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# THEORETICAL ISSUES RELATING TO GENERIC AND BRAND ADVERTISING ON AGRICULTURAL COMMODITIES

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Promotional efforts fall within one of two categories. First, they may disseminate information about the particular characteristics of a given "brand" of a commodity. Alternatively, they may be conducted through a cooperative effort among producers with a common interest and will promote consumption of the general commodity via "generic advertising" [16]. While both "brand" and "generic" advertising are intended to affect consumption patterns, theoretically there are considerable differences. In this paper, the intent is to provide an overview of existing advertising theory and to identify how the theoretical effects should change as the cooperative or "generic" advertising is compared with the competitive or "brand" efforts.

In the most general terms, advertising is directed to existing and potential consumers with the ultimate purpose being to enhance sales for the advertised commodity. From the marketer's perspective, the overriding issue focuses on how effective advertising is in achieving specific sales objectives. Alternatively, economists and public policymakers are also concerned with the structural adjustments associated with generic and brand advertising.

## How Advertising Works

Sheth identifies four separate mechanisms through which advertising produces potential changes: precipitation; persuasion, reinforcement, and reminder [11]. *Precipitation* encourages consumers to experiment and become a buyer of a product category. Through this dimension consumers' motivation levels are increased and desires are enhanced. *Persuasion* encourages consumers to choose among alternative "brands" within a given product category. The purpose is to intensify the consumer's desires for a particular brand and to influence the consumer's preferences for certain commodity attributes whether they are real or fancied. *Reinforcement* continually directs the consumer's attention to a particular "brand" or product in order to achieve repeated purchases of that specific product. This dimension constantly

reassures the consumer of the highly desirable qualities of a specific brand. Finally, *reminder* encourages the consumer to become a repeat purchaser of the product category and to be continually aware of the essential nature of the product group in the bundle of goods consumed.

Generic advertising is intended to precipitate and remind, while brand advertising is primarily intended to persuade and reinforce. The precipitation and reminder functions are more likely to increase total industry sales, while persuasion and reinforcement are usually associated with maintaining or increasing market shares.

Advertising is a *form of persuasion* that creates product differentiation and thus leads to greater market power among those with significant advertising efforts. This gain in power is at the expense of the consumer. Alternatively, advertising is viewed as *information* that provides an inexpensive means for current and potential buyers to assimilate data about different products. Thus the process enhances competition and reduces barriers to entry. There are merits to both arguments and the effects probably lie somewhere between these extremes. Generic advertising most likely corresponds with the latter argument. The results are dependent on the commodities and constraints within which the advertising takes place.

### Advertising and Consumers

Advertising tends to be concentrated among consumer products since consumers are large in number and dispersed across markets. Advertising provides a less costly means of communicating with a larger number of heterogeneous group of buyers. Consumers demand information and advertising may be one of the more effective means of filling this demand. There is a cost for consumers acquiring information about product alternatives, quality differences, prices, and reliability. Advertising can provide much of this needed data, thus reducing ignorance. Yet the same process raises many questions about the quality and factual content of many of the messages perceived and the potential waste resulting from messages being directed to those with little or no demand for the information. This can be true for both generic and brand advertising. One can argue that the consumer can make adequate judgment about the factual content of the message through experience with the goods consumed. Yet all goods are not the same and are consumed at different rates of frequency. Telser [13, p.30] argues that goods consumed less frequently are better candidates for deceptive messages. Whether or not competition among sellers can protect consumers against such deception is debatable and, of course, depends on the purchasing alternatives consumers face. When deception or misleading information occurs, it is more likely to be found among brand advertisements than with generic.

Nelson recognizes the importance of information to the consumption decision and outlines two essential ways consumers acquire this in-

formation [8]. In the first case, the product may be such that consumers can inspect the product prior to purchase. Purchases may be infrequent and of significant value to warrant considerable investment in acquiring detailed data about the product. Nelson labels these products as *search goods*. In the second case, the consumer may experiment with a number of alternatives and then decide on a limited set for continued use. The product may be inexpensive and the quality cannot be completely evaluated without actually consuming it. These goods are considered *experience goods*. Repeated purchases of the experience goods can be a major source of control that consumers have over deceptive advertising. Since consumers can sort out many of the characteristics for search goods, there is less incentive for misleading advertising among this group of products.

