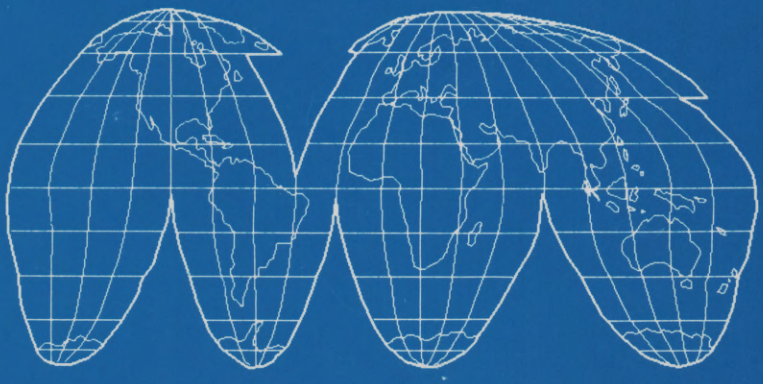
Commodity Promotion Policy



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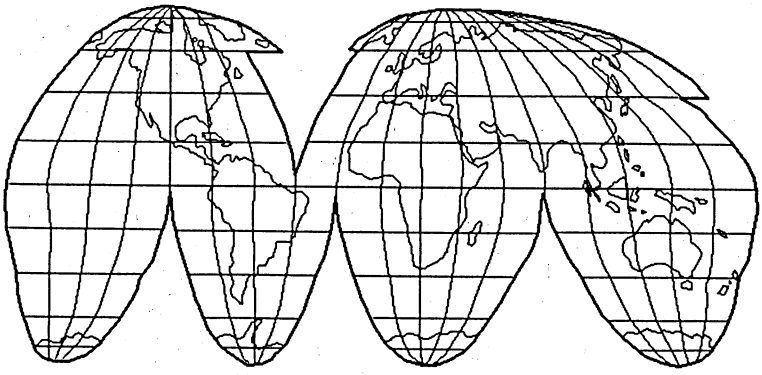

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Walter J. Armbruster and John E. Lenz

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ECONOMIC IMPACTS OF EXPORT MARKET PROMOTION

Karen Z. Ackerman
Economic Research Service, USDA

Shida R. Henneberry
Oklahoma State University

Nonprofit producer organizations, cooperatives and companies have promoted U.S. agricultural products overseas since the 1920s. The federal government formally joined the nonprofit producer organizations in funding nonprice export promotions in 1955.

In the ensuing decades, federal funding was increased and companies became eligible for federal matching funds for export promotions. Federal nonprice funding levels for nonprice programs totaled $237.6 million in fiscal 1992, a sixfold increase from 1985 programming. As federal funding has increased, so too has producer investment in export promotion.

However, the nonprice programs represent only 3 percent of total federal agricultural export program funding. Program levels for the commercial credit guarantee and price reduction programs far surpass those of the nonprice programs.

Given the resources invested in marketing activities by the industry, government and foreign contributors, evaluating the effectiveness of programs has been of great interest to all parties involved. In addition to measuring export increases attributable to promotion dollars, researchers must design methods to evaluate how much taxpayers and producers benefit from investment in market promotion.

Goals of Nonprice Export Market Development Programs

The most recent of a series of federal programs to develop export markets for U.S. agricultural commodities through advertising and other nonprice promotion activities—the Market Promotion Program (MPP)—was established in the Food, Agriculture, Conservation, and Trade (FACT) Act of 1990. The primary legislated goal of the MPP is to encourage commercial market development through cost-share assistance to eligible producer organizations and companies that conduct export market promotions. The legislation also emphasizes that priority for MPP funding is to be given to commodities alleged to have been victimized by unfair foreign trade practices.

Market development also was the primary goal of the Foreign Market Development Program (FMD), implemented in 1955 under P.L. 480. P.L. 480 specified that foreign currencies could be used "to help develop new markets for U.S. agricultural commodities on a mutually benefiting basis." The FMD remains a staple of Foreign Agricultural Service (FAS) market development efforts.

