

Marketers are accused of selling people products they do not need. This can frustrate consumers and eventually lead to angry social commentators. The authors define hard-sell as an effort to match customers to goods that is so annoying to the average consumer that the displeasure exceeds its potential benefits. Using this definition, they derive three results: Hard-sell (1) prevails in the market because it mitigates price competition, (2) injures all consumers, including the often-overlooked customers who avoid direct encounters with the practice, and yet it (3) may increase social welfare because sellers gain more than consumers lose.

Costs and Benefits of Hard-Sell

Active selling tactics in which retailers aggressively persuade consumers to spend more money at their stores have long been subjects of criticism and controversy. Star (1991) pointed out that researchers have been silent in response to criticism of such marketing practices and argues that

Individuals often don't perceive any need for particular products until they have been persuasively exposed to the possibility of having them—and it is marketing experts who expertly do the persuading. When an expert takes on an amateur, especially when money is involved, the general feeling is that it's unfair.

Examples of aggressive practices are loss-leader pricing with deliberate stockouts (Hess and Gerstner 1978), bait-and-switch selling (Gerstner and Hess 1990), manipulative presentations, creating a false sense of urgency, and overstating the product's merits. Such selling techniques are often associated with unsought add-on features. For example, car dealers and appliance stores often advertise a basic brand at a bargain price to draw customers to their stores and then pressure customers to buy high margin add-on features.

How can these selling practices prevail in competitive markets despite consumer irritation with this approach and firms' often-stated goal of providing customer satisfaction? What is the impact of these techniques on consumers and society? To answer these questions, we construct a conceptual measure of hard-selling that weighs consumer annoyance with active selling of add-ons against the benefit of im-

proved matching of customers to features. We define hard-sell as a situation in which to an average consumer the annoyance is greater than the expected benefit.

Retailers who face consumers with very different tolerance levels for active selling prefer to differentiate their selling styles; that is, one retailer uses hard-sell and the other does not. By differentiating their selling styles, the firms avoid head-on competition.

Hard-sell always injures the typical consumer. In most cases it injures *all* consumers not just those who directly encounter the practice. Consumers who avoid the hard-seller by shopping elsewhere pay a higher price to the passive seller, who takes advantage of the fact that many customers will bear high prices to escape from the hard-sell. That is, hard-sell is more damaging to consumers than was conventionally thought.

Finally, hard-sell is not necessarily bad for society (the collection of consumers and retailers), which is surprising, given how much it damages consumers. But hard-sell forces exposure to add-on features, which increases the incidence of value-creating exchange. Although all consumers may be injured either directly or indirectly by hard-sell, only those with relatively low exposure cost actually incur annoyance. This consumer self-selection implies that the net impact of hard-sell on social welfare *may* be positive.

The differentiated equilibrium derived subsequently is analogous to models of product differentiation, including recent work in marketing by Hauser (1988), Moorthy (1988), Horsky and Nelson (1992), and Rhee and colleagues (1993). Gerstner, Hess, and Chu (1993) show that sellers may profit through differentiation by introducing product features that are meaningless and even detrimental to consumer welfare. By contrast, the following model analyzes selling strategies in which retailers differentiate selling styles by bundling a utility-enhancing service (matching customer to add-on feature) with a utility-diminishing service (annoying selling).

*Wujin Chu is Senior Lecturer, Seoul National University, Korea. Eitan Gerstner is Associate Professor, University of California, Davis, and Senior Lecturer, University of Haifa, Israel. James D. Hess is Professor, University of Illinois. This research began while Professor Hess was visiting MIT's Sloan School of Management, where Wujin Chu was then a faculty member. The authors thank the Marketing Group for providing a stimulating environment, as well as participants at MIT, University of Haifa, Tel-Aviv University, University of Rochester, and EURO/TIMS marketing workshops, and particularly Birger Wernerfelt for his useful comments.