Nelson argues that the difference between the quality of advertising for search versus experience goods is so large that the advertising of experience goods is dominated by indirect information while the advertising for search goods is direct. That is, specific quality attributes for the search goods are likely to be emphasized and once these attributes are known there is little reason to continue the message. On the other hand, advertising the experience goods is directed to repeated purchases via methods to enhance product awareness and perception with less factual content about the product. Celebrity endorsements of experience goods is an example of stimulating high recall with little factual information. The more advertising messages, the greater the likelihood of trying the brand. Having a high recall of the message content is redundant for search goods but not for the experience goods. Hence, one fully expects to see more advertising for the experience goods [3, p.51].

Porter [10] provides additions to Nelson's product category by classifying retail goods into *convenience* and *nonconvenience* goods. Convenience goods are those sold through readily accessible outlets such as supermarkets and large retail chains. For nonconvenience (search) goods, the retailer is needed to provide information for obtaining product differentiation, using the local outlets.

Most agricultural commodities fall within the experience goods category, especially when the product is transformed into foods and fibers purchased directly by the consumer. In fact, most commodities that are advertised under a cooperative effort such as dairy, citrus, cotton, potatoes, eggs, wheat, lamb and wool, etc. fall within the experience category.

For some commodity groups, generic advertising seems to show a strong increase in aggregate demand, or at least reduces the per capita declining consumption rate [15, 14]. The empirical evidence for brand effectiveness for the same commodities has been ambiguous. Theoretically, generic advertising should expand aggregate sales and be brand neutral. The brand neutrality may not always hold if the generic mes-

sage emphasizes homogeneity within the product group, while the brand message stresses differences.

## Advertising and the Utility Function

Utility theory has long been used as the theoretical apparatus for explaining the consumer's behavior. The utility function represents the consumer's preference ordering among different bundles of goods. Economists normally assume that consumers maximize their utility functions subject to particular constraints (one mostly used is the available budget). This restricted maximizing results in a system of demand equations which purportedly shows the actual behavior of the consumer.

Advertising influences the consumption patterns and, therefore, the system of consumer's demand equations and what they look like by how it fits into the consumer's utility function. Do consumers directly receive utility from the advertising or does the utility arise from what is being achieved with the advertising? Stigler and Becker argue that it is in fact what is achieved from the message and not the message itself [12]. One could also argue that there is some entertainment value to the commercial and hence some utility from the advertising. Even so, we are going to choose to ignore this last aspect of the argument in our discussions.

Issues relating to consumer welfare directly relate to how the advertising is treated in the utility function. An example is the study by Dixit and Norman [4]. They introduced advertising directly in the utility function and analyzed social welfare under pre- and post-advertising market equilibria. Their major finding is that the profit maximizing level of advertising is excessive under all product market structures.

Another interesting study on consumer welfare and advertising is by Nichols [9]. He evaluates the consumer welfare consequences under equilibria levels of advertising by introducing advertising indirectly in the utility function using the household production function approach. Social welfare is shown not to be related to the structure of the market good, but to the structure of the characteristics of the commodity consumed.

Since this latter approach is less controversial and has great potential for evaluating the relationship of utility functions, advertising, and consumer welfare, we will build on this model and other recent theoretical advancements, and also suggest methodology for incorporating both generic and brand advertising into our model.

Suppose we are dealing with two types of goods, say  $X$  and  $Y$  where  $X$  is the good that is advertised and may be either a search or experience good and  $Y$  summarizes all other non-advertised goods. For example,  $X$  may be a basic food commodity such as vegetables, dairy,

etc., in which case it is an experience good. This product goes through several stages of perceived transformations before reaching the consumer, in such case, the consumer actually purchases  $Z$  where  $Z$  corresponds to  $X$  after the consumer is told about the characteristics (real or fancied) of the good. In the case of search goods,  $Z \simeq$ , e.g., the perceived characteristics must correspond closely with the actual since the consumer can readily judge the characteristics. In contrast,  $Z > X$  is more likely for experience goods since many of the characteristics in  $Z$  are fancied rather than real differences with respect to  $X$ . We will limit most of the comments to this latter set of experience goods since most foods fall within this category.

Using Stigler and Becker and subsequent work by Nichols, the consumer has some utility function for goods  $Z$  and  $Y$  where:

$$U = U(Z, Y)$$

$$Z = g(A) X.$$

and  $Y =$  other non-advertised goods

$A =$  advertising.

The consumer is not only buying  $X$  but also all of those perceived characteristics associated with what is being conveyed through  $g(A)$ , the marginal characteristic productivity of  $X$ . The consumed good  $Z$  includes the basic characteristics of  $X$ , and in addition includes those characteristics perceived about the good as a result of  $g(A)$ . Thus the utility raises from the consumption of  $Z$  and not  $A$  directly even though  $A$  is the essential element leading to  $Z$ . It is at this point that the essential distinction between generic and brand advertising can be made. Both types of advertising can contribute to the transformation of  $X$  to  $Z$  in the utility function. The difference in the contribution and the interaction between generic and brand advertising provides the fundamental distinction between these two types of messages and how they ultimately impact the demand for  $X$ .

