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DEMONSTRATIONS AND MONEY-BACK GUARANTEES: MARKET MECHANISMS TO REDUCE UNCERTAINTY

by

Amir Heiman, David Zilberman, and Devavrat Purohit

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Amir Heiman*
David Zilberman
Devavrat Purohit

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*Amir Heiman is Visiting Scholar, Haas School of Business, University of California, Berkeley; David Zilberman is Professor and Chair, Department of Agricultural and Resource Economics, University of California, Berkeley, and Devavrat Purohit is Assistant Professor, Haas School of Business, University of California, Berkeley.

DEMONSTRATIONS AND MONEY-BACK GUARANTEES: MARKET MECHANISMS TO REDUCE UNCERTAINTY

Abstract

One of the concerns that consumers face before purchasing a product is judging the extent to which the product will meet their needs. This uncertainty lowers consumers' propensity to make purchases. Hence, it behooves retailers and manufacturers to use strategies that lower consumers' pre-purchase risk. Not only does this help consumers, but it also helps retailers and manufacturers. This paper explores the role of demonstrations and money-back guarantees as strategies to reduce consumers' pre-purchase risk. In particular, the paper develops a series of propositions that outline the effectiveness of each tool and the conditions under which each should be used.

1. INTRODUCTION

In today's business climate, it is common for retailers to offer provisions such as money-back guarantees or full refunds to induce consumers to make purchases. However, these services often come at a high cost to both retailers and consumers. For example, only 16% of multimedia sales during the 1995 Christmas season were profitable, and the main reason for this low profitability was the high rate of consumer returns (Justin 1996). The question that this raises is: Why were so many of the products returned? Although some returns were due to defective products, most were due to "defective" information. In particular, consumers were not sure they wanted the product, they did not understand how to operate it, or they bought items that were incompatible with their existing equipment. This pattern strongly suggests that, if consumers had been better informed before they made their purchase, a number of returns could have been avoided, resulting in cost savings for both retailers and consumers. In this paper, we explore the role of demonstrations and money-back guarantees as mechanisms to reduce purchase uncertainty. In particular, we determine the conditions under which the use of these risk reduction strategies can be optimal for both retailers and consumers.

Warranties, money-back guarantees, and demonstrations are commonly used to reduce consumers' purchasing uncertainty. While the role of warranties in risk reduction has been widely researched (e.g., Courville and Hausman 1979; Padmanabhan and Rao 1993), there has been less research on the effect of money-back guarantees and demonstrations on reduction of consumer uncertainty . In particular, researchers have a limited understanding of the following questions about money-back guarantees and demonstrations:

1. From the consumer's point of view, which mechanism is most effective and under what conditions ?
2. What are the pros and cons of these mechanisms for retailers and manufacturers?
3. What role do retailers and manufacturers play in providing these mechanisms? In other words, what will be provided and by whom?
4. What are the trade offs between money-back guarantees and demonstrations?

The objectives of this research are to address the above questions by (1) describing and evaluating the performance of these mechanisms, (2) explaining the combination of consumer and product characteristics necessary for use of these tools, and (3) exploring the variables which affect the effectiveness of each tool.

In most purchasing contexts a consumer has to deal with some degree of uncertainty. For example, uncertainty may range from whether your new tie will look good at a formal dinner to whether it will fall apart after the first dry cleaning. It is clear that the discomfort associated with the uncertainty increases with the value (both monetary and nonmonetary) of the product being considered for purchase and decreases with the extent of prior knowledge the consumer has or can acquire about the product before making the purchase. It is important to note that the consumer's uncertainty can have objective and subjective sources. The objective component deals with the probability of failure of the product due to firm specific reasons such as the quality of manufacturing. On the other hand, subjective uncertainty deals with the degree to which the product fails to meet the consumer's needs.

