



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

ECONOMIC

EFFECTS

of Generic
Promotion

Programs for

Agricultural
Exports



Editors

John P. Nichols
Henry W. Kinnucan
Karen Z. Ackerman

Economic Effects of Generic Promotion Programs for Agricultural Exports

Edited By

**John P. Nichols
Henry W. Kinnucan
Karen Z. Ackerman**

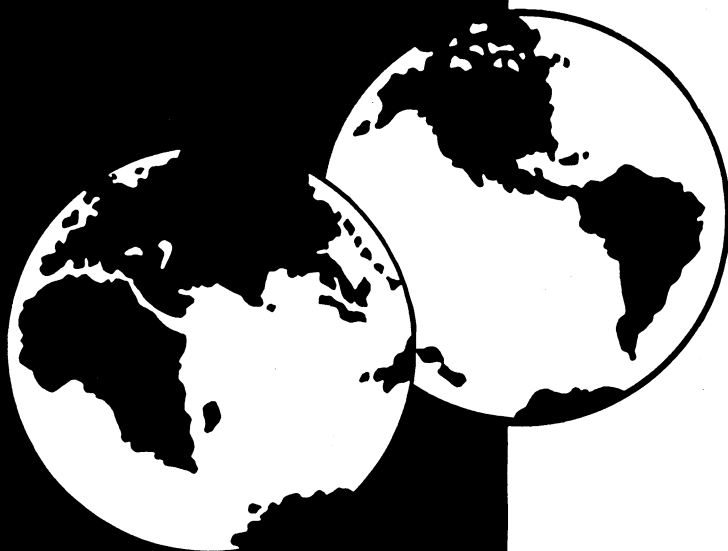
**Papers Presented at a
Symposium on Evaluating Economic Effects
of Generic Promotion Programs for Agricultural Exports
Washington, D. C.
February 22-23, 1990**

**Sponsored by NEC-63 Committee on Commodity Promotion
Foreign Agriculture Service, USDA**

**Published in Cooperation With the Agricultural and Food Policy Center
Department of Agricultural Economics, Texas A&M University**

August 1991

Part III:
Conceptual Issues,
Data and Research
Methods



NINE

Toward a Conceptual Framework for Evaluating Export Market Development Programs

Gary W. Williams

Shortly after the Foreign Agriculture Service (FAS) Cooperator Program was initiated in 1955, rapid growth of the program and hasty expansion of foreign offices of the major commodity group cooperators led to the first major evaluation of the direction and effectiveness of government agricultural foreign market development efforts (Howard). The FAS "Brain Bank" -- a team of outside experts in advertising, market research, sales promotion, international administration, and other fields -- was charged with the evaluation in the early 1960s. They concluded that the Cooperator Program had potential but would have to be expanded greatly to become effective (Howard).

Although continuing to be an important component of government foreign market development efforts, the evaluation of program effectiveness has relied largely on anecdotal evidence and simple comparisons of gross investments in market development and gross changes in exports. During the 1970s, when both U.S. agricultural exports and market development expenditures were growing rapidly, this approach to evaluation yielded some persuasive stories and even more impressive upward-sloping graphical relationships between exports and expenditures.

The problem with simply comparing the trends in exports and promotion expenditures to measure program effectiveness is that many factors other than the Cooperator Program affect the volume and value of U.S. agricultural exports.

The problem with simply comparing the trends in exports and promotion expenditures to measure program effectiveness is that many factors other than the Cooperator Program affect the volume and value of U.S. agricultural exports, including relative price changes, currency exchange rate fluctuations, trends in international livestock and meat production, changes in gross national products and personal disposable incomes, population growth, and changes in government policies around the world. This became rather apparent in the early 1980s with the

unexpected downturn in exports. The export retrenchment combined with growing concern over federal deficits and intensifying scrutiny of federal programs underscored a need to devise better means of isolating and measuring the unique contribution of the Cooperator Program to the performance of U.S. agricultural exports and the profitability of U.S. agriculture in order to justify continued federal support.

