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Couponing as a Horizontal and Vertical Strategy: Theory and Effects

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Abstract

This paper surveys developments in analytical models and empirical findings concerning the strategic use of manufacturers' coupons for U.S. grocery products. Traditional theories examine the horizontal effects of coupons as a strategy to charge various classes of consumers different prices. Recent developments focus on the use of coupons in manufacturer-retailer vertical competition. The paper provides data on trends in couponing: numbers, face values, redemption rates, total promotional costs, and international usage. The paper further analyses the effective price discounts provided by coupons across brands and segments of ready-to-eat cereals during 1992-1995.

Keywords: Coupons, sales strategies, vertical competition, food products, ready-to-eat cereals.

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Couponing as a Horizontal and Vertical Strategy: Theory and Effects

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For more than one hundred years, U.S. food marketing companies have offered special, temporary deals on grocery products to consumers in the form of coupons. In 1995, U.S. manufacturers issued price-reduction coupons that had a "face value" of $180 billion (Narisetti 1997). That is, if shoppers had collected all the cents-off coupons that were printed and redeemed these coupons when shopping for groceries, manufacturers would have been required to reimburse the retailers for $180 billion. In fact, consumers turned in only 2 percent of the 292 billion coupons that were issued in 1995 (Marketing News 1996).

Coupons and other forms of trade promotion have become increasingly important merchandising tools in the U.S. food system. In 1965, the first year for which coupon issuance was systematically tracked, 20 billion coupons were printed and distributed by U.S. manufacturers, the great majority of them for grocery products. By 1994, the number of coupons "dropped" by manufacturers had peaked at 310 million (Marketing News 1996). The total redemption value of coupons had climbed from $1.0 billion in 1982 to $4.6 billion in 1994 (Galbraith 1993). Similarly large increases are also found for coupons issued by food manufacturers (Gallo *et al.* 1982). In 1980, the redemption value of food and beverage coupons was estimated to be about $1,865 million; in 1993, the comparable figure was about $2,900 million. The U.S. grocery couponing system has become so prominent and well organized, that several analysts have predicted the spread of large-scale couponing to Western Europe and other high income countries.

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On the other hand, there is accumulating evidence that U.S. couponing activity may have peaked in the mid 1990s. After rising nearly uninterruptably for three decades, the number of coupons issued began to decline after 1993. More disturbing to the industry were the drastic declines in redemption rates, from about 5 percent in 1980 to only 2 percent in 1994-1995. The high costs of the coupon system have also been of concern. In 1978, consumer redemption benefits accounted for about 60 percent of the total costs of issuing, handling, and managing couponing (Gallo *et al.* 1982). By the early 1990s, redemption benefits had declined to less than half of total couponing costs. The costs of trade promotions in the food processing industry, and couponing in particular, was believed to pose a major threat to the future profitability of the industry (Galbraith 1993). The head of advertising for Proctor & Gamble was quoted as saying: "I don't like couponing. Period." Proctor & Gamble even went so far as to initiate a test in New York State in 1996 that ceased the distribution of all P & G coupons for more than a year, a move that earned the company a great deal of negative publicity and trouble with the State Attorney General's office.

The principal purpose of this paper is to survey the analytical models and principal findings of studies concerning the competitive effects of consumer coupons. Most analytical approaches focus on horizontal rivalry among manufacturers as the motivating factor in coupon systems, but my survey reveals that increasingly theorists are turning their attention to aspects of vertical competition. Before turning to these surveys, the paper considers the definitions and types of coupons, their role in trade promotion, and some trends in their usage. This paper will illustrate many facts about food coupons by focusing on the ready-to-eat breakfast cereal industry, which is by far the largest and most sophisticated user of coupons in the food industries. Coupon redemptions in the cereals industry became a matter of public controversy in the mid 1990s. (Connor 1996, Cotterill 1996).

The Role of Coupons

Coupons are promissory notes given by manufacturers or retailers to consumers that in effect offer a reduced price for a particular brand or item. The coupon specifies a specific discount (the face value) upon the purchase of a product that is often specified by size and that is of limited duration. Most retailers honor coupons presented by shoppers at the time of purchase. The retailers are later reimbursed the face value plus a handling fee. A small number of coupons are mailed to manufacturers for a rebate. In the United States more than 80 percent of all coupons are found as inserts in newspapers (free-standing inserts) or printed on pages of the newspapers themselves. Other coupons are mailed to consumers, found on retailers' shelves, or created electronically. Coupons are sometimes found on a product's packaging. In short, coupons are a form of special-use money with brief expiration dates whose value is due to the faith held by consumers in repayment by the issuing manufacturers.

The selling efforts of food marketing companies may be decomposed into three broad categories: advertising, "pull" promotion, and "push" promotion. Advertising conveys persuasive messages and information to consumers via posters, handbills, newspapers, magazines, outdoor signs, radio, television, cinema screens, or other mass media. Successful advertising seeks to predispose consumers to purchase advertised brands rather than unadvertised substitutes. In the early 1990s, U.S. food manufacturers spent on average 25 percent of their marketing budget on advertising (Connor and Schiek 1997).

Trade deals or push promotion is activity designed to encourage distributors to stock particular products. Examples of trade promotions include temporary price reductions, special point-of-purchase displays, in-store demonstrations, slotting allowances, cooperative advertising subsidies

for retailers, trade fairs, and services provided by field sale agents. The trade deals offered by manufacturers are often accompanied by retailer performance requirements, such as special shelf tags (also called "bonus buy" signs) or on-shelf discount coupons. Push promotions accounted for 50 percent of the total marketing budgets of U.S. food manufacturers.

"Pull" promotions are the third category of manufacturers' selling costs. Pull promotions provide material incentives directed at consumers to buy a particular brand. Methods include free samples, premiums, contests, sweepstakes, and above all cents-off coupons. In the 1990s, food manufacturers spent about 25 percent of their marketing budgets on pull promotions. Food manufacturers frequently design promotional campaigns that combine trade deals with large scale coupon drops.

In the mid 1970s, a special survey of about 100 of the largest U.S. food processing companies showed that total selling costs were 13 percent of sales (Connor *et al.* 1985: 89). One-fourth of selling costs (or 3.2 percent of sales) were advertising expenditures and three-fourths were promotional costs, but industries with highly differentiated packaged consumer food had much higher ratios of advertising to promotion costs. Data from all 32 of the food, beverage, and tobacco industries showed that advertising and promotion were complementary sales strategies; the correlation of advertising intensities and promotion intensities was positive ($r = +0.51$). If one excludes the ten industries that incurred high non-advertising sales expenses because of direct-store-delivery practices, the correlation is even higher ($r = +0.58$). For most food manufacturers, advertising and coupons are complementary merchandising tactics. Connor (1980) showed that there was a significant positive correlation across food industries between advertising expenditures and the number of coupons issued or redeemed.

There is a widespread impression among industry analysts that food processors became considerably, even dangerously dependent on promotional expenditures in the 1980s. Estimates prepared for the largest U.S. publically traded food manufacturers revealed that total marketing costs were 10.0 percent of sales in 1982, with promotional expenses slightly higher than advertising expenditures (4.6 versus 5.4 percent of sales). However, by 1992 selling costs had risen to 14.2 percent of sales, with promotional expenses (9.2 percent of sales) accounting for nearly all the increase (Galbraith 1993). In the early 1990s, Quaker Oats and Campbell Soup were spending four times as much on promotions than they were on advertising. The promotion:advertising ratio was about 1.4:1 at Kelloggs and General Mills. Only Wrigley (0.1:1 ratio) relied primarily on advertising to sell its products.