In purchasing contexts, the cost of eliminating uncertainty altogether can be prohibitively high. However, eliminating all uncertainty is not necessary. In particular, as long as a firm is able to lower the level of uncertainty below a threshold level, a consumer may be willing to make the purchase. In this paper, we explore demonstrations and money-back guarantees as two mechanisms for reducing pre-purchase uncertainty. Manufacturers and retailers often demonstrate their products (or offer samples in the case of nondurables) in order to enable the consumer to gain experience before making a purchase decision, thereby reducing uncertainty. In fact, almost all store sales involve some level of demonstration. While consumers receive the benefits of demonstrations before the product is sold, note that the benefits of a money-back guarantee can only be realized after the purchase is made; however, the money-back guarantee's risk reduction benefit occurs before the purchase.

The remainder of this paper is organized as follows. In the following section, we introduce the notion of pre-purchase uncertainty. Then, in section 3 we describe and analyze demonstrations and money-back guarantees. In the subsequent section, we develop propositions relating to an optimal use of demonstrations and money-back guarantees. Finally, we conclude with a discussion of the implications of our work and future research directions.

2. PRE-PURCHASE UNCERTAINTY

In many purchase situations, consumers have to resolve some level of uncertainty about the product before they can make their purchase. The uncertainty over the purchase is higher when the consumer is new to the category and less knowledgeable about the product. In general, the uncertainty experienced by consumers arises from four sources:

1. *Technical uncertainty* relates to the failure rate of the product. Sometimes referred to as reliability, it reflects the extent to which the product conforms to specifications and standards.
2. *Performance uncertainty* arises from a potential gap between the consumer's perception of the product's performance and the actual level of performance.
3. *Matching uncertainty* reflects the uncertainty about the product's ability to fit the consumer's needs.

4. *Response uncertainty* refers to the feedback about the product that the consumer may receive from other people. Note that this is similar to matching, but we separate the two in order to emphasize the distinction between the fit of the product to one's own judgment versus some significant other's judgment.

The extent of uncertainty experienced by consumers clearly depends on the context of the purchasing situation. In general, a purchasing situation can be characterized by the interaction between the individual consumer and product characteristics. In other words, depending on the individual consumer and characteristics of the product in a particular purchase situation, the level of uncertainty can vary. We elaborate on both of these below.

Consumer Effects

Depending on the level of information they have about a product, we can classify consumers into experts and novices. Because experts possess more knowledge than novices, we would expect experts to be more certain than novices about the technical and performance aspects of the product (see Moore and Lehmann 1982; Newman and Staelin 1971, 1972; Punj and Staelin 1983). However, even though experts may have lower technical and performance uncertainty, uncertainty regarding match and response need not be lower. In addition, note that the extent of information search need not be lower (Brucks 1985; Johnson and Russo 1984; Sujan 1985).

Finally, other variables that affect consumer decision making are the level of involvement and information search behavior. Products whose attributes are not known to the consumers, but for which the cost of a mistake is high (e.g., high price, ego attributes), lead to intensive information search. As consumers learn through experience, information search is reduced and there is a tendency toward repeat purchase. More experience with the same product means the brands are less risky and, therefore, more likely to be repurchased.

Product Effects

Products can be classified as durables, nondurables, and services (Kotler 1994). Durables are tangible products that are long lived and, therefore, consumed over long periods; nondurables are tangible products that are consumed relatively quickly (for example, supermarket products); and services are intangible. Compared to nondurables, the purchasing process for durables is characterized by higher levels of involvement and information search. On the other hand, because repeat purchases occur sooner with nondurables, learning can occur over multiple trials.

In addition to the classification of products above, Nelson (1974) clarified the distinction between search goods and experience goods. Search goods are products about which consumers can learn all the relevant information (e.g., attributes, performance, etc.) before making a purchase decision. For example, the nutritional quality of a cereal can be learned from the information on the package. Experience goods are products whose quality can be learned only after direct experience is gained (i.e., after the product has been purchased). Therefore, experience goods lead to a higher level of uncertainty than search goods. Darby and Karni (1973) added another category called credence goods. These are products or services which, even after they are consumed, do not provide consumers the ability to judge their performance, e.g., certain physician services.

