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INCREASING RETURNS ON INVESTMENT IN CONVENIENCE FOOD STORES THROUGH MERCHANDISING PRACTICES

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Introduction

The convenience store industry has shown a remarkable rate of growth during the past ten years.¹ Convenience store sales were \$1,300,000,000 in 1967 and nearly seven and one half billion dollars in 1976, or about five percent of total grocery store sales in 1976.² According to trade sources there were about 30,000 convenience stores in operation in 1976 which represented approximately twelve percent of all grocery stores in the United States.

Due to a high degree of financial leverage and relatively high rates of profit compared to other types of grocery stores convenience store companies have been able to realize very favorable returns on invested capital. According to a report presented at the 1975 annual convention of the National Association of Convenience Stores, returns on owners' equity averaged between 18 and 30 percent in the convenience store industry between 1972 and 1975.³

Although returns on invested capital have been relatively high on an industry-wide basis, some companies have achieved higher returns than others. In addition, there are some changing conditions that will make it more difficult to maintain return on investment at past levels. Increasing competition will make it more difficult to sustain sales and profit levels. The average investment (building

and land) for a new store is increasing, from 61,500 dollars in 1974 to 77,200 dollars in 1976.⁴

In analyzing returns on investment in convenience stores one of the limiting factors appears to be inventory turnover. Low rates of sale relative to inventory levels result in low turnover and low returns per unit of space for many items. This situation is particularly evident for standard grocery items. Analysis of velocity reports for one convenience store chain indicated that many items in grocery product categories sold at the rate of one consumer unit every five weeks. A study in four stores operated by four convenience store companies showed that grocery products returned a lower net margin percentage than all but two other product groups.⁵ Net margin was calculated by deducting occupancy costs, equipment depreciation and utilities, and equipment and inventory capital costs from gross margin. The low net margin contribution of groceries was due primarily to high occupancy costs because of the substantial amount of space occupied, a relatively low turnover and a relatively high capital investment in inventory.

Purpose and Method of Study

This study was based upon the hypothesis that reducing the number of items in certain grocery categories would not affect overall sales or gross margin in

those categories. The hypothesis reflects the point of view that a convenience store is not a small supermarket and that consumers are willing to accept a minimum assortment of grocery products, i.e., the availability of at least one item of each product is adequate to satisfy consumers convenience needs.⁶ If this hypothesis is correct, returns on investment in the grocery product group can be increased by reducing display space, increasing product turnover and reducing investment in inventory.

Selection of Categories

Four grocery categories were selected to be included in the test; household supplies, canned juices, pet foods and canned fruits and vegetables. These categories were selected because of the amount of space occupied and the judgement that the potential existed for considerable improvement in space management.

Item Selection and Space Reduction

Items in each of the four categories were eliminated from the test stores on the basis of a ten month item movement report for each category in all seventy stores of the convenience store chain that participated in the study. In addition, a set of decision rules was developed that included sales, gross margin, unit movement, consumer preference and duplication considerations.

The amount of display space in each test category was reduced except for pet foods where additional facings were necessary for some items. The number of items and total display space in the test and control stores for each of the four categories are shown in Table 1.

Table 1. Number of Items and Square Feet of Display Area Occupied by Four Grocery Categories in Test and Control Stores, 1976

Category	Number of Items		Square Feet of Display*	
	Test Stores	Control Stores	Test Stores	Control Stores
Household	40	82	16	32
Juices	19	29	10	11
Pet Foods	30	42	20	20
Fruits & Vegetables	21	42	4.2	8.5
TOTAL	110	195	50.2	71.5

* Based on the share of display floor area occupied by each category.

Selection of Stores

Eight stores were selected for the experiment. The stores were similar with respect to type of location and layout. All the stores had center checkouts, identical product selection and selling prices.

Each store was assigned test and control treatments randomly except that no store had less than one nor more than three test categories. Test treatments consisted of the reduced number of items, facings and display space except for pet foods where the amount of display space remained the same. Control treatments consisted of the original number of items, facings and display space.

Base and Test Periods

The experiment was conducted over a seventeen week period, June 5 to September 25, 1976. The test category dollar sales and gross margins relative to store sales and display space were then compared to a base period in order to determine the changes from the base period to the test period and whether the changes were the same for both the test and control stores. The base period was the entire year, 1975.

Results

The changes in category sales and gross margins from the base period to the test period, adjusted for differences in total store sales, are shown in Table 2. There was relatively little difference in the change in sales and gross margin from the base period to the test period between the test and control stores in the household and juices categories. For pet foods, dollar sales and gross margin per \$1,000 of store sales increased in the test stores and declined slightly in the control stores from the base to the test period. Fruits and vegetable sales and gross margin per \$1,000 of store sales declined in both test and control stores from the base to the test period. However, the decline was substantially greater in the test than in the control stores.

Table 3 shows the changes in sales and gross margins adjusted for both total store sales and square feet of display space. The productivity of display space was increased substantially by reducing the amount of space and/or items in test categories. A comparison of total store sales in the eight experimental stores and all other stores in the chain indicated that the reduction in display space and items in the four grocery categories had no adverse effect.

The inventory turnover was higher in the test than in the control stores for each of the four categories (Table 4).