Defining generic and brand advertising expenditures as  $A$  and  $B$  respectively,  $X$  is then transformed where  $Z = g(A, B) X$ . Furthermore, we could even extend the analysis to recognizing that perceptions and attitudes about a product may require considerable time to develop. Hence,  $Z$  would be related to past advertising efforts where  $Z = g(LA, LB)X$  and  $L$  is the lagged operator for the lagged advertising effects. Whether lagged efforts enter or not, the essential difference is that the consumer responds with consumption of  $Z$  and not  $X$  and  $Z$  arises out of what is being conveyed with both  $A$  and  $B$ . In our discussions today, we will limit our comments to the immediate effects and not the lags using the following utility specification:

$$U = U(g(A, B)X, Y)$$

If one knew the exact form of this utility function and if consumers chose  $X$  and  $Y$  to maximize utility, then for any given levels of  $A$  and

$B$ , there exist a set of coordinates  $X^*$  and  $Y^*$  that will maximize the utility subject to the normal income constraint.

Following Nichol's recent contribution to Stigler's and Becker's work and with some mathematical effort, one can derive the consumer's willingness to pay for advertising at the margin, i.e., the shadow price for advertising. Holding  $A$  (or  $B$ ) fixed while considering changes in the other type of advertising, this shadow price for advertising follows:

$$(dU/dA)/k = (P_{x^*}^*/A) (E_{\mu^A} - E_{r_{x^*}^A})$$

or

$$(dU/dB)/k = (P_{x^*}^*/B) (E_{\mu^B} - E_{r_{x^*}^B})$$

where  $k$  = the marginal utility of income. In these equations  $E_{\mu^A}$  and  $E_{\mu^B}$  measure the elasticity of each type of advertising for achieving certain perceived characteristic changes in  $X$ . Similarly,  $E_{r_{x^*}^A}$  or  $E_{r_{x^*}^B}$  measures the price change in  $X$  with adjustments in the advertising levels. The price response for brand advertising simply shows whether advertising leads to rising prices as often associated with promotions by large dominating firms that have considerable market power and have achieved some product differentiation. For generic advertising, the price response results from the demand increase of the commodity due to the new available information about the generic nature of the product. Whereas,  $E_{\mu^B}$  establishes whether or not consumers perceive new and desirable characteristics (and hence greater utility from the consumption of  $X$ ) through the advertising.

In most circumstances one would expect each of these elasticities to be greater than zero, yet they are equally expected to differ in magnitude. Nichols shows that if  $E_{\mu^B} - E_{r_{x^*}^B} > 0$  (or equivalently if  $E_{\mu^A} - E_{r_{x^*}^A} > 0$ ) at the profit ( $n$ ) maximizing level of advertising; e.g.,  $\partial n/\partial A =$  (or  $\partial n/\partial B$ )  $= 0$ , then shadow price for  $B$  (or  $A$ ) advertising is positive implying that the advertising is *undersupplied*. Whereas, if  $E_{\mu^B} - E_{r_{x^*}^B} < 0$ , the shadow price is negative and the advertising is *oversupplied*. In the analysis for either type of advertising, the solution for  $B$  depends on the levels of  $A$  and vice versa. That is  $\partial(E_{\mu^B} - E_{r_{x^*}^B})/\partial A$  and  $\partial(E_{\mu^A} - E_{r_{x^*}^A})/\partial B$  are not zero and are most likely asymmetric.

Let us concentrate on only one aspect of this model, that being the effects of brand advertising and how it is impacted by adjustments in generic advertising. This decision was made based on what has been actually observed in the market for agricultural products. Brand advertising for many commodities has existed in the market for a long time. Generic promotion is a more recent phenomenon. We are just following the same sequence of events occurring over time. Two theoretical issues are of immediate interest. First, how do we expect the shadow price for  $B$  to change with increasing levels of  $B$ ? Second, how does this shadow price adjust with expanded generic efforts? In the first case, the shadow price adjusts to changing levels of  $B$  as illustrated below:

$$\partial((dU/dB)/k)/\partial B = - (P_{x^*}^*/B^2) (E_{\mu^B} - E_{r_{x^*}^B}) + [P_{x^*}^*/B][\partial(E_{\mu^B} - E_{r_{x^*}^B})/\partial B]$$



Initially, for low levels of  $B$ ,  $E_{gB} - E_{p,B} > 0$  and possibly  $\partial(E_{gB})/\partial B > 0$ . Hence, there exist a range of  $B$  values where  $\partial(P_B)/\partial B > 0$ . However, as  $B$  is increased, most likely  $\partial(E_{gB})/\partial B < 0$  and  $\partial E_{p,B}/\partial B > 0$ , while still assuming a positive shadow price. Thus  $\partial(P_B)/\partial B < 0$ . Continuing to expand the brand message must ultimately lead to a negative shadow price where the possible changes are as illustrated in Figure 1.

