.

The greatest portion of the sales promotion work was done by the routemen. Sales promotion and advertising work was done more extensively by the full-line vendors. Cigarette vendors did very little if any advertising. Not much point-of-sale advertising was done because the merchandise capable of being vended consisted primarily of impulse items. The advertising done out of the offices of the vending firms was primarily newspaper ads sponsoring local events and welcoming new businesses into the community. The amount spent on advertising by the vending firms was not related to the volume of business done. Fifty per cent of the firms spent less than $500 on advertising. Suggestions for promoting the vending industry revolved around the projection of a higher type industry by improving the industry's reputation and increasing its prestige. Affiliation with national and state associations was mentioned as one way of accomplishing this.

The commission basis was used by all of the vending firms as the method of location payment. The method of location payment was one of the most competitive areas of vending. A written contract was used infrequently in establishing a vending location. Four vending firms had mass installations of a retail nature. Coin changers were used in all of the mass installations, but only two vending firms placed bill changers in their mass installations.

Five vending firms operated 129 industrial locations of which approximately 20 were office buildings. A majority of the industrial locations were in chemical, refining and manufacturing plants. The industrial locations were serviced once a day and some of the operators' routes were separated by the type of merchandise. The number of customers at these locations ranged from 400 to 1,200.

The main problems to overcome at industrial locations were those of helping employees to adjust to the use of the vending machines and informing them about the machines. Instructing the employees in the proper operation of the machines was the most important work done at an industrial location. Some advertising was done by the vending firms through trade journals and union papers and at the point-of-sale. The commission basis was the only method of location payment used and the rate was less important than other factors.

Five of the industrial locations visited were office buildings and three were plants. The plants had some type of previous feeding service such as a cafeteria or a catering service that was later converted to complete vending. The office buildings were new and the vending banks were installed when the building was completed. The number of employees and the location of an industrial vending installation affected the number and types of machines included in a vending bank. Office buildings located in downtown areas usually had smaller vending installations because of nearby cafeterias and restaurants.

Service was the most important factor in considering the use of vending machines. Other factors of importance were: convenience for employees, quality and price of merchandise, profit, economy of operation, quick service, and the availability of the machines 24 hours a day. Managers in building locations were conscious of comfortable and pleasant surroundings while the personnel directors in plants were concerned with work stoppages and lost man hours.

Conclusions

The data collected for this study seem to support the following conclusions:

1. The number of refining, chemical, and manufacturing plants in the Houston area provides an expanding market for full-line vendors.

2. Full-line vending has practically taken over the industrial market for cigarettes.

3. Service provided by the vending firm is the most important aspect of vending in an industrial location.

4. Volume is the determining factor in retail locations.

5. The individual assistance given to employees in the operation of the machines at industrial vending locations is of the greatest importance.

6. A fair and just commission rate with the accompanying service provided is the best policy in retaining vending locations.

7. Retail and industrial locations have different characteristics and therefore should be handled in different ways.

8. The advertising and sales promotion areas of the vending firms' operations have received little attention.

9. The vending firms do the normal amount of volume that is expected for their particular size of operations.

10. The vending firms support and confide in the national and state vending associations.

11. Vending firms have not as yet formulated definite policies for certain phases of their operations.

Recommendations

After consideration of data obtained from the interviews and questionnaires, the following recommendations are made to improve the operations of vending firms in Houston:

1. The potential vending market in Houston is found in the plants and refineries located there. Vending firms should expand and adapt their operations to accomodate these locations.

2. A determined effort on the part of the vending firms should be made to improve the service they offer, since the service of a location is of the utmost importance in retaining old locations and obtaining new ones.

3. Vending firms operating retail and industrial locations should consider carefully the type of vending bank to be installed in each type of location. The conditions existing in these two types of locations call for different handling.

4. In industrial locations, the idea of converting cafeterias to vending should be stressed. The firms should point out the advantages of vending over the other types of feeding that might exist.

5. The vending firms should improve and strengthen their efforts in the areas of instruction and information given to workers at an industrial location. This would assist the workers in making the adjustment to vending, which is of primary importance in determining the success or failure of a location.

