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CAN BAIT AND SWITCH BENEFIT CONSUMERS?

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We present a model that leads to an equilibrium with characteristics similar to the following stylized facts observed in retail markets: (a) Retailers advertise only selected brands; (b) Often low priced advertised brands are understocked; (c) In-store promotions are biased towards more expensive substitute brands. Together these practices constitute illegal bait and switch. Is this phenomenon necessarily harmful to consumers and to the economy? We show that bait and switch can benefit consumers because utility is created through in-store promotions and price competition is enhanced. This suggests that the FTC investigate further its ban on bait and switch.
(Pricing; Promotion; Regulation; Bait and Switch)

1. Introduction

Patricia Lyons wanted a mattress for her guest room, so she responded to a bedding store's advertisement offering a Sealy quilted, full-size, superfirm mattress and box springs for $48 to $68 each. At the store the salesman showed her the advertised special.

> It was in a back storeroom, leaning against the wall, soiled and looking, Miss Lyons said, "like one of these mattresses on the sidewalk waiting for a sanitation pickup."
> "Naturally," the salesman said, "you'd get a clean one."[1]

Had Miss Lyons been subjected to the classic bait and switch? Although such strategies are observed in retail markets, research on this topic is scarce. What exactly constitutes a bait and switch?

The Federal Trade Commission Trade Rule Guide on bait and switch defines it as "an alluring but insincere offer to sell a product or service which the advertiser does not intend or want to sell." The FTC offers four guides to businesses to avoid a charge of bait and switch (Howard 1983, p. 218):

> First, all advertisements must be *bona fide* offers to sell. Second, the advertisements must not create any false impressions as to an item's grade, quality, make, value, currency of model, size, color, usability, or origin. To tell the truth once the customer is in the store does not make it any more legal. Third, the customer should not be encouraged to switch by refusal to show or demonstrate, by disparaging the product, by refusing to take an order for delivery within a reasonable time, by having an inadequate quantity available for purchase, or by showing defective demonstrators. Fourth, switches achieved after a sale are equally in violation of the law.

The guideline requiring that stores have adequate quantities of low-priced advertised items for purchase is particularly intriguing and controversial; it is difficult for the FTC

[1] Blumenthal (1979).

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and customers to know if the stores run out of stock mistakenly or deliberately. Rain checks to compensate customers for stock outages might help reduce an inventory burden on retailers, but they can also be used to discourage customers from purchasing featured brands and to stimulate sales of more profitable brands.[2]

The FTC guidelines represent a myopic viewpoint. Consumers will eventually anticipate retailers' behavior, so stores that overuse these practices will eventually develop bad reputations and lose business. The FTC does not take into account the competitive process that follows bait and switch, in particular, its influence on prices. What is the impact of bait and switch on consumers and on the economy?

Recent studies examined models where retailers feature selected items at reduced prices but do not discourage customers from buying the featured products. Reasons for featuring included: **Clearance Sales** (Lazear 1986, Pashigian 1988), **Price Discrimination** (Conlisk et al. 1984, Shugan 1985, Jeuland and Narasimhan 1985), **Peak Load Pricing** (Gerstner 1986), **Penetration Pricing** (Kalish 1983), **Traffic Building** (Walters 1988).

These studies cannot explain why retailers use practices such as those described in the FTC guidelines. Why would reputable stores try to limit sales of featured items?

Featuring combined with stock outages and rain checks can stimulate sales of *complementary products* (Hess and Gerstner 1987); the rain checks induce customers to visit the store a second time and buy other goods. Surprisingly, this strategy may benefit consumers because of bargain loss leader prices. By way of contrast, in the model below stock outages encourage customers to switch to more profitable *substitute brands.* The model will be used to analyze the FTC policy on bait and switch.

2. A Model of Bait and Switch

General Description

To analyze bait and switch, a model is presented where stores advertise certain brands (or models) at low prices, understock them and in-store promote other brands at a more profitable markup. Rain checks are offered to customers who face a stock outage (a rain check entitles its holder to buy the featured brand at the advertised price when the store restocks the item). Consumers select stores by checking price advertisements, but stores have monopoly power for unadvertised brands when customers are already at the store because all have high search costs.[3] Only customers who face a stock outage are likely to switch brands and therefore the stores promote nonfeatured brands only to these customers.[4]

In contrast to assumptions that consumers are naive, however, we will assume that consumers foresee stock outages of feature brands. We also assume that in-store promotions such as demonstrations and customer education can be made customer and brand specific and can create permanent utility because they help customers differentiate between brands and better fit colors, shapes, capabilities, etc., to their tastes.[5]

[2] Recently the FTC reversed a previous policy related to rain checks. In a 3–2 commission vote, they decided to allow supermarkets to offer rain checks when they are out of stock (to reduce excessive inventory costs that could be passed to consumers (*Marketing News* 1988). More than 3000 people have written to the agency; most opposed the policy change.

