Chapter 8
US Export Market Development Programs

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Abstract The production of US agriculture has been growing faster than the domestic food and fiber demand, at least until the ethanol mandate took hold. Considering that over 95% of the world's customers lie outside the USA, US farmers and agricultural firms have relied heavily on export markets to sustain revenues and prices. However, entering new export markets and maintaining existing markets may require market development investments and promotion costs from both the public and private sectors. To create, expand, and maintain export markets for US agricultural products, the USDA's Foreign Agricultural Service has partnered with nonprofit trade associations representing commodity or regional interests. Despite its projected benefits, the US government's financial involvement in the promotion of agricultural exports has been an issue of growing debate. For example, some of these programs have been highly criticized as promoting corporate welfare. Nevertheless, most of the published studies evaluating export promotion programs have shown that these programs have been effective in increasing market shares and export revenues. Additionally, many small to medium sized agricultural industries find these programs valuable, as they might not have enough knowledge about export markets or enough funds to effectively promote their products. In this chapter, a critical overview of the US export market development programs is provided.

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Introduction

Over the past two and a half decades, US imports have exceeded its exports by a large margin (Figs. 8.1 and 8.2). The US trade deficit peaked in FY 2008, reaching almost one trillion dollars. However, during the early 1990s, the US trade deficit was reduced as the dollar depreciated and the economies in other countries grew which led to increased demand for US exports. In the latter part of 1990s, the US trade deficit grew larger as a result of the US economy growing faster than the economies of America's major trading partners which led to US consumer demand for foreign goods growing at a faster rate than foreign demand for US products. Also, the financial crisis in Asia sent Asian currencies plummeting, making their goods relatively cheaper than American goods which led to an increased US demand for their goods. During the past decade, a combination of factors contributed to the continued US trade deficit. In FY 2010, the total US trade deficit was $756 billion, composed of $1.1 trillion in exports minus $1.8 trillion in imports. America's dependence on foreign oil has been blamed as a major contributor to the US trade deficit.

Despite the overall trade deficit, the US agricultural sector has experienced a trade surplus since 1960. The surplus has helped counter the persistent deficit in nonagricultural US merchandise trade (USDA/ERS/Briefing 2012). The US agricultural trade surplus has fluctuated during the FY 2006–2010 period, growing from $4.6 billion in 2006 to $29.6 billion in 2010 (Fig. 8.1). Despite one of the worst

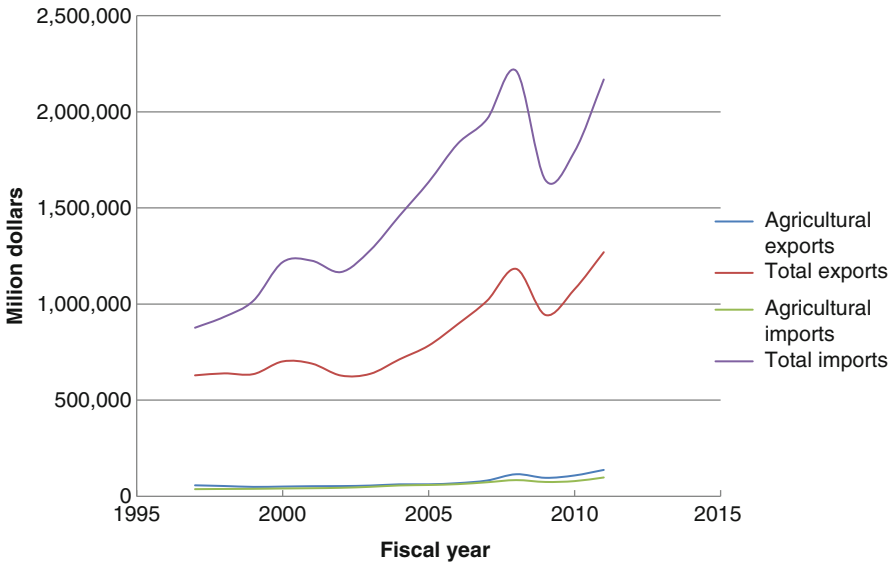

Fig. 8.1 Value of US trade—agricultural and total by fiscal year from 1997 to 2011. *Source*: Based on data from USDA/ERS/FATUS 2012

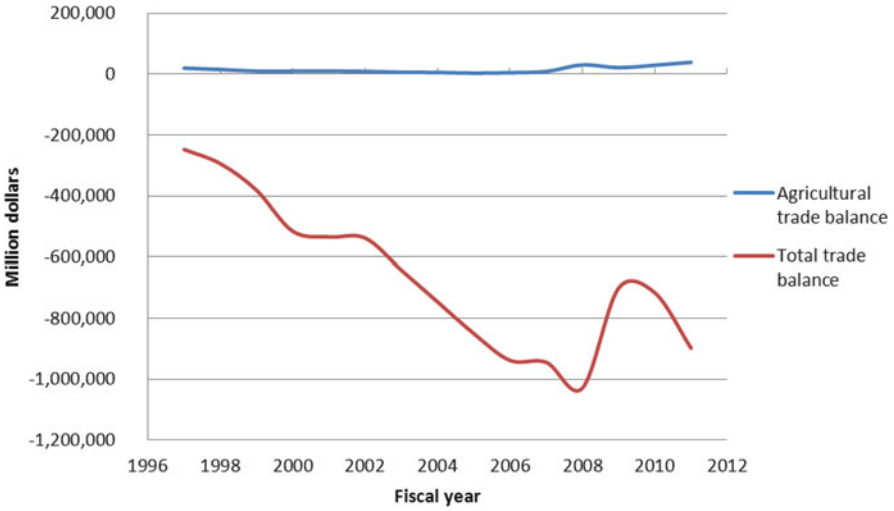

Fig. 8.2 Value of US trade—agricultural and total trade balance by fiscal year from 1997 to 2011. *Source*: Based on data from USDA/ERS/FATUS 2012

global recessions, the top US agricultural export products have increased by 78% in the past 5 years (FY 2005–FY 2010) (USDA/FAS/OTP 2010). It can be argued that the world macroeconomic outlook both supports and depends on increasing US exports in general and US farm exports in particular (USDA/ERS/AES 2010).