The principal purpose of coupons is to stimulate a brand's sales or market share. Coupons can achieve this goal by rejuvenating brand loyalty to existing brands, by encouraging consumers to try new brands, by switching their loyalty to alternative brands, or by ensuring that trade deals offered at the wholesale level are passed on at the retail level. Coupons are often critical to the success of a new-product campaign. The number and size of the coupons will often determine whether a new product will be stocked by grocery retailers. Coupons may be one of the few tools available for small companies seeking regional distribution into a new niche product, because advertising is typically highly inefficient in these circumstances. Coupon plans are one of the two strongest factors explaining acceptance by grocery retailers of trade deals by food manufacturers, advertising expenditures being the other strong factor (Hamm 1981).

Coupons played a critical role in the well documented Folgers-Maxwell House coffee case (Connor *et al.* 1985). Folgers coffee (owned by Procter & Gamble) waged a successful campaign

to enter the Eastern United States in the early 1970s on a city-by-city basis. For example, to enter the Philadelphia market in early 1973, Folgers sent 25-cents-off coupons to nearly every household in this large city, at a total cost of $300,000. At the time, the price of packaged ground coffee averaged about $1.00 per pound. Maxwell House retaliated almost immediately with a 50-cent coupon mailing that cost $600,000. Trade deals and coupon reductions cut the retail price of coffee by 50 percent almost overnight. After several months, Folgers had gained a strong second place in the market, but several smaller coffee roasters had exited the market. This scenario was repeated in dozens of metropolitan markets over the next few years.

The second major purpose of coupons is to attract price-sensitive consumers to switch brands that are qualitatively close substitutes. Coupons at least temporarily boost manufacturers' market shares and increase overall shopping traffic in the grocery stores honoring the coupons. The coupons may convert a brand into a "loss leader" that increases overall store sales and profits by generating sales on complementary grocery products with normal or even elevated margins, (Dhar and Hoch 1996). In economic terms, coupons are profitable because they separate consumers by their willingness to pay and effectively price discriminate between loyal and price-sensitive buyers. The reasons that separable demands exist will be more fully explored below.

Whether coupons in fact help to shore up waning brand loyalty is more debatable. Loyal consumers typically are drawn to a brand primarily because of its non-price characteristics. Coupons distributed to already loyal consumers may have the effect of making them more price sensitive, which may be ultimately counter-productive. Galbraith (1994), who is highly critical of excessive couponing by food companies, singled out using coupons "as a last gasp effort to support badly flagging brands" as an example of a "indiscriminate" couponing practice.

The final purpose of coupons is to avoid problems of compliance by retailers with manufacturers' trade deals. In many instances, retailers do not follow contractually required performance specifications when accepting manufacturers' deals. Chevalier and Curham (1976) found that 67 percent of all trade promotions were not advertised by retailers as required; 25 percent of "special display" items were not reduced in price and the average price reduction was less than half the deal allowance; in general, only one-third of the wholesale price deals were passed through to consumers. Consumer coupons have few of the massive principal-agent problems inherent in the case of trade allowances because third parties (national coupon clearing houses) monitor coupons flows and retailers cannot reimburse consumers for less than the face value. Indeed, couponing can be used by manufacturers or retailers to gain competitive advantage in the vertical channel, as will be explained in the last section of this paper.

Couponing Trends and Issues

Historians agree that the first consumer coupon was issued for a food product in 1895, but they disagree on who holds the honor. Some say the first was issued by C.W. Post for his breakfast cereal Grape Nuts, the oldest U.S. cereal brand (Antil 1985). Others attribute the innovation to Asa Chandler, the Atlanta druggist who first sold Coca-Cola and who gave hand-written notes to people for a free glass of his new beverage (Narisetti 1997).

Data sources on the number of grocery-product coupons issued in the United States are not always in agreement, but each series shows massive numbers increasing up to the mid 1990s (Table 1). The biggest rate of increase in coupon drops occurred in the 1970s when the number nearly quadrupled. The rate of increase slowed in the 1980s but was still fairly robust. Coupon redemption values increase faster than the number of coupons in the 1980s because average face values increased

from 41 cents in 1978 to almost 60 cents today. The redemption values to consumers were restrained by falling redemption rates. In 1978, the rate was about 5 percent of total drops, but by 1995 the rate had declined to 2 percent. Thus, currently 98 percent of all coupons are wasted. The decline in redemption rates is one reason that coupon programs' overhead costs have increased. In 1978, Gallo *et al.* (1982) reported that overhead was 41 percent of total costs, but by the 1990s overhead costs were 55 to 60 percent of total costs. Total costs do not include the opportunity costs borne by consumers in clipping, sorting, storing, and transporting coupons to the grocery store. Table 2 illustrates the distribution of coupons across grocery products in 1993. Grocery products account for about 90 percent of all coupons issued, and edible products account for two-thirds of all grocery coupons. The largest number of coupons are issued for medicines, toiletries, and other health and beauty aids; these products also have the highest redemption values. Among foods, cereals had the highest redemption value, but the broad "prepared foods" group had the highest number of coupons issued. Redemption rates average about 2.2 percent for all grocery products, but ranged upward to 3.8 percent for cereals. Total redemption costs were $4.7 billion in 1993, and space costs added $1.4 billion to the costs of running grocery couponing programs. Total commercial costs were in the range of $9 to $12 billion.

The duration period for coupons (the time between the distribution date and the expiration date) increased steadily until recent years. In 1993, the average duration of redeemed coupons reached 3.5 months (Marketing News 1996). Fully 73 percent of the coupons had durations of 3 months or more, and 7 percent were good for a year or more. By 1995, the average duration had declined to only 2.9 months. This decline is interpreted as a move toward finer targeting of coupons to specific demand segments; it also limits arbitrage among consumers.

Table 1. Coupons Issued for Food and Other Grocery Products, 1965-1995.

Year	Number of Manufacturer Coupons	Value of Coupons Redeemed
	Billion	*Billion Dollars*
1965	20	- -
1974	30	
1980	90	1.8
1982	110	1.0
1984	150	1.4
1986	180	1.8
1988	200	2.2
1990	220	2.5
1992	240	3.4
1994	280E	4.6E
1995	265C	4.5C

Sources: Narisetti (1997), Gallo *et al.* (1982), Galbraith (1993), National Clearing House, Promotion Information Management, and Marketing News (1996).
E = Estimate by Galbraith.
C = Estimated by author from Marketing News (1996).

Table 2. U.S. Coupon Use and Costs, Grocery Products, 1993

Category	No. of Coupons Issued	No. of Coupons Redeemed	Redemption Value	Space Costs[a]	Total Cost[b]
	Millions			*Million dollars*	
Food and beverages:					
Cereals	44,525	1017	915	212	1127
Prepared foods[c]	50,504	1016	427	175	602
Pet foods	24,576	477	395	65	460
Frozen & Refrigerated	27,086	577	260	102	362
Beverages, nonalcoholic	15,750	342	184	73	257
Baking & cooking needs	16,423	376	166	71	237
Dairy products	15,124	335	131	62	193
Confectionery & snacks	20,743	340	153	62	215
Processed & canned meats	12,426	220	90	33	123
Other foods[d]	18,419	386	192	74	266
Nonfood groceries:					
Health & beauty aids	73,871	1694	1118	255	1373
Other groceries	49,874	1186	690	191	881
Total	369,320	7966	4721	1375	6096

Source: *Brandweek* (March 21, 1994): 44.

