

Trade promotion: Essential to selling through resellers
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Trade promotions permit manufacturers to influence retail price, retail sales, and total channel profit by rewarding resellers for lower prices and subsidizing their selling effort.

Trade promotion expenditures in the packaged goods industry have steadily increased from less than 35 percent in 1983 to almost 49 percent in 1994. In fact, when they peaked at 52 percent in 1993, the trade-promotion budget was more than twice the size of the media advertising budget.¹ It is often claimed that this is symptomatic of a shift in power towards retailers and away from manufacturers. In 1996, the percentage of total retail sales made "on deal" across forty packaged goods categories included in the Market Fact Book averaged about 37 percent up almost 5 percentage points from 1991.²

As firms sell more goods on deal, there are more complaints that promotions are eroding the power of brands. Complaints come from managers who prefer "everyday low prices" (EDLP) rather than strategies that involve price discounts and other allowances. Even those who accept the need for occasional consumer discounts often tout the advantages of EDLP to the trade. Some call this the "everyday low purchase price" (EDLPP); others refer to it as "back-door EDLP."³ A single price to the trade sounds attractive for several reasons. First, trade promotion often involves reducing list prices to a retailer in return for a larger quantity bought and presumably sold by the retailer, and managers dislike reducing the list price.⁴ Second, controlling purchase quantities for temporary offinvoice allowances and other special discounts is problematic. Retailers buy more of the product at the temporary low price than they intend or are able to sell during the promotional period. Instead, they stockpile it for future sale at higher prices, causing booms and busts in retail demand and inventories that require higher manufacturing capacity. These large swings in demand, inventory, and production are referred to as the "bullwhip effect."⁵ Manufacturers suffer doubly from this forward-buying. Large variations in demand increase their production and distribution costs, and they also lose margin on the product that the retailer stockpiles but does not sell at reduced prices.

Does this mean that all trade promotions hurt manufacturers? Many industry observers contend that retailers are becoming increasingly powerful because of their higher concentration, their access to point-of-sale information, and increases in trade promotion. However, a study of trends in the relative profitability of food manufacturers and retailers shows that, at the peak of the trade-promotion controversy, manufacturers' profits increased at a fairly steady rate, whereas retailers' profits were stable at best (see Figure 1).⁶ Thus, even though retailers may be receiving more promotional discounts, their profits have not increased.

In contrast, consider the average trade promotion-to-sales ratios of manufacturers during the same period along with their average return on sales (see Figure 2). This shows that at the same time as manufacturers' trade-promotion expenditures were increasing, their profit margins increased too.

How can we explain these patterns? Perhaps trade promotions actually benefit the manufacturer? Some researchers argue that manufacturers are in a prisoner's dilemma. Others suggest that promotions may expand the product category or may reduce manufacturer price competition.⁷ For instance, in less concentrated markets like colas, trade promotions offered by major national brands may limit the competitive threat from smaller brands.

In this article, we discuss the underappreciated role of well-designed trade promotions. Using the example of a single manufacturer selling to and through a retailer, we show how certain promotions increase total channel profits and the manufacturer's share of those profits beyond levels achievable with a single price and without promotions. Furthermore, firms can implement these promotions in ways that avoid many issues associated with retailer forward-buying and gray markets. In fact, certain trade promotions may benefit the manufacturer as much as the retailer - if not more.

Pricing through Resellers

Frequently, marketers assume that the manufacturer "gives" the channel of distribution a margin. Although manufacturers influence channel margins in many ways, these influences are indirect and complex to manage. In most cases, resellers are free to set their own selling prices and, thus, the channel margins. By setting their own selling prices, retailers "take" the margins they believe are justified by costs and market forces.⁸ Often marketers wish their channels would charge a different price and take a different margin.

Managers also think that most problems related to setting prices would disappear if price elasticity were known with sufficient precision. Knowing

the relationship between the quantity demanded and the consumer purchase price (e.g., the retail selling price) for a given competitive configuration is a partial foundation for pricing. Firms also must consider competitive reactions to a price change. Furthermore, both manufacturer and retail margins must be set in a sustainable way. Usually, this requires a combination of margin and volume that produces acceptable profits for both channel partners. This is one aspect of a "coordinated" channel.