Some work to measure the effectiveness of foreign market development expenditures has been done for a few commodities including citrus (Lee 1985); soybeans (Williams); cotton (Beach and Deariso); and apples, tobacco, and poultry (Rosson et al.). Unfortunately, however, little has been done to develop a conceptual framework to guide program evaluation efforts. This paper attempts to provide a first step in that direction. After briefly discussing the major tools available to expand agricultural exports and the role of foreign market development programs, this paper will present a conceptual model of the relationship between foreign market development activities and the demand for U.S. agricultural products. The evaluation of foreign market development activities will be discussed within the context of the conceptual model. Finally, some implications for the analysis and funding of foreign market development programs will be discussed.

TOOLS OF EXPORT EXPANSION

Three basic tools to achieve an expansion in exports include price incentives, improved efficiency of the export marketing system, and foreign demand enhancement. Among those three, however, the surest way of inducing an expansion in exports is simply to make domestically produced commodities economically attractive to potential foreign buyers by selling in the world market at prices lower than those of the competition. Export subsidies are a common means of achieving this objective. A number of exporting countries successfully employ subsidies of one form or another to foster exports. The EC wheat export subsidy, the Export Enhancement Program, and the PL480 program are well-known examples of export subsidies. Subsidies, no matter how they are accomplished, are intended to capture a larger share of foreign markets for the subsidizing country. Unless the underlying taste and preference structure of the consumers in importing countries is affected by the price reduction, however, any increase in market share achieved through an export subsidy is only temporary. World prices, and consequently market shares, readjust when the subsidy is removed. Another problem with export subsidies is that they often invite retaliation from importing countries and export competitors.

A second means of boosting the volume of exports is through activities that facilitate more efficient export marketing. The flow of commodities from producers in one country to foreign buyers in another is affected by a number of forces (e.g., government policies and regula-

tions, transfer of market information, costs and technology of commodity transportation). For example, the efficiency of international commodity trade is affected by how rapidly and accurately market information is evaluated and then transmitted to and among the sellers and buyers in their respective markets. Any breakdown in this system would result in a smaller flow of commodities from producing to consuming countries, a decrease that would not occur if information flowed more freely in international markets. Many private and government agencies routinely gather and interpret a wide range of world market information for farmers and agribusinesses in an effort to enhance the efficiency of the U.S. export marketing system. The U.S.

Developing foreign markets for farm products is a long-term process. Japan, South Korea, and Taiwan, for example, progressed from major recipients of development aid in the 1950s to become three of the ten largest commercial markets for U.S. agricultural commodities.

Department of Agriculture (USDA), for example, operates an extensive international agricultural information system designed to provide U.S. suppliers with intelligence on foreign production, consumption, trade, price, and policy developments. Other activities by private concerns and government agencies to enhance the efficiency of world commodity markets also help boost the volume of U.S. exports.

Exports can also be expanded through programs designed to achieve a fundamental shift in foreign demand. The great advantage of this method of expanding exports over the price-incentive method is that export receipts are bolstered through both an expansion of sales volume and an increase in the per unit value of those sales. Foreign market promotion is also less obvious as a tool for capturing foreign markets than explicit export subsidies. Consequently, there is generally less concern over foreign market promotion programs in bilateral and multilateral trade talks than with other more obvious trade-distorting policies. Foreign market development is generally accomplished in two ways: (1) economic development assistance and (2) foreign market promotion.

Economic Development Assistance

Developing foreign markets for farm products is a long-term process. Some of the largest and fastest growing markets for U.S. agricultural products have been developed over 40 years or more. Japan, South Korea, and Taiwan, for example, progressed from major recipients of development aid in the 1950s to become three of the ten largest commercial markets for U.S. agricultural commodities. Nurturing lesser developed countries into viable commercial markets for agricultural exports begins with programs to foster economic growth, improve

incomes, and eliminate malnutrition. Any increase in per capita purchasing power achieved in the target countries would ultimately lead to an increase in their demand for food, some of which would presumably come from the country extending the assistance. Bilateral and multilateral development assistance activities include commodity assistance through concessionary sales of agricultural commodities (food aid) and technical assistance through the service of experts in infrastructure and institution development projects and related activities.