[a]Costs of printing, mailing, and distributing coupons.

[b]Does not count coupon handling fees.

[c]Mostly canned fruits, vegetables, sauces, and the like.

[d]Includes baby foods ($79 million value), alcoholic beverages ($12 million), breads and similar bakery products ($94 million), and cookies and crackers ($81 million). Miscellaneous items ($62 million) were categorized under "other groceries."

Manufacturers are concerned about the very low (now 2 percent) redemption rates for their coupons, and consumer groups decry the large costs created by unredeemed coupons. One response of manufacturers is to replace coupons distributed directly to consumers with *in-store coupons.* In-store coupons are placed by the retailer on the shelf next to the item that is being discounted. Consumers remove copies of the coupon when filling their shopping cart and present the coupon at the check-out line. Because the consumer's effort is so minimal, 55 percent of buyers redeemed them in a 1993 study (Dhar and Hock 1996). In-store coupons are initiated by wholesale price deals offered by food manufacturers. However, unlike the traditional manufacture deal that requires advanced purchases of larger-than-normal quantities (called "forward buying" in the trade), in-store coupons are offered under a system called "bill back." Under bill-back promotions, manufacturers reimburse retailers for in-store coupon redemptions only after seeing scanner data on units sold during the promotion period. The use of scanner data greatly reduces the principal-agent problem and eliminates diversion of merchandise obtained under "forward buying." (Diversion is the practice of buying excess deal merchandise and reselling it to other retailers or wholesalers that manufacturers did not want to target).

As an alternative to in-store coupons, retailers for a long time have used colorful shelf tags announcing that special prices have already been applied to specific items. Dhar and Hock (1996) report that in a typical supermarket that uses a high-low pricing policy (as opposed to every day low pricing), 90 percent of the 2000 to 3000 items sold on deal use either shelf tags or in-store coupons. Their analysis indicates that in-store coupons are much more effective at generating sales and profit increases than are shelf tags, so in-store coupons are likely to dominate in the future.

An interesting variation on the in-store shelf coupon is the new *electronic coupon* system, first

developed by the Catalina Company. Manufacturers can contract with Catalina to program the electronic check-out equipment to print coupons for shoppers at the time they receive their receipts McElgunn (1996). For example, the Gerber baby food company has used the Catalina system to deliver coupons for free samples of their brand whenever a consumer buys Heinz baby food. Consumer targeting efficiency is extremely high with these systems, but the competitive implications are unknown.

Whether coupons provide net benefits to consumers is a much debated issue. More than 80 percent of all U.S. households use at least one coupon during the year. Uhl (1982) argued that coupons raise the average price of all food and redistribute redemption income from light users of coupons to heavy users. *Ceteris paribus* coupon costs exceed redemption values by 0.5 to 1.0 percent of the retail value of food sold in the United States. Uhl (1982) further argues that consumer redemption effort is a dead-weight social loss: consumers in effect donate their time to retailers and manufacturers. Antil (1985) disagrees. His basic position is that without coupons food marketing companies would be compelled to employ less efficient promotional methods, particularly for new product introductions. Because coupons result in an overall increase in product output, he asserts, "...the price discrimination that results is in the best interests of consumers." In fact, there is no evidence that total category sales increase as a result of coupon use. Antil does not directly rebut the question of income redistribution, which is likely to be progressive in any case.

There is no doubt that a significant minority of consumers love cents-off coupons, indeed they may be addicted to them. Attitudinal surveys report that some shoppers evidence an increased sense of personal control, pride, and accomplishment from efficient coupon use (Dhar and Hoch 1996). These shoppers believe that they are "smart shoppers." On the other hand, a segment of shoppers

tend to feel embarrassed or suffer a loss of social status by their use of coupons. When Procter & Gamble withdrew their coupons in three test markets in New York State in 1996, a vocal minority reacted with hostility. More than 20,000 signatures were obtained on protest petitions and some local politicians held hearings on the issue. Opinion surveys found the majority of consumers were opposed to P&G's actions (Narisetti 1997).

Couponing of Ready-to-Eat Cereals

It is useful to examine a single food category that is one of the most intense and sophisticated users of coupons. Ready-to-eat cereals (also called cold breakfast cereals) certainly fits these criteria. Moreover, coupon redemptions in the cereals industry became the object of public debate during 1994-1996 when some members of the U.S. Congress chastised the industry for unjustified price increases. Official price data collected by the Bureau of Labor Statistics (BLS) showed that retail cereals prices had risen by 93 percent from 1983 to 1995 and by 24 percent during 1989-1993 (Cotterill 1996). Both price increases were the highest of any processed food category and were nearly double the price increases of all other foods during the same periods. Increases in industry costs of production were far lower than product price increases. The cereals industry disputed the accuracy of the BLS numbers; a 1995 press release of the Grocery Manufacturers of America said:

> Over the 1989-1993 period, ready-to-eat cereals prices paid by consumers *net of*
>
> *coupons* increased by 6.6 percent..."

In other words, the industry claimed (without citing its source of information) that the 1989-1993 price increase, when adjusted for consumer coupon redemptions, was only one-fourth the increase shown by the government's data. Clearly, reliable data on coupon redemptions is sorely needed for accurate U.S. food price analyses to help settle matters of public controversy.

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From data already shown in Table 2, breakfast cereals is the largest single food category in terms of the costs of coupons. In 1993, 45 billion cents-off coupons were printed and distributed by cereals manufacturers, and 3.8 percent of those coupons were redeemed at grocery stores by consumers, almost double the rate of every other food category. The redeemed coupons were worth $915 million to consumers who used them, which was an extraordinary 31 percent of the redemption value of *all* food and beverage coupons in 1993 (Table 2).

The reason that cereals redemption values are so high is because the face value of the cereal coupons is high and the purchase rate is also high. In 1993, the average cents-off of coupons redeemed was $0.90 per pound at a time when the average retail price (net of coupons and deals) was $2.67 per pound. No other grocery product save tobacco had such a high face value (see Table 2). Moreover, fully 30.9 percent of ready-to-eat cereals (measured by pounds) were purchased by consumers that used manufacturers' coupons. No other food product comes close to this 30.9 percent rate: among 82 food categories examined, the next highest purchase rates were for soluble coffee (21.9 percent), frozen waffles (19.7 percent), and hot cereals (18.8 percent). Most foods have coupon purchase rates of 4 to 9 percent (IRI 1996).

Calculating the total costs to cereal manufacturers of their couponing programs is not easy. Space costs of $212 million are only the tip of the iceberg. Retailers and clearing houses must be reimbursed for their handling costs of $150 to $200 million. The manufacturers incur substantial costs in planning coupon campaigns, monitoring results, and generally managing the programs. Finally, manufacturers typically coördinate coupon drops with wholesale price deals for distributors to ensure stocking of the couponed items. It is very likely that cereal manufacturers *total* coupon costs in 1993 were in the range of $1.2 to $1.4 billion, or 17 to 20 percent of total manufacturers'

sales of ready-to-eat (RTE) cereals (Connor 1996). These figures are only slightly higher than the 15 percent of sales estimated by Galbraith (1994:16). It is clear that couponing costs exceed advertising costs for RTE cereal makers; advertising/sales ratios averaged 13 to 14 percent in the early 1990s (*ibid*.: 72).