Another major nonprice market promotion program, the Targeted Export Assistance (TEA) Program, had slightly different goals from the MPP and the FMD. The TEA was established in the 1985 Food Security Act to assist commodities whose exports had been harmed by other nations' unfair trade practices. Congress appropriated funds for the TEA program from 1986 to 1990. Other potential program objectives, while not specified in laws or regulations, are implied by the market development goals. The primary goals of the nonprice market development programs—to maintain or increase exports of U.S. agricultural products—should also lead to higher prices and improved revenues for U.S. agricultural producers. Federal support for agricultural export promotion also should benefit the food processing industry and other sectors of the economy.

Methods for Evaluating Nonprice Export Promotion Programs

Export market promoters and researchers have employed several methods to evaluate the effectiveness of nonprice promotion programs including several forms of econometric models, consumer attitude and awareness surveys, and experimental statistical designs.

Econometric Models

Econometric models have helped measure the effects of market promotion expenditures and other factors on exports and market shares. Variables reflecting U.S. and competitor prices, per capita income, promotion expenditures, and, where appropriate, trade policies such as import quotas are included as predetermined variables. Prices and expenditures are often expressed in exporting country currencies to account for exchange rate effects. While most models have been in the form of single equations, multiple-equation econometric models also have been used to measure the impacts of market promotion on import demand.

Consumer Research

While exports may be the "bottom line" of market promotion, intermediate objectives for marketing activities may require analyses of consumer awareness of and response to advertising and promotion.

Consumer research studies help promotion managers analyze the effectiveness of individual advertising and promotion campaigns. In

an attempt to examine the relationship between advertising and sales, researchers conduct surveys to measure consumer awareness of the product and product advertising. Survey questions or focus groups may include questions about consumers' attitudes toward various product attributes such as quality (taste, texture, packaging, and convenience in preparation), price (affordability) and availability. Statistical tests are used to measure the significance of the consumer responses.

Experimental Design

Researchers also create economic experiments to test the effects of market promotion activities on sales. An experiment is designed to compare sales of companies that conduct promotions with those of firms who do not. The promotion effects may then be tested for significance. Experimental designs require advanced planning to obtain relevant data and comparisons.

Qualitative Evaluations

In the past, promotion managers used informal feedback from participants in marketing activities to gather information about the activities' effectiveness. In recent years, program managers have conducted more formal evaluations based on extensive interviews with industry and government representatives to establish marketing strategies.

Empirical Evidence of Promotion Effectiveness

Research on the effectiveness of nonprice export market promotions spans several decades and a range of commodities.

Evidence from Econometric Models

Citrus and citrus products were analyzed frequently in the 1970s and 1980s by the Florida Department of Citrus (Chern; Lee; Lee, Behr, Brown, and Fairchild; Lee, Myers, and Forsee). Single equation demand models were most frequently used to analyze export revenue increases attributable to market promotion expenditures for orange juice and, in more recent years, fresh grapefruit. Depending on the time period and markets studied, returns to government and private promotion expenditures for orange juice ranged from $1.33 to $4.85 per dollar spent.

Lee and Brown used a dummy variable technique to account for the regional effects of market promotion expenditures in a 1986 study of the effectiveness of market promotions for orange juice in Europe. Returns to orange juice expenditures in Western Europe from 1973 through 1982 averaged $5.51 per dollar spent.

Lee, Behr, Brown, and Fairchild also analyzed the returns from market promotion for fresh grapefruit in Western European and Pacific Rim countries. Expenditures for fresh grapefruit promotion in Western European and Pacific Rim countries from 1976 to 1987 yielded returns averaging $3 for each dollar expended.

In a study of the factors affecting the demand for fresh grapefruit in Japan, France and the Netherlands, Fuller, Bello, and Capps found that each dollar of promotion expenditure (TEA and FMD program expenditures) in Japan, France and the Netherlands increased U.S. grapefruit exports to those countries in 1988 by about $5.02, $4.13 and $6.65, respectively. Other factors also of importance to the growth in U.S. fresh grapefruit exports included the removal of Japan's import quota, devaluation in the U.S. dollar relative to other currencies (Japan, France, The Netherlands), the increase in Japan's per capita income, and the U.S. FOB price (France).