Coordination of the channel is multidimensional. Consider the bullwhip effect in channels: boom and bust in inventories, orders, backlogs, and out-of-stocks. Trade promotion is one of the prime causes of the bullwhip effect, and EDLP is perceived as one of the solutions. The general notion of simplifying pricing systems seems reasonable. Over time, pricing strategies, like income tax codes, become complex patchworks of programs, special deals, and incentive plans. No single manager can understand such complexity. In these situations, going back to basics (i.e., trying a simple program like EDLP) might seem like the best solution. However, EDLP is pretty strong medicine and may cause its own unexpected side effects. Because certain incentives and trade deals may perform important functions, managers must consider the second- and third-order effects of discontinuing them. Any careful analysis of pricing includes potential competitive reactions. The same logic applies to channels, so managers must assess how channel members are likely to react to various pricing strategies.

Maximize Total Channel Profits

Consider the case of a sparkling wine manufacturer that sells bottles of wine to and through a single chain of wine shops. In this case, total channel cost is the sum of the manufacturer's cost (MC) to produce a bottle of wine and the retailer's cost (RC) to distribute it. The channel profit margin per bottle of wine sold is the difference between the retailer's selling price (RSP) and the channel cost. Multiply the channel profit margin by the quantity sold, Q, to get the total channel profit, i.e., $([RSP - MC - RC] \times Q)$.

By estimating the demand curve - that is, the relationship between RSP and Q (see Figure 3 for the demand curve of the sparkling wine), it is simple to find the RSP that maximizes total profits for the channel. (See Table 1 for the total channel profit at different retail prices when MC is \$2.50 per bottle and RC is fifty cents per bottle.)

Total channel profit is maximized if the retailer charges consumers an RSP of 6. The bone of contention is dividing this total channel profit between the manufacturer and the retailer, a split that depends on the manufacturer's selling price. For instance, if the manufacturer were to charge a selling price (MSP) fifty cents less than the

channel-profit-maximizing \$6, the retailer would barely cover costs and the manufacturer would keep all the channel profits. Of course, if MSP equals MC, the situation would be reversed and the retailer alone would profit. Generally, neither of these extremes is likely to endure, and certainly neither could be considered a partnership between the manufacturer and retailer." So how should the retailer and the manufacturer of the sparkling wine divide these profits? To divide their profits in a "fair" way, what should the manufacturer's pricing strategy be?

The retailer and manufacturer could directly negotiate a fair division. In most situations, prolonged negotiations are not practical. (For example, consider that a large supermarket might stock more than 30,000 items.) Still, the outcome of such a negotiation might be a fixed MSP and a "suggested" RSP. What is a fair arrangement? At an MSP of \$4, the optimal amount of total channel profits could be earned and evenly split between the retailer and the manufacturer. Next, let's see what happens if the manufacturer decides to charge this amount.

Offer an Everyday Low Purchase Price

If the manufacturer charges an EDLPP of \$4, the retailer could honor the negotiated agreement to charge an RSP of \$6, thereby earning \$166.50 one-half the maximum channel profits.

However, the retailer might be tempted to let the retail price creep up to \$9 (see Table 2). This would generate retailer profits of \$220.50. Because sales volumes would be lower, the retailer's investment in inventory and use of shelf space would also be lower. The retailer's total profit would be quite attractive compared to the fifty-fifty split. Of course, the manufacturer's profit would fall substantially; at an RSP of \$9, it sells only forty-nine units and earns \$73.50. The total channel profits would be only \$294 instead of \$333. The manufacturer easily could lose by setting a fixed MSP and letting the retailer establish the RSP. The retailer's optimal selling price is well above the level that would maximize the total channel profit. Clearly, what seems to be a fair price for both parties is not viable if retailers maximize their own profits.

The manufacturer could charge a price higher than \$4, hoping to increase its share of the total channel profit, but that is not effective (see Table 3). When the manufacturer charges \$5.50, its profits increase slightly. (This is actually the maximum profit the manufacturer can earn under an EDLPP policy.) But the retailer now charges an RSP of \$11, resulting in a total channel profit that is even further from the optimum. In general, the strategy of charging a single MSP and letting the retailer choose the RSP does not maximize channel profit."

