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Marketing Science, Vol. 17, No. 3 (1998), 283-289.

Stable URL:
http://links.jstor.org/sici?sici=0732-2399%281998%2917%3A3%3C283%3AY%22ASRB%3E2.0.CO%3B2-%23

Marketing Science is currently published by INFORMS.

Yes, "Bait and Switch" Really Benefits Consumers

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Abstract

In our 1990 *Marketing Science* paper we demonstrated that a law prohibiting bait and switch may have the surprising consequence of hurting the consumers it was designed to protect. Wilkie, Mela, and Gundlach (1998) postulate that this may be false if upselling is equally effective when the bait brand is available and when it is out of stock. We show here that our earlier conclusion is correct in a more general setting: A law prohibiting bait and switch in a competitive market can reduce consumer well-being but never improve it. When bait and switch occurs, it creates welfare gains, and when it would create welfare losses, it does not occur, regardless of a law prohibiting the practice.

(*Pricing; Promotion; Public Policy; Bait and Switch*)

In Gerstner and Hess (1990), hereafter GH, we focused on one aspect of bait and switch, the deliberate use of stock outages of a featured, low-price bait brand in hope of persuading stocked-out customers to switch to a more profitable substitute brand. There we established that the law prohibiting bait and switch may have the surprising consequence of hurting the consumers it was designed to protect. In essence, we showed that in some circumstances the competitive nature of the retail environment was the only protection that consumers needed from bait and switch. A law prohibiting the practice actually reduced the welfare of the typical consumer.

Why? Because bait and switch can create value by improving the match of customers to brands through more effective in-store selling. Retail competition transfers that value to the consumers who enjoy very low prices for featured products (either immediately or through a rain check) and leaves the retailers with zero economic profit. Without the bait-and-switch process, these low prices and the consumer information from in-store promotions might not exist.

Wilkie, Mela, and Gundlach (1998), hereafter WMG, provide a excellent survey of the legal aspects of bait and switch. In addition, they reexamine our earlier model and carefully delineate two distinct attributes of bait and switch: stock outages of the bait brand and in-store promotion of the switch brand.

They assert that the basic policy finding (prohibiting bait and switch hurts consumers), while true for a parameter value we studied, may be false for other reasonable values of this consumer parameter. The parameter in question is the probability that a customer will respond positively to an in-store promotion for the substitute "switch" brand (called "upselling" by WMG) when the featured "bait" brand is available for immediate purchase. We had assumed that if customers came to a store seeking a featured brand at an advertised, rock-bottom price and found it, they would be unreceptive to a sales presentation for another brand. WMG explore another behavioral assumption about consumers, namely that the availability of the featured brand has no impact on the receptivity of customers to such "upselling" effort. It might appear that our different predictions of consumer welfare are simply reflections of different values of this parameter, turning the policy issue into an empirical issue. However, this is not the case.

0732-2399/98/1703/0283$05.00

Our finding in GH about consumer welfare can be generalized to include all values of this consumer parameter, including the one assumed by Wilkie, Mela, and Gundlach, contrary to their assertion. Specifically, we find:

General Bait-and-Switch Theorem. *A law prohibiting bait and switch in a competitive market can reduce consumer well-being but never improve it.*

This theorem generalizes the specific result proved previously in GH:

Specific Bait-and-Switch Theorem. *A law prohibiting bait and switch in a competitive market reduces consumer well-being if the probability of switching to a substitute brand is zero when the bait brand is available in stock.*

The General Bait-and-Switch Theorem is a strong statement and seems to call into question the logic that leads to WMG's conclusion,

> Under these conditions, a bait-and-switch limitation on out of stocks has a positive impact on consumer utility and no effect on profits. . . . *Taken by itself, allowing planned shortages (out of stock) results in a net welfare loss.* (p. 279)

The inherent problem in the argument of WMG is that they assume that the elements of bait and switch, including both stock outages and upselling, can be specified exogenously like treatments in an experiment, when in fact they are endogenous, dependent retailing practices that will be used in some, not all, circumstances. In what follows, we assume that the practice of bait and switch is chosen by the retailer based on contribution to profits, and we seek to identify conditions when it is chosen in equilibrium.