Rosson, Hammig, and Jones also used a dummy variable technique in a 1986 study of apples, poultry and tobacco. Expenditures for worldwide apple promotion from 1974 through 1981 averaged $60 per dollar of government expenditure and for worldwide tobacco promotion averaged $31 per dollar expended.

A more recent study of the TEA program in Japan (Dwyer and Flowers) used the single equation approach to estimate the effect of the TEA on exports of fourteen U.S. agricultural products to Japan. A dummy variable technique also was used in this study to reflect the presence or absence of the TEA program for the 1970-88 period. Study results indicated that TEA's share of 1987 and 1988 export increases was 70 percent for avocados, cherries and grapefruit juice; 69 percent for wine; 58 percent for fresh grapes; 54 percent for fresh grapefruit; and 45 percent for walnuts. Other factors contributing to export increases included prices, income and exchange rates.

Researchers at Auburn University and Oklahoma State University also have used single equation demand models to estimate the effects of promotion expenditures on U.S. market share. Solomon and Kinnucan from Auburn University conducted a study of the effectiveness of cotton promotions for the U.S. Cotton Council. An Armington market share model was used to determine how much promotion expenditures had contributed to changes in U.S. market shares in selected Pacific Rim cotton markets from 1965 through 1985. Although the Armington model is a two-stage allocation model, two major assumptions simplify the model and allow it to be estimated as a single equation.

Solomon and Kinnucan showed that market share increases attributable to promotion expenditures were 8.2 percent for Japan; 1.6 percent for South Korea; 5 percent for Hong Kong; and 2.6 percent for the Philippines. Marginal returns to promotion dollars from pub-

Table 1. Econometric Studies of the Effectiveness of Nonprice Export Market Promotions

Agricultural Product(s)	Authors	Markets studied	Time period	Type of model	Results	Comments
Citrus and products: Orange juice	Lee	W. Europe	1972/73-75/76	Single equation	Export revenue increases of $1.33 per $1 of promotion from all sources	Dummy variable technique across countries and time expenditures
Orange juice	Lee, Myers, and Forsee	W. Europe	1972/73-76/77	Single equation	Export revenue increases of $4.85 per $1 of promotion expenditures from all sources	Update of 1977 analysis with addition of Brazilian FCOJ price and exports on a per capita basis.
Orange juice	Lee and Brown	W. Europe	1973/74-81/82	Error components analysis	Export returns per $1 invested:	-range of $2.40-$7.81 -average of $5.51
Fresh grapefruit	Lee, Behr, Brown, Fairchild	W. Europe and Pacific Rim countries	1976-87	Single equation	Export revenue increases of $3 per $1 of promotion expenditures	
Apples, poultry, tobacco	Rosson, Hammig, Jones	World	1974-81	Single equation	Returns per $1 of investment: $60 for apples; $31 for tobacco; insignificant result for poultry	Dummy variables used for regions
Avocados, grapes, cherries, wine, grapefruit, grapefruit juice, peanut butter, salmon, walnuts	Dwyer and Flowers	Japan	1970-88	Single equation	TEA's share of 1987 and 1988 export increases: avocados-70% cherries-70%; fresh grapes-58%; grapefruit juice-70% fresh grapefruit-54%; walnuts-45% wine-69%	Dummy variables used for TEA expenditures; insignificant coefficients for TEA variables for avocados, salmon, peanut butter
Fresh grapefruit	*Fuller, Bello, and*	*Japan, France,*	*1969-88*	*Single equation*	*Returns per $1 of*	