3. MECHANISMS FOR REDUCING PURCHASE UNCERTAINTY

In reducing consumers' pre-purchase uncertainty, firms often choose tools such as demonstrations and money-back guarantees. Below, we discuss each of these strategies.

Money-Back Guarantees

A money-back guarantee gives a consumer the option to return a product for a refund. In general, these guarantees differ on three dimensions: the length of time during which the product can be returned to the firm, the cost of returning the product, and the terms of the return.[1] Retailers vary in the length of time that a money-back guarantee applies. For example, Tower Record offers a 24-hour, money-back guarantee while Nordstrom offers an open-ended, money-back guarantee. Most often we see money-back guarantees in the range of 30-90 days. In general the longer the period of return, the greater the opportunity for the consumer to learn about the product's attributes and how well it meets his or her needs.

The cost of the return can be looked at from two perspectives. First is the consumer's transaction cost of returning the product, i.e., returning to the store, waiting in line, etc. Second is the retailer's cost of return, i.e., restocking fees, shipping charges, direct mailing expenses, etc. In practice, some retailers offer full return and bear all the costs while other retailers offer only limited money-back guarantees and shift a portion of the above-mentioned costs to the consumer. For example, the terms of return can be classified by the extent of the refund and the prior condition for the return . Full money back means that the consumer receives a refund when the product is returned, while replacement means that the consumer is allowed only to replace the product with another product at the same store. Prior conditions for returns are restrictions such as proof of purchase, original package, etc. Note that the greater are the conditions imposed by the retailer, the harder it is for the consumer to take advantage of the money-back guarantee. Note that the existence of different terms for money-back guarantees can create additional uncertainty for consumers. Thus, consumers may not always understand the conditions of the money-back guarantee offer and, therefore, underestimate the risk of the purchase (Bredin 1992).

The existence of a money-back guarantee gives consumers the option to return the product if for some reason it turns out to be unsatisfactory. This, in turn, lowers the level of risk (Phillips 1993) and increases consumers' willingness to try new products (Davis, Gerstner, and Hagerty 1995). A firm can respond to a higher willingness to pay on the

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part of consumers through a price increase to cover some of the cost of returns. Thus, we observe that retailers who handle returns and offer longer terms for the return also charge higher prices (Geistfeld and Key 1991). Money-back guarantees also serve as a signal for the product's quality (Moorthy and Srinivasan 1995) or quality of the retailers' services (Heal 1977).

Although money-back guarantees are beneficial for consumers, they do carry certain additional risks for the provider of the guarantee. The retailers incur costs of handling returns such as absorbing all or part of the lost value of the product, cost of space, repackaging and delivering the product to the manufacturer, etc. In general, with the exception of the consumers, returns expose all members of the marketing channel to increased cash-flow uncertainty and higher costs. In addition, there is the cost of "moral hazard" on the part of consumers. For example, consumers could "use" the product and return it for a refund; this could occur with software that can be copied or a tuxedo that can be worn for that one special occasion and then returned. This suggests that firms need to set in place mechanisms to minimize opportunistic behavior on the part of consumers. Given some of these costs, the retailer can impose restrictions on returns (Davis et al. 1995), discount the consumer's compensation by the usage ratio (Mann and Wissink 1990), or better match the needs of the consumer to the product. Better matching of the product to the consumer's needs can be achieved by improving the product's quality or by improving the in-store service.

The terms of return that are offered by a manufacturer to the retailer are important in influencing the extent of returns. If a manufacturer allows unlimited returns, there is less incentive for the retailer to choose its customers with care; this can lead to overselling. This implies that it is in the manufacturers' interests to limit the number of returns. For example, the Computing Technology Industry Association recommends to its members to restrict returns, which can exceed 20%, to 2% of sales (Longwell 1994a, 1994b). As in other channel decisions, note that the final decision on the amount of merchandise that can be returned is negotiated, along with other terms, between the seller and the manufacturer or the distributor.