[3] The results below are likely to hold even if consumers have different search costs, but the costs are positively correlated with response to in-store promotion. High search cost customers would respond well to the promotions and buy the highly profitable substitute brand, and low search cost customers would prefer to search when facing a stock outage of less profitable featured brands. Empirical studies found that even for major purchases many consumers visit only one store (see, for example, Wilkie and Dickson 1985).

[4] Bait and switch is even more plausible if customers who find featured products in stock are also likely to switch. Promoting only for customers facing stock outages, however, might be more effective than promoting to all customers because the former are willing to pay more for substitute brands to avoid rain checks.

We will distinguish only between a representative store and all other stores. Small letters describe the behavior of a representative store, and capital letters describe the common behavior of each of the other stores. The control variables of the representative store are: the featured price, p, the common price of other substitute brands, p_s, and the probability of stock outage at the store, α. The equivalent variables for all other stores are: P, P_s, and A. Consumers select stores and brands based on the values of the control variables. By determining the Nash equilibrium values, p^*, p_s^*, α^*, it is shown that the featured brand is sold below cost and is understocked, and, surprisingly, that the law against bait and switch can be counterproductive.

Detailed Description

Stores. There are n identical stores, each selling the same selection of brands of an infrequently purchased product like a household appliance. These brands are slightly differentiated, but differences are noticeable only when consumers are exposed to in-store promotions such as sales presentations or demonstrations. For simplicity, it is assumed that the cost of in-store promotion is M dollars per customer, and that the unit cost of each brand is the same—C dollars per unit. Each store can feature (advertise) at a fixed cost of F dollars per brand.[6]

A featured brand must be offered at the advertised price immediately or through a rain check. Stores decide which brands to feature, which brands to in-store promote, how to price brands, and how often to be out of stock.

Consumers. There are N consumers who enter the market to buy only one brand. Before they visit a store, consumers do not differentiate among brands, and are willing to pay V dollars ($V > C$) for any brand. They select a store based on the lowest advertised price and expected availability of featured brands. When x customers visit a representative store and a proportion, $1 - \alpha$, find the featured brand in stock, then $(1 - \alpha)x$ buy the featured brand immediately if the surplus they obtain, $V - p$, is nonnegative. They do not pay attention to in-store promotion.

The number of customers who do not find the featured brand in stock is αx. These customers can take a rain check, buy an in-store-promoted substitute brand or leave the store. Customers will not leave the store empty handed if the surplus obtained from using a rain check or buying a substitute brand is nonnegative and greater than the expected surplus from visiting another store. As mentioned above, it is assumed that these conditions hold, so customers do not visit other stores because of high search costs.

Some customers are influenced by in-store promotions and others are not. A customer who buys the promoted brand obtains a surplus of $V + S - p_s$, where S is the parameter representing value added to V through the in-store promotion. The probability of this event is γ. A customer who is not influenced by the promotion continues to value the promoted brand at V and the probability of this event is $1 - \gamma$. This customer is offered a rain check. Rain checks have effects similar to those of demoting (disparaging) a featured brand because they cause inconveniences. Letting D represent the demotion in value resulting from using the rain check, the surplus obtained by a customer who buys the featured brand with a rain check is only $V - D - p$.

The demotion in value is likely to be larger when the number of customers seeking rain checks is larger (because of longer lines at the service counter). We assume that

[5] An example is more enthusiastic explanations and demonstrations by sales personnel for certain brands. Such in-store promotions, however, may contain false information or may only create a temporary enhancement in utility. We will discuss these issues in §7.