The production of US agriculture has been growing faster than the domestic food and fiber demand, at least until the ethanol mandate took hold. Considering that over 95% of the world's customers lie outside the USA, US farmers and agricultural firms have relied heavily on export markets to sustain revenues and prices. Exporting also helps develop jobs and strengthens wages. Exports already support more than a third of the US manufacturing jobs and it has been reported that Americans who work for firms that export earn at least 15% more than similar workers at firms that do not export (NEI 2010). During the last 5 years, exports have accounted for over 10% of US GDP as well as contributing more than one percentage point to GDP growth which is a larger contribution than either consumption or fixed investment. The goal of the US President's National Export Initiative (NEI) plan is to double US exports in 5 years.

However, entering new export markets and maintaining existing markets requires market development investments and promotion costs from both the public and the private sectors. To create, expand, and maintain export markets for US agricultural products, the US government has invested in various programs. In this comprehensive agricultural export promotion system, the US Department of Agriculture (USDA) Foreign Agricultural Service (FAS) has partnered with nonprofit trade associations representing commodity or regional interests. During the period of 2002 through 2010, federal support of US agricultural exports—including the Food for Peace Act (FPA), credit guarantees, and generic and brand commodity promotion programs, averaged $5.5 billion annually (Table 8.1).

Table 8.1 Export program activity, FY 2002–2010, in million US dollars

Program	2002	2003	2004	2005	2006	2007	2008	2009	2010
DEIP	55	32	3	0	0	0	0	100	25
MAP	100	110	125	140	200	200	200	200	200
FMDP	34	34	34	34	34	34	34	34	34
EMP	–	10	10	10	10	4	10	10	10
TASC	2	2	2	2	2	1	4	7	8
QSP	2	2	2	2	2	1	1.4	2	2
GSM-102	2,936	2,545	2,926	2,170	1,363	1,445	3,115	5,357	5,400
Food for Peace (P.L. 480)	1,095	1,960	1,809	2,115	1,829	1,787	2,067	2,321	1,690
Section 416(b)	773	213	19	76	20	0	0	0	0
Food for Progress	126	137	138	122	131	147	220	216	148
McGovern-Dole IFECN	–	100	50	90	96	99	99	100	210
Local and Regional Procurement Pilot	–	–	–	–	–	–	0	5	25
Total	*5,123*	*5,145*	*5,118*	*4,761*	*3,687*	*3,718*	*5,750*	*8,352*	*7,752*

Source: Ho and Hanrahan (2010a, b)

Despite its projected benefits, the US government's financial involvement in the promotion of agricultural exports has been an issue of growing debate in recent years. Although the federal government has played an important role in expanding sales of farm and food products to global markets for nearly six decades, the tightening of the federal budget over the years and the significant amount of public funds invested in export market development programs have raised concerns about the effectiveness of the federal promotion expenditures.

The objective of this chapter is to provide a critical overview of the US export market development programs. An overview of the US agricultural trade is followed by a description of current US government market development programs. Specific objectives of each program, their implementation methods, and the challenges faced in today's market environment are examined. Policy options addressing potential alternatives in dealing with challenges faced by each program are then presented. A summary of the studies and the models that have been used to measure the effectiveness of the export promotion programs is also included.

US Agricultural Trade

The USA is a net exporter of food and one of the major players in world agricultural markets. The US agricultural trade surplus has almost tripled over the past decade, from $11.90 billion in FY 2000 to $29.6 billion in FY 2010 (USDA/ERS/FATUS 2012). This agricultural surplus is helping mitigate the huge total negative trade balance which exceeded half a trillion dollars ($755.8 billion) in FY 2010. The US share of agricultural exports as a proportion of world exports has increased from 7% in 2000 to 10% in 2010. Stronger economic growth in China and other key markets and tighter global supplies of soybeans, corn, wheat, and cotton have stimulated the

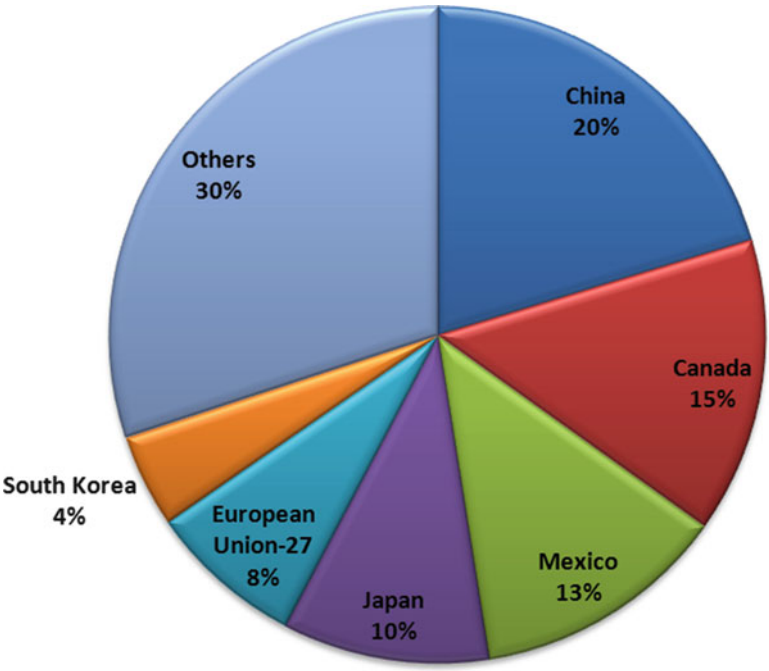

Fig. 8.3 US agricultural export destinations in 2010, weighed by export value US dollars. *Source*: Based on data from USDA/ERS/FATUS 2012

growth in US agricultural exports. Also, higher commodity prices during the recent years have significantly contributed to the export value gain.

The top US agricultural export destinations in CY 2010 were China and Canada, accounting for 20% and 15% respectively of the total US export value; Mexico, 13%; Japan, 10%; EU-27, 8%; and S. Korea, accounting for 4% (USDA/ERS/FATUS 2012) (Fig. 8.3). In CY 2010, bulk products (grains, oilseeds, cotton, and tobacco) accounted for 40% of total US agricultural export value. High-value products (HVPs) accounted for another 60%. Raw products (live animals, fresh fruits and vegetables, nuts, and nursery products) accounted for 21% of US HVP exports, while semi-processed products (fats, hides, feeds, fibers, flour, meals, oils, and sugar) accounted for another 26%. Over half (53%) of US HVP exports are in processed products (meat, milk, grain products, processed fruits and vegetables, juice, wine, beverages, and other processed products). It is interesting to note that HVP accounted for only about 30% of total US agricultural exports in the 1970s.