					walnuts-45% wine-69%	
Fresh grapefruit	*Fuller, Bello, and Capps*	*Japan, France, Netherlands*	*1969-88*	*Single equation*	*Returns per $1 of investment:* *$5.02 for Japan;* *$4.13 for France;* $6.65 for the Netherlands	
Cotton	Solomon and Kinnucan	Japan, S. Korea, Taiwan, Hong Kong, Philippines, Thailand	1965-85	Armington market share	Increase in market share attributable to promotion: Japan-8.2%; S. Korea-1.6%; HongKong-5%; Philippines-2.6% Marginal returns to promotion: Japan-$32; S.Korea-$13; HongKong-$171; Philippines-$11	Promotion variables for Taiwan and Thailand were insignificant.
Red meat (beef, pork beef offal)	DeBrito and Henneberry	Japan	1973-88	Armington market share	Returns of $8.64 per $1 of FAS expenditure	Promotion variable was positive but insignificant for total red meats, but was positive and significant for beef offal.
Soybeans and soybean products	Williams	World	1970-80	96-equation world trade model	$62 of export revenue per $1 of total expenditures (FAS, ASA, and 3rd party cooperator investments)	
Wool (Australian)	Dewbre, Richardson, Beare	United States	1974-85	Household consumption; aggregate demand model	1% increase in promotion expenditures yield a 0.07% increase in household consumption; aggregate effects of 1% increase in promotion expenditures: 1983-84: 7.6% 1985-85: 8.9% 1985-86: 9.1%	

Sources: See Authors in References.

lic and private funding sources were highest for Hong Kong ($171 per expenditure dollar), and lower for Japan ($32 per dollar spent), South Korea ($13 per dollar spent) and the Philippines ($11 per expenditure dollar). The wide variation in marginal returns indicates that incremental increases in promotion dollars would generate higher returns in Hong Kong than in Japan, Korea and the Philippines.

The Armington framework also was used by DeBrito and Henneberry at Oklahoma State University to determine the impacts of FAS promotion expenditures on the U.S. share of the Japanese red meat and red meat product markets. DeBrito and Henneberry found that government promotion dollars had their greatest effect on the U.S. market share of the beef offal market (a Japanese category for beef imports which includes diaphragm or "skirt" beef). Average returns to federal promotion dollars were $8.64 for each dollar spent.

A multiple equation econometric model was employed by Williams and others to analyze the effects of the market promotion programs for soybeans and soybean products on U.S. exports and global trade flows. Williams used a 96-equation econometric model to measure the returns to promotion dollars contributed by FAS, soybean producers and foreign third-party contributors from 1970 through 1980. Williams determined that returns to promotion expenditures from federal and private sources averaged $62 per dollar spent. He also simulated the effects of the soybean and soybean product promotion expenditures on the U.S soybean industry. Results of the simulation indicated that the promotion expenditures were responsible for a 2.3 percent increase in soybean acreage, a 2.3 percent increase in production and a 1.4 percent increase in soybean crush. The promotion expenditures also accounted for an increase in the farm price of soybeans of $0.08 a bushel. However, once the costs of the additional production needed to meet the higher export demand were subtracted from the returns to producers, net producer returns were only $14 for each $1 spent on promotion.

Econometric models provide useful indications of the relative effectiveness of nonprice export promotion expenditures in maintaining or expanding U.S. export revenues or market share. Economic models also are useful in comparing returns to investment across countries or regions. However, program managers, who must evaluate the effectiveness of individual activities and marketing campaigns, require more timely and focused analyses.

Consumer Awareness and Attitude Studies

Many FAS market promotion managers began to track consumer attitudes toward their products and awareness of TEA promotions in the late 1980s. Program managers used results of biannual, quarterly

or post campaign tracking studies to assess the effectiveness of ongoing promotion activities and to plan promotion strategies for the following years. Some program participants use the consumer studies to increase or decrease funding for individual promotion activities within a country or to change the country or regional focus.

One example of a consumer study was conducted by Moore and McCracken from Washington State University. Moore and McCracken attempted to analyze Pakistani consumer awareness of an advertising campaign for canned dry peas by conducting a probit analysis of the results of 377 post campaign personal interviews of Pakistani housewives. According to the authors, several variables affected off-season pea consumption (when most dry and frozen peas are consumed in Pakistan). Several variables also affected whether respondents saw any of the media advertising for the product and whether the advertising influenced the housewives to purchase dry peas.