[6] By assuming simple cost structures, featuring and in-store promotion decisions are simplified; stores decide only on whether to feature and in-store promote. More general cost structures would lead to decisions on how much to advertise and in-store promote.

the variable D is proportional to the fraction of customers that obtains a rain check $\alpha(1-\gamma)$. That is,

$$D = \alpha(1-\gamma)t, \tag{1}$$

where t is a positive parameter representing the level of transaction costs of using rain checks.[7]

Before they visit the store, consumers form expectations about the utility provided by each store. They observe the featured price, p, and they anticipate the stock outage probability, α (the store's reputation for bait and switch). They do not know the prices of nonfeatured brands. However, they rationally expect that profit-maximizing stores will price these brands high enough so that the surplus obtained from buying a nonfeatured brand would be just equal to the surplus obtained when using a rain check, $V - p - D$ (customers would not buy the nonfeatured brand if it is priced so high that the surplus from this alternative is below $V - p - D$). Therefore, a customer who faces a stock outage is guaranteed a surplus of $V - p - D$ and a customer who finds the featured brand in stock obtains $V - p$. The consumer's expected utility from buying at the representative store is:

$$u = u(p, \alpha) = (1-\alpha)(V-p) + \alpha(V-p-D). \tag{2}$$

When the store features a lower price or offers a lower stock outage probability, the expected utility is increased. Consumers visit the store that provides them with the highest utility.

3. Optimal Featuring and In-Store Promotion

To derive optimal featuring and in-store promotion strategies, we adopt a Bertrand (1882)-type concept: It is assumed that every store takes the featured price and stock outage probability of other stores as given and that the store providing customers with the highest utility gains all customers (if several stores provide the highest utility, they share the customers equally). The optimal strategy of the representative store will satisfy the following:

Result (A). *Exactly one brand will be featured.*

To see this, note that if featuring does not take place in the market, consumers obtain zero surplus because they randomly visit one store, and the store uses its monopoly power to extract all their surplus. A representative store can feature and gain all customers by offering them utility slightly above zero. To stay in business each store must feature at least one brand. Featuring more than one brand, however, is not profitable because advertising is not free, and consumers initially view the brands as perfect substitutes. Therefore, each store will feature no more than one brand.

Result (B). *A featured brand will not be in-store promoted.*

This result is straightforward. When a store features a low price, it is committed to honor this price. Consequently, the store is unable to capture any additional consumer value created by in-store promotions.

Result (C). *A substitute brand will be in-store promoted if* $\gamma S > M$.

[7] Assuming other techniques to demote the featured brands (such as those mentioned in the FTC guidelines above) should not appreciably affect the results. The stock outage probability of our model can be interpreted more generally as a probability that the featured brand will be demoted at the store (stores with reputations for hard sell techniques have high α's).

Note that γS is the expected added value due to in-store promotion that can be obtained from customers who face a stock outage. The store has monopoly power once a customer is in the store, so it will be able to capture this expected added value. The store will in-store promote substitute brands if the returns from in-store promotion, γS, exceed the cost M.

Results (A)–(C) have an intuitive appeal. When different brands are perceived to be alike and advertising is not free, featuring only one brand is an efficient way to attract many customers. This brand should not be in-store promoted, since the store has already committed itself to the featured price and cannot capture through price added value created by in-store promotions. By not committing itself to low prices for substitutes, the store can in-store promote these brands, and profit from consumers' higher willingness to pay.

4. The Competitive Process of Bait and Switch and Equilibrium

It follows from the above results that only one brand will be featured by all stores to attract customers, and assuming that $\gamma S > M$, substitute brands will be in-store promoted to customers who face a stock outage. How will the substitute brands be priced?

Since the featured brand is advertised at price p, the store is committed to offer all customers who face a stock outage a rain check with a surplus of $V - D - p$. Switching to an in-store-promoted substitute is worthwile to a customer only if the surplus from the substitute is at least as large. However, the profit-maximizing store will set the price of the substitute high enough so consumers who self select that brand are just indifferent between buying the substitute and taking a rain check for the featured brand. That is, the surplus from buying the substitute brand, $V + S - p_s$, is equal to the surplus obtained when using a rain check:

$$V + S - p_s = V - D - p. \tag{3}$$

Consider next the profit function of a representative store. When x customers visit the store, its expected profit is:

$$\pi(p, p_s, \alpha) = (1 - \alpha)x(p - C) + \alpha x[(1 - \gamma)(p - C - M) + \gamma(p_s - C - M)] - F. \tag{4}$$

The first term denotes profits earned from the customers who find the featured brand in stock. The second term is the expected profits from customers who face a stock outage; $\alpha(1 - \gamma)x$ customers are expected to accept a rain check and eventually contribute $p - C - M$ dollars to profits, and the remaining $\alpha\gamma x$ customers (who are impressed with an in-store promoted substitute brand) contribute $p_s - C - M$.