Now the interesting question is what happens to this relationship (Figure 1) when the levels of generic advertising are changed? Mathematically, the response function is quite straight forward where

$$\partial(dU/dB)/\partial A = (P_{x^*}/AB)\{(E_{xA} + E_{pA})(E_{gB} - E_{pB}) + A \partial(E_{gB} - E_{pB})/\partial A\}$$

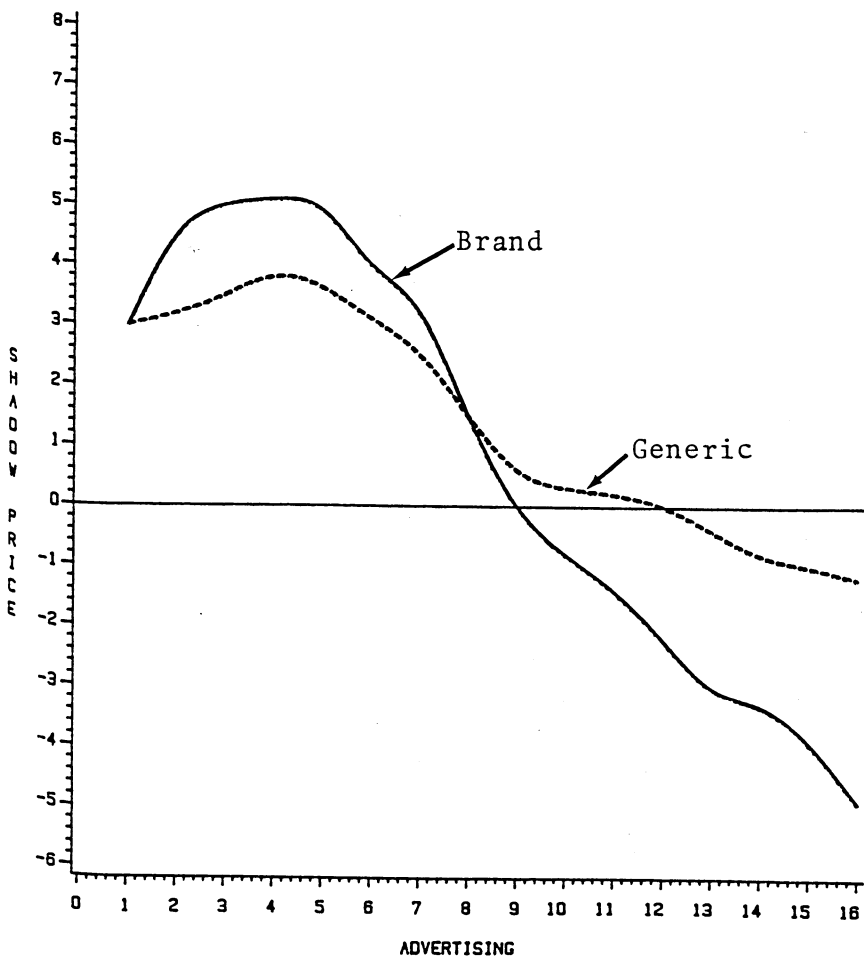


Figure 1. Example of shadow prices for brand and generic advertising.

If we make the assumption  $E_{xA}, E_{p_xA} > 0$ , then the sign of the impact of  $A$  on  $B$  depends on the shadow price for  $B$  and the cross effect of  $A$  on this shadow price. There are a number of alternatives to consider and we will limit our discussion to a subset of these alternatives.

Case I:  $E_{gB} - E_{p_xB} > 0$  and  $\partial(E_{gB} - E_{p_xB})/\partial A > 0$

In this situation brand advertising is under supplied and the generic promotions enhance the brand differentiation, i.e.,  $\partial E_{gB}/\partial A > 0$  and  $\partial E_{p_xB}/\partial A < 0$  or  $\partial E_{p_xB}/\partial A > 0$  but  $\partial E_{gB}/\partial A > \partial E_{p_xB}/\partial A$ . Path I in Figure 2 indicates that the complementary effect of generic on brand advertising leads to even more demand for brand advertising. Beyond some upper level of  $A$ , this situation is likely to become infeasible since  $\partial(E_{gB} - E_{p_xB})/\partial A > 0$  cannot be maintained.