Foreign Market Promotion

Efforts to promote foreign consumption of agricultural commodities or classes of agricultural commodities are often classified as generic advertising (Morrison). However, the word "advertising" usually conjures up visions of radio jingles, television commercials, magazine advertisements, and the classified section in most newspapers. The dictionary defines advertising as "making known or promulgating," suggesting a much broader concept of the promotional activities that could be considered as advertising. This definition encompasses most non-price efforts of firms and governments to boost the consumption of specific commodities. U.S.

generic promotion efforts in foreign markets primarily include the FAS foreign market development programs, including the Cooperator Program, the Export Incentive Program, and the Targeted Export Assistance Program. These programs are supported both by federal appropriations and by

Nurturing lesser developed countries into viable commercial markets for agricultural exports begins with programs to foster economic growth, improve incomes, and eliminate malnutrition.

private funds, principally from commodity producers through various national and state commodity check-off programs. The activities funded by these programs are intended to alter foreign consumer tastes and preferences with respect to the use of particular U.S. agricultural products. These activities are of three general types: (1) technical assistance, (2) trade servicing, and (3) consumer promotion.

Technical assistance encompasses a wide range of activities designed to expand U.S. agricultural exports by providing technical help to potential users in their commodity production and/or selling efforts. Such promotional activities include feeding trials and demonstrations, animal and human nutrition seminars, product development research, product formulation and use assistance, feeding and processing technology implementation instruction, and facilities development.

Trade servicing activities are specifically designed to promote product awareness and adoption by importers, wholesalers, dealers, and industrial users. Examples include trade press announcements and

conferences, advertisements in foreign trade periodicals, distribution of promotional material to foreign food buyers, and other trade-related merchandising activities.

Consumer promotion activities tend to be targeted directly at foreign consumers. Some examples include media advertising, point-of-purchase merchandising, development and distribution of recipes, and product demonstrations in retail food outlets. The use of particular commodities like soybean oil is often promoted indirectly such as in margarine and tofu sales campaigns in Japan. Direct commodity promotion activities make explicit reference to the particular product being promoted such as in baking and cooking seminars to illustrate the quality and versatility of soybean oil. Although outside the purview of the Cooperator Program, branded advertising is undertaken through the Export Incentive Program to enhance the foreign demand for specific brands of commodities marketed by specific U.S. firms.

CONCEPTUAL MODEL OF FOREIGN MARKET DEVELOPMENT

Promoting consumption of U.S.-produced agricultural commodities through generic promotion activities in either domestic or foreign markets is intended to achieve a permanent shift in demand and thereby enhance prices and incomes in the U.S. farm sector. The only conceptual difference between promoting foreign versus domestic consumption is the particular demand curve that is targeted. The observed differences in domestic and foreign promotion program content relate almost entirely to differences in the shift variables in the respective demand functions. The different social, cultural, demographic, and other forces affecting demand in different world markets require different approaches to consumption promotion. For example, a promotion campaign intended to expand U.S. beef consumption by emphasizing leanness would not likely be successful in Japan where consumer preference is for highly marbled, fat beef.

In general, the U.S. export demand for a particular commodity can be enhanced by three types of promotion activities:

- Those designed to increase the foreign demand for the general class of commodities (R) to which the specific commodity belongs (A_R).
- Those intended to boost the share of a particular commodity (s) in the foreign consumption of the commodities in the same general class (A_s).
- Those focused directly on increasing the U.S. market share of a particular commodity (A_i). This can be generalized in the

following representation of the demand by a given country i for some commodity s from exporting country j (D_{sj}):

$$(1) \quad D_{sj} = S_j \cdot S_m \cdot S_s \cdot D_R$$

where all variables are assumed to pertain to country i ; S_j is country j 's share of total imports of commodity s by country i ($S_j = D_{sj} / \sum_j D_{sj}$); S_m is the import share of total consumption in country i of commodity s ($S_m = \sum_j D_{sj} / (D_{si} + \sum_j D_{sj})$) and D_{si} is the demand of country i for domestically produced commodity s where $j \neq i$; S_s is the share of commodity s in the total consumption by country i of the general commodity class R ($S_s = (D_{si} + \sum_j D_{sj}) / (D_{si} + \sum_j D_{sj} + \sum_r D_r)$) where commodities s and r both belong to commodity class R and D_r is the demand by country i for commodity r (from either foreign or domestic sources) and $r \neq s$; and D_R is the total consumption in importing country i of the commodities in class R ($D_R = D_{si} + \sum_j D_{sj} + \sum_r D_r$).