A DESCRIPTION OF THE MODEL

Consider two retailers who try to attract customers to their stores by advertising their prices for a homogeneous *basic product*. Each retailer decides whether to persuade visiting customers to spend additional money on an unsought *add-on feature*. The retailer may have monopoly power over this feature, which may exist because of exclusive distribution arrangements, unique retailer service packages, or simply because customers want to avoid additional shopping costs.

Consumers

Consumers enter the market seeking only one unit of the basic product. Each consumer is willing to pay up to V dollars for it. At the store, a retailer may attract the attention of customers and actively persuade them to buy an add-on feature. This active selling may provide customers with useful information about the add-on (Wernerfelt 1994), awaken latent desires, and eventually lead to unplanned purchases. Let γ , $0 \leq \gamma \leq 1$ denote the conversion rate, the probability that a consumer will be persuaded to buy the add-on. Those who are persuaded would buy it at any price less than or equal to A . Those who are not convinced value the add-on at zero. We assume that consumers are not defrauded into buying the add-on for a price above their reservation value.

Such active selling, however, absorbs customers' time and may impose psychological distress upon them. We call the monetary equivalent of these customers' costs *exposure costs*, denoted by E . Consumer discontent from active selling is diverse. Assume that exposure cost is distributed uniformly within the population between $\mu - D$ and $\mu + D$, where $\mu - D > 0$, so all consumers have a positive exposure cost. The average customer would give up μ dollars to avoid the hassle of an active sales presentation, and the diversity of exposure cost is measured by the half-width of the interval, D .

Retailers' Profits

A retailer who uses active selling for add-ons is an *active seller*, and one who does not is a *passive seller*. Assume, for simplicity, that a passive seller cannot sell the add-on because consumers do not seek to buy it (one can show that none of the results that follow change if passive selling converts some customers to the add-on). Let P_{active} denote the active seller's price of the basic product and let P_{passive} be the passive seller's price. The basic product's unit cost is C , where $C < V$, and the costs of add-ons are assumed to be zero without loss of generality. With market size normalized to 1, let X_{active} represent the market share of the active seller and let $X_{\text{passive}} = 1 - X_{\text{active}}$ be the market share of the passive seller. The passive seller's profit is gross margin times market share,

$$(1) \quad \text{Profit}_{\text{passive}} = (P_{\text{passive}} - C)X_{\text{passive}}$$

All customers of an active seller contribute $P_{\text{active}} - C$ dollars by buying the basic product. Once these customers are in the store, however, the retailer has monopoly power over them and can charge a price for the add-on that extracts all the consumer's value (this assumption is not crucial, as discussed subsequently). Those who are converted by active selling of the add-on contribute A dollars. That is, in equilibrium

$P_{\text{add-on}} = A$, and the expected profit of an active seller is

$$(2) \quad \text{Profit}_{\text{active}} = (P_{\text{active}} - C + \gamma A)X_{\text{active}}$$

Decisions are made in the following sequence. First, each of two retailers chooses a selling strategy: active or passive. This may result in identical selling strategies (both retailers are either active or passive) or differentiated selling strategies (one retailer is an active seller and the other is a passive seller). Second, given the selling strategies, the retailers select prices. Both set the price for the basic product, but the active seller must also price the add-on. Finally, consumers decide where to shop and what to buy, selecting the retailer and items that maximize their well-being.

The strategic interplay between active and passive sellers is analyzed in two stages, first by solving for equilibrium prices and profits and then by deriving the equilibrium selling strategies. This backward induction guarantees that the equilibrium is subgame perfect.

EQUILIBRIUM PRICES

Second-stage equilibrium profits are both zero (that is, the revenue is just sufficient to yield a normal return on investments) if both retailers adopt identical selling styles and positive if both use different selling styles as shown subsequently.

Identical Selling Styles

Consider the case in which both sellers use active selling tactics, with profits given in Equation (2). Consumers believe they will obtain a low price for the advertised basic product but will be hassled by an active sales pitch. Because all stores are equally unattractive with respect to exposure cost, the store choice decision is based solely on price. All consumers select the store with the lowest basic price. Price-cutting takes place until the expected profits from selling the basic product and add-ons are zero for both retailers.