Grains and livestock products are the US top major export commodities and the United States is an important player in the global trade of several agricultural products. During the period October 2009-November 2010, the United States accounted for an average of 10, 39, and 1.6% of global production of wheat, corn, and rice, respectively; while accounting for a notable portion of global trade in these commodities. The United States accounted for 23, 52, and 11% of world exports of wheat, corn, and rice, respectively (USDA/FAS/PSD 2012). Additionally, global

markets are notably important to US agricultural producers. Agricultural exports have been about a third of total US agricultural cash receipts. During the period October 2009-November 2010, 51% of US wheat, 15% of US corn, and over 50% of US rice were destined for global markets. For some other agricultural products, such as almonds and cotton, export sales have far exceeded domestic sales (USDA/FAS/OTP 2010). Some government estimates show that every dollar spent on US exports in 2008, generated another $1.36 of expenditures created in the US economy to support exporting activity and in 2008, 8,000 American workers were engaged in supporting activities for every $1 billion of US agricultural exports (USDA/FAS/OTP 2010).

For livestock products, The USA accounted for over 20% of the world volume of beef and veal and for 10% of the world volume of swine meat production. The USA is also one of the largest meat exporting and importing countries. In 2010, US export volume of beef and pork accounted for 14.3 and 33.5%, respectively, of global trade in red meats, while its imports accounted for 16.4 and 6.8% of global trade in beef and pork, respectively (USDA/FAS/PSD 2011). Moreover, meat exports accounted for a notable portion of meat production in the USA. About 11% of US beef and beef variety meat production volume and about 24% of US pork and pork variety meat production were exported (USDA/FAS/OTP 2010). The leading markets for US beef and pork exports, although varying from year to year, have primarily been Mexico, Canada, Japan, South Korea, Taiwan, and China/Hong Kong (USMEF 2011).

Despite having the lion's share of the global agricultural trade, the US global market share has fluctuated during the past decade. For instance; imports of beef from the USA were banned by Canada, Mexico, South Korea, and Japan following the outbreak of *Bovine Spongiform Encephalopathy* (BSE) in 2003 (Henneberry and Mutondo 2009). Another issue that is important to consider when analyzing the US export market share is the fact that markets in major importing countries are differentiated in terms of buyers' attitudes toward agricultural products from various sources (Henneberry and Hwang 2007). For example, in the Asian markets, grain-fed beef imported from the USA has generally been viewed as having a higher quality than grass-fed (nonfed) beef imported from other sources. Therefore, supply source differentiation is important when analyzing global agricultural markets (Mutondo and Henneberry 2007).

In order to increase sales and market shares of their agricultural products, US exporters and commodity groups have conducted a wide range of promotion activities in their import markets. Source differentiation has been the focus of many of these activities. For example, one of the major goals of the US non-price export promotion programs has been to market US agricultural products as being of a higher quality or better at meeting consumer (buyer) demand than those offered by US competitors.

With the rapid globalization of the commodity markets in countries across the world and given the fluctuating US share in global agricultural markets, understanding the potential impacts of US promotion activities is important in developing effective marketing strategies and the allocation of advertising investment. The US export promotion activities and their intended impacts are examined in the following sections.

US Export Promotion Programs

Over the past several decades, with the goals of increasing agricultural exports and providing food aid, the USA has operated a comprehensive agricultural export promotion system, wherein non-price export promotion has been subsidized by the federal government and matched by industry dollars. The Food, Conservation, and Energy Act of 2008 (the 2008 farm bill) which established US farm policy for 2008 through 2012, contains a trade title (Title III of P.L. 110-246) that authorizes and amends the USDA agricultural export promotion and the US international food aid programs. Current legislative authority for most of these activities will expire with the 2008 farm bill in 2012.

The trade title of the 2008 farm bill authorized and amended four kinds of export and food aid programs: direct export subsidies, export market development programs, export credit guarantees, and foreign food aid (Ho and Hanrahan 2010a) (Fig. 8.4). The USDA's Foreign Agricultural Service administers all these export promotion programs, except for Titles II and III of the Food for Peace Act (P.L. 480), which are administered by the US Agency for International Development (USAID). USDA's international activities are funded by discretionary annual appropriations acts and by using the borrowing authority of the Commodity Credit Corporation (CCC), (Ho and Hanrahan 2010a). More specifically, the foreign food assistance is under the Food for Peace Act (P.L. 480) and programs such as export credit guarantees, non-price market development programs, and export subsidies are funded through the borrowing authority of CCC. The total program value for international programs has decreased from $5.7 billion in 1998 to $4.97 billion in FY 2009 (Ho and Hanrahan 2010a).

P.L. 480 is the largest of these programs, with average annual spending of $2.2 billion on international food aid programs over the past decade. Title II activities have comprised the largest portion of the Food for Peace budget. The 2008 farm bill sets the annual authorization level for Title II of the food aid program at $2.5 billion (Ho and Hanrahan 2010a). The Export Credit Guarantee Program (GSM-102) is also a significant export market development program and is authorized for export credit guarantees of $5.5 billion worth of agricultural exports annually. The acronym GSM refers to the General Sales Manager, an official of FAS who administers the credit and other export programs. The most notable of USDA's non-price export market development programs are the Market Access Program (MAP) and the Foreign Market Development Program (FMDP). In 2009, non-price market development activities totaled over $570 million, consisting of $234.5 million of USDA market development program allocation for the FMDP, Cooperator Program and MAP, which leveraged an additional private sector investment of over $335 million (USDA/FAS/OTP 2010).