The different social, cultural, demographic, and other forces affecting demand in different world markets require different approaches to consumption promotion. For example, a promotion campaign intended to expand U.S. beef consumption by emphasizing leanness would not likely be successful in Japan where consumer preference is for highly marbled, fat beef.

Commodity Class Promotion Activities

Promotion activities in the first of the three categories above (A_R) attempt to shift the D_R schedule to the right and thereby increase D_{sj} (the country's demand for some element s of commodity class R from the promoting country). The per capita demand for commodity class R in target country i ($d_R = D_R / \text{population}$) can be thought of as a function of the commodity class price (P_R), the prices of other commodity classes (P_O), per capita income (Y), tastes and preferences regarding commodity classes (T_R), and other shift factors (α_R):

$$(2) \quad d_R = d_R(P_R, P_O, Y, T_R, \alpha_R)$$

U.S. expenditures to foster economic development in a given developing country could be broadly considered to be a "promotional" activity in the sense that any increase in Y achieved in the target country would normally shift D_R to the right. A more narrow and traditional definition of promotional activities in this category (A_R), however, includes foreign market promotion activities that shift D_R through a change in underlying tastes and preferences in the country (T_R). These

latter activities would focus on promoting consumption of broad classes of bulk commodities such as "meat" or "livestock feed" usually as a result of the unfamiliarity of users in the market with such commodities or associated technologies.

Equation (1) indicates that activities in category A_R could result in an increase in D_{sj} . U.S. exports of soybean meal, for example, might be stimulated by activities promoting the use of modern feeding technologies in foreign countries. This will not necessarily be the case, however, because any additional consumption of soybean meal generated would be distributed among all alternative suppliers (both domestic and foreign) according to the shares of each supplier in the total domestic consumption of soybean meal in the country. According to equation (1), if the target country tends to import a small share of its consumption of the specific commodity being promoted from the promoting country (i.e., either S_j or S_m are close to zero), then A_R promotion activities would result in little additional exports of that commodity from the promoting country. In this case, other suppliers would be the primary beneficiaries of these "promotion" expenditures.

At the same time, if consumers in the target country are unfamiliar with the specific commodity being promoted (i.e., S_s is close to zero), other commodities would likely be the major beneficiaries. For example, assisting a country to develop modern feeding technology could simply result in greater imports of rapeseed meal if livestock feeders in the target country are less familiar with soybean meal as a protein supplement in feed rations. Note that expenditures in this category would not necessarily affect any of the share variables in equation (1).

Specific Commodity Share Promotion Activities

Promotion activities in the second of the three categories above (A_s) attempt to increase the demand by the target country for a particular commodity (D_{sj}) by increasing S_s in equation (1), the commodity's share of the total consumption of commodities in its class (e.g., beef's share of total meat consumption). The factors affecting movements in S_s include the price of the commodity relative to the prices of other commodities in its class (P_s/P_r), tastes and preferences with respect to commodity s (T_s), and other shift factors (α_s):

$$(3) \quad S_s = S_s(P_s/P_r, T_s, \alpha_s).$$

Promotional expenditures in this class lead to an increase in T_s and, therefore, an increase in S_s . Such activities include campaigns, for example, to introduce consumers in a given country to a relatively unknown commodity with superior nutritional characteristics or other properties. Examples include feeding trials to demonstrate the superiority of soybean meal as a protein supplement in livestock rations and

advertisements to promote the use of beef in traditional food dishes. However, such promotion activities are unlikely to result in much increase in U.S. exports of the commodity if the U.S. share of the target country's domestic consumption of the commodity is small (i.e., S_j or S_m in equation (1) are close to zero). In this case, other suppliers will be the primary beneficiaries of this particular category of activities (A_2).