The level of off-season use of peas was 30 percent of the 498 housewives interviewed. The housewives interviewed chose their sources of peas based on perceptions of freshness, cost and ease of availability. Almost 40 percent of the housewives interviewed recognized the Pakistani brand of U.S. dry peas, Platinum American Dry Peas, eight months after the television commercial aired. Television advertisements for the brand provided the major source of information. Details from the television advertisement about cooking techniques for dry peas were remembered more frequently than information about product details or advantages. While many of the housewives were aware of the product, they had not tried it themselves.

The results of the probit analysis indicated that low-income households more likely recalled advertising than middle- or high-income households. Higher education also positively influenced the probability of advertisement recall. Recall of brand names of canned dry peas significantly increased the probability of consumption of peas in the off season. However, knowledge of U.S. origin did not result in higher consumption. Finally, advertising recall itself did not necessarily increase consumption because the analysis of advertising recall did not take into consideration changes in consumer attitudes and beliefs resulting from advertising emphasizing product attributes.

Moore and McCracken concluded that the introduction of U.S. dry peas under a Pakistani brand may have been premature and that Pakistani housewives could be further educated in proper cooking techniques for dried pea preparation. They suggested the provision of materials to retailers in the small shops where Pakistani housewives traditionally make their purchases because Pakistani housewives consult with the shopkeepers about product attributes.

Experimental Design

Branson developed an experimental design to evaluate the effectiveness of a $1 million marketing campaign to promote breads and sweet breads in South Korea. Marketing activities evaluated included the introduction of ten new bread products; the selection of 1,000 bakeries as sites for product marketing; training in new product preparation and improved baking methods for bakers from the chosen bakeries; eight months of television advertising and a year of print media and billboard advertising; consumer taste fairs; and display materials for the bakeries promoting the new products.

Branson compared changes in sales of the 1,000 chosen bakeries with sales from a probability sample of 100 nonparticipating bakeries. Comparisons of sales changes were checked against bread product purchase data from a national consumer survey.

Sales of the original bread products and new sweet breads combined increased by 35 percent from November, 1987, through November, 1988, in the bakeries designated for promotion of the new bread products. The value of sales of the original breads and sweet breads increased by 3 percent in the chosen bakeries and 1.4 percent in the sample of control bakeries. Monthly sales of the new bread products in the chosen bakeries increased by 759 percent from November, 1987, to November, 1988. Combined sales of original and new bread products in the chosen bakeries increased by 35 percent.

The national consumer panel indicated an increase of 4.6 percent in consumer purchases of bread products for the time period studied. This equaled the combined net change in estimated nationwide bread sales for the 1,000 designated bakeries and 7,000 nonparticipating bakeries.

According to Branson, the triangular approach was an effective means of checking research results when data sources were limited. He also emphasized the importance of pretesting marketing campaigns on target audiences before implementing a full-scale campaign.

Research Issues and Data Requirements

The bulk of the empirical studies attempted to measure the relationship between promotion expenditures and exports. The coefficient of the expenditure variable was then used to derive either average or marginal returns to promotion expenditures. Estimates of export returns to promotion expenditures for the cited studies ranged from $1.33 for orange juice in an early study to $62 for soybeans and products. The variation in returns to market promotion dollars reflects differences in modeling techniques, level of promo-

tion expenditures modeled, time period for the analysis, and the factors included in the equation.

The dated nature of the empirical evidence indicates a need for further analysis. However, available data limits the scope of evaluation. Some major potential data and research issues have plagued researchers in the field for many years, while others have developed as the programs changed in the past seven years.