The results of this study indicate that returns on investment can be increased by reducing space and/or item selection in grocery product categories in convenience stores. Inventory turnover is increased, category space costs are lowered and inventory investment is reduced.⁷ The extent of benefits to the convenience store firm will depend upon the use made of the space released by the reduction in grocery items in existing stores. For new stores, the possibility exists for reducing overall store size to achieve the same sales volume. Additional studies are underway to investigate alternatives for utilizing display space in convenience stores.

The cooperation of Mr. Louis Hannaford, Jr., Lil Peach, Inc., Chelmsford, Massachusetts and the National Association of Convenience Stores made this study possible.

Table 2. Average Dollar Sales and Gross Margin Per \$1,000 of Total Store Sales, Four Grocery Categories, Base and Test Periods, 1975-76*

Category	Sales Per \$1,000 of Store Sales				% Change From Base Period to Test Period	
	Test Stores		Control Stores		Test Stores	Control Stores
	Base Period	Test Period	Base Period	Test Period		
Household	\$9.92	\$10.11	\$12.40	\$12.62	+1.9%	+1.8%
Juices	3.23	3.43	3.54	3.79	+6.2	+7.1
Pet Foods	11.93	12.32	12.82	12.74	+3.3	-0.6
Fruits & Vegetables	3.16	2.43	3.41	3.22	-23.1	-5.6

Category	Gross Margin Per \$1,000 of Store Sales				% Change From Base Period to Test Period	
	Test Stores		Control Stores		Test Stores	Control Stores
	Base Period	Test Period	Base Period	Test Period		
Household	\$3.32	\$3.39	\$4.18	\$4.25	+2.1%	+1.7%
Juices	1.14	1.18	1.26	1.32	+3.5	+4.8
Pet Foods	4.39	4.81	4.70	4.58	+9.6	-2.6
Fruits & Vegetables	1.18	.89	1.28	1.22	-24.6	-4.7

* The base period included the entire year, 1975.
 The test period included 17 weeks, June 5 - September 25, 1976.

Table 3. Average Sales and Gross Margin Per Square Foot of Display Space Per \$1,000 of Store Sales, Four Grocery Categories, Base and Test Periods, 1975-76*

Category	Sales Per \$1,000 of Store Sales Per Square Foot of Display				% Change From Base Period to Test Period	
	Test Stores		Control Stores		Test Stores	Control Stores
	Base Period	Test Period	Base Period	Test Period		
Household	\$0.31	\$0.63	\$0.39	\$0.39	+103.2%	0%
Juices	0.29	0.34	0.32	0.34	+17.2	+6.2
Pet Foods	0.60	0.62	0.64	0.64	+3.3	0
Fruits & Vegetables	0.37	0.58	0.40	0.38	+56.8	-5.0

Category	Gross Margin Per \$1,000 of Store Sales Per Square Foot of Display				% Change From Base Period to Test Period	
	Test Stores		Control Stores		Test Stores	Control Stores
	Base Period	Test Period	Base Period	Test Period		
Household	\$0.10	\$0.21	\$0.13	\$0.13	+110.0%	0%
Juices	0.10	0.12	0.12	0.12	+20.0	0
Pet Foods	0.21	0.24	0.24	0.23	+14.3	-4.2
Fruits & Vegetables	0.14	0.21	0.15	0.14	+50.0	-6.7

* The base period included the entire year, 1975
The test period included 17 weeks, June 5 to September 25, 1976.

Table 4. Annual Inventory Turnover for Four Categories, Test and Control Stores, Based on Sales and Average Inventories June 5 to September 25, 1976¹

Category	Rate of Inventory Turnover	
	Test Stores	Control Stores
Household	6.3	4.8
Juices	7.5	4.5
Pet Foods	11.6	8.5
Fruits & Vegetables	<u>4.4</u>	<u>2.7</u>
Average	7.9	5.2

¹Inventory turnover calculated by dividing cost of goods sold by average inventory at cost and converting to an annual basis.

Footnotes

¹Progressive Grocer defines a convenience store as a "small, compact, self-service store open long hours and featuring a limited line of brands and sizes."

²Convenience Stores, 6th Annual Report of the Convenience Store Industry, Progressive Grocer, New York, September-October, 1976.

³How to Maximize ROI, presentation of Leonard W. Arentsen, Partner, Arthur Andersen & Company, Chicago, Illinois, September 1975.

⁴State of the Convenience Stores Industry, National Association of Convenience Stores, Falls Church, Virginia, 1975-1977.

⁵Impact on Product Profitability of Energy and Capital Requirements, a study prepared for the National Association of Convenience Stores by Arthur Andersen & Company, Chicago, Illinois and Easton Associates, Inc., Madison, Wisconsin, October 1974.

⁶In this study "Category" refers to a family group of related products such as canned fruits and vegetables. "Product" refers to a particular commodity within a category such as canned, sliced peaches. "Item" refers to a particular brand, size, color or flavor within a product such as Del Monte Yellow Sliced Peaches, No. 303 can.

⁷Occupancy costs for the experimental stores averaged \$26.95 per square foot of display space per year. Occupancy costs include rent, real estate taxes, insurance and utilities (excluding refrigeration).