Because identical retailers capture the same market share, the equilibrium price for each can be found by substituting a market share of .5 percent in profit formula (2), setting this equal to zero, and solving for price (see Table 1 for results). The argument for zero economic profits when both retailers use passive selling is similar.

Differentiated Selling Styles

Customers select stores on the basis of in-store selling style and basic product price. Each store targets a different consumer segment. The market divides at the point where the surpluses from each retailer are equal for the boundary customer with exposure E_0 :

$$(3) \quad V - P_{\text{passive}} = V - E_0 - P_{\text{active}}$$

Solving this for the level of exposure costs that corresponds to a customer who is indifferent between active and passive sellers gives

$$(4) \quad E_0 = P_{\text{passive}} - P_{\text{active}}$$

Because consumers' exposure costs are distributed uniformly in the interval $\mu - D$ and $\mu + D$, the active and passive re-

Table 1
EQUILIBRIA: IDENTICAL VERSUS DIFFERENTIATED SELLING STYLES

Selling Style	Identical Selling Styles		Differentiated Selling Styles	
	Both Passive	Both Active	Passive	Active
Basic Product Price	C	$C - \gamma A$	$C + D - \frac{B}{3}$	$C - \mu + D - \frac{2B}{3}$
Market Share	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2} - \frac{B}{6D}$	$\frac{1}{2} + \frac{B}{6D}$
Economic Profits	0	0	$2D(\frac{1}{2} - \frac{B}{6D})^2$	$2D(\frac{1}{2} + \frac{B}{6D})^2$

where $B = \text{expected benefit} = \gamma A - \mu$.

tailers obtain the following market shares, respectively (assuming every consumer buys):

$$(5) \quad X_{\text{active}} = (E_0 - \mu + D)/(2D) = (P_{\text{passive}} - P_{\text{active}} - \mu + D)/(2D),$$

$$(6) \quad X_{\text{passive}} = 1 - X_{\text{active}}$$

Profits can be written as functions of prices P_{passive} and P_{active} by substituting the market shares into formulas (1) and (2) respectively:

$$(7) \quad \text{Profit}_{\text{passive}} = (P_{\text{passive}} - C) [1 - (P_{\text{passive}} - P_{\text{active}} - \mu + D)/(2D)], \text{ and}$$

$$(8) \quad \text{Profit}_{\text{active}} = (P_{\text{active}} + \gamma A - C) (P_{\text{passive}} - P_{\text{active}} - \mu + D)/(2D).$$

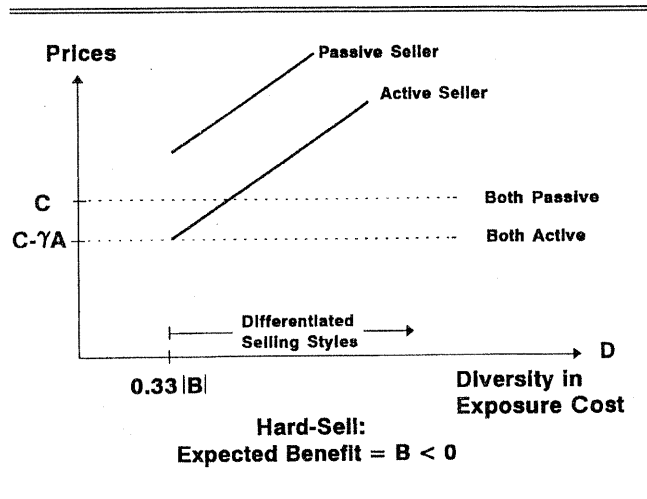
Equilibrium prices are found by maximizing profits (7) and (8) with respect to P_{passive} and P_{active} , respectively, and solving simultaneously for the two prices. Back substituting the equilibrium prices into equations (5)–(8) yields the equilibrium market shares and profits.