6. Where the merchandise consists of impulse items, signs directing customers to the vending banks should be used to increase the customer traffic at the installation by exposing it to customers who might not know of its existence.

7. In industrial locations printed information should be distributed prior to the completion of the vending installation in order to acquaint the employees with the quality and type of merchandise to be vended.

The following recommendations are made from the present researcher's own observations of the vending situation in Houston. For the improvement of the advertising and sales promotion programs of vending firms:

1. A definite relationship should be established between the amount of maney spent on advertising and sales

promotion and the amount of business handled. This would provide a means by which to guage the effectiveness of the advertising and sales promotion.

2. Advertising the company, its products, and equipment should be done through the local media. This would keep the company before the public eye.

3. Affiliation with the various vending associations is good, but a more determined effort on the part of the individual vending firms would do much to promote vending. The operators are in closer contact with the public than are the associations. Too much emphasis is being placed on what the associations can do, rather than what the individual operator and the association can do together or what the individual operator can do alone.

4. Full-line vendors operating in the industrial field should stress the service factor in their advertising. These operators should design advertising campaigns directed toward the industrial locations pointing out the advantages of converting their feeding systems to complete vending.

5. Weekly specials on certain food items should be advertised to create interest and increase customer satisfaction. Introduction of new and varied products periodically would also be helpful.

6. The advertising of the vending firms or the associations should advertise the fact that a vending bank that is custom-made for a location can be installed.

7. Since the routemen are an important link between the vending firm and a location and because they do the majority of the sales promotion work, a planned program should be developed to aid these men in their work. Some sales training would be helpful.

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APPENDIX A

	1956	1957	1958	1959	1960	1961
Packaged Confections	Not Given (510,000)	$244,000,000 (533,400)	$244,575,000 (543,500)	$ 271,293,750 (569,100)	$ 304,647,000 (585,400)	$ 321,557,000 (612,800)
Bulk Confections	Not Given (1,150,000)	$ 57,000,000 (1,100,000)	$ 58,500,000 (1,125,000)	$ 58,760,000 (1,130,000)	$ 54,880,000 (1,120,000)	$ 54,090,000 (1,127,000)
Cigarettes	Not Given (565,500)	$761,881,000 (645,700)	$820,703,000 (717,400)	$1,037,760,000 (786,500)	$1,141,920,000 (793,000)	$1,180,951,000 (814,000)
Cigars	Not Given (40,000)	$ 6,405,000 (42,700)	$ 7,952,000 (45,500)	$ 8,675,000 (48,600)	$ 8,785,000 (50,200)	$ 9,539,000 (52,700)
Soft Drinks (cups)	Not Given (73,000)	$101,557,000 (93,200)	$103,588,000 (105,300)	$ 124,312,500 (115,700)	$ 132,338,000 (122,300)	$ 156,800,000 (137,700)
Soft Drinks (bottles)	Not Given (662,000)	$258,055,000 (737,300)	$267,588,000 (764,500)	$ 272,550,000 (790,000)	$ 306,281,000 (825,000)	$ 328,315,000 (845,000)
Coffee	Not Given (76,000)	$ 94,745,000 (99,000)	$ 99,518,000 (113,900)	$ 130,520,000 (131,200)	$ 142,940,000 (149,800)	$ 161,100,000 (163,900)
Ice Cream	Not Given (29,000)	$ 22,765,000 (31,400)	$ 23,299,000 (31,700)	$ 25,575,000 (34,700)	$ 25,550,000 (36,500)	$ 22,060,000 (38,300)
Milk	Not Given (27,500)	$ 50,000,000 (36,400)	$ 45,925,000 (41,750)	$ 55,473,000 (47,300)	$ 61,630,000 (52,500)	$ 65,880,000 (54,900)
Hot Canned Foods	Not Given (6,800)	$ 14,850,000 (15,000)	$ 14,928,000 (17,100)	$ 16,483,500 (19,700)	$ 22,121,000 (22,900)	$ 24,700,000 (24,825)
Prepared Foods	Not Given	Not Given	Not Given	Not Given	Not Given	$ 55,000,000 (not given)
All Others	Not Given	$438,000,000	$446,000,000	$ 376,000,000	$ 385,000,000	$ 360,000,000

* Number of Machines on Location in Parenthesis

Source: VEND MAGAZINE

APPENDIX B

SECTION I

GENERAL INFORMATION

1. Name of the Company____

2. When was the company organized:______________At (city)___

   How many years have you operated in Houston?______yrs.