Specific Commodity Market Share Promotion Activities

Promotion activities in the third category (A_3) attempt to increase the share of the total consumption of commodity s in country i that comes from exporting country j . Promotion activities in this category could focus on promoting the country's share of imports (S_j), the total import share of domestic consumption (S_m), or both. Factors affecting the behavior of the promoting country's export share (S_j) include the price of the commodity from the promoting country relative to the price of the commodity from competing export suppliers (P_{sj}/P_{sk}), consumer tastes and preferences in the target country with respect to the characteristics of the commodity from the promoting country (T_j), and other shift factors (α_j):

$$(4) \quad S_j = S_j(P_{sj}/P_{sk}, T_j, \alpha_j).$$

On the other hand, the import share of domestic consumption of the promoted commodity (S_m) is determined by the internal price of the commodity (P_s) relative to the price of imports ($P_m = P_m(P_{sj}, P_{sk})$), tastes and preferences with respect to the consumption of imported as opposed to domestically produced commodity s (T_m), and other shift factors (α_m):

$$(5) \quad S_m = S_m(P_s/P_m, T_m, \alpha_m).$$

Focusing entirely on activities to boost the promoting country's share of the target country's imports (S_j) would do little to boost the promoting country's exports if the import share of consumption (S_m) is small. Similarly, focusing on boosting imports as a fraction of domestic consumption (S_m) in the target country would be hazardous if the promoting country accounts for only a small share of the target country's imports (S_j).

Note that export subsidy measures by country j work to increase that country's exports of commodity s by reducing the price ratio in equation (4). Also, import restricting policies of the target country reduce

The most effective "promotional" activities are likely to be economic development assistance programs that lead to increases in purchasing power in the country.

imports by reducing the price ratio in equation (5). Promotional activities intended to shift T_j and T_m can generally help offset the negative effects of export subsidies by competing suppliers and import restrictions by the target country, respectively. If any import restrictions are of a nontariff nature, however, additional increases in T_m will not lead to additional increases in the promoting country's exports of the commodity because S_m becomes an exogenous variable controlled by the importing country's government.

Promotion activities in this last category (A_j) can be considered to be "branded advertising" in the sense that they attempt to differentiate the target commodity by country of origin such as in the promotion of U.S. beef in Japan. Promotion activities in the first two categories, however, are more generic in nature because they can benefit producers in other countries as well as those in the promoting country. Such "generic" promotion of commodities is the area in which most U.S. foreign market promotion expenditures have been directed since the inception of the FAS programs.

Only relatively recently have some Cooperators begun attempting to differentiate U.S. from foreign-produced agricultural commodities in their foreign market promotion programs. In the context of the model presented here, however, this is the expected pattern of expenditure development over time as market development efforts in a given country mature. Over time, the target for market development activities should move from the right to the left in equation (1). It makes little sense to target the U.S. market share (S_j) in initiating an effort to promote a new commodity in a foreign country if total consumption (D_R) is low, the consumers in the country are unfamiliar with the commodity (S_s is low), or domestic production accounts for most of consumption (S_m is low).

This is particularly the case for a developing country. The most effective "promotional" activities are likely to be economic development assistance programs that lead to increases in purchasing power in the country. Until that is accomplished, promotional efforts targeting the share variables will be constrained by the limits of purchasing power in the country. Some combination of the various export expansion tools would likely be the most successful. Export subsidies to increase S_j , for example, could be combined with market development activities and development assistance efforts to break into many foreign markets successfully.

EVALUATING THE EFFECTIVENESS OF FOREIGN MARKET DEVELOPMENT ACTIVITIES

The parameters of primary concern in evaluating the effectiveness of export promotion are the coefficients associated with the taste and preference variables in equations (2) through (5). Assuming that each taste and preference variable (T) is positively related to the respective

type of promotional expenditure activities (A), then empirical measurement can proceed by substituting the appropriate expenditure variables for the respective taste and preference variables in each equation. There are a number of problems, however, in applying this procedure to the evaluation of foreign market development efforts.

One problem is that data on expenditures by activity across countries are often sketchy. Consequently, some researchers (e.g., Williams) have chosen to substitute equations (2) through (5) into equation (1) and then estimate the export demand equation using a single, aggregate expenditure variable for each commodity and country, undifferentiated by activity, to represent foreign market development efforts.