This illustrates the problem of an uncoordinated channel. In every pricing situation described by a negatively sloping demand curve, the price setter can trade off higher margins against lower unit volumes. However, a manufacturer that sets a fixed price not contingent on the retailer's sales volume loses the ability to influence this trade-off. The retailer can opt to charge a higher price, earn higher margins, and sell a lower unit volume. If the retailer does this, the manufacturer is left with lower unit volume and no compensating increase in margin. What pricing strategy will be able to "coordinate" the wine manufacturer's channel?

Trying Trade Promotion

What happens if the manufacturer abandons the EDLPP policy and introduces a trade promotion for example, by offering a 27 percent discount off the \$5.50 MSP in return for a featured retail price of \$6? Using such an offer, the manufacturer hopes to maximize total channel profit and split it evenly with the retailer. The retailer may accept the trade deal and feature the wine at an RSP of \$6 (see Table 4). However, careful inspection of Table 4 shows that the retailer may prefer to decline the trade deal, take the regular \$5.50 MSP, and set an RSP of \$11. To a retailer not faced with stiff competition from other retailers, the latter arrangement may be more advantageous, given the lower inventory-carrying, stocking, and other costs associated with a lower turnover. The manufacturer may, therefore, have to offer a more steeply discounted feature price, thus giving up a larger portion of the total channel profit to the retailer (see Table 5). This maximizes total channel profit, because the retailer finds it worthwhile to accept the deal. The manufacturer gets less than half the profits, but benefits more than with the EDLPP policy.

Instead of a discount linked to a specific feature price, the manufacturer may set up a pricing schedule that ties the MSP to the retailer's selected RSP. In some cases, this is a temporary price that involves retail advertising, display, or some other special selling effort. In other cases (usually when unit sales are few and the dollar amount relatively large), manufacturers obtain evidence of the reseller's customer discount and then rebate a portion of the discount to the retailer. The discount will, of course, be steeper for a lower RSP.

Starting with a high MSP of \$10, the manufacturer may "deal the price down" for every \$1 decrease in the RSP (see Table 6). Faced with this manufacturer pricing schedule, the retailer again chooses \$6 (the channelprofit-maximizing price) because that maximizes retailer profit. This "price up and deal down" trade promotion allows the manufacturer to exercise some influence over the RSP and, in turn, over sales to consumers and channel profit (see Tables 4, 5, and 6).

By using the specific pricing schedules from Tables 5 and 6, the manufacturer gets a slightly smaller share of the total channel profit than the retailer. Of course, another pricing schedule could split the channel profit differently, enabling the manufacturer to retain a larger share than the retailer or vice versa. The particular pricing schedule that the manufacturer can implement depends on the competition faced by the manufacturer and the retailer and the resulting power balance between them.

Regardless what the actual profit split is, the key point is that the manufacturer must design pricing schedules so that the retailer finds it optimal to price at a level that maximizes total channel profit. Using such promotions, the manufacturer is able to influence the retailer's pricing decision and, therefore, total sales, total channel profit, and its own share of total channel profit.

Thus, although marketers typically regard trade allowances as being "extracted from the manufacturer by a powerful retailer," the examples presented show that this is not always true. Indeed, well-designed trade allowances may be devices to induce retailers to charge lower prices and may result in higher manufacturer profits. Manufacturers ask retailers to put products "on sale" and pay them to do so. During interviews that we conducted, several retail executives in charge of such promotions indicated that "virtually 100 percent" of manufacturer promotions involve requests that the retailer temporarily lower retail price. Retailers accept trade compensation and the associated terms and conditions because they believe that they too benefit from the promotions.

Perhaps the price promotions that manufacturers and industry observers decry are actually a way to coordinate the channel, motivating the retailer to sell more at a lower price and benefiting the manufacturer as much as, or perhaps more than, the retailer. Maybe this is why manufacturer profit is not suffering relative to that of retailers, despite the clear increase in trade promotions.¹² At the same time, evidence suggests that implementations of EDLPP have not benefited the manufacturer.¹³