Here is our critique in a nutshell: In a competitive market when stock outs and upselling occur, they create welfare gains; when they would create welfare losses, they do not occur. In every condition in which a law "might" protect customers from bait and switch, market competition alone forces retailers to drop the practice as unprofitable, so the law is moot. In every condition in which the practice of bait and switch creates social value, market competition always transfers the value to the customers, so a law prohibiting the practice actually damages consumer welfare.

The formal argument can be best illustrated using a variant of GH suggested by WMG that generalizes the findings of the model.

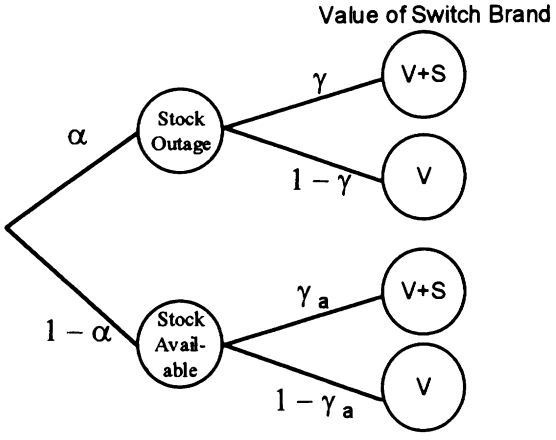
Design of the Theoretical Experiment

A store features a "bait brand" at a low price and designs inventories so that only a fraction, 1-α, of the shoppers find the brand (which they value at V) in stock. If there is a stock outage, the customer will listen to an in-store sales presentation (which costs the retailer M dollars) for a substitute "switch brand," which may convert their value for it from V to $V + S$. When there is a stock outage, this upselling conversion occurs with probability γ. A sales presentation of the switch brand will sometimes identify value, S, that had escaped the consumer's attention, so the net expected contribution of upselling to customers who face a stock outage is $\gamma S - M$. This is a measure of the potential improvement to the system from bait and switch. We assume that $\gamma S - M > 0$, so that if there is a stock outage (bait), the retailer will always want to upsell the substitute brand (switch).

GH and WMG differ on one primary assumption. Let γ_a be a new consumer parameter denoting the probability of converting customers with an upsell when they find the featured brand available (the subscript a denotes that the featured bait brand was available for immediate purchase). See Figure 1. Naturally this probability of conversion, contingent on finding the featured bait brand available for immediate purchase, could empirically take on any value from 0 to 1. GH assumed that if the customer found the inexpensive bait brand available for immediate purchase, then they would brush aside any effort to upsell the switch brand (implicitly, $\gamma_a = 0$). WMG explore the case where customers are more receptive to sales presentations even though they could make an immediate purchase of the bait brand that brought them into the store (implicitly, $\gamma_a = \gamma$).

WMG assert that a law prohibiting bait-and-switch stock outages improves consumer welfare if $\gamma_a = \gamma$. The basic thought experiment ought to specify the values of the treatment, "allow bait and switch" or "prohibit bait and switch," and measure the consumer welfare, while holding γ_a constant. However, WMG do not make the policy comparison ceteris paribus.

Figure 1 Consumers' Probabilities of Switching



α = Retailers' endogenous probability of stock outage of bait brand
γ = Consumers' exogenous probability of converting to switch brand given stock outage
γ_a = Consumers' exogenous probability of converting to switch brand given stock availablility

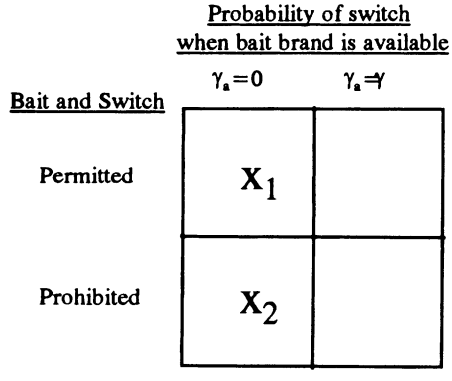
A 2 × 2 experiment might treat the consumer parameter γ_a as a control variable (with such values as 0 and γ, as in Figure 2). One value of γ_a might correspond to an economy like that in New York, while the other value corresponds to Chicago. The focus is on the main effect of the "bait and switch" treatment variable. Does prohibiting bait and switch in New York help New Yorkers and does prohibiting it in Chicago help Chicago's consumers?