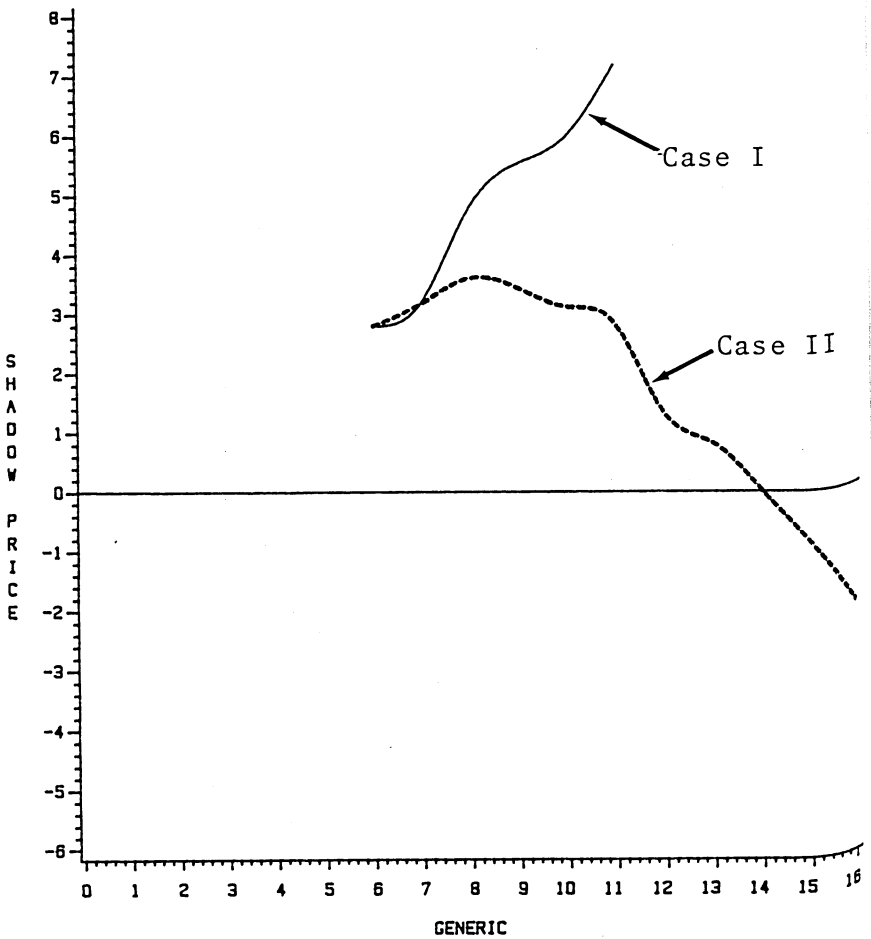


Figure 2. Brand shadow price adjustments to generic advertising: Cases I and II.

Case II:  $E_{gB} - E_{PB} > 0$ ,  $\partial(E_{gB} - E_{PB})/\partial A = 0$  and  
 $\partial E_{gB}/\partial A < 0$ ,  $\partial E_{PB}/\partial A < 0$

For these conditions, generic advertising has a negative impact on the components of the shadow price for B. However, the shadow price may increase or decrease with more generic advertising depending on the relative impacts on  $E_{gB}$  and  $E_{PB}$ . If generic advertising lowers the price enhancing effects of B and has a minimal effect on  $g_B$ , then  $\partial(E_{gB} - E_{PB})/\partial A > 0$  and the shadow price for B will rise.

Alternatively, and probably the most feasible, generic emphasizes the homogeneous nature of the X and thus makes it more difficult to achieve brand differentiation. This implies that  $\partial(E_{gB} - E_{PB})/\partial A < 0$  and, hence, the shadow price declines with greater generic efforts. These adjustments are depicted with Case II in Figure 2.

What II implies is that while brand advertising may be undersupplied at some low level of A, eventually as A continues to increase the shadow price for B will approach zero. Beyond that upper level of A the shadow price for B becomes negative and the brand level is then oversupplied.