Table 1 compares active and passive sellers in the various equilibria. Equilibrium prices, market shares, and profits depend on costs, consumer diversity, and the expected benefit of active selling. A consumer who is exposed to active selling has an expected value for the add-on of γA and an expected annoyance with active selling μ , so the *expected benefit* from active selling is $B = \gamma A - \mu$.

Hard-sell is defined as active selling, where the average consumer would experience annoyance from the selling encounter that exceeds the expected consumption value of the add-on. That is, hard-sell corresponds precisely to negative expected benefit, $B < 0$. All consumers experience exposure costs with active selling, but this does not by itself constitute hard-selling. The typical customer learns something of value about the add-on feature. This measure of hard-sell takes into account the average exposure cost across the entire population and the average value created. According to this conceptualization, hard-sell occurs when consumer valuation of the add-on feature A is small, the conversion rate γ is small (many consumers do not value the add-on after the active sales effort), and the average exposure cost μ is high.

If the unsought feature is expected to generate great satisfaction for the typical consumer and cause only mild annoyance, then we say that the active retailer is using *soft-sell*, which is defined as an active selling environment in which the expected benefit is positive, $B > 0$.

Figure 1
PRICES OF BASIC PRODUCT VERSUS DIVERSITY IN EXPOSURE COST



In Figure 1 the equilibrium prices of the basic product are plotted against the consumer diversity parameter. The passive seller always charges more for the basic product, because the price cannot be cross-subsidized from the add-on feature. As consumers become more diverse, segmentation becomes easier, and both sellers can charge higher prices.

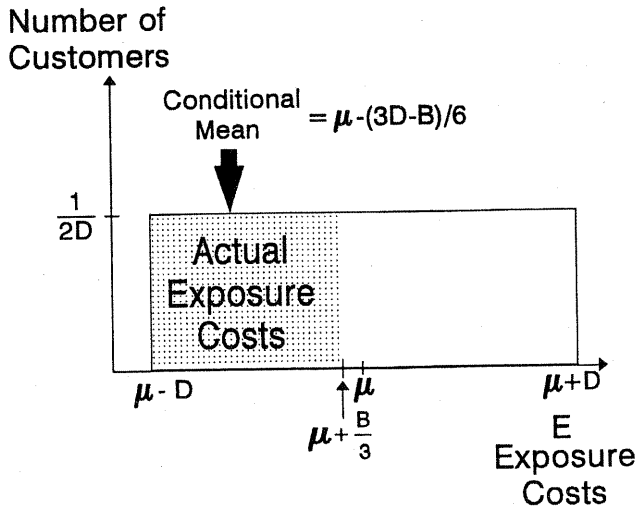
When both retailers are active sellers, the competitive price of the basic product, $C - \gamma A$, is lower than cost because the add-on also contributes to profits. In the differentiated equilibrium, the hard-seller can also use the basic product as a loss-leader (see Figure 1 with small diversity). The retailer takes a loss on the basic product to get the customer into the store, where on average more than enough profit is made on the add-on to compensate for the loss-leader. We turn now to determination of the equilibrium selling strategies.

EQUILIBRIUM WITH HARD-SELL

With sufficient diversity in consumer attitudes toward active selling, we might expect a differentiated equilibrium with both active and passive selling. From Table 1 we see that both differentiated sellers have positive market shares in equilibrium when

$$(9) \quad -3D < B < 3D.$$

Figure 2
EXPOSURE COSTS



If this inequality holds, differentiated selling strategies persist and profits are positive.

The width of the interval of expected benefits in Equation (9) is determined by the diversity in exposure costs, as measured by the half-width of the uniform distribution, D . The more diverse the customers, the more likely that a given expected benefit, even a negative one, will lead to differentiated selling, so hard-sell can exist in equilibrium.

Result 1. With sufficient consumer diversity, retailers choose to differentiate their selling styles, even when hard-sell results.

The intuition for this result is as follows: Consumers with high exposure costs dislike active selling so intensely that they become captives of the passive retailer who in turn can increase the price of the basic product. This higher price makes the active retailer more attractive to the remaining shoppers with low exposure costs, so the basic price can be raised to better exploit these customers. Using different selling styles, both retailers extract more consumer surplus and earn positive profits compared to identical selling styles, even when hard-sell persists.