Assessing Different Trade Promotions

Discounts that are not linked to reseller performance sometimes work through "stock pressure." For example, if the reseller buys a larger quantity from the manufacturer, there is incentive for the retailer to sell it. However, resellers have become adept at manipulating purchase quantities to maximize their own profits. Consider what happens when the manufacturer offers the same 27 percent off-invoice allowance on the regular MSP of \$5.50 for a "promotion period," but does not link it to either the RSP or the amount sold by the retailer. At best, the manufacturer faces an uncoordinated scenario (see Table 2). The astute

retailer accepts the lower MSP and, in turn, sells only forty-nine bottles, making a profit of \$220.50 and leaving the manufacturer with a profit of \$73.50. Circumstances could be even worse for the manufacturer. The retailer has an incentive to forward-buy. That is, depending on warehousing costs, the retailer may find it profitable to buy a larger quantity than it can sell during the promotion period in order to sell it later when the manufacturer's MSP returns to \$5.50. Such forward-buying would hurt the manufacturer's profits not only in the current period, but later too.

What if the trade promotion is a "pay for sales performance" deal that requires the retailer to substantiate sales to qualify for the discount? There are many ways to implement these deals. For instance, "scan backs" are per-unit discounts that are paid back to the retailer when the manufacturer has evidence that the units were actually scanned through, i.e., sold by the retailer. Even with these promotions, however, the manufacturer may not be able to influence the RSP and thus risks making an unprofitable trade-off among unit sales, prices, and margins.

As we have described, not all trade promotions work equally well. Off-invoice allowances are the least beneficial from the manufacturer's point of view. Although pay-for-performance promotions alleviate the forward-buying problem, they don't really address the channel-coordination problem. Promotional allowances that are linked to feature prices are clearly the most promising for the manufacturer.

Adding Competition to the Mix

Thus far, our examples have ignored competition among retailers and among manufacturers, which may alter the channel-coordination problem, but rarely eliminates it. By recognizing competition among manufacturers, the retailer may benefit from analyzing total store (or category) profit, not only profit from one brand. This may improve the retailer's negotiating position and aggravate the coordination problem. Strong brands from multiple manufacturers mean that the retailer can more easily raise the price of one brand and still retain store customers by encouraging them to switch to another brand.

When retail competition is strong, it is difficult for retailers to raise the retail price on strong national brands, thus diminishing the chances that resellers will charge prices that are too high. Such products are often advertised as "specials" to attract store traffic. Retailers want to keep the prices of these brands low, because consumers may use them as key price comparisons across stores. Therefore, it is not surprising that manufacturers with strong brands are in the forefront of the move toward adopting EDLPP. Partly because of their thinner distribution, weaker brands have greater need for well-designed trade promotions. 14 Trade promotions

may be one of the few defenses that brands have against retailers pricing them too high and generating too little volume for margin. Even products with strong brands may need promotions to keep their retailers sufficiently aggressive. In the light-bulb market, General Electric lost key market-share points to discount brands when traditional retailers were slow to counter the promotions offered by hardware stores.¹⁵

Review of Three Perspectives

In this article, we have tried to integrate three perspectives on channel pricing. The first perspective comes from the academic literature on "double marginalization" or "channel coordination" that is at least fifty years old. Spengler, for example, noted that consumers might often receive lower prices with vertically integrated organizations if the alternative were three separate stages with managers at each stage being "price takers."¹⁶ A second perspective is that of teaching faculty that deal with pricing issues in MBA and executive programs. The problem of double marginalization must be intuitively understood before anyone can develop and implement creative solutions. A third view is that of managers and consultants. Many pricing and promotion systems have developed piecemeal to address the problems of selling through resellers that have pricing latitude. Some are effective; some are not - partly because the participants don't fully recognize the inherent problems. Interestingly, the concepts of promotion and coordination have not been well integrated, despite a long tradition of academic work in both channel pricing and coordination and promotions. Perhaps this is partly because one of the first solutions to the channel-coordination problem was presented in the form of a quantity-discount schedule. About fifteen years ago, Jeuland and Shugan provided an analytical representation of the channel-coordination problem and devised a quantity-discount-pricing schedule to ensure that the optimal prices for individual channel members coincide with the channel optimum.¹⁷