Note that we did not discount revenues from customers who use rain checks, and to simplify the algebraic expressions even further, let us assume that featuring cost is zero. Substituting (1) and (3) in (4) and setting $F = 0$, the profits can also be expressed as a function of p and α only:

$$\pi(p, \alpha) = x(p - C) + \alpha\gamma x[S + \alpha(1 - \gamma)t] - \alpha x M. \tag{5}$$

The symmetric Bertrand-Nash equilibrium consists of prices and out-of-stock proportions $(p^*, P^*, \alpha^*, A^*)$ that satisfy the following conditions. The values (p^*, α^*) maximize the representative store's profit in (5) subject to the expected utility constraint (2), given (P^*, A^*). In equilibrium the magnitudes satisfy the symmetry conditions

$$p^* = P^*, \qquad \alpha^* = A^*, \qquad x^* = X^* = N/n, \tag{6}$$

and all customers obtain nonnegative surplus.

To find equilibrium, imagine that all other stores advertise their featured brand at price P and that the stock outage rate at these stores is A. This combination provides consumers with expected surplus U. The representative store would contemplate featuring a price p and stock outage proportion α that provides consumers with a slightly higher surplus $u_0 = U + e$. Under the Nash assumption that other sellers leave their prices and stock outage rates unchanged, *all* N consumers will be attracted to the representative store, increasing its profits. What combination (p_0, α_0) maximizes the representative store's profit function (5) for the given u_0?

To find the optimal combination (p_0, α_0), substitute $u = u_0$ in the utility formula (2) and solve for p as a function of α. Second, substitute p into the profit function (5), which becomes a function of α only. Finally, since all the customers patronize the representative store when it offers a utility level u_0, we can substitute $x = N$ in the profit expression (5) and maximize the resulting profit expression with respect to α. This gives

$$\alpha_0 = (\gamma S - M)/(2(1 - \gamma)^2 t). \tag{7}$$

Finally, substitute α_0 back into p to get p_0.

It is interesting to note from (7) that α_0 is independent of u_0. Therefore, the most profitable way the deviant store could offer customers higher utility would be by reducing the featured price, leaving α_0 unchanged.

The combination (p_0, α_0) is not the market equilibrium. The other stores lose all their customers to this offer. To regain customers, these stores must lower their prices and offer expected surplus slightly higher than u_0. In frustrating attempts to keep market share, each store will successively undercut its competitors until p_0 is so low that the ensuing pricing decision for the nonfeatured brand produces zero profits.

In equilibrium the profit-maximizing stock outage proportion (7) still holds (remember that α_0 is constant during the price cutting process that leads to the equilibrium), as does a zero profit condition.[8] Therefore $\alpha^* = \alpha_0$, and the equilibrium price of the featured brand, p^* is determined by substituting α_0 and $x = N/n$ into the profit function (5), setting it equal to zero and solving for p. We obtained

$$p^* = C - \alpha_0^2(1 - \gamma)(2 - \gamma)t. \tag{8}$$

The equilibrium price of a substitute brand is obtained by substituting p^* and α^* into (3) using (1) and solving for p_s:

$$p_s^* = p^* + S + \alpha_0(1 - \gamma)t. \tag{9}$$

Customers who buy a substitute brand pay a premium over the price of the featured brand, which is below cost. This premium reflects the value added through in-store promotion, and the transaction costs saved when a customer chooses a substitute brand rather than a rain check.

The equilibrium expected surplus provided to the typical consumer is obtained by substituting p^* and α^* into (2) using (1),

$$u^* = V - C + \alpha_0^2(1 - \gamma)^2 t. \tag{10}$$

Equilibrium resembles bait and switch. The representative store features one brand at a price below cost, understocks this brand and in-store promotes substitute brands at a more profitable markup. Table 1 provides a numerical example. In this example, only 30 percent of the customers find the featured brand in stock; 35 percent obtain a rain check, and 35 percent buy a substitute brand. All customers obtain nonnegative surplus.

[8] In economics zero profit implies that the owners of the firms earn normal (competitive) rates of return on their capital. A fixed cost term could be added to the profit function to reflect the cost of capital. This would not affect the main results.