The US generic commodity promotion programs seek to both inform and change consumer attitudes and perceptions, with the goal of increasing domestic and export sales and market shares for US agricultural commodities. However, in recent years, the continuation of these programs has generated much debate. These arguments have centered on the total costs and benefits and the distribution of costs and benefits

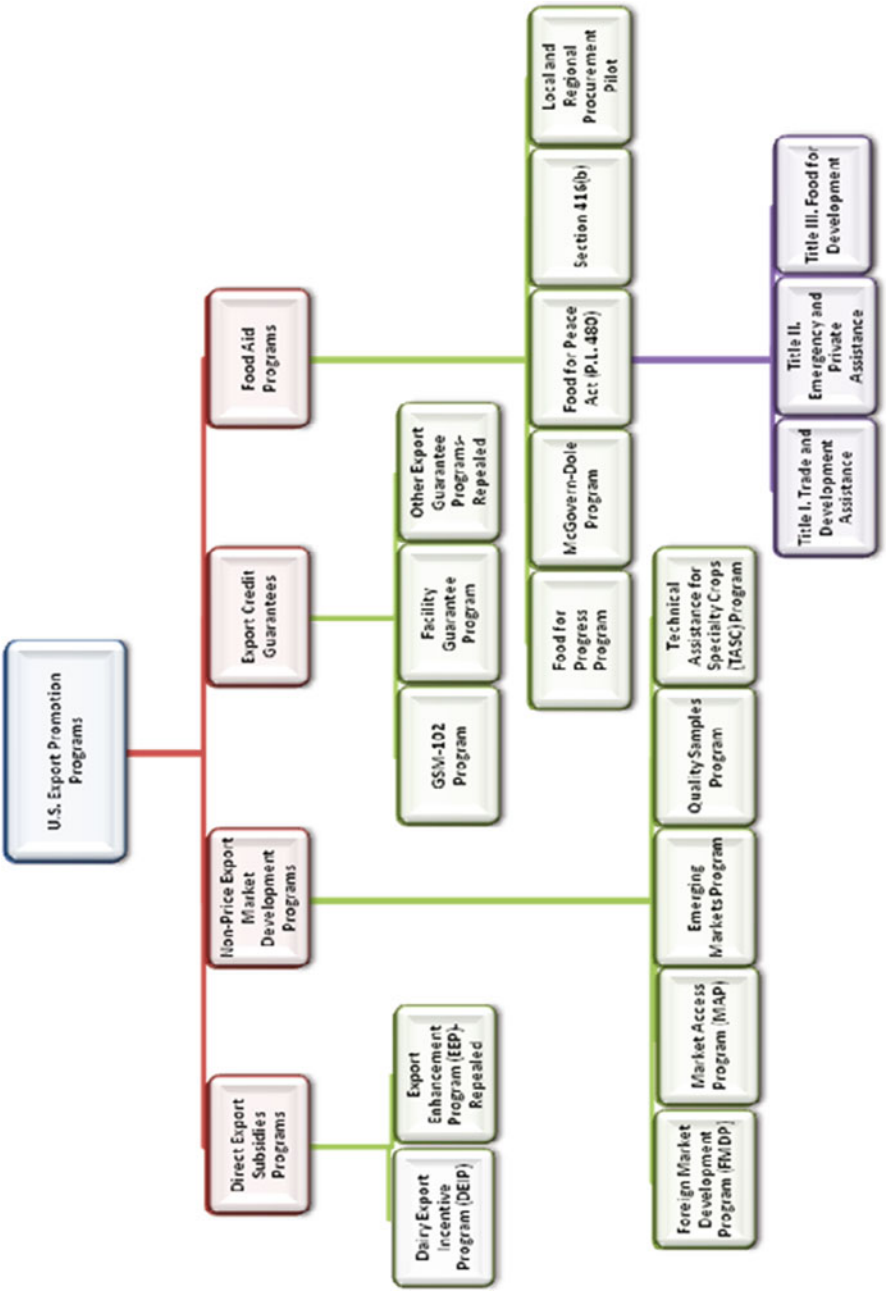

Fig. 8.4 US Export Market Development Programs

among producers and handlers of a given commodity covered by a promotion program. Given the significant amounts of producer and US government funds devoted to the domestic and international promotion of agricultural products and the ongoing debate over the welfare implications of advertising, it is crucial for the continuation of the programs for policy makers to understand the effectiveness as well as the economic impacts of market development expenditures (see Chap. 7 for detailed treatment of domestic advertising and promotion programs). Despite their intended contribution to US agricultural exports, these government funded export market development programs have been highly criticized as promoting "corporate welfare." The following section provides a description of each market development program that is included in Title III of the 2008 farm bill, including challenges faced and their successes.

Export Subsidy Programs

Most of the past programs that provided direct export subsidies to producers/marketers, such as the Export Enhancement Program (EEP), have been phased out to comply with World Trade Organization (WTO) rulings. In the Doha Round, agricultural export subsidies are on the agenda of currently stalled WTO multilateral trade negotiations (Ho and Hanrahan 2010a). As the US and world prices have moved closer together, there has been less need for direct export subsidies which were originally created to close the gap between world and US domestic prices and to encourage US exports during the periods when US support prices are higher than the world prices. In the Doha Round of WTO multilateral trade negotiations, the USA and other trading partners have tentatively agreed to phase out all agricultural subsidies by 2013.

The only remaining direct export subsidy program in the 2008 farm bill, authorized in the commodity program title and not the trade title, is the Dairy Export Incentive Program (DEIP). This program was established under the 1985 farm act to assist exports of US dairy products, with the objective of countering the adverse effects of foreign dairy product subsidies—mainly those of the European Union. The DEIP program has strong support in Congress and dairy producers consider DEIP as an integral part of the US dairy policy and an important addition to domestic support programs. The DEIP operates on a bid bonus system, with cash bonus payments. The subsidies originally were in the form of sales from CCC-owned dairy stocks, later they were generic commodity certificates from CCC inventories, and currently cash payments are used to subsidize the exporters. For FY 2002, bonuses totaling $53.7 million were awarded for 85,251 metric tons of nonfat dry milk, and bonuses of $931,775 were awarded for 1,222 metric tons of cheese (USDA/FAS 2002). The DEIP levels for FY 2003 and 2004 were reduced to $32 and $3 million, respectively; however, no DEIP payments were awarded during FY 2005–2008. Legislative authority for DEIP expires on December 31, 2012, as DEIP is included in the WTO export subsidy commitments which limit the volume and financing of export subsidies.

