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# SUPERMARKET TRENDS AND CHANGES IN RETAIL FOOD DELIVERY

By

Jean Kinsey
Professor of Applied Economics
Director of The Retail Food Industry Center
University of Minnesota

The supermarket, one of several types of retail food stores, is the last stops for a farm commodity before a consumer selects it. That commodity has been transformed into a (nearly) ready-to-eat food or beverage and shipped through a complex distribution system in response to an order from the manager of a retail food establishment. This manager is the first to observe what consumers are willing to pay and what they desire to eat. The role of the retail outlet in the food distribution chain has evolved from a relatively passive handler of national brands and seasonal products to an active advocate for consumers' preferences. Today the food retail outlet can be thought of as the command center of the food system. Here, data is gathered about what sells. This data is released into the food distribution chain where it signals an order for more (or less) of particular products needed to replenish shelves. These signals are, in turn, relayed up stream through processors to farmers where they make adjustments in crops, livestock, seed types, veterinary services and financing in order to respond to the demand for particular varieties, quantities and qualities of food.

Many factors have induced a shift from "production push" to "retail pull" in the food system not the least of which is an increase in consumers' preference for a wide variety of safe and convenient food. This paper discusses the size, operation and role of retail grocery stores in the food system. The implications for agriculture are many. They include the increased use of vertical coordination and contract relationships up and down the food distribution chain.

## The Food and Agricultural Industry - Size and Trends

Food and agriculture is one of the largest industries in the U.S. economy making up 13.4 percent of the Gross Domestic Product (GDP). Retail food sales make up 7.2 percent of GDP, more than any other retail sector including automobiles. This sector employs over 15 percent of all workers with over 12 percent working at the retail end. Grocery stores capture about 53 percent of the food dollars spent while providing over 70 percent of the food (by weight) eaten in the United States.

There are 127,000 grocery stores in the United States; 10 percent fewer than 5 years ago. The top 100 retail food companies (measured by total sales) own or service almost 17 percent of all these stores compared to 12 percent five years ago (Chain Store Guide). One-third of the $425.7

billion sales made in grocery stores in 1997 were made in stores affiliated with the top ten supermarket chains (Chain Store Guide, FMI,1997a). The top four chains, Kroger, Safeway, Albertson's, and American Stores captured 17 percent of total grocery sales. These four chains have been among the top 5 grocery companies since 1976.

Continuous mergers (averaging 54 per year over the last ten years) and on going divestitures (averaging 35 per year) keep this end of the food distribution chain competitive and dynamic (USDA). Economies of size, distribution and management fosters continuing consolidation on a regional basis, but food, like politics, is a local business. Real competition is considered to be within three miles of one's store. Looking at market share in the 100 largest metropolitan areas in the U.S. reveals that in 18 metro areas one chain has captured more than 40 percent of the market share but in none of the areas covered were there fewer than nine chains to choose from (Chain Store Guide).

The percent of total market shared by the four largest chains is a standard measure of concentration in an industry. Among these 100 metropolitan areas 24 had concentration ratios of over 80 percent including 4 areas that were over 90 percent. Almost half had concentration ratios between 66 and 80 percent (Chain Store Guide). Economists have worried about whether concentration would lead to higher food prices; evidence on this is very mixed (Cotterill).

We can expect continued buyouts and mergers and reorganizations. Supermarkets are getting bigger, with median store size now over 38,000 square feet. Club stores and supercenters have between 100,000 and 200,000 square feet with at least 40 percent of it devoted to groceries. Sales per square foot is a standard performance measure and it has increased, on average, from $392 to $409 over the past 5 years. As stores get larger and add more high service departments, this figure fluctuates across chains. The range of sales per square foot was between $1,026 and $180 in 1996 with the higher figures tending to be aligned with stores that sell higher priced products (Chain Store Guide).

The formats of grocery stores has changed dramatically. A supermarket is generically defined as a full line grocery store with sales of over $2.5 million per year. A conventional supermarket is defined as a store that devotes most of its space to a full line of food and beverage products including fresh meats and produce. This type of store format in declining in numbers. The large growth has been in supercenters, superstores and combination stores where up to 60 percent of floor space may be devoted to nonfood merchandise. Convenience stores are also a fast growing format.

The definition of store formats varies by author. One distribution of the number of stores by format shows that convenience stores comprise 44 percent of all the store units, combination stores 33 percent, superstores/warehouses have 9 percent and conventional supermarkets, 14 percent. By sales, however, these supermarkets have 33 percent of the market, superstores/warehouses have 42 percent and convenience stores only 6 percent.