The model does not predict which of the two identical retailers uses active selling. However, it is clear from Table 1 that the passive seller earns higher profits when hard-sell exists ($B < 0$). If retailers enter the market sequentially, the

first entrant would choose passive selling. The second entrant would find taking the role of differentiated hard-seller more profitable than taking the role of another passive seller (see Gerstner, Hess, and Chu 1993 for a model with sequential entry).

Next, we examine the consequences of hard-selling for the retailers, consumers, and society as a whole.

THE IMPACT OF HARD-SELL ON CONSUMERS AND SOCIETY

Both firms profit when one retailer uses hard-sell. What about consumers? Is it possible that some customers benefit positively from the diversity of shopping alternatives, even when hard-sell exists? The answer is no. Can society benefit from hard-sell? The answer is yes, but not always, as we will establish next.

Impact on consumers

We measure the overall customer satisfaction by the expected surplus obtained by consumers. Under identical passive selling, the expected consumer surplus is $V - C$, because prices are driven to cost. Under identical active selling, the price of the basic product is driven below cost, and the expected surplus is $V - C + B$.

Prices with differentiated selling strategies are given in Table 1. The expected surpluses from a passive seller is $V - P_{\text{passive}} = V - C + B/3 - D$, and the expected surplus from an active seller is $V - P_{\text{active}} - E = V - C + \mu - D + 2B/3 - E$. Only consumers with E below $E_0 = \mu + B/3$ shop at the active seller (Figure 2), so average realized exposure cost is the midpoint of the interval $[\mu - D, \mu + B/3]$: $\mu - (3D - B)/6$. The total consumer surplus is found by summing these values across all possible exposure costs (see Table 2).

Figure 3 shows how consumer surplus varies with exposure costs under differentiated and identical selling styles. The following result is evident.

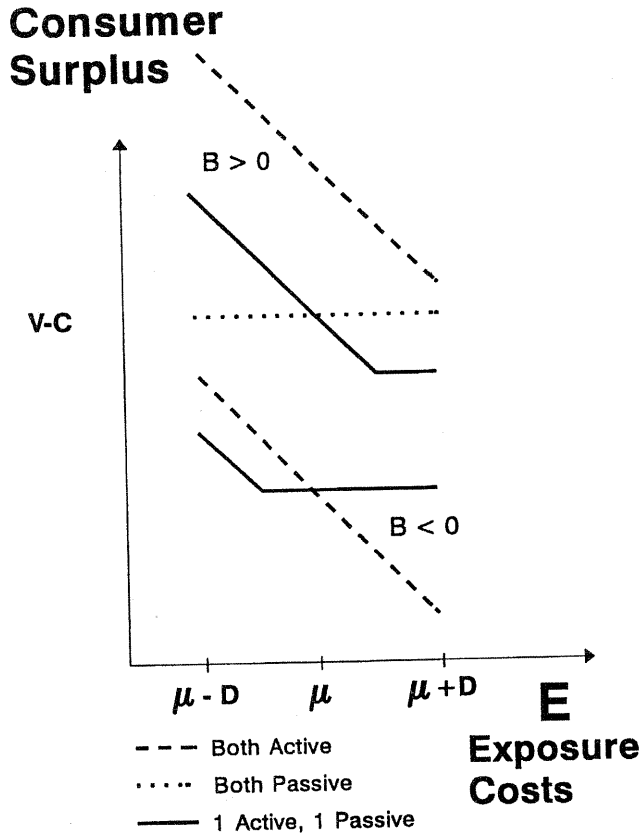
Result 2. A differentiated equilibrium with hard-sell is detrimental to all consumers.