The Export Enhancement Program (EEP) was another important US export subsidy program. The program was authorized through 2007 under the 2002 farm bill, at the funding level of $478 million per year. The stated purpose of EEP was to help US farmers compete with subsidized farm products from other countries, especially the European Union. More specifically, EEP's main objectives were to expand US agricultural exports, to encourage other agricultural exporting countries to engage in negotiations on agricultural trade problems, and challenge unfair trade practices. Trade-distorting subsidies, trade barriers (such as labeling that restricts new technologies), unjustified sanitary and phytosanitary restrictions, and monopolistic state trading enterprises (including those that implemented noncommercial pricing practices) all fall under the definition of unfair trade practices which are challenged under EEP. Under the EEP, exporters were awarded cash payments that enabled them to sell certain commodities to specified countries at competitive prices. About 80% of EEP was used to subsidize exports of wheat and wheat flour (USDA/FAS 2012a). However, the last year of significant EEP subsidies was 1995 and as a result of the US and world prices moving closer together there were no EEP subsidies granted during 2002–2007. The 2008 farm bill officially revoked legislative authority for EEP. The elimination of agricultural export subsidies has been a longstanding goal of US agricultural trade policy (Ho and Hanrahan 2010a).

Nonprice Export Market Development Programs

The US government has played an important role in developing, maintaining, and expanding markets for US agricultural products by funding export promotion programs. The Agricultural Trade Development and Assistance Act of 1954 authorized the use for foreign currencies generated by the sale of PL-480 surplus commodities to help develop new markets for US agricultural commodities (USAEDC 2011). USDA FAS administers the market development programs, as previously stated. The agency was created March 10, 1953 and began to look for new partners to work with to carry out the commodity promotion activities, as it was recognized that FAS did not have the staff or the necessary expertise for implementing the intended market development programs (USAEDC 2011).

To date, FAS has continued its cost-sharing trade promotion partnership with the US agricultural producers and processors, who are represented by nonprofit commodity or trade associations, called cooperators. This public/private partnership, which has evolved since its inception during the Eisenhower/Benson era in 1953, has played an important role in promoting the growth of the overseas markets for US agricultural products. The FAS export promotion programs were created when it became apparent that the US domestic markets could not absorb the US agricultural production and external markets were needed to absorb the US excess supplies. This partnership originally involved in-country survey teams composed of FAS and cooperator staff that met with foreign government officials and local trade associations, under the auspices of the US Embassy officials and agricultural attaches. In the USA, FAS provided the statistical data and analysis (USAEDC 2011).

Cotton, wheat, and tobacco were the first commodities to be included in the export market promotion programs.

Currently, FAS administers five programs with the goal of promoting US agricultural products in international markets: FMDP, MAP, Emerging Markets Program (EMP), Quality Samples Program (QSP), and Technical Assistance for Specialty Crops (TASC). These programs were created as marketing tools to increase foreign demand for US agricultural products. All these programs are funded through the borrowing authority of the CCC. Legislative authorization of CCC funds for the market development programs expires with the most recent farm bill expiration date in FY 2012.

The non-price export promotion programs encompass four types of activities: trade servicing, technical assistance, market research, and consumer promotion. Consumer promotion includes point-of-sale promotion activities, and both generic and brand advertising. Technical assistance and trade servicing (including trade policy support) have accounted for over half of the USDA's market development program expenditures, while consumer promotions have accounted for a much smaller share (USAEDC 2011).

Under these programs, the USDA and the cooperators pool their financial resources and technical expertise to conduct overseas market development. In this respect, the export market promotion programs differ from domestic non-price promotions funded primarily by nonprofit producer organizations through producer assessments and by other private funding sources. The following section provides a description of each program, including history and allocation requirements.

Foreign Market Development Program

The goals of the Foreign Market Development Program (FMDP), which has been in operation since 1956, are to create, expand, and maintain long-term export markets for US agricultural products. This program, first established under the authority of P.L. 480 and reauthorized by Title VII of the Agricultural Trade Act of 1978, uses funds from the USDA CCC to conduct the promotion programs. FMDP is exempt from Uruguay Round agreement reduction commitments (USDA/FAS/FMDP 2011).

In order to carry out the export market development activities, FAS enters into partnerships with those eligible nonprofit US trade organizations (cooperators) that have the broadest producer representation of the commodity being promoted. As stated on the USDA/FAS website, the FMDP benefits the participants in the US agricultural industry by assisting their organizations through addressing long-term foreign market import constraints and by identifying new markets or new uses for the agricultural commodities or products in the foreign market. In general, the FMDP aims to increase global demand for US agricultural exports by addressing infrastructural impediments, technical and regulatory issues, or cultural factors which limit the consumption of the promoted products. The FMDP approved projects have averaged 6 years in length, reflecting the long-term nature and focus of the program. The focus of FMDP is on generic promotion of US commodities, rather than brand-name advertising, and the promotion activities are targeted toward long-term development

(USDA/FAS/FMDP 2011). These long-term programs are concentrated on technical information and trade servicing activities which target infrastructural impediments in markets that inhibit demand growth. More specifically, the FMDP cooperators mostly represent bulk product (unprocessed commodity) associations, the activities are conducted in less developed markets, and consumer promotions are ineligible.

Preference is given to nonprofit US agricultural and trade groups that represent an entire industry or are nationwide in membership and scope. FMDP applications go through a competitive review process and funds are awarded to applicants that demonstrate effective performance based on a clear long-term strategic plan (USDA/FAS 2012a). Cooperators receive partial reimbursement from CCC funds for conducting approved overseas promotional activities.

The 2008 farm bill reauthorized CCC funding for FMDP for FY 2008–2012 at an annual level of $34.5 million. Total allocation for FY 2010 was $34.2 million; with the largest cooperator recipients being the American Soybean Association ($7.3 million), Cotton Council International ($5.1 million), US Grains Council ($4.3 million), the US Wheat Associates ($4.2 million), the American Hardwood Export Council and other wood and paper related associations ($3.5 million), and the US Meat Export Federation ($1.9 million).

The FMDP was the only export market promotion program in place until the early 1980s, when the decline in US agricultural exports after years of record gains led to growing agricultural surpluses (USAEDC 2011). The imposition of trade barriers by US major markets and aggressive promotion and subsidization by US competitors were among the factors that led to eroding US exports and export market shares. To strengthen US exports, the US Congress included in the Food Security Act of 1985 the Targeted Export Assistance Program (TEAP). It emphasized trade policy goals which attempted to counteract the "unfair" trade practices of competitors.