Demonstrations

In contrast to money-back guarantees, demonstrations allow the consumer to gain experience with the product before making a purchase. Demonstrations can differ in the place where the product is demonstrated (in the retail environment or the consumer's environment) and the extent of service and guidance provided by the salesperson. By their nature, note that demonstrations occur only with durable products.[2]

The extent to which demonstrations affect sales has been analyzed using two approaches. The first approach takes the view of a demonstration as another element in the promotional mix, where a demonstration reduces the potential customer's resistance to the sales efforts (see Freedman and Fraser 1966; Pliner, Hart, Kohl, and Saari 1974; Scott 1976). This research suggests that the customers who agree to a demonstration are more likely to purchase the product than are consumers who do not see the demonstration.

The second area of research focuses on the role of demonstrations in allowing consumers the opportunity to learn more about the product, thereby reducing risk. Demonstrations also provide the consumer with information from the primary source which is highly preferred to any other source of information (see Smith and Swinyard 1983). In addition, demonstrations work very well in affecting consumers' prior beliefs. For example, Roberts and Urban (1988) show how this works in the case of automobile test drives.

From the firm's perspective, offering demonstrations involves further costs which, because of the personal selling nature of a demonstration, are usually quite high. For example, these costs may include not only salaries and insurance for the staff, but also

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installation, delivery, fuel, etc. In addition, if a product is used extensively for demonstration, then the depreciated product has to be sold at a lower price.

More recently, Heiman and Muller (1996) suggest that products (or attributes) differ on the amount of time it takes to learn about them. While certain attributes (e.g., how fast a car accelerates) can be learned reasonably quickly, other attributes (e.g., the comfort of the seats on long drives) can only be learned through a greater investment of time. Note that the extent and rate of learning depend on the level of knowledge the consumers possess before the demonstration. The more knowledgeable the consumer, the faster is the learning process. However, because a more knowledgeable consumer learns more quickly, this consumer may seek information on more attributes. On the other hand, consumers with low levels of prior knowledge may become frustrated in their attempts to learn about a product. This calls for a greater involvement of the salesperson. Although the salesperson reduces the learning time needed to operate the product, note that the consumer loses some of the self-experience advantages of the demonstration and is exposed to sales pressure. This suggests that consumers who are averse to salespersons and less knowledgeable may give up the demonstration opportunity entirely.

Another variable that should be considered is the place of demonstration. Demonstration can take place in the dealers' showroom or in a more natural environment. Although showroom demonstrations allow the firm more control at lower costs, a demonstration in the consumer's environment can be more beneficial to the consumer albeit at higher demonstration costs.

4. PROPOSITIONS

In this section, based on our analysis of money-back guarantees and demonstrations developed above, we generate propositions that relate to an optimal use of demonstrations and money-back guarantees. Given the choices available to retailers, the question is under what conditions should they offer demonstrations, money-back guarantees, or a combination of the two? Generally, this reduces to determining the rate at which the product can be "used up" and the rate at which consumers can discover their true feelings about the product. We discuss both of these below.

In certain cases, the perceived quality of a product changes as soon as the product is sold or used. This may not reflect the "true" quality of the product, but the market adjusts its expectation of the quality downward. We highlight two extreme examples of this phenomenon. First, consider the case of pharmaceutical drugs or personal care products such as cosmetics or lingerie. In these categories, an item that has a broken seal or an open package will not be purchased by the consumer and, therefore, will not be accepted by the retailer as a return or an exchange (unless, of course, the product itself is defective). The second example is a new car that has just been driven off the dealer's lot. In this case, the market value depreciates significantly, even though the physical deterioration of the vehicle is negligible. Most of this occurs because of an asymmetry of information. The asymmetry arises because the owner knows the "true" quality of the car, while potential buyers do not know the true quality. Thus, if the owner tries to sell the car, potential consumers will assume that the only reason the car is being offered for sale is because it is a lemon. Hence, the market will lower its valuation of the car.