Figure 2a shows the design of GH's logical experiment. We held the consumer parameter γ_a constant at 0 and compared consumer welfare when only the "bait and switch" variable changed values. The result is restated as the above Specific Bait-and-Switch Theorem.

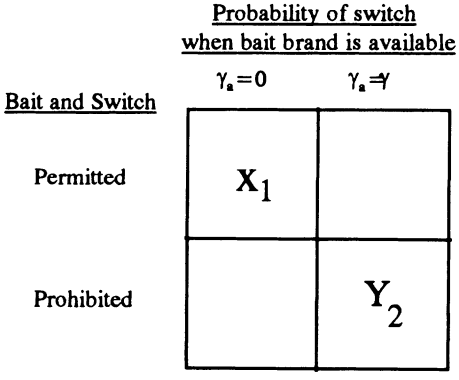
Figure 2b shows WMG's implicit experimental design. They calculate the welfare in all four cells, but draw their conclusion by showing that consumer welfare is larger in cell Y_2 than in cell X_1. Specifically, WMG's Equation (A1) in Appendix 1 compares the consumer utility of a law prohibiting bait and switch when $\gamma_a = \gamma$ (drawing on Equation (13)) to the utility of allowing bait and switch when $\gamma_a = 0$ (drawing on Equation (7)). The difference could be attributed as much to increasing the probability of switching as to prohibiting bait and switch. There is a problem of confounding.

What is needed in this policy analysis is a comparison of the differences between dependent variables for each column of the experimental design. GH did this only for the special column value $\gamma_a = 0$. When the thought experiment is corrected this way, the analysis

Figure 2 Experimental Designs



a. Gerstner and Hess (1990)



b. Wilkie, Mela, and Gundlach (1998)

Dependent Variables: Stock Outages, Upselling, Consumer Welfare

implies that a law against bait and switch never helps consumers and generally hurts them, as we will now show by analyzing the model with general values of γ_a.

Analysis of the General Model

To avoid the "apple versus orange" comparison, let us fix the consumer parameter γ_a (the probability that the consumer will switch when the bait brand is available) at a given value in the interval from 0 to 1. The gist of the logic can be seen considering just three special values, $\gamma_a = 0$, $\gamma_a = \gamma$, and $\gamma_a = 1$. Figure 3 provides the experimental design. These three values of the consumer parameter γ_a bracket all possible values, beginning with no response to upselling and ending with certainty of switching to the bait brand. The intermediate value, $\gamma_a = \gamma$, is precisely that suggested by WMG. Of course, these three values merely demonstrate the rationale, but the General Bait-and-Switch Theorem holds for all values of γ_a (a proof is available upon request).

GH have already analyzed the case $\gamma_a = 0$, comparing X_1 to X_2 in Figure 3, and will not be repeated. Stock outages occur (see point A in Figure 4), but a law prohibiting bait and switch hurts consumer welfare; the upselling provides value $\gamma S - M$ that is transferred to the consumers by retail competition.

