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# POTENTIAL FOR CONSOLIDATED DELIVERY OF VENDOR ITEMS TO RETAIL STORES

by

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## Methodology

Intensive one week study in each of two supermarkets to measure all activities involved in direct store deliveries including those performed by the vendor and store personnel, including product handling and paperwork. Costs were also developed from eight vendors including labor, vehicle operating costs, methods and costs for billing customers, and handling methods and equipment. Based on information obtained in the study and simulations from standard data, a cost model for the consolidated warehouse distribution of direct store delivery items was developed.

## Major Findings

The cost for direct store delivery averaged \$1.135 per case, while projected cost for the consolidated system total \$0.688 per case with five deliveries per week and \$0.726 with six deliveries. With five deliveries per week, this potential 39 percent savings, \$0.447 per case, amounted to an average savings of \$623.56 per week for each of the two stores studied that received an average of 1,395 cases per week by direct store delivery. With six deliveries the potential 36 percent saving, \$0.409 per case, would total \$570.55 per week per store. Projected savings for a 50-store group would total more than \$1.6 million annually for five deliveries and nearly \$1.5 million annually with six deliveries.

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# THE ECONOMIC VIABILITY OF INDEPENDENT SUPERMARKETS

by

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Independent food retailers have been losing sales to food store chains (firms with 11 or more stores) since the 1920's. Their share of industry sales fell 0.6 percent each year between 1930 and 1977, and several factors could limit their ability to compete with chains in the future.

Independents' prospects are critically dependent upon four factors. They will continue to have difficulty in head-to-head competition with chains because it is very difficult for them to match chains' prices. Variable-price merchandising, product selection, and customer services are very

important. UPC scanner data has vast untapped potential to tailor prices, products, and promotions to each stores' special needs. Chains are adopting scanners more quickly than independents are and even if independents install scanners and learn how to use the data effectively, they are likely to have the merchandising advantage they had when chains standardized sales efforts among all or many stores in a market.

Independents will have difficulty preserving their market niches. Industry sales growth has slowed and chains are looking for new sales opportunities. With the additional merchandising flexibility made possible by scanners, chains could compete more effectively in the market niches.

Independents lag in new store construction. As new supermarkets get larger, independents find it is more difficult to build stores because of the high costs, difficulty in securing

financing and choice locations, length of time and other problems in store construction, and increased risks. Independents probably will operate very few of the superstores and combination grocery-drug stores that are expected to become the predominant type of supermarket in the 1980's.

Independents rely heavily upon discarded chain stores. Several chains are replacing their stores with superstores and combination stores and others are likely to sell stores due to financial problems. However, it appears unlikely that recycled stores will become available at the same pace as in the 1970's. In addition, affiliated wholesalers have gained the expertise to operate supermarkets, and if their growth and profit objectives are better served by integration into food retailing, they could acquire and keep recycled stores. Although this does not now appear likely, eight wholesalers now rank among the Nation's 100 largest food chains.

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## AN INTERACTIVE SUPERMARKET FRONT-END COMPUTER SIMULATION MODEL

by

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Checkout operations in U.S. supermarkets pose a dilemma for store management. First, a slow understaffed operation can precipitate consumer ill will which ultimately translates into lost sales. On the other hand, maintaining a service policy which results in shorter checkout lines may cause underutilization of both labor and equipment. This research addresses the problem of the resultant customer service - labor cost trade off. The FRONTLINE interactive simulation model

was designed as a decision aid to be used in training exercises and optimal checkout design experiments.

### Methodology

FRONTLINE is a computer simulation of a multiple line, multiple service checkout station queuing model which provides for the input of real time managerial skills. To the trainee the model appears as a management game with which he/she interacts via a video