Although quantity discounts are important, they may create more problems than they solve. Getting the retailer to buy more from the manufacturer is a necessary, but not sufficient, condition for the manufacturer's ultimate goal of encouraging the retailer to sell more. Because quantity discounts are tied to the quantity that the retailer purchases from the manufacturer - not the quantity that consumers buy - they encourage forward-buying and gray markets. Quantity discounts may also encourage the growth of large-volume retailers that demand ever larger concessions to their purchasing power. Some manufacturers, such as in the recording industry, refuse to provide allowances for prices that are below advertising minimums. This system supports smaller retailers and therefore sustains product availability. The larger principle underlying any solution to the coordination problem is that it must encourage the retailer to set prices

at a level that improves total channel profits and maintains adequate product availability and merchandising support. Furthermore, the pricing schedule must permit a sharing of the margin between channel members that is fair in the sense that the division of profits is sustainable. Trade deals are a form of negotiation. We have shown that a system of deals may often be better than a fixed price. By definition, such deals should benefit both partners. Manufacturers should only make offers that will benefit them. By the same token, retailers are free to decline trade deals that they do not perceive as being attractive. Of course, the basis for such comparisons is the everyday price. In other words, a variable price schedule that links manufacturer price to the price set by the retailer may help the manufacturer, but adequate retail incentive to accept the deal may only exist if the "nondeal" price provides a credible reference point.

Linking manufacturer price to retailer price rather than the quantity bought (or the amount sold) by the retailer is a simple solution to the coordination problem. It is easily understood, administered, and monitored; it also alleviates many problems and costs involved in other trade promotions." The "discount" from the manufacturer is tied not to what the retailer buys or even to what the retailer sells, but to the price charged to consumers. As a result, there is less room for forward-buying and its associated problems - gray markets, production crests and troughs, and warehousing problems. Arguably, there is also less room for the "scam backs" and "trans-scans" that some marketers face, whereby retailers scan extra quantities of the product and later sell it through other retail outlets or after the promotion period ends. Forward-buying and scam backs may still occur if the manufacturer cannot estimate the demand function accurately and ships more than the retailer can sell at the lower price. However, demand forecasts will be more accurate to the extent that the manufacturer does not have to "guess" what percentage of the deal will reach consumers.

Trade promotions vary widely. Some are designed to increase the retailer's inventory, assuming that the "stock push" will compel the retailer to lower prices or engage in other efforts to sell more. Other trade promotions pay the retailer for selling efforts, such as building displays or increasing shelf space. A third kind of trade promotion provides payments for increased sales or share of sales through the retailer at the end of a period - usually a year. These volume "commitments" by the retailer are often attained by means of temporary price promotions but give the retailer more choice about how to achieve them.

In this article, we emphasize the value of promotions that reward the retailer directly for a specific price or a price reduction. Even these promotions differ in implementation. Partly because many retailers jealously guard their ability to determine selling prices, the usual form

of these promotions is to pay the retailer for a given reduction (as either a percentage or dollar amount) and let the retailer determine "normal selling price."

Sometimes the influence is subtler, but just as effective. For example, quite often manufacturers reward retailers for advertising a product, because they know that retailers are unlikely to advertise a noncompetitive price. Thus, what appears to be a cooperative advertising agreement is an effective device to achieve a lower retail selling price. Some industries use specific schedules or formulas that relate the reseller price to the size of the rebate the reseller receives. This is presented to the reseller as a "sharing" of the discount that the reseller decides is appropriate.

Occasionally, other efforts to control retail price arise but aren't effective. Although sometimes manufacturers list a "suggested retail price" on their products, retailers typically resist such external control over pricing. They might remove the suggested prices from the merchandise. More often than not, the suggested prices mainly serve to legitimize the discounts offered by the retailer to consumers and bear little relation to actual average selling prices.

Conclusion

In recent years, manufacturers and media alike especially in the packaged goods industry - have decried trade promotions, and many have advocated everyday low pricing. In this paper, we show that EDLPP, although simple to administer, may diminish manufacturer control over the retail price set by channel members and, therefore, over the total sales and total profit derived from their products. Although some trade promotions create more problems than they solve, not all forms of trade promotion are bad. Price-up and deal-down strategies that link manufacturer prices to the price featured by retailers are an effective way for a manufacturer to influence the retailer's selling activity and thereby coordinate the channel."