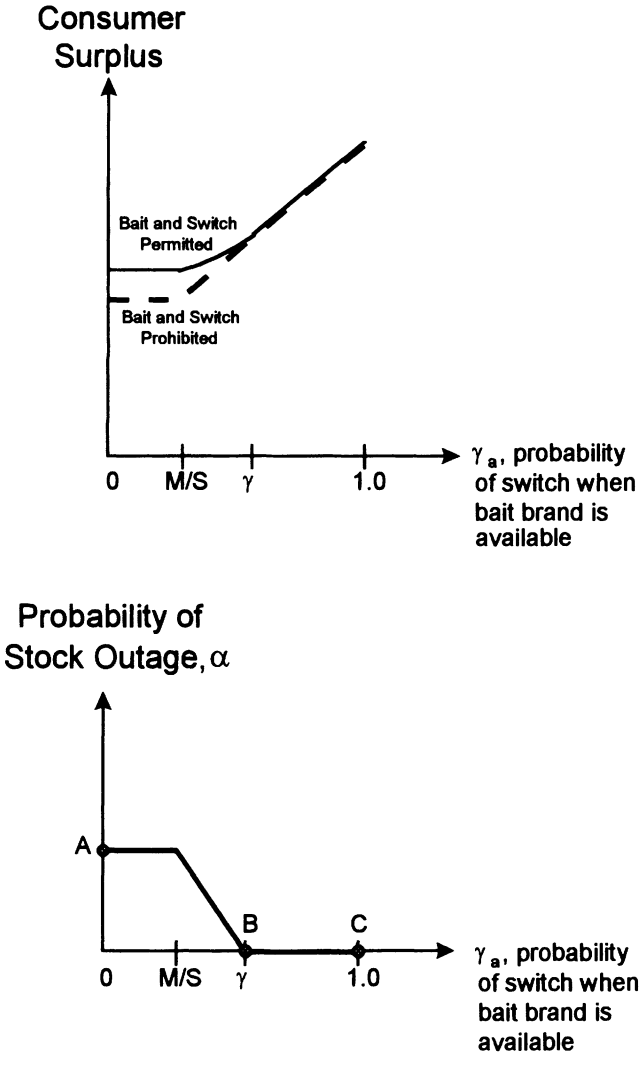
What about the other extreme, $\gamma_a = 1$? Compare Z_1 to Z_2 in Figure 3. In this circumstance (which seems

Figure 3 General Experimental Design

	Probability of switch when bait brand is available		
Bait and Switch	$\gamma_a=0$	$\gamma_a=\gamma$	$\gamma_a=1$
Permitted	X_1	Y_1	Z_1
Prohibited	X_2	Y_2	Z_2

Dependent Variables: Stock Outages, Upselling, Consumer Welfare

Figure 4 Consumer Surplus and Stock Outages



empirically unlikely but theoretically useful), a consumer who could buy the available featured bait brand immediately will instead listen patiently to a sales presentation for a more expensive substitute brand and with certainty will switch to it. If customers behaved this way, it would be retailing folly to consciously reduce the probability of selling the more profitable switch brand from 1 to γ by having a stock outage (see Figure 1). Therefore, when $\gamma_a = 1$, the retailer will optimally choose to have no stock outages, $\alpha = 0$, in order to maximize the number of switch brands sold (see point C in Figure 4). Consumer welfare is identical in

Z_1 and Z_2 in Figure 3. The legal prohibition of stock outages is a moot point, because they would not occur even if allowed.

Analysis of the intermediate value, $\gamma_a = \gamma$, is similar to the case of $\gamma_a = 1$, but compares Y_1 to Y_2 in Figure 3. The retailer cannot change the probability of selling the more profitable switch brand by having stock outages of the bait brand. Recall that the net expected value added of the upselling is $\gamma S - M$ or $\gamma_a S - M$ depending on whether the bait item is out of stock or available. When the two are equal, which occurs precisely when $\gamma_a = \gamma$, there is no differential expected profits from stock-outs. This eliminates the incentive to have stock-outs (see point B in Figure 4), as WMG recognize in their Appendix 2, "retailers will never intentionally understock . . . and the solution degenerates to the no out of stock, upselling condition." Again, a law prohibiting bait and switch is moot.