The physical layout of stores is changing as is the mix of products sold. This is in response to two large competitive threats: 1.) Wal Mart and 2.) Consumers' shift to fast food and take out food from other establishments. The response to Wal Mart is in the form of distributional reengineering and will be discussed later. The response to consumers continued desire for meals-to-eat verses food-to-cook has lead this industry into a flurry of activity to find the best way to sell food ready-to-eat. It is called "meal solutions" or "home meal replacement" and it dominates most of the business decisions in retail food stores today. Store layouts are changing to accommodate the shopper who wants to pick up a quick meal to eat on or off premise. The traditional store where you are forced to walk through aisles of dry groceries to find the dairy and produce is evolving into a store where dry grocery is moved to the back left hand corner and fresh produce and deli food is up front, often with its own fast checkout stands. This is a deliberate attempt to capture a larger share of consumers' meal dollar. With over half of food purchased in food service places being taken out to eat, grocery stores need to be in this game. Between 1994 and 1996 the percent of consumers who reported that the grocery store was their primary place to get take out food jumped from 12 to 22 percent but the majority of take-out food sales are still going to restaurants and fast food places.

**Supermarket Finances**

The most frequently cited fact about supermarkets is that they operate on very small profit margins. In 1996-97 their average net income (total sales minus cost of good sold, taxes, interest and operating expenses) was 1.08 percent of net sales (0.53 percent for stores with less than $100 million in annual sales and 1.26 percent for stores with sales over $100 million). In addition, real dollar sales have risen less than 1.6 percent since 1992 and in "same stores", real sales have fallen by up to one-half percent in three of the past five years. It would appear that this competitive business is operating on the edge. It is not, however, unprofitable. Return on equity has been between 13 and 16 percent over the past four years and return on assets was between 3 and 4 percent.(FMI, 1997b).

Store expansions in this industry are notable. Some would say expansion is beyond the demand and population needs. The top 100 grocery chains, who account for two-thirds of all store sales, increased their number of stores by 26 percent to 20,134 stores since 1992 and the total selling space by 33 percent to 667,422 square feet. Sales per square foot increased only 4.1 percent over this period reflecting the maturity of this business. (Chain Store Guide) .

**Food Delivery - Logistics**

In 1992 the grocery store industry began to realize the impact of a major competitor - Wal Mart. At the time Wal Mart had only 50 stores that sold a full line of groceries, but they had arrived on the scene with the most sophisticated and integrated logistics system known to retailing. They had contracts with their suppliers for specific products at every day low prices. These products were to be delivered to distribution centers at specific times and to be dispensed to stores without delay. The lean inventory, warehouse and trucking system allowed Wal Mart to cut their

operating costs 5 percentage points below the average in the grocery business, and they were planning to open more superstores with groceries in the future. By now they have over 370 food stores in the United States. Food sales of $10 billion represents a five year growth of over 600 percent. They now rank 10th in food sales in the country. They have changed the landscape for retail stores of all types.

Large supermarket chains and their suppliers sat up and took note. Through their trade associations they began an initiative in 1992 called “Efficient Consumer Response” (ECR). The ECR national committee was formed. It is made up of representatives of food companies at all levels, equipment suppliers, and many others who were interested in designing a food delivery system that would be more efficient. At its heart is electronic data interchange (EDI) where retailers would transmit real time sales data directly to manufacturers (or wholesalers and brokers who pass it on to manufacturers). This would provide a continuous flow of information about how fast each product was selling and the rate at which it should be replenished by the distributor and how fast manufacturing lines should be adjusted to speed up or slow down the production of fast (slow) moving items.

Many changes in management activities will accompany the full implementation of ECR. They include category management (identifying and eliminated slow moving items), activity based costing (ABC, assigning management and overhead costs to the departments or categories that use them), customer loyalty programs and electronic data transmission and analysis.

There are striking similarities between the activities of the ECR Committee in the 1990's and the Symbol Selection Committee of the early 1970's. The later worked arduously to design, promote and implement the use of the Universal Product Code (UPC bar code ). Through careful and numerous contacts and much testing and research a workable UPC was developed, but adoption was slow and painful since stores did not want to invest in scanning equipment before all food packages had a bar code and manufacturers wanted to be sure the bar code would be scanned before they changed their packages to include it. Likewise adopting ECR practices is slow and meeting some resistence. Companies defined as chains (more than 11 stores) have been the most likely to divide products into formal categories (76 percent) and to transmit data to and from suppliers via EDI (68 percent). The average over all companies is 36 and 37 percent respectively. In January 1997 only 13 percent of all companies had adopted continuous replenishment programs and 15 percent were using ABC (FMI, 1997b). A study at the University of Minnesota showed that those stores which had adopted the largest number of ECR practices had the best performance, but the authors cannot tell whether good performance led to adoption or visa versa (Phumpiu and King).