Case III:  $E_{gB} - E_{PB} < 0$  and  $\partial(E_{gB} - E_{PB})/\partial A > 0$

This case parallels that of Case I except that initially the shadow price is negative. This may be the case where the brand advertiser is strongly oligopolistic and the advertising leads to price premiums. If the generic message enhances the brand productivity and lowers the impact of brand on prices, then  $\partial(E_{gB} - E_{PB})/\partial A > 0$  and the marginal value of brand advertising increases. Such adjustments appear as III in Figure 3.

Case IV:  $E_{gB} - E_{PB} < 0$  and  $\partial(E_{gB} - E_{PB})/\partial A < 0$

This case is self-explanatory in that the negating effects of generic messages simply lower the marginal value of the brand message even further. The shadow price for B declines further and the oversupply of brand is accentuated. See this adjustment with Curve IV in Figure 3.

While the above cases are for the brand response, similar results could be derived for the shadow prices for generic advertising. However, at the point where  $E_{gB} - E_{PB} = 0$  may not correspond to the same for  $E_{gA} - E_{PA}$ . To achieve optimal social welfare both A and B must be solved where

$$X^*P_x/B (E_{gB} - E_{PB}) = 0$$

$$\text{and } X^*P_x/A (E_{gA} - E_{PA}) = 0$$

This yields two equations and two unknowns (A and B) from which the optimal generic and brand levels can be derived once the utility function and  $g(A, B)$  are specified. Similarly, the demand for X can be derived from the utility function and the demand will be functionally related to both A and B.

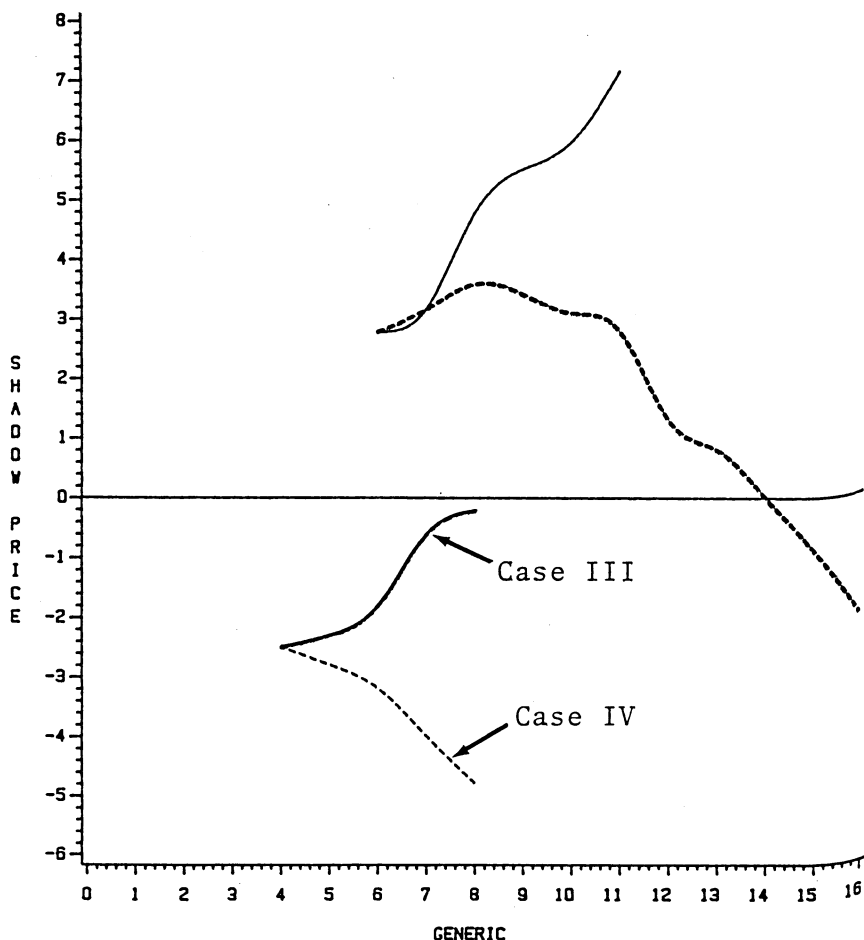


Figure 3. Brand shadow price and adjustments to generic advertising: Cases III and IV (lower curves).

This analysis has provided a partial evaluation of the resulting effects of brand and generic advertising under the utility and welfare framework. All of these results can be validated in markets under competitive conditions. Unfortunately not all markets resemble the competitive market model. Hence, the role of the firms under different market structures coupled to our partial analyses developed in this paper should be integrated for more fruitful results. By now, we are aware that there are two different markets playing a role in studying advertising. One is the market for the characteristic commodity ( $Z$ ) which provides the stable demand important for the analysis of the advertising effects through the shadow price. The second market is

the actual market for the good being advertised ( $X$ ) which provides measures of the marginal productivity of the characteristic and of the price response essential for evaluating the adjustments of both brand and generic advertising. Both markets are very important in the analysis of advertising effectiveness and its consequences on social welfare.