Measurement of Returns to Market Promotion Expenditures

With few exceptions, the studies cited in the previous sections addressed the effectiveness of the FMD Cooperator Program through 1986 or 1987. Econometric evaluation of TEA and MPP promotion expenditures may yield different results. Higher funding levels for the TEA and MPP raised expenditures in markets in which U.S. commodity organizations already maintained a presence; changed the types of promotion activities; and expanded the scope of the countries and commodities covered by federal funding. For those organizations that already conducted promotion programs, expenditures probably increased several times above FMD programming. The higher program levels also permitted USDA to fund many additional commodity organizations, widening the scope of commodities and markets covered by the programs.

Other factors were at work in international markets in the mid- to late 1980s that would challenge analysts of the market promotion programs. While many of the current studies reflect skyrocketing import demand for U.S. agricultural products in the 1970s—particularly grains and oilseeds—other factors such as favorable exchange rates, changes in trade policies and expanding incomes drove import demand from 1985 through 1990.

Scarcity of Promotion Expenditure Data. While the prospect of analyzing the level of returns from significantly higher promotion expenditures appears enticing, researchers have been challenged by the scarcity of promotion expenditure information. Researchers interested in analyzing the impacts of the TEA now can draw on five years of TEA data. Federal MPP expenditures for 1991 will not be complete until late 1993.

Economists attempt to study a large number of observations in order to include as many explanatory variables as possible in a demand equation. Domestic generic promotion specialists usually analyze weekly or monthly advertising and sales data. Export data and export promotion expenditures generally are available only on an annual basis. This leaves analysts with fewer meaningful data points and more degrees-of-freedom problems in analysis.

Aggregation of Expenditures for All Marketing Activities. Economic researchers tend to aggregate promotion expenditures for all

marketing activities in any one marketing period. Annual promotion expenditure and export (or sales) data capture with difficulty the relationships between marketing activities and sales. Annual data may obscure the monthly or weekly effects of advertising and consumer promotion campaigns; while historical data may be inadequate to measure long-term cumulative and goodwill effects of technical assistance projects.

Most of the studies of export market promotion did not lag the promotion expenditure variable because the restricted number of observations would lead to degrees-of-freedom problems. In addition, lags may not be appropriate when annual expenditures represent consumer advertising. However, Williams used a three-year moving average of real promotion expenditures in his analysis of soybean promotion effectiveness and Rosson, Hammig, and Jones used a finite distributed lag structure (weighted average of current and lagged promotion expenditures) to model the effectiveness of programs for apples, poultry and tobacco.

Branded Versus Generic Advertising. Legislators have asked USDA to apply restrictions to branded promotions. Generic promotion may be more effective when educating processors and consumers about a new product and may continue to be an effective marketing strategy if the product is not highly homogeneous. However, brand promotion may help increase or maintain market share in markets in which consumers associate product quality with a brand name.

Most of the current published research applies to generic promotion. Further research on the effectiveness of brand promotions is needed. In export markets, branded advertising and promotion may imply different target audiences and expected impacts than generic advertising. However, since promotion expenditure data usually is aggregated for all marketing activities, it will be difficult for researchers to analyze branded promotions separately from other activities.

Promotion Expenditures by Contributing Source. Some researchers have modeled only FAS promotion expenditures while others have included expenditures from both FAS and private funding sources. Promotion funding for the FMD was contributed by three major sources: FAS; the producer organization through checkoffs or other private contributions; and foreign industry promoters (importer organizations or companies). Contributions from private sources were less important for the TEA because of its goal of countering unfair trade practices. However, interim MPP regulations emphasize industry contributions.

Using only FAS contributions to represent total promotion expenditures will result in measurement error which biases the coefficients. Depending on the model specification, if only FAS promotion

expenditures are used, returns to promotion dollars may be inflated. Including promotion expenditures from all contributors may provide a more realistic picture of returns. However, prior to aggregating contributions from all sources, researchers should attempt to examine further the types of outlays which FAS allowed participants to submit as second- and third-party contributions.

Effects of Other Countries' Promotions. Researchers incorporate U.S. promotion expenditures into their demand equations, but do not include other exporters' promotion expenditures. The promotion activities of other countries could contribute to higher exports of homogeneous commodities (feed grains, some types of wheat) or could diminish the effectiveness of U.S. promotions. Although U.S. program expenditure data have drawbacks, they are generally available. Promotion outlays by other countries and promotion boards are not readily accessible.