Unfortunately, promotion expenditures that are successful in increasing a particular target variable, such as S_s , in equation (1) may have little measurable effect on the promoting country's exports if per capita incomes in the target market or one of the other share variables in equation (1) are low or zero. As indicated by equation (1), even if S_s is successfully doubled, exports to the target country from the export promoting country (D_{sj}) may not change significantly if the exporting country's market share (S_j) is low or zero, if the target country imports little of its supply of the commodity (i.e., S_m is low or zero), or if low per capita incomes or other factors preclude effective demand for that class of commodities (i.e., D_R is low or zero). In this case, the results of estimating the parameters of a demand equation for exports from the promoting country to the target country using aggregate foreign market development expenditures as an explanatory variable would imply that foreign market development programs are ineffective, as indicated by a statistically insignificant estimated coefficient for the expenditure variable. In fact, the program in this case was quite successful in achieving the objective of increasing the relative consumption of commodity s in the target country (S_s).

A problem in evaluating foreign market development efforts is that "effectiveness" is more of a catch word than a rigorously defined term that can be measured.

The real problem in this situation is with the management of the program and the expenditure allocation decisions rather than with the program itself, i.e., "doing things right" in boosting S_s but not "doing the right things" to increase exports (Sharpe). A reallocation of funds to the appropriate targets (one or more of the other variables in equation (1)) would help relieve the factors limiting an expansion of the promoting country's exports to the target country. Estimating the aggregate expenditure parameter of the same export demand equation following reallocation of expenditures would then be more likely to show a positive, significant relationship.

Another problem in using the model presented earlier to measure the effectiveness of foreign market development efforts is that

it may be difficult to separate the promotional activities into the necessary groups (i.e., A_R , A_s , A_j). Some sense of what set of activities is most likely to be associated with each target variable in equation (1) is necessary. Nichols suggests that activity expenditure allocation decisions are affected by the level of economic development in the target country, among other factors.

Because the sophistication of the market in any country, including its channels of distribution and consumer preferences, is positively correlated with the level of economic development, the effectiveness of market promotion activities varies greatly across countries of differing economic status. Consequently, consumer promotion activities are likely to be more effective in markets with higher discretionary income. Technical assistance for bulk commodities, on the other hand, would likely be more appropriate in markets at an earlier stage of economic development. Then trade servicing would fall somewhere between these two extremes but increase in importance as more complex market channels were developed for more specialized high-value products.

This suggests that generally the A_R activity group would consist primarily of technical servicing activities and would be most associated with efforts to increase the target variables furthest to the right in equation (1). Consumer promotion activities, on the other hand, are more in the nature of those associated with A_j and are more likely to be used to achieve increases in the target variables further to the left on the right-hand side of that equation. Trade servicing activities are those most likely to be associated closely with A_s and most likely to be associated with efforts to increase the target variables more in the middle of the right-hand side of equation (1).

A final problem in evaluating foreign market development efforts is that "effectiveness" is more of a catch word than a rigorously defined term that can be measured. Because the stated objective of foreign market development programs is "to increase exports of United States agricultural commodities" (Svec), effectiveness is often measured in terms of changes in export volume (i.e., D_{sj} in equation (1)). Most anecdotal evidence of program effectiveness relies on this definition. If exports have increased, then the program is judged to be effective. An obvious problem with this measure of effectiveness is that export values and shares can drop even if export volumes are increasing. Consequently, a broader measure of program effectiveness would include changes in export value or export share.

Unfortunately, empirical estimation of the parameters of the foreign market development model presented in equations (1) through (5) can provide partial equilibrium information on the effects of foreign

If exports have increased, then the program is judged to be effective, but export values and shares can drop even if export volumes are increasing.

market development efforts only on the absolute volume of associated commodity exports. An analysis of the effects on export values and shares requires the incorporation of the foreign market development model into a more general equilibrium, world price determination model. Simulating this larger model over time under various assumptions regarding the level of market development expenditures by commodity, country, and/or activity as done by Williams would generate measures of the effects of market development efforts on the volume and value of associated exports and the share of the target country's imports accounted for by the promoting country.