Nichols presented in his article a hint of how to deal with advertising in the agricultural products. He introduced in his study a case which resembles some of the agricultural markets. He analyzed the characteristic market  $Z$  as an imperfect market and  $X$  as a perfect one and obtained very interesting results. A firm finds it profitable to advertise if there are alternative technologies for producing  $Z$ . In other words, it pays to advertise (even when the  $X$  market is competitive) if you can affect the shadow price of the characteristic commodity. Applying this methodology to agricultural markets should produce interesting results.

In the remaining discussion we will address additional issues relating to brand and generic advertising while drawing from this conceptual framework.

### Advertising and Product Differentiation

Among all product groups there are real as well as perceived differences among products as expressed with  $g(A,B)$ . Product differentiation results with either case. If advertising brings the consumer closer to understanding the true commodity characteristics, then this advertising is informative. Any resulting market power is not from the advertising, but from the real differences within a commodity group. If the advertising creates perceived attributes that are not necessarily real, then the advertising can clearly contribute to market power. Such gain from this latter source may continue even with repeated purchases if the perceived attributes are difficult to measure. For example, claims about the nutritional value of certain foods may be accepted but impossible for the consumer to directly measure.

Ultimately, the success of advertising to attain product differentiation depends on both the actual product attributes and how easily these attributes can be measured. For many foods and fibers, such attributes as taste, quality, packaging, etc. can be judged. Yet there exists a comparable list of attributes that cannot be judged by the consumer. This then explains why  $g(A,B)$  can clearly differ across commodities. If generic advertising emphasizes certain attributes common to all brands within a product group, then brand differentiation should be decreased. One may also argue that generic promotions may force brand advertisers to focus on those attributes that are more difficult to directly evaluate. One hypothesis then is that generic promotions lead to branded advertising directed more to enhancing perceived differentiations.

## Market, Product Characteristics, and Advertising

Product differentiation, barriers to entry, scale economies, and the overall market structure are the economic factors regulating the intensity and level of advertising in the markets. Equally important factors interacting with both generic and brand advertising are the particular characteristics of the commodity and other factors related to the market itself. Some of these characteristics will negate the effects of advertising while others will help it succeed. In either case, they will have an impact on the "g" function.

Some of these characteristics are identified below with respect to their potential effect on both generic and brand advertising.

- *Product transformations.* Products normally go through several changes from the producer to their final consumer. Generic advertising may be successful when the product keeps its own identity and is easily recognizable. On the other hand brand advertising may be more effective when the commodity does lose its identity, and it is easier for the producer or marketer to differentiate the particular brand.
- *Homogeneity and quality standards.* A well established set of quality standards for a product should be beneficial for using generic advertising since it provides easy identification of product qualities. Unclear and unstable standards on the other hand may help brand advertising since a company might claim a superior product which will be difficult for the consumer to validate.
- *Potential uses of the product.* It seems that both generic and brand advertising will benefit from knowing the potential uses of a product. Type of promotion and targeted audience will be easy to identify. The fewer number of potential uses a product has, the more important the analysis of the substitute products and their level of advertising.
- *Number of substitutes.* A large number of substitutes will make it more difficult for the brand advertising to succeed than for generic advertising because a brand will have to compete (assuming negative effects) against generic advertising and the advertising of other products.
- *Geographical dispersion of production, distribution, and product availability.* This is mostly important for generic advertising because a company brand is thought to have its own private plan design. The better the dispersion of production, distribution, and product availability, the higher the percentage of potential customers that can be reached.
- *Market saturation.* Generic advertising may not obtain its goal of

increasing sales with an almost saturated market. Brand advertising will still be able to shift market shares among brands.

- *Market structure.* The more competitive, the higher the probability of success for generic advertising. Brand advertising will thrive under imperfect competition since more opportunities for differentiating the brands will exist.
- *Nutrition and health attributes.* Good health related characteristics of a product should be positively related to both generic and brand advertising.

### Barriers to Entry and Scale Economies

Barriers to entry occur when existing firms have an economic advantage over potential entrants. Theoretically, such barriers are reflected by an entry forestalling price that exceeds the competitive price that would exist in the absence of entry barriers. If substantial advertising produces brand loyalty and if potential entrants must make considerable initial entry advertising and promotional expenditures, then advertising clearly leads to barriers to entry. The antithesis to these arguments is that advertising provides the medium for entry that could not occur otherwise. Barriers to entry are real. Whether advertising contributes to or reduces such barriers becomes an empirical question.