Couponing, then, has become a major competitive weapon in the contest for market share among manufacturers of branded RTE cereals. Table 3 contains estimates extracted from one of the most reliable U.S. grocery information companies (IRI 1996). On average, from 1992 to 1995, branded cereals were discounted through manufacturers' coupon redemptions by 11 to 14 percent of the net price. Note that manufacturer coupon usage is insignificant for private label cereals; the only price deal of any significance for private-label cereals is retailer shelf-price reductions, which affected 25 percent of volume in 1993.

Coupon discounts vary by demand segment. Based on categories suggested by Galbraith (1994) and other sources, the major distinction among cereals is between presweetened (total sweeteners more than 30 percent by volume) and "regular" types. Most presweetened cereals are marketed to children, but about 20 to 25 percent of them are marketed as an all-family or adult cereal (Figure 1). Within the broad family segment are other identifiable demand segments: granola, fruit and nut, mueslis, healthy-image, and high-fiber cereals. Certain brands may possibly belong to two segments (some all-bran cereals may have healthy images also) but most brands can be placed in one segment. High fiber cereals appeal to the oldest age groups and have the least sugar, whereas the opposite is true for presweetened family cereals.

Coupon price reductions are larger for adult cereals than for children's cereals. Apparently, indulgent parents are not as price-sensitive when buying cereals for children as when they are buying

cereals for themselves. Cereal makers offer larger percentage discounts on the cheaper regular brands (especially raisin brans) and also on the cheaper family presweetened cereals (Table 4). On the highest priced segments (e.g., chocolate children's, adult healthy image), coupon discounts tend to be the smallest.

Coupon discounting also varies systematically by manufacturers (Table 5). Historically, the market leader Kelloggs has offered the lowest price cuts, presumably because of economies of scale in coupon distribution or because it has the most loyal (least price-sensitive) consumer base. In most years the next three market leaders offered progressively higher discount to consumers. When one looks beyond the top four cereal makers, the coupon discounts generally begin to decline, especially for the three smallest companies shown in Table 5. The smallest cereal companies have couponing activity that resembles that of private-label products. The negative correlation between market share and coupon price reductions broke down in 1995 as the industry entered a year of unprecedented turbulence in pricing and promotion strategies.

Quaker Oats and Ralston seem to be the most competitively disadvantaged in the couponing game. Both companies have lower prices than the top three companies, yet both are usually the companies that offer the largest percentage discounts. Post uses generous coupons to position its net prices slightly below the two leaders. General Mills may be the most profitable of the market leaders because for many years, even after coupon payments, its cereals are by far the highest priced (10 to 20 percent higher than Kelloggs' cereals).

Finally, coupon discounting is related inversely to the average prices of all cereals in a segment. For example, the average prices charged for the nine segments shown in Table 4 are inversely correlated with coupon discount rates in both 1992 ($r = -0.45$) and 1995 ($r = -0.57$). There is some

evidence that *intra*-segment prices are also inversely related to discount levels as well. Clearly, couponing and its price effects reveals much about the price strategies and market positions of the major makers of RTE cereals and deserves further study.

International Couponing Patterns

Coupon programs are an anglophone phenomenon. The United States accounts for about 95 percent of the cents-off coupons distributed in Japan, North America, and Western Europe (Table 6). The UK and Canadian grocery-products industries account for most of the rest, though significant numbers are distributed in Japan, Italy, and Spain. In at least two European countries (Switzerland, Netherlands) retailers simply refuse to accept manufacturers' coupons, while two more countries had government regulations restricting coupon use. In Germany, the maximum coupon value is set so low that coupons are effectively forbidden. Denmark's prohibition on coupons is reported to have ended in 1994.

Although at a low level compared to the United States, coupon distribution is increasing at a rapid rate in some European countries (Marketing News 1991). Annual increases in redemption rates were reported to be very high in the UK and Canada, and the proportion of households redeeming coupons was reported to be above 70 percent there as well. Growth is more modest in Spain, Italy, and several other European countries. Increased use of coupons is often predicted for Europe by the coupon industry for several reasons: falling legal barriers and the international "standardization" of marketing techniques being encouraged by business schools and multinational corporations. The international convergence of food couponing practices is very much an open question.

Table 3. Coupon Price Reductions Among Types of Breakfast Cereals, 1992-1995.

Types or Segments	Average Price Reductions due to Redeemed Manufacturers' Coupons			
	1992	1993	1994	1995
	Percent[a]			
All manufacturers' brands	14.3	14.2	13.3	11.3
Private label products	0.5	0.3	0.2	0.3
Presweetened branded varieties:	13.4	13.2	12.8	11.3
A. Chocolate flavored children's	11.9	12.9	10.7	10.2
B. Fruit flavored children's	13.2	13.7	12.1	11.0
C. Other children's	12.1	12.1	12.5	11.1
D. Family & adult	15.3	15.7	14.4	12.1
Regular branded varieties:	14.6	14.7	14.3	12.3
A. Raisin brans	13.9	14.2	14.0	13.1
B. Other brans	12.6	13.2	12.7	12.3
C. Granolas	19.9	14.1	13.1	9.9
D. Adult health-oriented	13.2	14.2	14.3	11.8
E. Other family & adult	15.1	15.7	14.5	12.4

Source: IRI *Marketing Fact Book* (1996 and previous issues).