Changes in export value or share, however, are limited gross measures that fail to account for the costs associated with achieving those changes. Consequently, a more appropriate measure of program effectiveness is some concept of return on investment (ROI) or benefit/cost ratio (BCR). Williams calculated a ratio of changes in export value to the associated program expenditures as one measure of program effectiveness.

An export value ROI, however, does not measure the returns from foreign market development expenditures to the producers who have provided the funding through check-off programs. Williams calculated a ratio between changes in U.S. farm cash receipts as a result of foreign market development activities to check-off dollars invested in foreign market promotion as a measure of returns to soybean growers from the Soybean Cooperator Program. A successful market development effort that raises foreign demand and prices would also elicit an expansion in production. Consequently, in calculating the return to growers, the increase in gross cash receipts realized would first have to be discounted by the additional costs of production as a result of the price-induced production expansion.

Using any of these effectiveness measures is complicated by the fact that market development expenditures take time to yield results. Like any generic promotion scheme, market development expenditures are investments intended to create new streams of revenues. Consequently, the benefits of market development expenditures in any given year are realized over a number of years. A common error in calculating ROI measures, however, is to divide current changes in export value by current foreign market development expenditures. Williams utilized a three-year moving average of expenditures to calculate the time path of returns to the soybean market development program. Although the carryover effects of advertising in the domestic market have been the subject of considerable research¹, the carry-over effects of export promotion expenditures have received little empirical attention.

¹ Lee, Brown, and Fairchild provide a brief review and references on the decay structure or carryover effects of advertising.

IMPLICATIONS FOR THE ANALYSIS AND FUNDING OF FOREIGN MARKET DEVELOPMENT PROGRAMS

Limited availability of federal funds and growing concerns about the appropriate allocation of federal and grower check-off funds will require future justification of continued foreign market development investments to be based on more objective and reliable evidence of program effectiveness than has generally been the case in the past. This paper has attempted to begin the development of a general framework for evaluating the effectiveness of foreign market development programs. The discussion leads to several implications for program analysis and funding.

First, increases in U.S. exports of agricultural commodities to a particular country can be achieved by aiming foreign market development expenditures at one or more of four different targets:

- The target country's domestic demand for the general class of commodities to which the target commodity belongs.
- The share of the target commodity in the country's consumption of the commodities in the same general class.
- The share that imports account for in the country's consumption of the target commodity.
- The U.S. share of the country's imports of the target commodity.

Foreign market development programs will be more effective in expanding U.S. exports if expenditures are explicitly focused on these targets. An adequate evaluation of export promotion efforts must consider the increases achieved both in the various targets as well as in export volume and value.

Second, foreign market development programs can be successful in increasing one or more of the target variables without achieving much increase in U.S. agricultural exports. That is, concentrating foreign market development expenditures in a low-income

The aggregate return to generic commodity promotion expenditures for particular commodities might be enhanced if commodity organizations allocated a greater portion of these funds to promote consumption of commodities in foreign markets.

developing country, for example, on consumer promotion activities to differentiate U.S. agricultural products from those of competing domestic or foreign suppliers might only increase the U.S. share of a very small

level of imports. Consequently, little increase in U.S. exports would be achieved.

A similar outcome would result in a more developed country where incomes are higher but the target commodity is relatively unknown as an alternative in traditional food, fiber, or feed purchasing and use patterns in the country. A reallocation of market development expenditures towards the limiting target variables in both cases would be more effective in achieving an increase in U.S. agricultural exports. In the developing country case, economic development assistance efforts would need to accompany market development efforts if any significant export expansion to such a country is to be expected. In the developed country case, reallocation of some expenditures to activities that demonstrate the use of the target commodity as an alternative to traditional commodities would likely be most effective in increasing exports.

The implication for program evaluation efforts is that program effectiveness relates to changes not only in the level of expenditures but also the allocation of expenditures among alternative activities. If the allocation problem is ignored, evaluation efforts could conclude, for example, that the program is ineffective when the appropriate conclusion is that expenditures need to be reallocated to improve the effectiveness of the program. Some research to determine the particular variables limiting an expansion of exports may be necessary to allocate expenditures efficiently.