The preceding discussion suggests that, with durables, the quality of a product may be affected by the manner in which it is used by the consumer. Thus, from the firm's perspective, the concern is whether the product's quality has been affected by a very limited usage (Davis et al. 1995). If quality is affected instantaneously, then a money-back guarantee has higher costs for the retailer (Mann and Wissink 1990). On the other hand, if there is some time frame during which the quality is not affected, then a money-back guarantee can be feasible during that period. This leads to the following:

Proposition 1: Products that have an instantaneous and high rate of depreciation should be demonstrated and should not have money-back guarantees.

Another risk faced by retailers is that in some cases consumers can derive almost all the utility from the product during the demonstration period. For example, a consumer may have a need for a product for only one occasion such as a wedding. In this case, this consumer may use the product for the occasion and then take advantage of the money-back guarantee. We acknowledge that consumers may behave unscrupulously in many purchase situations. However, what we emphasis is that there are certain product categories that lead to a higher level of this kind of behavior. This leads to the following:

Proposition 2a: If the probability that a product's benefit can mostly be consumed in a short period is high, then the product should not come with a money-back guarantee.

Now consider a variant of the above example. Suppose the consumer uses the product, finds it not to his or her liking, and decides to return it to the retailer. In many cases, the product may have been damaged during the period of use and the damage may not be observable to the retailer. In this case, the retailer faces the added risk of accepting a damaged product. Thus, in such cases, the firm should choose not to offer a money-back guarantee. Instead, the firm should invest in building sophisticated showroom simulation mechanisms and in training the sales force in order to increase the probability of match. This implies the following:

Proposition 2b: Products that can be misused, and where the misuse is unobservable by the retailer, should not come with money-back guarantees.

As shown earlier, with most purchases, there is some uncertainty about whether the product will be a good match for the customer. If it is a repeat purchase of the same product, then uncertainty is certainly lower. The rate at which consumers discover whether the product matches their needs is labeled *discovery*. One could argue that the consumer should discover whether the product is appropriate while in the store. While some uncertainty may be resolved prior to purchase, it is not clear that all the uncertainty can be resolved. In addition, by definition, a demonstration is of limited duration. Hence, if a product requires a long learning period, then a demonstration without any other external help is not efficient (see Heiman and Muller 1996). For example, consider the case of clothes. The clothes not only have to fit the consumer but must also match other clothes in the consumer's wardrobe. The only way to fully resolve the latter is by evaluating the new clothes at home. In addition, the uncertainty of fit can also be reduced by second opinions of family, friends, etc., who might not be available at the time of purchase. Getting a second opinion takes time; hence, a money-back guarantee is the only way to provide the consumer with the opportunity to more fully evaluate the clothes and reduce his or her uncertainty.

Proposition 3: If the product is characterized by a long learning time and consumers cannot obtain the key information during an average demonstration, then the product should be covered by a money-back guarantee.

In business-to-business marketing, the importance of demonstrations increases because potential customers usually rely on the retailer or manufacturer and personal experience for the information. Managers of automobile fleets are very cautious about the costs associated with new models and as a result manufacturers offer demonstrations to allay the managers' concerns. For example, *Fleet Equipment* (1995) demonstrated its new automatic transmission by allowing 1,300 customers (80 per day) to test their transmissions under very rigorous driving conditions (Fleet Equipment 1995). In 1989, a Volvo truck company demonstrated its synchronized transmission by allowing fleet managers and automobile reporters to test drive its product in the difficult driving conditions of roads in northern Scandinavia (Siegel 1989).