TABLE 1
Numerical Example

Parameter Values: Transaction cost $t = 2$, Probability of switching $\gamma = 0.5$, Willingness-to-pay $V = 10$, Added value $S = 1.6$, Unit cost $C = 3$, Cost of promotion $M = 0.1$, Number of customers $N = 1000$, Number of stores $n = 20$, Fixed cost $F = 0$.

Solution Values: Stock outage probability $\alpha^* = A^* = 0.7$, Featured price $p^* = P^* = 2.26$, Nonfeatured price $p_s^* = P_s^* = 4.56$, Customers per store $x^* = X^* = 50$, Demotion $D^* = 0.70$, Profit $\Pi^* = 0$, Expected utility $u^* = 7.24$, Surplus without rain check $V - p^* = 7.74$, Surplus with rain check $V - D^* - p^* = 7.04$.

5. Sensitivity Analysis

Table 2 summarizes the response of the equilibrium values to parameter changes. Intuition for the results follows the table. Note from the table's first two columns that consumer's expected utility is higher in an equilibrium with a higher degree of bait and switch (a lower featured price and a higher stock outage probability). The welfare implications of bait and switch are discussed further in §6.

Response to in-store promotion. With better response to in-store promotion (higher S or higher γ), bait and switch is more profitable, so stores raise the probability of stock outages. With higher α, more customers switch brands, and competition to attract customers is more fierce. Therefore, the price of the featured brand is reduced, and the price differential between in-store promoted and featured brands is increased. The reduction in the featured price overcompensates for the larger stock outages and consumers are provided with higher expected utilities.

Increase in the cost of in-store promotion. When the cost of in-store promotion increases, it is more costly to differentiate the brands. Bait and switch becomes less profitable, so the probability of a stock outage decreases, the featured price is increased, and the price differential is decreased. The lower level of stock outages undercompensates for the higher featured price and therefore consumer expected utility is lowered.

Increased transaction costs. When the transaction cost parameter, t, increases, rain checks are less attractive to consumers. To attract customers, stores reduce the stock outage proportion, so α^* is adjusted downward. When α is lower, fewer customers switch brands, featuring is less profitable, and the featured price is increased. The price increase lowers consumers' expected utilities. The increase in the transaction cost parameter and the decrease in the stock outage proportion offset each other and the equilibrium price differential, $\alpha^*(1 - \gamma)t + S$, does not change.

TABLE 2
Sensitivity Analysis

	Parameter				
	Prob. of Switch	Added Value	Cost of Promo.	Trans. Costs	Unit Cost
Equilibrium Value	γ	S	M	t	C
Stock outage prob. α^*	+	+	−	−	0
Featured price p^*	−	−	+	+	+
Price differential $p_s^* - p^*$	+	+	−	0	0
Expected utility u^*	+	+	−	−	−

Increased unit cost. When the retailers face higher unit cost, α^* is unchanged because unit cost is not relevant to the marginal consideration that determines optimal stock outage probability. Stores pass the unit cost increases on to consumers by raising the price of both brands by the same amount. This reduces consumers' expected utilities.

6. Should Stock Outages to Stimulate Brand Switching Be Illegal?

The FTC guidelines require stores to have adequate quantities available for purchase of featured brands. What is the effect of this requirement on consumers and on the economy?

In our model, when stock outages are not allowed ($\alpha = 0$), all consumers find and buy featured brands in stock, so in-store promotion of substitute brands is not productive. When all stores sell only featured brands, competition drives profits to zero, and all brands are sold at cost. The surplus obtained by each customer is $V - C$.

To determine whether consumers are better off with the FTC guideline, we compare $V - C$ to the expected utility expression (10) obtained under bait and switch. The last term of (10) is positive, and therefore *consumers are better off with bait and switch ex ante* (before visiting the store).

Is it possible that all consumers can be better off with bait and switch, even ex post? That is, might unfortunate consumers who faced stock outages obtain higher surpluses under bait and switch than without? The example above shows that this outcome is possible. In this example, consumers who use rain checks or buy substitute brands obtain a surplus of 7.04, which is larger than the surplus of 7.00 they would obtain without bait and switch. Under bait and switch the featured price is 2.26 and the transaction cost of using rain checks equals 0.70, so the full cost to rain check users is 2.96, below the 3.00 price that will prevail without bait and switch. Therefore, *consumers can be better off under bait and switch even ex post.*

The intuition is as follows. Despite the monopoly power retailers have when customers visit their stores, the price of in-store-promoted brands cannot be raised too much or customers who face stock outages will buy the featured brand with a rain check. The competitive process of bait and switch drives the price of featured brands to very low levels. The process also stimulates in-store promotions of other brands. Although the in-store promotions are biased towards substitute brands (as shown in Result (B) above), they can still benefit consumers (compared to a situation in which in-store promotions are not available at all). These benefits can exceed the costs incurred from using rain checks.