Given the dynamics of the marketplace and the continued influx of new consumers, existing firms, like potential entrants, must communicate with these new buyers. However, new products are generally advertised more than old ones [3, p. 93]. Advertising is used to create disloyalty more so than loyalty. Some evidence suggests that there is less consumer loyalty in the heavily advertised markets. Also, the advertising intensity among the largest firms with major market shares is often less than the smaller rivals.

Much of the literature on advertising and market structures relates to the scale economies issue. Such economies occur when the advertising cost decreases on a per unit sales gain. Per unit cost may decline with the larger advertising commitments. Likewise, the sales gains may be proportionally greater with incremental increases in advertising. Theoretically, economies to scale give the larger firms an economic advantage over smaller firms and potential entrants. If there is some minimum threshold limit of exposure before consumers respond to advertising, then the larger advertisers can clearly have an advantage over smaller rivals. Likewise, if the larger media users can gain cost advantages, the potential entrants are at an initial disadvantage. Theoretically, existence of advantaged over the disadvantaged firms translates into market power and higher prices.

Existing empirical evidence does point to specific circumstances where scale economies exist. Mueller's and Roger's [6] research points to scale

economies of national over local television advertising. Arguments can be made that smaller advertisers are at a disadvantage in booking media time and space. Considerable lead time is generally required to coordinate media use, and possibly the larger firms can amass more expertise in coordinating this function. A recent study by Peterman [7] suggests that the differences in media rates across the array of buyers does not add credence to the economies to scale claims.<sup>1</sup>

Again both barriers and scale economies have an impact on the specification of  $g(A,B)$  in the utility model.

### Closing Comment

Generic as opposed to brand advertising has a special characteristic which directly relates to the concept of public good. R. Just, D. Hueth, and A. Schmitz [5] define public good as one for which consumption by one individual does not prevent consumption by another individual. A slightly different definition, and one related to production processes, is that a firm may derive some benefit from the good without preventing another from enjoying the same benefit. The special characteristic about generic advertising is the well-known free rider concept, which is defined as the enjoyment of a certain benefit without actually paying for it. This can occur because it is difficult to force an individual to pay for a public good according to the benefits received from it and also because it is easy to claim that no benefits are being obtained. Moreover, the same nature of the public good produces a natural inducement to enjoy the good without paying for it.

We have found two situations under which generic advertising behaves as a public good. The first situation results from the refund provision required for federal approval of research and promotion programs. The refund provision allows any producer to obtain a refund if the producer does not desire to participate in the program. For example, a claim of receiving no benefits from the generic advertising program can be made, hence this individual may end up being a free rider. The second situation pertains only to those products that are produced and imported by a country and also have provisions for using generic advertising. One such example is the orange industry in the United States. The orange industry uses a check-off program to collect and pay for generic advertising, research, and education programs. At the same time orange imports are also brought to this country but are not subject to the check-off program. Therefore, orange importers are obtaining some free benefits from the advertising done and paid for by Florida producers.

When generic advertising behaves as if it was public good, several important implications result from the relationship of a free competitive industry and social welfare optima. A free competitive industry dealing with a public good will fail to reach social welfare optimum because the market will not account for those free benefits derived by



the free riders. It can be shown [5, p. 285] that the amount of public good required for social optimum when all social benefits are accounted for is greater than the amount obtained under regular conditions (without the inclusion of the free riders).

Because of these problems with public goods (i.e. generic advertising) government intervention is necessary. In our case, either import taxes equivalent to the marginal benefits received by the importers or a mandatory check-off program for everybody (including importers) with no refund provisions may be required to obtain the social welfare optimum.

The section on advertising and the utility function might need to be reviewed under these particular circumstances.

For instance, what will be the implications of having a public good (generic advertising) and brand advertising in the same utility function? What will happen to the derivations of the demand equations and especially to the shadow price of the characteristic good when we have a public and not a private good? We believe this is not an easy task but are sure it will be a real challenge to investigate and discover the theoretical implications of this particular set of circumstances and thus to start the road for potential applications on this important subject.

#### FOOTNOTES

<sup>1</sup>Most of the studies of scale economies concentrate on the buyer's size without giving adequate attention to the structure of the media industry. Changes among media suppliers are probably more dynamic than among those within a product group doing the advertising. Hence, to focus on scale economies without dealing with the underlying structure of the media suppliers can readily lead to invalid conclusions about scale economies.

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