The ability of consumers to learn about the product during the demonstration or money-back guarantee period is conditional on their prior knowledge about how to operate or use the product. Not only does this "know-how knowledge" vary among consumers, but it is also a function of the product's complexity. In most cases, the retailer cannot discriminate between the customers who have this knowledge and those who do not. In other words, the retailer cannot offer demonstrations (or money-back guarantees) to some customers and not to others. Therefore, if retailers cannot offer different money-back guarantees for different products and cannot discriminate between customers, then

Proposition 4: (a). Products requiring extensive know-how on the part of consumers should not be demonstrated unless accompanied by training. (b). Unless the retailer has a storewide money-back guarantee policy, it is preferable not to offer a money-back guarantee on these products.

Recently, Microsoft decided to demonstrate its Windows NT server. However, it was clear that consumers could realize the full potential of the product only if they understood how to use it. Therefore, Microsoft offered a 60-day trial, but only under the condition that the potential customer also purchase six hours of training (Johnston 1994).

Next we analyze the nature of purchases (impulsive versus planned) on demonstrations and money-back guarantees. Note that impulse purchases are those that are not planned and are often made with a minimum of effort. However, for many products, the risk of a "mistake" may be quite high and thus, in order to encourage impulsive buying, the firm should provide the consumer with a "security net". That is, consumers should feel that if they regret their purchase decision, they have the option to return the product and receive a refund (Phillips 1993). If the firm does not give this escape opportunity, the risk of purchase increases and consumers will probably reduce their number of impulse purchases. Planned purchases are different because the process is more deliberate, entailing information gathering and comparing across products. Thus, the need for an escape option is not as strong as in the case of impulse purchases. Theoretically, this suggests that products that are often purchased on impulse should have more generous money-back guarantees than products whose purchase is planned.

Proposition 5: Money-back guarantees increase the proportional probability of an impulse purchase.

We acknowledge that in many cases a money-back guarantee is part of a store policy. Thus, the retailer may not be able to offer different terms for different products. By having a store policy, such as a money-back guarantee for all products, the retailer conveys some information about itself to consumers (Chu and Chu 1994; Heal 1977; Moorthy and Srinivasan 1995). Offering generous money-back guarantee policies on its products allows the retailer to convey a favorable impression regarding service.

Proposition 6: A money-back guarantee serves as a signal for the retailer's service quality. Therefore, higher quality stores should have more generous return policies.

Given the information delivery role of a demonstration, it is clear that if consumers have all the information about a product, then a demonstration provides no further information. Therefore, a demonstration is useful only when consumers are less informed. In addition, if consumers get a fairly accurate reading of the product from the demonstration, it is clear that only a firm with a high quality product should choose to demonstrate. This situation can occur when a company has not yet established its reputation, or when there has been a significant change in quality with introduction of a new version of the product. When the product is new and the reputation of the firm does not eliminate the perceived risk of the purchase, the firm should consider demonstration. Mann and Wissink (1988, 1990) showed that: (1) when the buyer can determine the quality of the product before the purchase (i.e., quality is observable), there is no need for money-back guarantees, and (2) when the uncertainty of quality is at either extreme (i.e., very low or very high), then money-back guarantee contracts are not efficient. We note that the average consumer's uncertainty about a product can be proxied by how long the product has been in the market. In other words, we can use the life cycle as an proxy for uncertainty.

Proposition 7: When products are in the early stages of their life cycle, demonstrations are more efficient than money-back guarantees. Demonstrating very mature products does not add much information to the consumer and should be avoided.

When Cabeltron systems developed its new network management tool, Spectra, it had to convince customers that it had a superior product relative to the products of the leading SNMP[3] competitors (HP OpenView, Sun's Sunnet). Cabeltron offered a 30-day, free-of-charge demonstration with free training (know-how knowledge) followed by a generous offer to cover 50% of the price of future training (for the next half year if the product is purchased) (McConnell 1995; Slofstra, 1995).