In a hard-sell environment, the first best outcome for every consumer is to have identical passive sellers. When one seller differentiates him or herself by using hard-sell, two negative things happen. First, customers who are attracted by the hard-seller's relatively low basic prices incur exposure costs. Second, retailers become differentiated in the eyes of the consumers, so price competition for the basic good is less fierce. This allows the passive seller to raise the price above cost because the active seller is annoying cus-

Table 2
SOCIAL WELFARE

Selling Style	Identical Selling Styles		Differentiated Selling Styles
	Both Passive	Both Active	Active and Passive
Total Profits	0	0	$[1 + (\frac{B}{3D})^2]D$
Consumer Surplus	$V - C$	$V - C + B$	$V - C + \frac{B}{2} - [3 - (\frac{B}{3D})^2] \frac{D}{4}$
Total Welfare	$V - C$	$V - C + B$	$V - C + (1 + \frac{B}{3D})(\frac{1}{5} + \frac{B}{3D}) \frac{5D}{4}$

Figure 3
CONSUMER SURPLUS

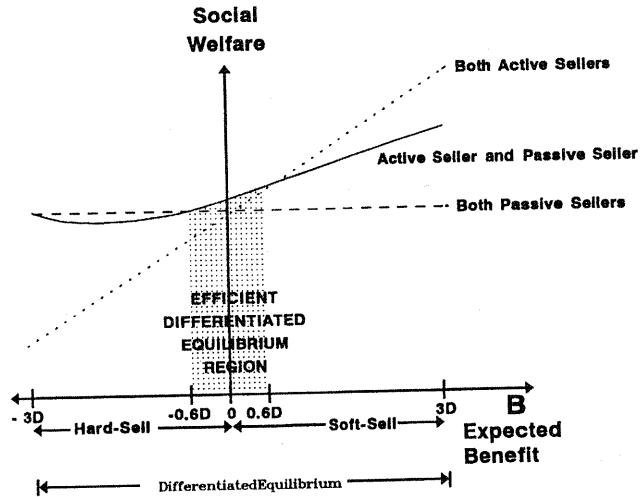


tomers. Because the passive seller is not as attractive with this higher price, the active seller does not have to fully compensate customers for their exposure cost. From Table 1, we see the hard-seller's price is not $\mu - D$ dollars below cost but $\mu - D + 2B/3$ dollars; because $B < 0$, even the customer with smallest exposure cost, $\mu - D$, is hurt by the hard-selling.

It is interesting to note from Figure 3 that when the benefit factor B is positive (soft-sell), active selling by both retailers is the preferred choice of the average consumer. Why wouldn't typical consumers prefer a variety of selling styles so they could select the style that fits them best? The answer is simple: When retailers use the same active selling style, competition for customers drives the price of the basic product below cost. By contrast, under differentiated selling styles, the retailers avoid head-to-head competition, so prices are higher. In the aggregate, the incremental surplus from lower prices exceeds the decrement in surplus from limited shopping alternatives with soft-sell.

It might appear that retailers capture all the social benefits of hard-selling, simply because consumers lack the negotiation skills to drive the price of the add-on below their willingness to pay, A . Surprisingly, nothing dramatic changes if consumers can buy the add-on for a fraction of their willingness to pay.

Figure 4
DIFFERENTIATED EQUILIBRIUM AND SOCIAL WELFARE



Specifically, if the price of the add-on was not A but $(1 - k)A$, where $0 < k < 1$, one can show that the equilibrium price of the passive seller is unchanged, but the price of the active seller rises by γkA . This implies that the dividing line between the segments, E_0 , is unchanged, because the active price increase cancels the gain in surplus from the add-on. Because the net margin per customer is unchanged and there are no extra customers, the profits and aggregate consumer surplus cannot change.

However, redistribution of consumer surplus within the population will occur. In fact, those who value the add-on have a positive benefit, because they get a realized surplus of kA (compared to zero before) and pay an extra γkA for the basic good, netting more surplus $(1 - \gamma)kA$. In contrast to Result 2, these shoppers may actually benefit from hard-sell. The unlucky consumers who shop at the active seller and expect to benefit, but discover they do not actually like the add-on, lose the surplus γkA because of the higher basic product price. There are γ lucky consumers and $1 - \gamma$ unlucky consumers, so the aggregate surplus for the customers of the active seller does not change $\gamma(1 - \gamma)kA + (1 - \gamma)(-\gamma kA) = 0$.