Because profits are driven to zero with or without bait and switch, total welfare (consisting of consumer and seller surplus) can be higher when stores are not required to follow the FTC guideline. *Therefore, the FTC should investigate further its ban on bait and switch because this marketing practice can promote economic efficiency.*

7. Conclusion

The model presented above leads to an equilibrium with characteristics similar to the following stylized facts observed in retail markets: (a) Retailers advertise only selected brands; (b) Often low priced advertised brands are understocked; (c) In-store promotions are biased towards more expensive substitute brands. Is this phenomenon necessarily harmful to consumers and to the economy?

Supporters of the FTC policy on bait and switch say, "yes." They claim that stock outages of advertised brands are unfair, even when rain checks are offered to frustrated customers, because of the transaction costs and delayed consumption associated with rain checks. This view, however, does not consider the impact of the competitive process that follows bait and switch.

It was shown that the process of bait and switch can enhance economic efficiency for the following reasons. Competition to attract customers motivates retailers to cut the prices of featured brands to very low levels. While the process results in some stock outages, these motivate in-store promotions that add real utility. Stores must guard against overdoing it when customers foresee stock outs. They cannot take full advantage of the monopoly power over customers already at the store because they are committed to a low price for the featured brand. The benefits from low featured prices and in-store promotions can exceed the costs incurred in using rain checks.

The assumptions essential to our argument are:

(a) Consumers foresee stock outages of featured brands.

(b) High search costs give retailers monopoly power for unadvertised brands over customers already at the store.

(c) Customer and brand specific in-store promotions create "real utility."

The first assumption is reasonable for markets with established retailers who sell large assortments of items. Consumers will form expectations about stock outage frequencies (even for infrequently purchased items) based on their previous experiences with these stores. Thomas et al. (1988) found that today's consumers are well aware of bait and switch techniques.

The second assumption was incorporated into the model in its extreme; we assumed that all consumers visit only one store. This assumption seems limiting, but the directional predictions of the model will still be the same if we would have assumed that not too many customers visit more than one store. As noted above, empirical studies found that this situation exists in some markets.

Is the third assumption reasonable? Marketing texts such as that by Kotler (1988) emphasize that retailers do create utility by stocking a variety of brands, demonstrating them in attractive ways, accentuating important features and values, and providing information to help customers better fit the brands to their tastes. In the process of bait and switch, however, in-store promotions are biased towards substitute brands because these brands have higher markups (see Result (B) above). We showed that even biased in-store promotions can be beneficial to consumers as long as the information presented is not false. The following anecdotes, drawn from our personal experience, show how brand switching can occur.

1. One of us recently bought a VCR. The $179 featured brand did not have remote control, and the author had never owned a TV or VCR with remote. The salesman convinced him that it is difficult to see the buttons on a VCR through the glare of the TV set in a dimly lit room, and so he switched to a $225 brand with remote. Without the short presentation, he would not have thought of the inconvenience of having to turn on overhead lights before adjusting the VCR and would not have switched purchasing plans.

2. The other author recently responded to an ad for an IBM compatible computer system for $1495. The advertised Model 212 running at 12 MHz was out of stock. The salesman recommended a faster Model 216 running at 16 MHz for $100 more. The author bought the Model 216 immediately rather than waiting for the featured model. He was ready to pay the extra $100 dollars for two reasons: the Model 216 was available immediately, and the author felt that the faster machine better served his needs.

The price differential between brands can be attributed to two sources, stock outs and value added through in-store promotions, as seen in equation (9) above. In the VCR example it was only added value because the featured brand was in stock. In the computer example both components were at work.

Do stores have incentives to avoid false or exaggerated in-store promotions? Misleading promotions can hurt retailers in the long run—legally or by giving them bad reputations. Most stores allow customers to return merchandise, and although customers incur transaction costs in merchandise returns, such returns can be even more costly to the stores because of handling and repackaging costs and uncertainties associated with the condition of the returned merchandise. Exaggerated claims also may stimulate consumer postpurchase cognitive dissonance.[9] Therefore stores will try to avoid these practices.