3. Is this a proprietorship, partnership, corporation, or do you operate as a subsidiary or branch of another organization?

_____Proprietorship

_____Partnership

_____Corporation   Branch or Subsidiary of Parent Co.__________

4. What was the primary activity of the company when it was founded?

_____Confections

_____Cigarettes

_____Coffee

_____Soft Drinks

_____Prepared Food

_____Unprepared Food

_____Music

_____Other

_____ "

5. What vending activities are you presently engaged in, and classify them as primary or secondary operations.

_____Confections	Primary	Secondary	Added___yrs.	ago
_____Cigarettes	"	"	" ___ "	"
_____Coffee	"	"	" ___ "	"
_____Soft Drinks	"	"	" ___ "	"
_____Prepared Food	"	"	" ___ "	"
_____Unprepared Food	"	"	" ___ "	"
_____Music	"	"	" ___ "	"
_____Other	"	"	" ___ "	"
_____ "	"	"	" ___ "	"

6. How many machines do you operate in each activity? Are they single-product or multi-vend machines?

_____Confections

_____Cigarettes

_____Coffee

_____Soft Drinks

_____Prepared Food

_____Unprepared Food

_____Music

_____Other

_____Other

7. What are your approximate total annual sales of all machines? $____________

8. What are your approximate annual sales per machine? $_______________

9. What are your approximate total annual sales per category?

$________Confections

$________Cigarettes

$________Coffee

$________Soft Drinks

$________Prepared Food

$________Unprepared Food

$________Music

$________Other

$________ "

10. What is the total number of employees in the company?_____

11. Of these total employees, how many are:

_____Office personnel

_____Salesmen

_____Routemen

_____Servicemen

_____Other

_____ "

SECTION II

RETAIL LOCATIONS

1. How many retail locations do you operate?_______________

2. Where are they located?

_____Schools

_____Stores

_____Lounges

_____Office buildings

_____Theaters

_____Apartment Buildings

_____Other

3. How often are your retail locations serviced?

A. __________times a _______ day / week / month   B. Irregular

4. What is the approximate size of each route?

___________Number of machines

5. Do the routemen or servicemen do any sales promotion work?

____yes

____no

If so, what type?____

6. Is any advertising done at the point-of-sale, such as signs, display material, etc.?

_____yes _____no

A. What type?____

B. By whom?____

7. Is any advertising done out of this office to promote your products, machines, and company ?

______yes _______no

A. What type? B. By whom? C. ___New location

___Educational ___New Product

___Informative ___New Equipment

___Other

8. Do you think that advertising a location is beneficial to that location?

_____yes _____no

Why or why not?

9. How much does your company spend on advertising and sales promotion?

$________________ or _________% of gross sales

10. In your opinion, what type or types of promotion would be beneficial to you and to the industry as a whole?

11. Are any of your retail location machines located in a mass installation?

_____yes _____no

How many? Where?

12. How many machines and what type machines make up a mass installation?

_____Confection

_____Cigarette

_____Coffee

_____Soft Drinks

_____Prepared Food

_____Unprepared Food

_____Other

13. Do you have any coin changers located in these mass installations?

____yes _____no

14. Do the mass installations present any special types of problems? Explain.

15. Could advertising and sales promotion help solve any of these problems?

What type?

16. What type of arrangement do you have with the location-owner?

A.

____Rent

____Commission

____Other

B. Terms of the arrangement?

17. Do any of your arrangements vary with the type of location and type of machine used?

____yes ____no In what ways? Why?

18. Outside of advertising and sales promotion, what type of public relations do you indulge in?

SECTION III

INDUSTRIAL FEEDING LOCATIONS

1. How many industrial feeding locations do you have?________

2. In what types of industries are these locations?

_____Processing

_____Manufacturing

_____Service

_____Other

3. Are any of these industrial feeding locations in a vending bank installation?

_____yes _____no

4. Do you have more than one vending installation in a plant?

_____yes _____no How many?______________

5. How often are these installations serviced?

A. B. Irregularly

________times a_______day
week
month

6. Do you have any service as "Coffee Break" by truck?

_____yes _____no

7. Do you feed all of the people in the plant or do you compete with some other type of operation such as a cafeteria?

8. How many people use your installation?______________

9. How many people operate the vending installation?_______

What are their specific duties?