Initial funding for the TEAP was set at $110 million for the first 3 years and $200 million for the remaining two. Although the level of funding allowed only limited expansion of the relatively costly and labor intensive trade servicing and technical information activities, it did allow an array of consumer promotions. The consumer promotion activities could be contracted through public relations firms and once the original fixed cost of developing the promotion was incurred, it could be reused in the same and other markets with little additional cost (USAEDC 2011). Until the late 1980s, the horticultural and tropical products groups ended up receiving the majority of the TEAP funds.

In the late 1980s, the focus on the type of agricultural exports began to change from bulk to value-added products, requiring a different type of promotion activity, including branded product promotion programs. The value of US agricultural exports grew from $27.9 billion in 1987 to $40.1 billion in 1990 and the US share of global trade in HVPs had doubled from its share in 1985. Still, the United States accounted for only 15% of the global trade in HVPs. In 1990, the EU had 24% of the global market share of agricultural HVP. As a result of the changing international trade environment in the 1990s and more emphasis on trade of HVPs, the Conservation and Trade Act in 1990 eliminated the TEAP program and replaced it with the Market Promotion Program (MPP), funded at $200 million per year.

This level of funding remained in place until 1993 when it was reduced to $147.7 by the Agricultural Appropriations Committee. The 1996 farm bill renamed MPP as the MAP.

Market Access Program

The authorization for MAP funding goes back to the funding for its predecessor programs which were authorized by Section 203 of the Agricultural Trade Act of 1978. The MAP is administered by FAS and its goal is primarily to promote US exports of value-added products. Unlike FMDP, the MAP is intended for consumer-ready food products and has a significant consumer promotion component, including electronic and print advertising, consumer exhibits, point-of-sale promotions, market research, trade team exchanges, and brand promotion. Agricultural cooperatives and small companies can receive assistance under the brand program. Under MAP, at least 50% of the branded product promotion activity funding must be provided by individual companies and promotions to an individual country are limited to 5 years. For generic promotion activities, trade associations and other organizations must contribute a minimum of 10% cost match (FAS/USDA/MAP 2011). A wide variety of US food and fiber products qualify to receive MAP funds.

More than half of MAP funds typically support generic promotion—about 60%—and the remaining 40% support branded product promotion. For branded product promotion, since FY 1998, USDA policy has been to allocate all MAP funds to cooperatives and private US companies for branded product promotions. More specifically, MAP is intended for shorter-term, consumer-oriented promotions of high-value and processed products. Additionally, no foreign for-profit company may receive MAP funds for the promotion of foreign-made products (Ho and Hanrahan 2010a). Multi-market, cross-commodity projects are encouraged under an FAS initiative which was launched in 2003.

The 2008 farm bill, authorized funding for the MAP at $200 million annually through fiscal year 2012. Total allocation for FY 2010 was $197.4 million. The largest recipients were Cotton Council International ($20.7 million), US Meat Export Federation ($16.5 million), Food Export Association of the Midwest ($10.7 million), Western United States Agricultural Trade Association ($9.7 million), Wine Institute ($7.2 million), and Southern United States Trade Association ($6.6 million).

Emerging Markets Program

The general objective of the Emerging Markets Program (EMP) is to provide market access for US food and agricultural products. More specifically, the EMP provides funding for technical assistance activities intended to promote exports of US agricultural commodities and products to emerging markets in all geographic regions, consistent with US foreign policy (USDA/FAS 2012a). An emerging market is defined as any country that is taking steps toward a market-oriented economy through food, agricultural, or rural sectors of the economy and also the country must

have the potential to provide a viable and significant market for US agricultural commodities or products (Ho and Hanrahan 2010a). Examples of the technical assistance activities are those that focus on trade capacity building or addressing technical barriers to trade. FAS limits EMP projects to countries that have per capita incomes of less than the World Bank's current ceiling on upper middle income economics and those whose populations are greater than one million.

The funding for EMP is authorized in the 2008 farm bill at $10 million each fiscal year for 2008–2012. The FY 2010 funding recipients included universities, state and federal agencies, trade groups, and nonprofit organizations. Total approved funding allocation for FY 2010 was $8.3 million, with project examples being: Food Consumption in China's Second-Tier Cities, for the University of Florida ($468,600): Exporting US Dairy Genetics to China, for Cooperative Resources International ($277,632); Hotel, Restaurant and Institutional Sector Development for USDA/FAS in Chengdu, China ($212,000); and Cotton USA Technical Assistance Initiative in Bangladesh, for Cotton Council International ($200,000).

Quality Samples Program

The Quality Samples Program (QSP) also applies to emerging countries and its objective is to stimulate interest and demand for US agricultural products by permitting potential customers to discover US quality. More specifically, the QSP is intended to help US agricultural trade organizations provide small samples of their agricultural products to potential importers in emerging markets overseas. This program focuses on industrial and manufacturing users of products and is not intended for end-use consumers. The QSP allows manufacturers overseas to do test runs to assess how US food and fiber products can best meet their production needs (USDA/FAS 2012a).

To carry out the program, under the authority of the CCC Charter Act of 1948, FAS can use up to $2 million of CCC funds. In 2010, USDA provided allocations totaling about $1.9 million to trade associations and state agricultural organizations, with recipient examples including: National Potato Promotion Board ($455,000), American Sheep Industry Association ($365,000), California Agricultural Export Council for China ($300,000), and the Mohair Council of America ($225,000).

Technical Assistance for Specialty Crops

The Technical Assistance for Specialty Crops (TASC) Program provides funding to US organizations for projects that address sanitary, phytosanitary, and technical barriers that prohibit or threaten the export of US specialty crops. The legislation defines specialty crops as all cultivated plants, and the products thereof, produced in the USA, except for wheat, feed grains, oilseeds, cotton, rice, peanuts, sugar, and tobacco (Ho and Hanrahan 2010a). Examples of activities these grants may cover include seminars and workshops, study tours, field surveys, pest and disease research, and pre-clearance programs for imports to the USA. TASC proposals are accepted from any US organization, including, but not limited to, nonprofit trade

associations, universities, agricultural cooperatives, private companies, US and state government agencies. Applicant matching contributions are not required, but are strongly encouraged.