Figure 4 summarizes the general results when γ_a varies continuously. For γ_a near zero ($\gamma_a S - M < 0$), the retailer will not only consciously plan to run out of stock of the bait brand, but will upsell only to those customers who are stocked out. This is the most extreme form of bait and switch. When γ_a is somewhat larger, but not greater than γ, the retailer will have stock outages, but will try to upsell to all customers, not just those stocked out. This is a more moderate form of bait and switch. In either of these situations, competition transfers all the expected benefits from improved customer/product matching to the consumers. Finally, for large values of γ_a ($\gamma_a \geq \gamma$), the retailer has no need to induce switching by stock outages because the probability of conversion is higher when the bait brand is available. As the General Bait-and-Switch Theorem states, consumers are either worse off with a law prohibiting bait and switch (when $\gamma_a < \gamma$), or such a law is moot because the retailers would voluntarily avoid bait and switch (when $\gamma_a \geq \gamma$, including the special case considered in WMG, $\gamma_a = \gamma$).

Bait and Switch with Monopoly Power

Both GH and WMG assume intense price competition among retailers, in the sense that attempts to attract customers with discounted feature prices drive retail profits to zero (of course, zero "economic" profits means a "normal" return on assets). This is critical because competition transfers benefits from bait and switch to the consumers. What if the retailer has monopoly power and was insulated from price competition? Will bait and switch necessarily help the retailer at the expense of the consumers?

To address this, suppose that the model is unchanged with the exception that we now have only one retailer. With no direct competition, the retailer's challenge is to attract consumers away from the convenience of their home (rather than away from a rival store). In equilibrium, the featured price must be low enough to make consumers just indifferent between staying home or going to the store: A higher bait price will not bring consumers to the store and a lower bait price will not maximize the retailer's profit. Once at the store, whether in the monopoly or competitive case, the retailer has the power to price the switch brand to leave the consumer indifferent between taking a rain check or buying the switch brand.

Will a law prohibiting bait and switch help consumers in the monopoly case? Obviously, there is no price-cutting spiral for the bait brand, so positive retail profit is possible when bait and switch is practiced. However, whether or not bait and switch is practiced, the monopolist has an incentive to leave each consumer indifferent to staying home or shopping. As a result in this monopoly model, a law prohibiting bait and switch does not change the welfare of consumers.

In the model discussed above all consumers are identical. Realistically, consumers are heterogeneous with respect to their costs of travel and shopping, willingness to pay for the products, or willingness to tolerate aggressive in-store sales presentations. When consumers are not identical, if each one is to be left indifferent between staying home and shopping, perfect price discrimination must be possible. Since this is a difficult practice to implement, it is likely that the monopolist excludes some consumers from the market through high prices. The introduction of bait and switch may accentuate this, creating welfare losses for some segments of consumers. Therefore, a law against bait and switch may or may not help when monopoly power exists.

Conclusion

We are pleased that Wilkie, Mela, and Gundlach (1998) have picked up the gauntlet that we tossed down with our *Marketing Science* paper back in 1990. Does bait and switch require protective legislation in a competitive market? We applaud their courage to take on this controversial issue, one of many aggressive marketing practices that could lead to consumer discontent (Star 1989; Lazear 1995). They stress the important fact that bait and switch consists of a combination of stock outages of featured brands and in-store upselling of substitute brands. Upselling by itself is an acceptable practice, but when combined with deliberate stock outages of featured brands, it becomes unfair bait and switch.

When we reexamine the competitive equilibrium that prevails in a more general setting than Gerstner and Hess (1990), we still find that a law prohibiting bait and switch is either harmful to consumers or is a moot point. Consumers are protected from bait and switch more than adequately by the "invisible hand" of competition, which transfers the gains from informative upselling to the consumers. The title of this paper is provocative but accurately describes the outcomes in markets like those modeled here. On the other hand, as scientists we recognize there are other types of markets where our conclusions do not hold, as we will now discuss.