Impact on society

It is important to consider the social efficiency of hard-selling not just the initial distribution of benefits and costs. With larger social welfare, it is at least possible to design programs that make both the retailers and consumers better off.

A measure of total social welfare commonly used by economists (Stiglitz 1986) is the sum of profits and all consumer surplus, as reported in Table 2. Plotting social welfare against the expected benefit (Figure 4) shows that the differentiated selling styles can be more efficient than identical selling styles if the hard-sell is not too harsh ($-0.6D < B < 0$).

Result 3. With sufficient consumer diversity, an equilibrium with hard-sell benefits sellers more than it costs consumers. The hard-sell improves total social welfare because of improved product matching.

The intuitive explanation for this result is as follows: Active selling improves the matching of consumers to add-on features, even when hard-sell exists. When customers can select between active and passive sellers, annoyances are reduced. With a sufficiently diverse population, customers can better protect themselves from hard-sell by selecting the most appealing store. The differentiated equilibrium is efficient.

CONCLUSION

Sellers continue to use aggressive techniques that put marketers on the defensive. For example, Sears recently settled a suit with New Jersey for pushing auto center employees to oversell repairs (by agreeing to pay \$200,000 to an auto reform fund; see Flynn, Del Valle, and Mitchell 1992). How can such hard-sell persist in competitive markets, and should marketers apologize for such practices? Answering these questions requires a measure of hard-sell and a careful analysis of hard-sell's impact on the entire market system.

We defined hard-sell as an effort to sell an unsought add-on feature that is so annoying to the average consumer that the displeasure from the practice exceeds its potential benefit to society. Using this definition, we derived three principal results:

- Hard-sell can prevail profitably in a competitive environment.
- Hard-sell is detrimental to all consumers, including those who avoid direct exposure to the practice.
- Moderate hard-sell is beneficial to society in the sense that sellers gain more from the improved product matching than consumers lose.

It is important to note that our measure of hard-selling incorporates the attitudes of the average consumer in the market, including consumers who avoid hard-sellers. That some consumers have taken steps to mitigate the damage (by shopping at a passive seller) does not mean they should be ignored, because these shoppers pay a higher price. This is in the same spirit as the belief that customer satisfaction measures should include noncustomers to avoid self-selection bias (Hauser, Simester, and Wernerfelt 1994).

The value created by active selling would typically be shared by buyer and seller. For expositional simplicity we initially assumed that the seller captured all the value. This meant, of course, that no customer gained from the add-on feature alone. Isn't this no-win situation for add-ons what constitutes hard-sell? We believe not.

First, it is myopic. The basic product and the add-on feature are a package, and the consumer may be offered an excellent deal on the basic product in compensation for the ac-

tive selling of the add-on. It would be improper to unhook the two pieces. Second, hard-sell may be in the eye of the beholder—one person's hard-sell is another person's friendly customer service. We use an overall conceptual measure. Third, as mentioned previously, even if the price of the add-on is zero (consumers capture all the benefit of the add-on), there is a compensating increase in the price of the basic product. The equilibrium outcome for a typical buyer or seller depends on our measure of hard-sell not the initial sharing of the add-on benefit.¹

What drives our principal results? Hard-selling prevails in a competitive environment because of retailers' desires to differentiate their selling styles, even when the harm from active selling exceeds its benefit. Consumers prefer to eliminate hard-sell, because the benefits from variety in selling styles is captured by the retailers through higher prices. From the social perspective, however, when hard-sell is not too severe, the benefit of improved customer-to-feature matching can offset the consumer annoyance, and the equilibrium with differentiated selling styles is efficient.

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¹Economists have for years dealt with similar issues when analyzing tax incidence; the retailer literally pays the sales taxes, but the buyer may help pay for it through higher prices (Stiglitz 1986, Chapter 17).