The apparent dilemma of bait and switch might be resolved through empirical research to study the real impact of bait and switch on different markets. Unfortunately, studies on brand switching and unplanned purchases to date have not focussed on the bait and switch issue. Cooperation from stores in studying bait and switch, however, is probably limited because the practice is still illegal.[10]

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[9] Consider the extreme situation in which all customers discover in postpurchase evaluation that the in-store promoted brand is worth only $V + 0$ and not $V + S$. Assuming for simplicity that the prepurchase equilibrium values p^*, p_s^*, α^* are unaffected, the population of consumers will include the following segments:

	Population Proportion	Postpurchase Surplus
(1) Bought the featured brand immediately	$1 - \alpha^*$	$V - p^*$
(2) Bought featured brand with rain check	$\alpha^* (1 - \gamma)$	$V - p^* - D^*$
(3) Bought substitute brand and regret it	$\alpha^* \gamma$	$V + 0 - p_s^*$
(4) Bought substitute brand without regret	0	$V + S - p_s^*$

The postpurchase average utility is:

$$u^{**} = (1 - \alpha^*)(V - p^*) + \alpha^*(1 - \gamma)(V - p^* - D^*) + \alpha^*\gamma(V + 0 - p_s^*). \quad (11)$$

Substituting p^* and α^* into (11) using (1), gives:

$$u^{**} = V - C - \alpha_0(\gamma S + M)/2. \quad (12)$$

The postpurchase utility is lower than $V - C$, so consumers are better off without bait and switch if all regret switching. To describe a situation in which only some customers regret switching, we could introduce a parameter, θ, to represent the proportion of these customers in the population. As θ varies from 0 to 1, our welfare conclusion varies from pro-bait and switch to anti-bait and switch.

[10] This paper was received in December 1987 and has been with the authors $10\frac{1}{2}$ months for 3 revisions.

Accepted by John R. Hauser.

References

Bertrand, J. (1882), "Theorie Mathematique de la Richesse Sociale," *Journal des Savant*, 499–508.

Blumenthal, R. (1979), "When Buying a Bed, Beware," *The New York Times*, (February 22), C1–C2.

Conlisk, J., E. Gerstner and J. Sobel (1984), "Cyclic Pricing by a Durable Goods Monopolist," *Quarterly Journal of Economics*, (August), 489–505.

Gerstner, E. (1986), "Peak Load Pricing in Competitive Markets," *Economic Inquiry*, (April), 349–361.

Hess, J. D. and E. Gerstner (1987), "Loss Leader Pricing and Rain Check Policy," *Marketing Science*, 6 (Fall), 358–374.

Howard, M. C. (1983), *Antitrust and Trade Regulation: Selected Issues and Case Studies*, Englewood Cliffs, NJ: Prentice-Hall.

Jeuland, A. P., and C. Narasimhan (1985), "Dealing-Temporary Price Cuts by Seller as a Buyer Discrimination Mechanism," *The Journal of Business*, 58 (July), 295–308.

Kalish, S. (1983), "Monopolist Pricing with Dynamic Demand and Production Costs," *Marketing Science*, 2 (Spring), 135–160.

Kotler, P. (1988) *Marketing Management*, Englewood Cliffs, NJ: Prentice-Hall.

Lazear, E. P. (1986), "Retail Pricing and Clearance Sales," *American Economic Review*, 76 (March), 14–32.

Marketing News (1988), "Supermarkets Get OK to Offer Rain Checks," (May 23).

Pashigian, B. P. (1988), "Demand Uncertainty and Sales: A Study of Fashion and Markdown Pricing," *American Economic Review*, 78 (December), 936–953.

Shugan, M. S. (1985), "Pricing When Different Outlets Offer Different Assortments of Products," working paper, Graduate School of Business, University of Chicago.

Thomas, M. S., D. C. Van Doren and L. W. Smith (1988), "Bait and Switch May Be Getting Passe; Consumers Want Information, Respect," *Marketing News*, (February 15).

Walters, R. (1988), "Retail Promotions and Retail Store Performance: A Test of Some Key Hypotheses," *Journal of Retailing*, 64 (Summer), 153–180.

Wilkie, W., and P. Dickson (1985), "Shopping for Appliances: Consumers' Strategies and Patterns of Information Search," Marketing Science Institute Report No. 85-108.