Model Formulation

Model specification has a major influence on the outcome of the estimation. When a single-equation form is used, multicollinearity may be a problem. Multicollinearity occurs when explanatory variables are correlated. This biases the coefficients. When a large number of explanatory variables such as income, price, promotion and population are included in the import demand model, multicollinearity is likely to be present.

Another problem may arise if a variable that should be incorporated in the equation is omitted. The misspecification error caused by the failure to include a relevant variable may bias downward or upward the estimate of the promotion expenditure variable. Misspecification error may be a real problem in estimating the effectiveness of promotion expenditures when changes in import policies and other institutions have not been modeled, or when import tariffs have been included in the price of the commodity or may be a separate variable. In studies focusing on returns to export promotion, quotas and less quantitative barriers generally are not included as separate variables unless the level of the trade barrier changes significantly during the study period.

Although the single equation approach is simple and can be estimated with rather basic estimation procedures, it has many theoretical shortcomings in evaluating demand. When the single equation method is used, domestic and imported products are generally assumed to be perfect substitutes. Import demand is defined as total demand minus domestic production including changes in inventory. Another shortcoming is that the single equation approach does not allow for testing or the imposition of the general restrictions of demand such as symmetry or homogeneity.

Diminishing Returns to Promotion

Many of the studies cited in this paper measure returns to promotion when promotion expenditures were relatively low. Returns per dollar generated may be high in early years, but decline as funding increases. One study found that returns per dollar invested in promotion in more mature country markets were lower on average than in newer markets (Williams).

Welfare Effects of Promotion Programs

Federal funding of export market promotions raises questions of benefits to producers and consumers. Some of the commodities promoted in export markets are federal "program commodities," while others are participants in marketing orders and producer checkoffs. The soybean study (Williams) was the sole study of this group to address the effects of export market promotion on producers' net revenues and the soybean industry. Potential research should attempt to address net returns to producers, supply responses to export increases, and effects on domestic consumers.

Addressing Trade Policy Goals of Market Promotions

While this presentation mainly discusses the relationships between promotion expenditures and exports, future research may want to address the trade policy effects of nonprice promotions. While countering unfair trade practices is not a direct goal of the nonprice export market promotion programs, the presence of promotion organizations in Western Europe and Japan may have provided a means of education on trade policy issues for consumers and importer organizations in those countries.

Conclusions

Steep increases in federal and private funding for nonprice export market promotion in the late 1980s and early 1990s have fueled new research studies of the effectiveness of nonprice promotions as export marketing tools. Most of the previous economic studies focused on returns to promotion investment. Returns to investment dollars vary by time period and commodity studied; type of marketing activities conducted; maturity of the market; importance of price and other variables in the demand equation; and the way that promotion expenditures are modeled.

Econometric research provides insights into the effectiveness of promotion activities relative to other trade and price factors. Studies conducted for several countries may also offer guides to the allocation of funds across country markets. However, promotion managers use consumer research and other less formal evaluation methods to

obtain more timely analyses of responses to advertising and promotion campaigns.

Industry program managers have focused on market evaluations of the effectiveness of export promotions of single commodities or groups of commodities. However, FAS program administrators must consider the optimum allocation of funds across eligible trade organizations as well as across countries and marketing activities. This raises the need for further research on the relative strengths of branded versus generic promotions and cross- commodity and cross-program analyses. Finally, as the export market development programs increase in importance as marketing tools for U.S. agricultural products, researchers should consider exploring the net benefits to producers, supply response to increased exports, and the costs to domestic consumers of nonprice export promotion programs.

REFERENCES

Branson, R.E. "Market Research Evaluation of Generic Product Promotions: The U.S. Wheat/Korean Bakers Case," *Economic Effects of Generic Promotion Programs for Agricultural Exports*, ed. S.J.P. Nichols, H.W. Kinnucan, K.Z. Ackerman, pp. 130-145. College Station TX: Texas A & M University, 1991.