The intensity of the competition between retailers in our model is extreme. If retailers had monopoly power, based on geographical location or collusion, the conclusion is problematic. The benefit of superior matching of customers to brands (on which our model rests) may not be transferred to the consumers, as it was in the competitive case. In some circumstances, we reasoned, this would leave consumers indifferent because their surplus would be extracted entirely, regardless of bait and switch. In other cases, where there is consumer heterogeneity, the monopolist may be unable to extract all the consumers' surplus using normal marketing tools, so bait and switch may enhance the ability to take advantage of customers to their detriment. Additional research is needed.

Consumer diversity is likely to create opportunities for a variety of retail practices targeted to different customers segments. Some stores might use deliberate stock outages and very low bait prices to attract customers who are not greatly bothered by stock outages, while other stores might carry generous inventories but charge higher prices to customers who would pay for shopping convenience. This type of differentiation strategy was modeled in Gerstner, Hess, and Chu (1993) for practices other than bait and switch, but future research should investigate the impact of a bait and switch law on the mixture of retail segments and on the total welfare in the economy.

It is important to recognize that stock outages occur for reasons other than bait and switch. Inventory management mistake is an obvious reason. In an earlier paper (Hess and Gerstner 1987), we analyzed stock outages when the retailer was not trying to switch customers to substitute brands, but rather trying to sell more complementary goods in other categories by offering rain checks as a way to bring back customers for future business. Our analysis of that situation also leads to the conclusion that consumers are generally better off when stock-outs are allowed, but we also found that the Nash equilibrium for retailers had a "prisoners' dilemma" aspect: Profits are lower when stock-outs are allowed. This is a double surprise. In fact, summing together consumer surplus and profits, we showed the total welfare of society is promoted with a law prohibiting stock outages. Balachander and Farquhar (1994) also rationalize stock outages as a means to soften price competition though differentiation.

As WMG point out, the law on bait and switch also deals with fraud. A law against fraud is useful regardless of whether the fraud is associated with bait and switch. In GH (p. 123) we argued that false or exaggerated in-store promotions that temporarily blind customers to the true merits of the substitute brand hurt consumers, but that the retailer's incentive to use such fraudulent practices is mitigated by competition.

In both our 1990 paper and Wilkie, Mela, and Gundlach's paper, the upselling may (or may not) be effective in generating improved matches between customer and brand, but the process of selling does not impact the utility of the shopper directly. Recently, we have analyzed (along with Wujin Chu) the retail practice of hard-sell (Chu, Gerstner, and Hess 1995), in which the typical customer registers discontent from

the process of upselling. In that model, there are no stock outages, but the hard-sell is detrimental to all consumers in the market.

In conclusion, like Wilkie, Mela, and Gundlach, we believe that bait and switch and other aggressive marketing practices deserve additional serious studies by marketing scholars.[1]

References

Balachander, S., P. H. Farquhar. 1994. Gaining more by stocking less: A competitive analysis of product availability. *Marketing Sci.* **13** 4 (Winter) 3–22.

Chu, W., E. Gerstner, J. D. Hess. 1995. Costs and benefits of hard-sell. *J. Marketing Res.* **32** 1 (February) 97–102.

Gerstner, E., J. D. Hess. 1990. Can bait and switch benefit consumers? *Marketing Sci.* **9** 2 (Spring) 114–124.

———, ———, W. Chu. 1993. Demarketing as a differentiation strategy. *Marketing Letters* **4** 1 49–57.

Hess, J. D., E. Gerstner. 1987. Loss leader pricing and rain check policy. *Marketing Sci.* **6** 4 (Fall) 358–374.

Lazear, E. P. 1995. Bait and switch. *J. Political Economy* **103** 4 813–830.

Star, S. 1989. Marketing and its discontents. *Harvard Business Rev.* (November/December) 148–154.

Wilkie, W. L., C. F. Mela, G. T. Gundlach. 1998. Does "bait and switch" really benefit consumers? *Marketing Sci.* 17 (this issue), 273–282.

[1]We thank Jelena Spanjol for comments that assisted our development of this paper.

This paper was received April 22, 1998, and has been with the authors 3 months for 2 revisions; processed by Charles B. Weinberg.