There is evidence that manufacturers are placing increasing importance on "pay for performance" promotions. In 1994, Donnelley Marketing Inc., for the first time, started tracking scan-backs, scan-downs, and other "strict proof of trade promotion performance," as part of its annual survey of promotional practices. In its seventeenth annual survey, Donnelley notes that the use of scan-backs and scan-downs is up from 92 percent in 1994 to 97 percent in 1995. Further, the percentage of firms surveyed that believe such pay-for-performance practices are important is up from 14 percent in 1994 to 46 percent in 1995.²⁰ Contrary to the way it is sometimes portrayed, pricing can be a creative area of marketing, and promotion is an important tool in this creative process. The notion of promotional

discounts as simply "giving away" margin is simplistic. It shortchanges this aspect of marketing strategy and prevents it from getting the attention and respect it deserves from top management.

Everett has observed: "If [companies with] branded products want to base their strategy solely on [the motto] `brand equity will save us, hold the course,' it's a little like expecting your knights in armor to be protected against an enemy using armor-piercing bullets. Branded products need to shift to a new battleground, driven by smart, strategic price/value promotion to protect brand equity. 1121

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Figure 1
**Profits Increase for Manufacturers,
 Remain Flat for Retailers**

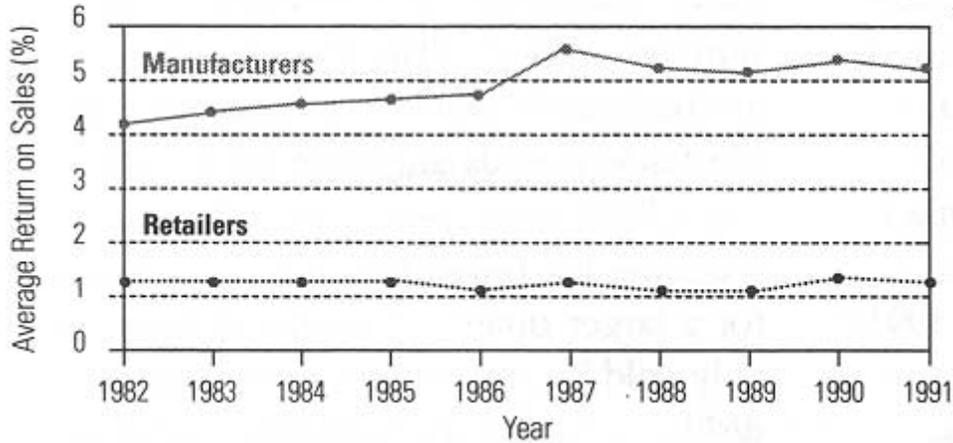


Figure 2
Manufacturer Profits Increase Despite Trade Promotion

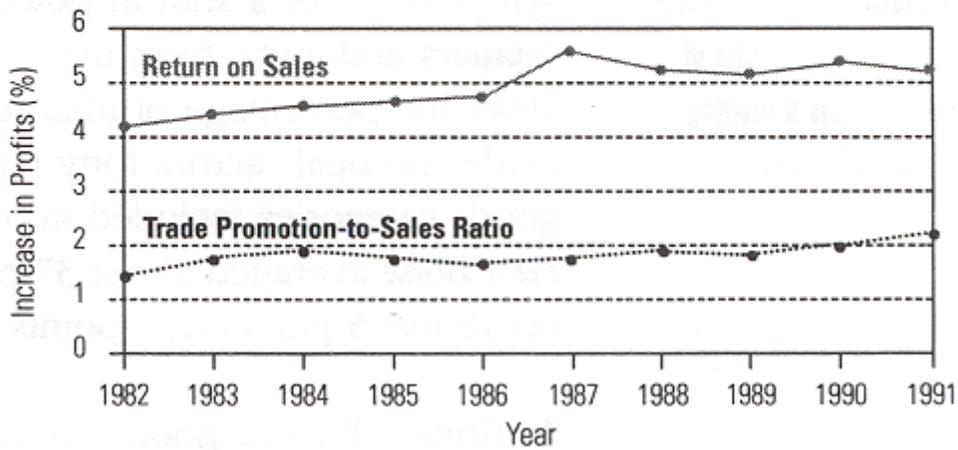


Figure 3
Retail Price and Market Demand

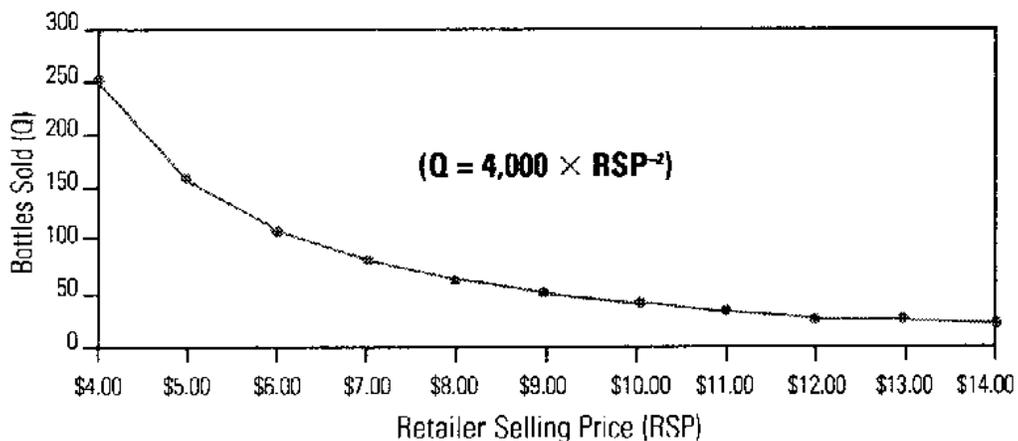


Table 1
Retail Price, Demand, and Total Channel Profit

Retail Selling Price (RSP)	Bottles Sold (Q)	Manufacturer Cost*	Retailer Cost [†]	Channel Profit