Chern, W.S. *Econometric Analysis of the Consumer Demand for Orange Juice in Canada*. ERD Report 73-2. Gainesville FL: Florida Department of Citrus, 1973.

DeBrito, M.A, and S.R. Henneberry. *The Impact of Non-Price Promotion Activities on United States Red Meat Exports to Japan*. Stillwater OK: Oklahoma State University, forthcoming.

Dewbre, J., R. Richardson, and S. Beare. "Measuring Wool Promotion Response with Household Survey Data." Unpublished paper. Canberra, Australia: Australian Bureau of Agricultural and Resource Economics, 1987.

_____. "Returns from Wool Promotion in the United States." Australian Bureau of Agricultural and Resource Economics Occasional Paper 100. Canberra, Australia: Australian Government Publishing Service, 1987.

Dwyer, M.J., and K.K. Flowers. "Evaluating the Impacts of TEA on Exports to Japan: A Simplified Econometric Approach." *Economic Effects of Generic Promotion Programs for Agricultural Exports*, eds. Nichols, J.P., H.W. Kinnucan, K.Z. Ackerman, pp. 116-129. College Station TX: Texas A & M University, 1991.

Fuller, S., H. Bello, and O. Capps. "Import Demands for U.S. Fresh Grapefruit: Effect of U.S. Promotion Programs and Trade Policies of Importing Nations." *South. J. Agr. Econ.* 24(1992):251-260.

Grigsby, S.E., and P. Dixit. *Alternative Export Strategies and U.S. Agricultural Policies for Grains and Oilseeds, 1950-83*. Washington DC: USDA ERS Int'l. Econ., Div., Sept. 1986.

Lee, J.L. "Research Directed Toward Foreign Market Development Programs." *Research on Effectiveness of Agricultural Commodity Promotion*, ed. W.J. Armbruster and L.H. Myers, pp. 57-68. Oak Brook IL: Farm Foundation, 1985.

Lee, J.Y., R.M. Behr, M.G. Brown, and G.F. Fairchild. "Generic Promotion Programs for Florida Citrus." *Economic Effects of Generic Promotion Programs for Agricultural Exports*, ed. J.P. Nichols, H.W. Kinnucan, K.Z. Ackerman, pp. 146-157. College Station TX: Texas A & M University.

Lee, J., and M.G. Brown. "Economic Effectiveness of Brand Advertising Programmes for U.S. Orange Juice in the European Market: An Error Components Analysis." *J. Agr. Econ.* 37(1986):385-94.

Lee, J., L.H. Myers, and F. Forsee. *Economic Effectiveness of Brand Advertising Programs for Florida Orange Juice in European Markets*. ERD Rep. 79-1. Gainesville FL: Florida Department of Citrus, 1979.

Lee, J., and D.S. Tilley. "Irreversibility Import Shares for Frozen Concentrated Orange Juice in Canada." *South. J. Agr. Econ.* 15(1983):99-104.

Moore, D.L., and V.A. McCracken. "Evaluation of Consumer Response to Generic Promotion of Dry Peas in Pakistan." *Economic Effects of Generic Promotion Programs for Agricultural Exports*, ed. J.P. Nichols, H.W. Kinnucan, K.Z. Ackerman, pp. 158-171. College Station TX: Texas A & M University, 1991.

Rosson, G.P., M.D. Hammig, and J.W. Jones. "Foreign Market Promotion Response for Apples, Poultry, and Tobacco." *Agribusiness* 2(1986):33-42.

Solomon, H., and H. Kinnucan. "Effects of Export Promotion on Import Demand for U.S. Cotton in the Pacific Rim." *Economic Effects of Generic Promotion Programs for Agricultural Exports*, ed. J.P. Nichols, H.W. Kinnucan, K.Z. Ackerman, pp. 103-115. College Station TX: Texas A & M University, 1991.

Williams, G.W. "Returns to U.S. Soybean Export Market Development." *Agribusiness* 1(1985):243-63.