The 2008 farm bill reauthorized the TASC Program and provided mandatory CCC resources of $4 million in FY 2008, $7 million in FY 2009, $8 million in FY 2010, and $9 million in FY 2011 and FY 2012. This was a significant increase in TASC funding of $2 million per fiscal year under the 2002 farm bill. In fiscal year 2010, $7.3 million were allocated to TASC Program proposals, with a significant portion of funds allocated to the California Dried Plum Board which received $1.5 million for Low-Emission Methyl Bromide Fumigation for Quarantine and Pre-Shipment Uses, and the California Pistachio Export Council which received $1.2 million for Navel Orange worm control to overcome sanitary and phytosanitary barriers in major export markets.

Challenges Facing Non-price US Export Promotion Programs

In summary, all of the nonprice export promotion programs are intended to increase demand (shift the demand curve to the right) for US food and fiber products and to increase the size of the market, as well as the US market share. The two programs, FMDP and MAP, work together in the global markets for increasing US agricultural exports. Due to the change in incomes, lifestyles, and food demand of the global population and consumers in the US export destinations, the FMD and MAP activities have been refined and changed over the years to be more appropriate for the targeted audience.

For the most efficient use of resources, FMDP should precede MAP activities in the targeted markets. The goal of FMDP is to create and develop markets through research, trade servicing, and technical information activities, thereby laying the ground work and establishing relationships for subsequent MAP market expansion activities.

The nonprice market promotion programs, and MAP in particular, have been criticized by members of Congress who maintain that these programs are a form of corporate welfare. Additionally, these programs have been highly contested on the grounds that they offset expenditures on other programs, they fund activities that private firms would and could fund for themselves, principal beneficiaries are foreign consumers, and they open up markets for competing exporters (free riders). Many argue that these funds could be better spent, for example, on educating US firms on how to export (Ho and Hanrahan 2010a).

Nevertheless, there are many success stories of how these programs have impacted US sales in markets overseas by creating a positive image for US products. The supporters of government funded export promotion programs argue that US's major competitors, especially EU member countries, spend a significant amount of funds on market promotion in the US export destination. Therefore, US market promotion programs are needed to help keep US products competitive in global markets.

Another economic justification for government involvement in export promotion is the inability of many American small- and medium-sized enterprises (SMEs) to

successfully export their products into overseas markets and to participate in global marketing. This inability may be viewed as a market failure condition and from an economic standpoint, if there exists a market failure, then the government's role in market development and export promotion is justifiable (Wilkinson and Brouthers 2006). In general, market failure occurs when the allocation of goods and services by a free market is not efficient (does not maximize welfare). According to Armbruster and Knutson (Chap. 1), Pareto optimality is the economic foundation for measuring marketing efficiency. If it is not possible to make one person better off without making another person worse off through a reallocation of resources, then the market is said to have reached Pareto optimality.

State government staff have the training and knowledge to help SMEs in exporting through an array of marketing tools, including trade shows, trade missions, and electronic trade-lead-matching programs. It may be argued that when the government gets involved in conducting the export promotion activities of SMEs, that involvement increases technical efficiency of promotion activities. In a market context, because of economies of scale and know-how, the cost of the promotion activity per unit exported is expected to be lower with government involvement.

Enhanced exports by SMEs as well as larger manufactures are expected to increase employment, expand tax base, and encourage capital formation. Therefore, state and federal policy makers encourage export market development activities that result in increased sales of US products in global markets.

Export Credit Guarantees

The USDA administers export credit guarantee programs for commercial financing of US agricultural exports to buyers in countries where credit is necessary to maintain or increase US sales, but where financing may not be available without CCC guarantees (USDA/FAS 2012a). The objective of these USDA CCC programs is to encourage US exports to foreign market destinations. The export credit guarantee programs were first established in the Agricultural Trade Act of 1978 and reauthorized in the 2008 farm bill, from FY 2008 through FY 2012. Under these programs, private US financial institutions extend financing at interest rates which are at prevailing market levels to countries that want to purchase US agricultural exports and guarantee that the loans will be repaid. The CCC essentially assumes the risk of default for loans on US farm exports for payments by the foreign purchasers (Ho and Hanrahan 2010a).

Two export guarantee programs are authorized under the 2008 farm bill: the GSM-102 short-term guarantee program and the Facility Guarantee Program (FGP).

GSM-102 Program

The Export Credit Guarantee Program (GSM-102) underwrites credit extended by the private branding sector in the USA (or, less commonly, by the US exporter) to

approved foreign banks using dollar-denominated, irrevocable letters of credit to pay for food and agricultural products sold to foreign buyers. GSM-102 guarantees repayment of short-term financing for 6 months to 3 years.

The 2008 farm bill authorized export guarantees of $5.5 billion worth of agricultural exports annually from FY 2008 through FY 2012. The actual level of guarantees depends on market conditions and the demand for financing by eligible countries. FAS announced $5.4 billion in credit guarantees for FY 2011. The largest FY 2011 allocations were for Africa and the Middle East ($700 million), Central America ($600 million), the Caribbean Region ($325 million), and Mexico ($300 million).

Facility Guarantee Program

The USDA's Facility Guarantee Program (FGP) is designed to expand sales of US agricultural products to emerging markets where inadequate storage, processing, or handling capacity limit trade potential. The program provides payment guarantees to finance commercial exports of US manufactured goods and services that will be used to improve agriculture-related facilities. Eligible projects must improve the handling, marketing, storage, or distribution of imported US agricultural commodities and products (USDA/FAS 2012a). Emerging markets are the target of this program, as these countries often lack the infrastructure to support increased trade volume. Export sales of US equipment or expertise to improve ports, loading and unloading capacity, refrigerated storage, warehouse and distribution systems, and other related facilities may qualify for facility guarantees, as long as these improvements are expected to increase opportunities for US agricultural exports (USDA/FAS 2012a).

Other Credit Guarantee Programs

Two other export guarantee programs were revoked by the 2008 farm bill. These were the GSM-103 program and the Supplier Credit Guarantee Program (SCGP). The GSM-103 guaranteed long-term (3–10 years) financing, while the SCGP guaranteed very short-term financing of exports.