\$4.00	250	\$625.00	\$125.00	\$250.00
\$5.00	160	\$400.00	\$80.00	\$320.00
\$6.00	111	\$277.50	\$55.50	\$333.00
\$7.00	81	\$202.50	\$40.50	\$324.00
\$8.00	62	\$155.00	\$31.00	\$310.00
\$9.00	49	\$122.50	\$24.50	\$294.00
\$10.00	40	\$100.00	\$20.00	\$280.00
\$11.00	33	\$82.50	\$16.50	\$264.00
\$12.00	27	\$67.50	\$13.50	\$243.00
\$13.00	23	\$57.50	\$11.50	\$230.00
\$14.00	20	\$50.00	\$10.00	\$220.00

* \$2.50 per bottle
[†] \$0.50 per bottle

Table 2
Manufacturer Charges an Everyday Low Purchase Price of \$4

Retail Selling Price (RSP)	Bottles Sold (Q)	Manufacturer Selling Price (MSP)	Retailer Profit*	Manufacturer Profit [†]	Channel Profit
\$4.00	250	\$4.00	-\$125.00	\$375.00	\$250.00
\$5.00	160	\$4.00	\$80.00	\$240.00	\$320.00
\$6.00	111	\$4.00	\$166.50	\$166.50	\$333.00
\$7.00	81	\$4.00	\$202.50	\$121.50	\$324.00
\$8.00	62	\$4.00	\$217.00	\$93.00	\$310.00
\$9.00	49	\$4.00	\$220.50	\$73.50	\$294.00
\$10.00	40	\$4.00	\$220.00	\$60.00	\$280.00
\$11.00	33	\$4.00	\$214.50	\$49.50	\$264.00
\$12.00	27	\$4.00	\$202.50	\$40.50	\$243.00
\$13.00	23	\$4.00	\$195.50	\$34.50	\$230.00
\$14.00	20	\$4.00	\$190.00	\$30.00	220.00

* $Q \times (RSP - MSP - \$0.50)$
[†] $Q \times (MSP - \$2.50)$

Table 3
Manufacturer Increases Everyday Low Purchase Price to \$5.50

Retail Selling Price (RSP)	Bottles Sold (Q)	Manufacturer Selling Price (MSP)	Retailer Profit*	Manufacturer Profit [†]	Channel Profit
\$4.00	250	\$5.50	-\$500.00	\$750.00	\$250.00
\$5.00	160	\$5.50	-\$160.00	\$480.00	\$320.00
\$6.00	111	\$5.50	\$0.00	\$333.00	\$333.00
\$7.00	81	\$5.50	\$81.00	\$243.00	\$324.00
\$8.00	62	\$5.50	\$124.00	\$186.00	\$310.00
\$9.00	49	\$5.50	\$147.00	\$147.00	\$294.00
\$10.00	40	\$5.50	\$160.00	\$120.00	\$280.00
\$11.00	33	\$5.50	\$165.00	\$99.00	\$264.00
\$12.00	27	\$5.50	\$162.00	\$81.00	\$243.00
\$13.00	23	\$5.50	\$161.00	\$69.00	\$230.00
\$14.00	20	\$5.50	\$160.00	\$60.00	220.00