[a]Estimated as the product of two percentages: the percent of item volume sold at check-out with manufacturers' coupons and the percent of retail price reduction due to price deals. There are three types of price deals shown by IRI: manufacturers' coupons, in-store retailers' coupons, and inferred temporary price reductions in the shelf price. In 1993 among ready-to-eat cereals, manufacturers' coupons were presented by consumers for 39 percent of the pounds sold, in-store coupons for 8 percent, and shelf-price reductions for 15 percent. It is possible that some specific purchases were made that benefitted from two deals, i.e., a manufacturer coupon and one, but not both, retailer discounts. However, because manufacturers initiate and coördinate all three types of deals, overlaps are probably rare. If manufacturers' coupons have face values higher than the average retailers' cents-off deal, then the price reductions shown in this table are systematically underestimated, and vice versa. There is no reason to expect such bias, but even if it exists the differences shown in the table are likely proportional to true differences.
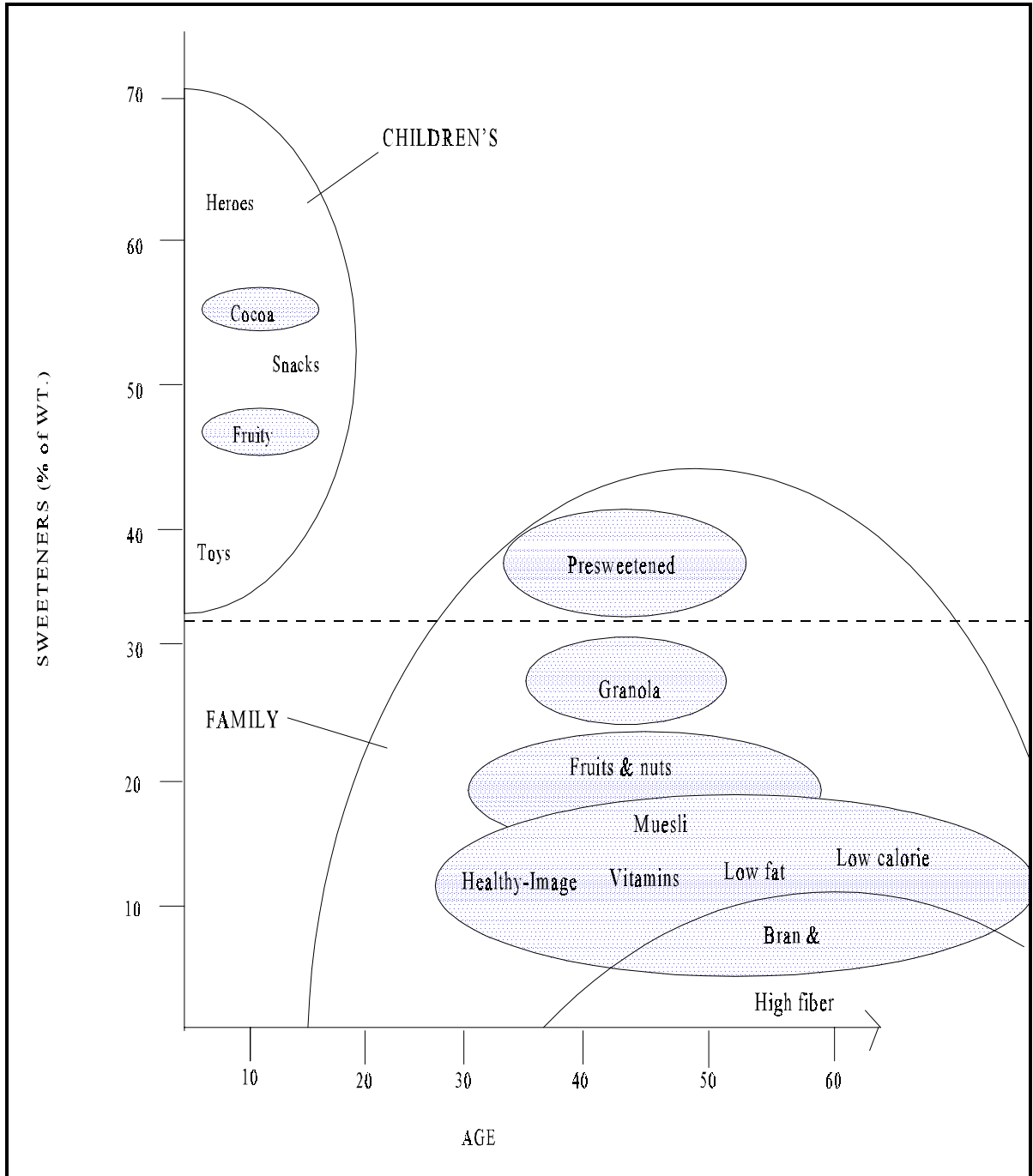
Figure 1. Demand Segment of RTE Cereals

SWEETENERS (% of WT.)

70
60
50
40
30
20
10

CHILDREN'S

Heroes

Cocoa

Snacks

Fruity

Toys

FAMILY

Presweetened

Granola

Fruits & nuts

Muesli

Healthy-Image   Vitamins   Low fat   Low calorie

Bran &

High fiber

10   20   30   40   50   60

AGE

Table 4. Average Cereals Prices, by Company and Segment, 1992 and 1995.

Type or Company	Retail Price Net of Coupons Redeemed	
	1992	1995
	Dollars per pound	
Presweetened brands:	2.79	2.96
Chocolate, children's	3.34	3.44
Fruit-flavored, children's	3.11	3.14
Other children's	2.71	2.93
Family & adult	2.66	2.81
Regular brands:	2.53	2.71
Raisin bran	2.11	2.31
Other Brans	2.31	2.63
Granola	2.35	2.61
Adult, healthy-image	2.89	3.05
Family & adult:	2.35	2.67
Contain bran[a]	2.14	2.32
Old brands[b]	2.33	2.45
Kellogg	2.51	2.79
General Mills	2.97	3.06
Philip Morris (Post)	2.49	2.72
Quaker Oats	2.40	2.61
Ralston	2.71	2.30
Nabisco	2.78	2.90
Private label	1.79	1.84

Source: IRI *Marketing Fact Book* (1996 and previous issues).
[a]Eight brands with "Bran" in name plus Grape Nuts. See Table A.
[b]Eight brands more than 50 years old. See Table A.

Table 5. Coupon Price Reductions by Brand, 1992-1995.

Manufacturer	1992-1995 Market Share	Average Coupon Price Reductions			
		1992	1993	1994	1995
		Percent			
Kellogg	35.9	13.3	12.4	12.3	11.8
General Mills	25.0	15.6	17.0	14.4	11.9
Philip Morris (Post)	13.3	15.1	16.5	15.2	12.8
Quaker Oats	7.7	16.6	16.7	14.7	10.6
Ralston Foods	4.5	15.1	13.3	14.0	10.4
RJR Nabisco	3.5	13.4	13.1	15.3	12.2
Malt-O-Meal	1.8	2.9	3.4	2.9	0.9
Sunshine Biscuit	0.1	0.3	0.6	0.2	0.2
McKee Baking	0.1	0.0	0.1	0.0	0.0
Private label	7.1	0.5	0.3	0.2	0.3
Total market	100.0	13.4	13.3	12.3	11.8

Source: IRI *Marketing Fact Book* (1996 and previous issues).

Table 6. Number of Coupons Distributed for Grocery Products Internationally, 1993.

Country	Number	Number per Capita per Year
	Millions	
United States	303,000	1165
United Kingdom	11,100	191
Canada	4130	148
Japan	787	6.3
Italy	580	10.0
Spain	142	3.6
France	21.4	2.5
Sweden	10.0	1.1
Norway	8.9	2.1
Switzerland	0[a]	0
Netherlands	0[a]	0
Denmark	0[b]	0
Germany	0[c]	0

Source: National Clearing House, estimates by Galbraith (1994) and U.S. Census Bureau (1994).
[a]Retailers refuse to accept coupons.
[b]Coupons were illegal until 1994.
[c]Coupons cannot by law exceed 1% of the product's value.

Theoretical Analysis of Couponing

Until about 1990, economic models of the motives for and consequences of price-reduction coupons focused on price discrimination theories of manufacturer-consumer interactions (Gerstner and Hess 1991, Kotter 1998, Tirole 1988, Levedahl 1984, Blattberg and Neslin 1989). The motive of these earlier models was to understand the existence of promotional activity even when demand and supply conditions were stable. Most models assume that manufacturers price discriminate across consumer groups that vary in their willingness to pay (the height of their reservation prices), elasticity of demands, degree of knowledge about market prices, willingness to incur search or transactions costs (such as clipping coupons), or intertemporal price expectations. Temporal models may not be particularly apropos of the food industries because they appear to be set in industries where durable goods are subject to frequent style or design changes (Pashigian 1988). In all these models, if arbitrage is prevented between demand segments, sellers earn economic profits by selling at higher prices to the ill-informed, high-search-cost, or impatient consumer group. There is substantial empirical confirmation of the additional sales response or profit increases from coupon promotions (Narasimhan 1984).