10. Did you do any type of promotion or educational work before the installation was complete?

_____yes _____no

What type?

11. How successful do you think these efforts were and are?

12. What type of sales promotion do you do now?

APPENDIX C

Supreme

ICE CREAM BLUE BELL CREAMERIES

TELEPHONE GReenfield 6-3777 P. O. Box 358 BRENHAM, TEXAS

PROVIDE WHOLESOME REFRESHMENT

RIGHT ON SCHOOL PREMISES --

24 HOURS A DAY!

You can offer delicious ice cream at school . . . where students are supervised . . . where you know the quality of the product they buy.

Yes, our all-new Vendo Automatic Ice Cream Merchant gives students their favorite dessert and between-meal refreshment . . . without fuss or bother . . . without extra help or operating problems for you.

These handsome, easy-to-operate machines refrigerate, store, serve, collect, tally the sale and even make change . . . automatically! They offer a choice of three selections at the regular consumer purchase price of 10¢. We stock them on a carefully planned rotation of finest brand name specialties that will be popular with students and faculty alike.

A Vendo Ice Cream Merchant requires little floor space -- no special installation treatment. It can be conveniently located in a hallway, alcove or outside recreation area. In school lunchrooms, it offers a practical supplement to over-the-counter service.

Investigate this easy way to provide high quality, nutritious refreshment in your school. Simply return the enclosed card and I will be glad to stop in and talk with you about our convenient automatic ice cream service. There is no obligation, of course.

Sincerely yours,

BLUE BELL CREAMERIES

APPENDIX D

PLACEMENT AGREEMENT

Date ____________________

IN CONSIDERATION OF ____

______________________________________, and in futher consideration that ____________

____________________________________hereinafter called Operator agrees to install, operate and service coin operated vending machines, phonographs or amusement devices within the premises

known as: ____

______________________________________ owned by ________________________

hereinafter called Owner, located at ____

__________________________ Houston, Texas, and to pay commissions on all sales made through said machines at the rate set forth below, the owner hereby allocates space in his premises sufficient to place said machines and agrees that all sales of cigarettes and furnishing of music and amusement services within said premises shall be soley by means of the coin operated machines furnished by

____.

This contract shall remain in force for a period of ______ years from date hereof and shall be binding on heirs, successors and assigns of the parties hereto.

It is agreed that the cigarette commission payable to the Owner is to remain in full force and effect for the term of this agreement unless there is an increase in the manufacturer's price of cigarettes to the company or there is an increase in National, State or local cigarette taxes on cigarettes, then and in such event, the commission as called for in this agreement shall be adjusted accordingly.

The Operator shall not be held responsible for failure to service his machine or machines on location or for loss, damage or delay caused by strikes, riots, fires, lighting, insurrection, city, state or government requirements, acts of God or of the public enemy or other causes beyond its control nor shall the company be liable for consequential damages.

In the event of wilful breach of this contract by Owner, monetary damages shall be based upon the average weekly sales of cigarettes and the average weekly gross receipts from phonograph, music and amusement devices for the period preceding breach by Owner and shall be computed at five (5c) cents per package of cigarettes and one-half (½) of the gross average receipts of phonograph and amusement devices multiplied by the number of weeks remaining to expiration date of contract. The foregoing measure of damages shall not limit or exclude any other remedy or damages to which Operator may be entitled by law.

This contract shall remain in force for a period of________ years after its termination unless notice not to renew is given by either party, in writing, at least thirty (30) days prior to its termination.

We, the undersigned, agree to all the terms, covenants and conditions of this contract, and guarantee the performance thereof.

______________________________ ______________________________

Firm Name

By ______________________________

COMMISSION RATE:

By ______________________________

Cigarettes ______________________________

Music &
Novelty ______________________________ ______________________________

Home Adress

Vita was removed during scanning.