ECR practices are the next major logical step in utilizing the power of the UPC code and scanning and computer technology. Scanning products upon purchase and being able to change prices in a central computer system and not having to put prices on each item, was a huge productivity boost to the supermarket business in the late 1970's. Since then, few technology breakthroughs or productivity enhancing changes have had as much promise as ECR. If ECR is

fully implemented, it will push the industry in the direction of further economies of scale. Savings are promised to consumers who should benefit from a more efficient system. Many are skeptical of this, but as long as there is intense local competition for the consumer's food dollar, savings will probably be passed on to consumers.

ECR practices also lead to new partnerships involving tighter contractual relationships with first line suppliers and distributors. By sharing information about consumers' purchases and preferences retailers can and will have great influence on what foods are produced and delivered through the food chain. Studying the supply chain and how it evolves and performs is one of the new sciences in business schools and agricultural economics departments.
Some of the phenomenon being examined are the concentration among producers, the benefits of captive supply, savings from inventory control and product flow, vertical coordination, international sourcing and new-age coops. The later are an example of micro opportunities that arise in niche markets with strong and special demands.

**Other Trends**

With the increase in food service operations in stores, food safety issues take on new importance. Fresh, unpackaged food is more vulnerable to spoilage and to contamination from handlers. Increased training of food handlers and the establishment of hazard control programs will increase. Informative labels about nutrition and ingredients is a larger challenge in freshly prepared food.

Continuing to make food more convenient while maintaining freshness, nutrition and taste is an ongoing challenge. The time most consumers expect to spend cooking (assembling) a meal is down to 15 minutes. This means that food must be virtually ready-to-eat when it comes into the home.

The growth of "grocerants", where groceries and ready-to eat meals are both available in the same store, is exciting and helps provide adventure and excitement in the store. It is not, however an economical way to deliver food to middle and lower income households. The formats of retail food stores may bifurcate even further. One of the challenges for public policy makers and for the food industry is to balance competition for the high-end food dollar while also serving the food needs of the poor. As the lines between food for home and away-from-home consumption blur, food stuffs eligible to be purchased with food stamps, or their electronic equivalent, may need to be recategorized.

Home delivery and Internet shopping for food is here and growing. Industry experts predict it will reach 10 percent of food sales in about 10 years. To be profitable, the technology of filling orders must find a way to bypass the grocery store and receiving deliveries must be more convenient than going to the store oneself.

Demographics and lifestyles dictate that stores will cater to older consumers, provide more

services unrelated to food, and find new ways to attract customers on a regular basis. The ideal customer is the one who considers their grocery store to be their cook, kitchen and dining room, a place they feel at home.

More training of labor and finding labor saving technologies (high tech) while maintaining or even increasing the (high touch) service personnel will be critical. Good service is delivered by well trained and friendly people but they add to labor costs which already comprise over 38 percent of the cost of food. (FMI, 1997a)

Keeping prices low, adding services, increasing food safety and customer loyalty are among the vast challenges this industry faces. Part of the solution will be in tighter links to food manufacturers (including commissaries) and narrower specifications on acceptable food qualities and delivery time. This changes the nature of the food delivery system all the way back to the farm. This is a mature business but it has a steady flow of repeat customers. As long as consumers have numerous choices of what to eat and where to obtain their food, competitive forces should ensure favorable food prices and uphold our long tradition of decreasing the portion of household budgets needed for food.

References:

Brown, S.A. 1997, *Revolution at the Checkout Counter*, Boston: Harvard University Press.

Chain Store Guide, 1997, *Top 100 Grocery Operators: A 5-Year Historical Analysis*, Tampa, Fl: C.G. Information Services

Cotterill, R W., Ed.,1993, *Competitive Strategy Analysis in the Food System,* Boulder, CO: Westveiw Press.

Food Marketing Institute, , *1997 Supermarket Facts,* Washington D.C., FMI, 1997A.

Food Marketing Institute, 1997b, *1996- 1997 Annual Financial Review*, Washington D.C., Gerke & Associates, Inc.

Paul F. Phumpiu and Robert P. King, 1997, *Adoption of ECR Practices in Minnesota Grocery Stores,* The Retail Food Industry, University of MN: Working Paper 97-01.

United State Department of Agriculture, September 1996, *Food Marketing Review, 1994-95*, Washington D.C. ERS, Agricultural Economic Report No. 743.