Dhar and Hock (1996) extended these models to consider why retailers might find it profitable to cooperate with manufacturers' wholesale-price deals by placing shelf tags or in-store shelf coupons on deal merchandise. They make several salient points: coupons promise consumers a reduction on the best shelf price they can find; unlike claims of a "sale price" or "special price,' coupons give consumers certainty about the value of a price reduction. Moreover, because coupons allow consumers to buy in advance of consumption, they discriminate between those with different opportunity costs of holding inventory. Customers with large storage facilities and good inventory

management skills will be more responsive to coupon reductions.

Much of the management literature focuses on the discriminatory aspects of cents-off coupons. However, some coupons (on or in packages, for example) are designed to reward repeat purchasers of the same brand. These types of coupons are profitable for firms with market power because they create additional brand switching costs and reduce social welfare (Caminal 1996). Caminal extends these models to a situation that does not require the promotional firm to create additional search costs. In this model, a monopolist sells a homogeneous product and advertises only to provide information about price; advertising has large economies of scale. However, some consumers remain uninformed about price from the advertising, but they can find the price by visiting a store (incurring a small search cost). Despite these innocuous assumptions, Caminal is able to derive a game-theoretic equilibrium in which the monopolist makes economic profits by distributing *untargeted coupons* to *ex ante* identical consumers. Although some coupon recipients buy at a low price, a group of uninformed consumers pay a high price.

Caminal's weak assumption about untargeted consumers is a useful one because the half-dozen studies on demographic characteristics associated with supermarket coupon redemption often find conflicting results. There is some evidence that household income and female opportunity cost of time are positively related to redemption, but Mittal's (1994) study demonstrates the complexity of the relationship. Mittal finds evidence that demographics influence the formation of certain personal attitudes that in turn affect shopping preferences that finally affect coupon use. For example, high income induces feelings of economic security that discourage desires of comparison shopping that induces skepticism about the economic benefits of coupon use. Dual career employment by educated female household members also discourages coupon use, but in this case because such

women have a reduced need for pride in homemaking skills. On the other hand, Mittal's study confirms that some demographic segments actually enjoy clipping coupons, seeing the activity as a hobby or game with tangible rewards for superior organizational skills.

Couponing as Vertical Competition

While most analyses up to about 1990 considered horizontal (manufacturer-manufacturer or retailer-retailer) competition, most theoretical development of couponing models in recent years has focused on vertical (manufacturer-retailer) relationships. Many models have assumed or reasoned that manufacturers' coupons were beneficial to retailers. Loss leaders, for example, would attract customers who would buy complementary grocery products with higher mark-ups because with positive search costs the store enjoys a kind of local monopoly over the seekers of loss leaders (Hess and Gerstner 1987). On the other hand, retailers often express opposition to couponing because it diverts customers from high-margin private-label product to lower margin national brands (Antil 1985). Moreover, there is ample evidence that retailers do not pass through all or most of the manufacturers' deals offered to them (Buzzell *et al.*1990). Indeed, Levedahl (1984) showed that retailers actually *raise* their shelf prices in response to manufacturers' cents-off coupons.

At least three recent formal models have explicitly considered vertical-rivalry games in the context of coupon activity. First, Lal (1990) suggests that vertical relations in the context of trade promotions are analogous to the classical prisoners' dilemma. Given that consumers are habituated to coupons, manufacturers fear to abandon them should they lose market share to opportunistic rivals that continue to use coupons heavily. Thus, couponing continues even though both manufactures realize that their payoffs would be higher with mutual abandonment of coupon activity. In his formal model, Lal assumes that two processors sell "national brands" with some loyal buyers and one sells

a private label product to a single retailer. The most interesting conclusion is that, if there are enough price-sensitive switchers, the Nash equilibrium is equivalent to a tacit collusive game in which the two brand manufacturers offer trade deals during non-overlapping equal periods. This conduct effectively blocks all increases in market share for the price-sensitive, private label product, and provides economic profits to the two brand manufacturers. Moreover, Lal demonstrated that if the private label is owned by the retailer, he is able to extract larger trade deals from the two manufacturers. (These qualitative results persist when a retail duopoly is introduced.) Lal supports his model with the case of Pepsi and Coca-Cola, which each offer deals 26 weeks per year, effectively freezing small brands and private-labels from the U.S. market.

The structural setting of Gerstner and Hess' (1991) static model is different: a monopolist manufacturer selling to a monopsonist retailer facing two groups of consumers with different reservation prices. The manufacturers distributes untargeted coupons to consumers. Several types of promotions are considered, but the push-pull combination is probably the most realistic. The combination case predicts that the manufacturer's profits are higher than when only push or only pull are used; however, the retailer's profits are the lowest in this case. Pure push (wholesale trade deals only) promotions produce a reversal of relative profits. Pure pull promotions (consumer coupons only) result in the worst static welfare of the three cases. Although this model rests on several stringent assumptions (bilateral monopoly and zero execution costs of promotions), it is a promising beginning to vertical channel issues.

Gerstner *et al.* (1994) extend the above model by allowing for a perfectly competitive retail industry and by providing some fairly convincing empirical verification of their model. In this version, Gerstner *et al.* (1994) predict that relatively high retailer mark-ups causes the manufacturers to

reduce both the wholesale price and the size of the percentage coupon discount. That is, push promotion substitutes for pull promotion as retailer mark-ups increase. The reasoning is quite straightforward: high retail mark-ups force up retail prices requiring larger coupon discounts to keep price sensitive buyers loyal to the brand. But the large coupons also draw more non-targeted (loyal, non-price-sensitive) customers to the brand, which lowers the profitability of price discrimination. This model explains why large coupon values are common for breakfast cereals (about $0.60) with low retailer mark-ups (15 percent) but low face values ($0.32) are found for frozen foods (31 percent mark-ups). Regression analysis of 1,113 coupons printed in ten U.S. cities confirms the relationship; coupon values were also positively related to retail price and new product introductions. This pioneering study deserves replication and augmentation of explanatory power.

The third vertical model as developed by Krishnan and Rao (1995). Here vertical competition is considered in the context of an extreme retailer response to manufacturer couponing called "double couponing." In the late 1980s, in as many as 30 percent of U.S. retail grocery markets, one or more of the leading retailers promised consumers double (sometimes triple) the face value of any valid manufacturer's coupon (even though the retailer receives only the face value as reimbursement). The model considers two manufacturers, only one which issues a coupon, and two kinds of monopolistic retailers (single and double couponers). Perhaps the most interesting conclusion is that the optimal manufacturer's couponing strategy varies according to the type of retailer. In the case of double couponing, the manufacturer should drop much larger face values in that market; the retailer's response is then to reduce its margins on rival non couponed brands. They find modest empirical support for their model's predictions.

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APPENDIX TABLE

Table A. Retail Prices, Coupon Price Reductions, and Market Shares of Major Brands of RTE Cereals, by Segments, 1992-1995.