Third, particular types of export promotion activities are likely to be more effective than others in achieving gains in particular target variables, but the level of economic development in the target countries may limit the effectiveness of some market development activities in achieving gains in their respective target variables. For example, consumer promotion activities are likely to be more effective than technical servicing activities in differentiating U.S. commodities in markets with higher discretionary income. On the other hand, technical servicing activities are likely to be more appropriate for introducing new bulk commodities into a foreign market, particularly if consumer incomes are low.

Fourth, because there is no standard definition of program "effectiveness," a number of effectiveness measures have been used (i.e., changes in the level and value of exports, changes in the U.S. export market share, and some notion of return on investment (ROI)). Work is needed to develop a more standard method of calculating the ROI, including a closer examination of the dynamic nature (time lag problem) of foreign market development expenditures.

Finally, generic promotion activities in foreign markets for a given commodity are less likely than such activities in domestic markets to alter the commodity share of the total consumption of U.S. agricultural commodities. Generic promotion of commodities like beef or soybean oil in the domestic market may do little more than increase consumption of the commodity at the expense of such competing commodities as poultry

(in the case of beef) and corn oil or cottonseed oil (in the case of soybean oil). Consequently, there may be little net effect on total commodity consumption and, therefore, U.S. farm income.

However, promotion of the consumption of the commodity in foreign markets stands a better chance of enhancing U.S. farm income. Increased foreign consumption of U.S. soybean oil, for example, could result in a decline in the consumption of foreign-produced soybean oil rather than of competing U.S.-produced edible oils. Such commodity export promotion activities also could result in a dietary shift in the foreign countries away from traditional foods like lard and tallow to the U.S.-produced soybean oil. The aggregate return to generic commodity promotion expenditures for particular commodities might be enhanced if commodity organizations allocated a greater portion of their funds to promote consumption of commodities in foreign markets. Some measure of the relative returns to domestic versus foreign market development efforts may be useful as an indication of foreign market development program effectiveness.

REFERENCES

- Beach, A., and E. Deariso. "Evaluation of FAS-CCI Cooperative Advertising Project in Japan." Paper presented to the U.S. Agricultural Export Development Council, November 1984.
- Howard, J. O. *Partners in Developing Farm Markets Overseas*. Washington, D.C.: U.S. Agricultural Export Development Council, 1989.
- Lee, J. "Research Directed Toward Foreign Market Development Programs." *Research on Effectiveness of Agricultural Commodity Programs: Proceedings*, pp. 57-68. Oak Brook Illinois: Farm Foundation, Apr. 1985.
- Lee, J., M. G. Brown, and G. F. Fairchild. "Some Observations on the Impact of Advertising on Demand." *Agribusiness: An International Journal* 5(1989):607-18.
- Morrison, R. M. *Generic Advertising of Farm Products*. Washington, D.C.: USDA ERS Agr. Info. Bull. No. 481, Sept. 1984.
- Nichols, J. P. "Export Promotion Effectiveness for Agricultural Products." Paper presented at the Conference on Realizing Opportunities for Farm and Food Product Exports to the Pacific Rim, Columbus, Ohio, 24-25 Oct. 1989.
- Rosson, C. P. III, M. D. Hammig, and J. W. Jones. "Foreign Market Promotion Programs: An Analysis of Promotion Response for

Apples, Poultry, and Tobacco." *Agribusiness: An International Journal*, no. 1(Spring 1988), pp. 33-42.

Sharpe, D. B. "Measuring the Effectiveness of Commodity Market Development." *Research on Effectiveness of Agricultural Commodity Programs: Proceedings*, pp. 42-46. Oak Brook, Ill.: Farm Foundation, Apr. 1985.

Svec, R. J. "Foreign Market Development Programs: A Federal Agency Perspective." *Research on Effectiveness of Agricultural Commodity Programs: Proceedings*, pp. 27-30. Oak Brook, Ill.: Farm Foundation, Apr. 1985.

Williams, G. W. "Returns to U.S. Soybean Export Market Development." *Agribusiness: An International Journal*, no. 3(Fall 1985), pp. 243-63.