Theoretically, one can argue that either retailers or manufacturers can offer money-back guarantees or demonstrations directly to consumers. Consider first the case of a manufacturer who markets products through a retailer. The manufacturer can decide to demonstrate the product directly to consumers, either at the retail outlet or some other location. For example, Lotus used a direct sales force to approach large corporations but then left the sale for individual retailers (Rangan 1994). Thus, one sees that in certain cases a demonstration by the manufacturer helps both the retailer and the manufacturer, as it increases the volume of sales while the consumer still buys the product from the retailer.

However, the manufacturer has a more difficult time implementing a money-back guarantee directly to consumers. In particular, if a manufacturer offers a money-back guarantee, then (1) retailers have an incentive to oversell and (2) the manufacturer has higher costs of collecting money from the retailer. Therefore,

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Proposition 8: If a manufacturer chooses to go directly to consumers, it should offer only demonstrations and not money back guarantees.

Now consider a retailer's incentive to provide demonstrations or money-back guarantees. Note that providing a demonstration is like providing service. In particular, consumers can get the demonstration at one store and purchase at another. Therefore, competing retailers might have an incentive to provide lower levels of demonstration. This is similar to the service externality problem (see, for example, Bolton and Bonanno 1988). In addition, providing demonstration requires highly trained sales personnel with broad knowledge about the product. This, in turn, requires a significant up-front investment on the part of the retailer. On the other hand, providing money-back guarantees is part of the retailers' service and positioning and does not require additional training, nor is it subject to the externality problem. Therefore,

Proposition 9: Retailers should prefer money-back guarantees to demonstrations.

CONCLUSIONS AND FUTURE RESEARCH

Money-back guarantees and demonstrations are tools that are widely used by retailers. The main argument for their use is that they lower consumers' prepurchase uncertainty. From the point of view of consumers, a longer money-back guarantee or a more informative demonstration is always preferable to a shorter guarantee or a less informative demonstration. On the other hand, retailers and manufacturers face certain costs in providing guarantees and demonstrations. This suggests that there is an optimal use of these tools. In this paper, we integrate the findings from various literatures about the effectiveness of these tools. In the process, we generate a set of propositions that suggest how these tools can be used effectively.

Money-back guarantees are effective in reducing uncertainty when consumers lack extensive knowledge about the product, when there is a long learning time associated with the product, and when they are contemplating an impulse purchase. Demonstrations aid consumers mainly in conveying pertinent information about the product, such as their uncertainty about the "feel" of a particular attribute. In addition to the consumer benefits of money-back guarantees and demonstrations, retailers are concerned about their costs. Money-back guarantees leave retailers open to problems and are not appropriate in certain situations, in particular, if the product has an instantaneous and high depreciation rate, if the product can be misused where the misuse is hidden from the retailer, and if the benefits can be fully consumed within the guarantee period.

Demonstrations are useful for conveying information to consumers. When consumers have very limited knowledge, such as the case with a new product, then a demonstration is more effective than a money-back guarantee. With more informed consumers, demonstrations are not useful. The manufacturer faces an interesting problem because it relies on the retailer to market its product. Although a manufacturer can provide demonstrations directly to consumers, providing money-back guarantees directly to consumers is not efficient. Therefore, money-back guarantees are used only with retailers. In such a case, the manufacturer should put explicit limits on the number of products that can be returned by the retailer. These limits ensure that the retailer does not oversell the product.

In this paper, we have reviewed findings across various disciplines. The next step is an empirical analysis that addresses the propositions laid out in this paper. In particular, an analysis of money-back guarantees and demonstrations across various product categories would be useful for testing some of our propositions. By focusing on variables such as the ratio of returns to sales, length of guarantees, and product categories, we can test our propositions and provide further insights into the effectiveness of these tools.

FOOTNOTES

[1] Although money-back guarantees are usually used by retailers, there have been cases where they were offered to the consumers by the manufacturer.

[2] A nondurable counterpart to demonstrations would be samples.

[3] SNMP (simple network management protocol) is hardware and software built into computers. Its main function is managing the network and, in particular, it serves as a diagnostic tool.

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