Segments and Brands	1992			1993			1994			1995		
	Net Price	% Off	Vol. Share	Net Price	% Off	Vol. Share	Net Price	% Off	Vol. Share	Net Price	% Off	Vol. Share
Total cereals:	2.59	13.4	100.0	2.67	13.3	100.0	2.76	12.34	100.0	2.75	10.37	100.0
Branded cereals	2.64	14.3	93.6	2.92	14.2	92.9	2.83	13.27	92.74	2.83	11.29	91.52
Private label cereals	1.80	0.5	5.9	1.81	0.3	6.7	1.84	0.17	6.85	1.84	0.27	8.25
Presweetened brands[d]:	2.79	13.4	39.9	2.89	13.2	38.7	2.98	12.80	34.94	2.96	11.26	42.00
A. Chocolate children's:	3.34	11.9	1.7	3.43	12.9	1.7	3.52	10.73	1.83	3.44	10.17	1.85
Kellogg Cocoa Krispies	3.22	12.7	0.5	3.26	13.4	0.4	3.42	9.39	0.48	3.37	8.83	0.47
GM Cocoa Puffs	3.55	11.3	0.6	3.56	13.3	0.7	3.73	10.97	0.64	3.61	11.41	0.67
Post Cocoa Pebbles	3.23	11.9	0.6	3.38	12.1	0.6	3.41	11.41	0.71	3.32	9.88	0.71
B. Fruity Children's:	3.11	13.2	3.4	3.16	13.7	4.6	3.18	12.07	4.81	3.14	11.01	4.74
Kellogg Fruit Loops	3.04	11.4	1.9	3.09	12.6	1.7	3.15	12.54	1.98	3.18	10.72	1.88
GM Trix	3.73	13.3	1.2	3.63	17.7	1.0	3.65	13.18	0.76	3.36	14.15	0.83
Post Fruity Pebbles	3.24	11.3	0.8	3.40	11.2	0.8	3.47	9.72	0.99	3.37	9.19	0.98
Post Dino Pebbles	3.05	17.4	0.3	3.33	8.8	0.1	- -	- -	0.00	- -	- -	0.00
Quaker Cap'n Crunch Crunchberry	2.49	16.3	1.1	2.61	14.0	1.0	2.66	12.60	1.08	2.69	10.73	1.05

Table A (continued)

C. Other children's:	2.71	12.1	17.5	2.88	12.1	19.7	2.96	12.45	20.36	2.93	11.13	21.66
Kellogg Apple Jacks	3.50	11.0	0.7	3.45	12.0	0.8	3.36	12.18	0.95	3.30	10.00	1.06
Kellogg Cinnamon Buns	2.48	19.9	0.8	2.79	16.0	0.6	3.37	12.26	0.20	3.82	5.38	0.04
Kellogg Corn Pops	3.27	10.1	1.0	3.34	9.9	1.2	3.31	10.80	1.35	3.22	9.12	1.66
Kellogg Frosted Flakes*	2.21	9.9	4.5	2.31	9.6	4.3	2.50	10.69	4.19	2.45	11.38	4.16
Kellogg Honey Smacks	2.79	11.8	0.5	2.87	12.8	0.4	2.91	8.48	0.37	2.81	9.29	0.43
Kellogg Frosted Mini Wheats	2.49	10.1	2.8	2.57	9.2	3.1	2.58	12.94	3.36	2.57	10.68	3.47
Kellogg Rice Crispies Treats	- -	- -	0.0	3.14	13.2	1.0	3.30	12.84	0.68	3.12	14.74	0.72
GM Cinnamon Toast Crunch	3.28	12.7	1.2	3.30	14.3	1.4	3.38	12.91	1.31	3.35	11.15	1.32
GM Kix	- -	- -	0.0	3.34	15.1	1.6	3.55	13.96	1.34	3.66	10.00	1.21
GM Lucky Charms	3.32	12.2	1.4	3.39	13.5	1.5	3.39	11.83	1.56	3.28	10.56	1.65
GM Frosted Cheerios	- -	- -	0.0	- -	- -	0.0	- -	- -	0.00	2.75	11.04	0.63
GM Reeses	- -	- -	0.0	- -	- -	0.0	3.24	14.53	0.35	3.25	13.37	0.55
Post Alpha Bits	3.11	15.7	0.7	3.31	16.0	0.6	3.23	15.78	0.64	3.16	14.19	0.76
Post Honeycomb	3.28	12.4	0.7	3.40	10.5	0.7	3.24	11.52	1.05	3.35	10.03	1.01

Table A (continued)

Post Super Golden Crisp	2.59	13.5	0.7	2.67	14.7	0.6	2.52	15.59	0.75	2.55	12.93	0.76
Quaker Cap'n Crunch	2.38	16.1	1.8	2.48	15.6	1.6	2.61	14.13	1.83	2.63	12.32	1.78
Ralston Cookie Crisp	3.42	17.2	0.5	3.78	12.3	0.3	3.82	13.86	0.43	4.10	10.40	0.37
Ralston hero/movie tie-ins	3.58	5.4	0.2	- -	- -	0.0	- -	- -	0.00	3.64	12.88	0.08
D. Family/Adult:	2.66	15.3	10.1	2.79	15.7	9.3	2.82	14.41	8.89	2.81	12.07	9.17
Kellogg Frosted Bran#	2.21	9.9	0.6	2.36	15.8	0.6	2.84	9.27	0.19	- -	- -	0.00
Kellogg Nut & Honey Cr.	2.81	13.1	0.5	3.06	15.4	0.2	3.53	7.49	0.10	- -	- -	0.00
Kellogg Temptations	- -	- -	0.0	- -	- -	0.0	- -	- -	0.00	3.58	17.96	0.65
GM Golden Grahams	3.14	15.0	1.0	3.15	16.2	1.1	3.21	13.39	0.98	3.15	11.68	1.12
GM Honey Nut Cheerios	2.91	14.2	2.7	3.02	14.7	2.5	2.88	13.31	2.49	2.75	10.95	2.73
GM Oatmeal Crisp	2.62	20.5	0.8	2.89	17.4	0.6	2.95	14.54	0.54	2.19	12.62	0.60
Post Honey Bunches of Oats	2.83	13.9	1.1	3.00	14.0	1.0	2.97	13.30	1.19	2.98	10.70	1.08
Quaker Life	2.11	14.0	0.8	2.16	14.6	0.8	2.21	15.39	0.88	2.33	9.76	0.71
Quaker Oat Life	2.26	16.8	0.9	2.32	17.7	0.9	2.39	16.24	0.87	2.42	13.18	0.93
Quaker Oat Squares	2.39	17.3	0.8	2.48	18.3	0.7	2.61	16.59	0.69	2.80	10.93	0.56
Ralston Honey Almond Delight	2.46	16.8	0.6	2.65	17.0	0.5	3.18	13.56	0.28	3.01	14.83	0.13