* $Q \times (RSP - MSP - \$0.50)$
[†] $Q \times (MSP - \$2.50)$

Table 4

Manufacturer Offers Discount for Feature Price

Retail Selling Price (RSP)	Bottles Sold (Q)	Manufacturer Selling Price (MSP)	Retailer Profit*	Manufacturer Profit [†]	Channel Profit
\$4.00	250	\$4.00	-\$125.00	\$375.00	\$250.00
\$5.00	160	\$4.00	\$80.00	\$240.00	\$320.00
\$6.00	111	\$4.00	\$166.50	\$166.50	\$333.00
\$7.00	81	\$5.50	\$81.00	\$243.00	\$324.00
\$8.00	62	\$5.50	\$124.00	\$186.00	\$310.00
\$9.00	49	\$5.50	\$147.00	\$147.00	\$294.00
\$10.00	40	\$5.50	\$160.00	\$120.00	\$280.00
\$11.00	33	\$5.50	\$165.00	\$99.00	\$264.00
\$12.00	27	\$5.50	\$162.00	\$81.00	\$243.00
\$13.00	23	\$5.50	\$161.00	\$69.00	\$230.00
\$14.00	20	\$5.50	\$160.00	\$60.00	\$220.00

* Q × (RSP – MSP – \$0.50)
[†] Q × (MSP – \$2.50)

Table 5

Manufacturer Offers Steeper Discount for Feature Price

Retail Selling Price (RSP)	Bottles Sold (Q)	Manufacturer Selling Price (MSP)	Retailer Profit*	Manufacturer Profit [†]	Channel Profit
\$4.00	250	\$3.85	-\$87.50	\$337.50	\$250.00
\$5.00	160	\$3.85	\$104.00	\$216.00	\$320.00
\$6.00	111	\$3.85	\$183.15	\$149.85	\$333.00
\$7.00	81	\$5.50	\$81.00	\$243.00	\$324.00
\$8.00	62	\$5.50	\$124.00	\$186.00	\$310.00
\$9.00	49	\$5.50	\$147.00	\$147.00	\$294.00
\$10.00	40	\$5.50	\$160.00	\$120.00	\$280.00
\$11.00	33	\$5.50	\$165.00	\$99.00	\$264.00
\$12.00	27	\$5.50	\$162.00	\$81.00	\$243.00
\$13.00	23	\$5.50	\$161.00	\$69.00	\$230.00
\$14.00	20	\$5.50	\$160.00	\$60.00	\$220.00

* Q × (RSP – MSP – \$0.50)
[†] Q × (MSP – \$2.50)

Table 6

Manufacturer Offers Variable Price Schedule

Retail Selling Price (RSP)	Bottles Sold (Q)	Manufacturer Selling Price (MSP)	Retailer Profit*	Manufacturer Profit [†]	Channel Profit
\$4.00	250	\$3.10	\$100.00	\$150.00	\$250.00
\$5.00	160	\$3.45	\$168.00	\$152.00	\$320.00
\$6.00	111	\$3.85	\$183.15	\$149.85	\$333.00
\$7.00	81	\$4.40	\$170.10	\$153.90	\$324.00
\$8.00	62	\$5.00	\$155.00	\$155.00	\$310.00
\$9.00	49	\$5.75	\$134.75	\$159.25	\$294.00
\$10.00	40	\$6.50	\$120.00	\$160.00	\$280.00
\$11.00	33	\$7.25	\$107.25	\$156.75	\$264.00
\$12.00	27	\$8.00	\$94.50	\$148.50	\$243.00
\$13.00	23	\$9.00	\$80.50	\$149.50	\$230.00
\$14.00	20	\$10.00	\$70.00	\$150.00	\$220.00

* Q × (RSP – MSP – \$0.50)
[†] Q × (MSP – \$2.50)