Nabisco Frosted Wheat Squares	2.77	22.4	0.3	3.12	14.5	0.4	3.20	14.86	0.09			0.0
Nabisco Frosted Wheat Bites	- -	- -	0.0	- -	- -	0.0	2.89	19.34	0.59	3.05	14.70	0.66
Regular types[e]:	2.53	14.6	53.6	2.62	14.7	54.2	2.70	14.27	52.80	2.71	12.30	49.52
E. Raisin brans:	2.17	13.9	5.5	2.23	14.2	6.2	2.29	13.96	6.21	2.31	13.13	5.64
Kellogg Raisin Bran*#	2.13	11.3	3.2	2.10	11.9	3.6	2.24	12.32	3.40	2.25	13.50	3.17
Post Raisin Bran*#	2.05	17.3	1.9	2.14	18.4	1.9	2.14	16.19	2.21	2.23	13.37	1.85
GM Total Raisin Bran#	3.12	18.2	0.4	3.15	14.3	0.7	3.17	14.99	0.60	2.90	10.48	0.62
F. Other bran cereals:	2.31	12.6	1.6	2.33	13.2	2.3	2.58	12.71	2.35	2.63	12.32	1.98
Kellogg Complete Bran Flakes#	2.09	17.5	0.7	2.28	12.8	1.1	2.55	11.72	0.96	2.58	11.88	0.81
Kellogg All Bran#	2.50	8.4	0.5	2.54	9.3	0.4	2.72	9.75	0.40	2.80	9.56	0.43
Post Bran Flakes#	2.54	12.4	0.1	2.20	18.0	0.5	2.48	16.55	0.56	2.55	14.83	0.58
Nabisco 100% Bran#	2.43	8.2	0.3	2.43	11.8	0.3	2.63	12.69	0.43	2.67	12.87	0.16
G. Granolas:	2.35	19.9	1.9	2.61	14.1	1.5	2.59	13.06	1.36	2.61	9.85	1.05
Kellogg Low Fat Granola	2.52	19.3	0.9	2.89	11.2	0.8	2.99	10.40	0.64	2.92	10.57	0.53
Quaker 100% Natural	2.19	20.5	1.0	2.30	17.4	0.7	2.24	15.42	0.72	2.30	9.12	0.52

Table A (continued)

H. Other adult health-oriented:	2.89	13.2	11.7	3.00	14.2	10.9	3.03	14.34	11.23	3.05	11.76	10.21
Kellogg Just Right	2.89	11.3	0.5	2.73	12.3	0.6	2.81	12.26	0.51	2.89	11.57	0.42
Kellogg Healthy Choice	- -	- -	0.0	- -	- -	0.0	3.20	15.22	0.46	3.24	15.34	0.71
Kellogg Nutrigrain	2.85	12.4	0.8	3.20	9.2	0.8	3.23	11.52	0.59	3.34	6.85	0.27
Kellogg Product 19	3.37	12.3	0.4	3.55	11.2	0.3	4.01	11.64	0.23	4.20	7.99	0.25
Kellogg Mueslix	3.41	11.0	0.8	3.44	11.8	0.7	3.33	14.29	0.72	3.46	12.64	0.40
Kellogg Cracklin Oat Bran	3.32	10.3	0.9	3.18	15.9	0.8	3.28	13.93	0.62	3.55	10.84	0.44
Kellogg Special K	3.34	10.4	1.3	3.36	13.2	1.5	3.59	11.36	1.55	3.49	11.35	1.80
Post Fruit & Fiber	2.74	17.9	0.7	2.90	17.7	0.5	2.86	19.54	0.58	3.05	13.46	0.62
Post Grape Nuts*#	1.98	12.8	2.9	2.07	13.5	2.5	2.11	13.26	2.44	2.07	12.54	2.39
Post Great Grains	- -	- -	0.0	3.06	18.0	0.3	3.05	16.94	0.64	2.99	11.67	0.57
GM Basic 4	3.30	15.1	0.8	3.43	15.1	0.8	3.26	16.17	0.76	3.31	11.52	0.55
GM Total	3.34	16.5	1.8	3.51	17.7	1.3	3.42	16.15	1.37	3.42	12.19	1.22
GM Fiber One	2.65	9.7	0.4	2.80	12.8	0.4	2.91	11.38	0.35	3.17	4.12	0.32
Ralston Muesli	3.39	18.8	0.4	3.61	17.9	0.4	3.43	21.69	0.41	3.57	11.04	0.25
I. Other family/adult:	2.35	15.1	24.8	2.48	15.7	26.9	2.67	14.51	26.29	2.67	12.43	25.25

Table A (continued)

Kellogg Corn Flakes	1.37	15.2	5.1	1.42	14.8	5.2	1.78	13.04	4.19	1.71	14.08	4.46
Kellogg Crispix	2.97	15.2	1.2	3.21	13.0	1.0	3.37	12.96	1.09	3.37	9.68	1.31
Kellogg Rice Crispies	2.34	16.7	3.8	2.49	14.6	3.5	2.76	14.71	3.66	2.79	12.74	3.33
GM Apple Cinnamon Cheerios	2.91	15.3	1.1	2.90	17.8	1.1	2.82	14.83	0.82	2.70	14.16	0.90
GM Wheaties*	2.28	17.0	1.4	2.33	18.4	1.2	2.37	15.31	1.19	2.36	14.15	1.10
GM Oatmeal Crisp	2.85	16.0	0.1	2.88	16.8	0.7	2.95	14.54	0.54	2.91	12.62	0.60
GM Raisin Nut Bran	2.69	18.1	1.1	2.87	15.6	0.9	2.83	15.61	0.78	2.81	11.00	0.55
GM Cheerios*	2.68	15.4	4.8	2.71	17.6	3.8	2.86	13.05	3.54	2.74	11.61	3.54
GM Clusters	3.19	19.8	0.9	3.18	15.1	0.8	3.12	15.85	0.80	3.10	12.48	0.50
GM Multigrain Cheerios	- -	- -	0.0	3.29	18.2	0.7	3.49	14.79	0.59	3.36	13.88	0.69
Post Banana Nut Crunch	- -	- -	0.0	2.88	15.0	1.3	2.86	16.39	1.23	2.99	11.99	0.97
Post Blueberry Morning	- -	- -	0.0	- -	- -	0.0	3.15	18.52	0.67	3.03	15.72	0.83
Post Toasties	1.16	20.5	0.6	1.22	21.8	0.6	1.25	19.72	0.60	1.47	7.65	0.34
Ralston Almond Delight	- -	- -	0.0	- -	- -	0.0	- -	- -	0.00	3.16	7.87	0.12
Ralston Rice Chex	2.95	10.3	0.8	3.02	12.2	0.8	3.20	11.64	0.83	3.31	10.16	0.85
Ralston Corn Chex	2.94	9.6	0.6	3.18	8.5	0.7	3.52	5.90	0.67	3.51	7.97	0.73
Ralston Wheat Chex*	2.09	12.6	0.7	2.11	15.6	0.7	2.20	17.29	0.71	2.41	11.00	0.64

Table A (continued)

Quaker Toasted Oatmeal	- -	- -	0.0	2.68	23.8	1.1	2.89	18.49	1.45	2.90	16.40	1.24
Nabisco Shredded Wheat (4)	2.79	10.4	2.6	2.86	13.1	2.8	2.84	14.90	2.93	2.88	11.59	2.5

Source: IRI. *Marketing Fact Book*. Chicago: Information Resources, Inc. (1995 and previous editions).

[a]Price in dollars per pound, average U.S. retail, net of all price reductions (temporary shelf price, retailers' coupons, and manufacturers' coupons).

[b]Estimated price reduction due to redemptions of manufacturers' coupons. Assumed that three types of price reductions (see fn.a) are mutually exclusive. In 1993, the three types of price-off deals for RTE cereals accounted for 15% of volume (shelf price), 8% (store coupons), and 39% (manufacturers' coupons).

[c]Market shares are based on percent of volume (pounds) sold, not value of sales. This table includes every brand that achieved a 0.5% national share in one or more of the years covered. Shares of "0.00" mean less than 0.50.

[d]This row includes manufacturers' brands of cereals that contain at least 33% sugar or other sweeteners by weight. Excludes private label, which was 32% to 36% presweetened types in 1992-1993 by volume.

[e]Manufacturers' brands only. For 1994 and 1995, total segment share estimated from total of listed brands in category.
- - = not available   * = Old brand (50+ years)   # = contains bran