Challenges Facing Export Credit Guarantees

The US export credit guarantee programs came under scrutiny by WTO during a dispute between the United States and Brazil regarding cotton subsidies. The USA is the world's largest cotton exporter, accounting for a significant portion of global trade. In 2001, US cotton exports accounted for 39% of world trade, while US cotton subsidies averaged $2.8 billion per year. In 2002, one of the US major competitors, Brazil, expressed its growing concerns about US cotton subsidies by initiating a WTO dispute settlement case (DS267) against specific provisions of the US cotton program. A WTO dispute settlement panel ruled against the USA on several key

aspects of US cotton programs in September 2004. Although this ruling was appealed by the USA, on March 2005, the WTO Appellate Body (AB) upheld the panel's ruling and provided specific deadlines for removal or modification of the offending US subsidies (Ho and Hanrahan 2010a).

The WTO panel found that all three export guarantee programs existing at the time of the dispute (GSM-102, GSM-103, and SCGP) effectively functioned as export subsidies because the financial benefits returned to the government by these programs failed to cover their long-run operating costs. Because export subsidies in general lead to a gap between the subsidized price and the actual marginal cost, they may be viewed as creating market failure. Allocative inefficiency—which exists when the allocation of scarce resources to production activities do not maximize welfare—will result.

Moreover, the WTO panel found that this export-subsidy aspect of export credit guarantees applies not just to cotton, but also to all recipient commodities that benefit from US commodity support programs. Therefore, so long as the credit guarantees act as an implicit export subsidy, only US program crops that have export subsidies listed in their WTO country schedule are eligible for US export credit guarantees. The WTO, AB recommended that the "prohibited" subsidies be withdrawn by July 1, 2005 (Ho and Hanrahan 2010a).

The American negotiators discussed possible solutions with Brazil and declared that it would be very difficult to get rid of cotton subsidies. The two sides agreed that the US would pay Brazilian cotton farmers $147 million a year. In conclusion, the credit guarantee programs were one of two programs which caused such an issue with Brazil, and the settlement has come at a high cost to all US tax payers. It can be argued that the cost of subsidies and retaliations that have resulted from the subsidies create marketing inefficiencies and are not Pareto optimal for the US tax payers. This is an example where supporting US cotton producers and encouraging their exports have come at a high cost in terms of the welfare of US tax payers. This market failure has led to a gap between marginal social cost (US tax payers) and marginal private cost (cotton producers and marketers). This gap could have been reduced by changes in the export enhancement policies that have led to market failure in general and to technical, allocative, and dynamic inefficiencies in particular.

International Food Aid Programs

The FAS provides US agricultural commodities to millions of people in various countries, through direct donations and concessional programs. The objectives for international food aid programs are providing emergency and humanitarian assistance in response to natural or manmade disasters, and promoting the development of market-oriented agricultural sectors and food security. The USA provides food aid for emergency food relief and to support development projects. The food aid programs in the 2008 farm bill include: the Food for Progress Program, the

McGovern-Dole International Food for Education and Child Nutrition Program, the Food for Peace Act [formerly referred to as Public Law 480 (PL 480), Titles I, II, and III], Section 416(b), and the Local and Regional Procurement Project. The full name for Public Law 480 is the Agricultural Trade Development Assistance Act, which was signed into law in 1954 by President Dwight Eisenhower (USDA/FAS 2012b).

Food for Progress Program

The Food for Progress (FFP) program provides for the donation or credit sale of US commodities to developing countries to strengthen free enterprise development in the agricultural sector. FFP mainly focuses on private sector development of agricultural infrastructure, including improved agricultural production practices, marketing systems, farmer training, agro-processing, and agribusiness development.

A minimum of 400,000 metric tons of commodities are required in 2008 farm bill to be provided through the FFP program. USDA purchases those commodities from the US market, donates them to the implementing organizations and pays for the freight to move the commodities to the recipient country. The freight cost is limited to no more than $40 million annually. Organizations eligible to carry out FFP programs include private voluntary organizations (PVO), cooperatives, and intergovernmental organizations, such as the World Food Program (WFP).

In FY 2009, USDA provided over 280,000 metric tons of US commodities, such as wheat, wheat flour, soybean, and corn, with an estimated value of over $200 million to PVO and foreign governments for implementing agricultural and rural development projects in developing countries.

McGovern-Dole International Food for Education and Child Nutrition Program

The McGovern-Dole program uses commodities and financial and technical assistance to carry out school feeding programs and maternal, infant, and child nutrition programs in foreign countries. Commodities are donated through agreements with PVO, cooperatives, intergovernmental organizations, and foreign governments. Priority countries under the McGovern-Dole program must demonstrate sufficient need for improving domestic nutrition, literacy, and food security.

The funding for McGovern-Dole in the 2008 farm bill is on a flexible basis. The appropriations of FY 2010 provided $209.5 million for the McGovern-Dole Program, more than doubling the program level in FY 2009. In addition, there was $84 million of CCC funding provided to the program in FY 2009 as a one-time authorization in the 2008 farm bill. It also includes an appropriation to the US Secretary of Agriculture of $10 million to conduct pilot projects to develop and field-test new and improved micronutrient-fortified products to improve the nutrition of populations served through the McGovern-Dole program.

Food for Peace Act

The Food for Peace Act (FPA), formerly referred to as Public Law 480, is the primary legislative mechanism that authorizes foreign food assistance. Over the past decade, FPA typically accounted for 50–90% of USDA's total annual international food aid budget. The objectives of FPA food aid is improving global food security and nutrition, promoting sustainable agricultural development, expanding international trade for US commodities, and fostering private sector and market development. There are three primary programs in FPA: Title I, Trade and Development Assistance; Title II, Emergency and Private Assistance; and Title III, Food for Development. Title I is managed by USDA, while Titles II and III are managed by USAID. Titles I and II are no longer funded. Detailed information regarding these programs is available from USDA/FAS (2012a).

A Food Aid Consultative Group (FACG) advises the USAID Administrator on food aid policy and regulations. FACG currently consists of the USAID Administrator, the USDA Under Secretary of Agriculture for Farm and Foreign Agricultural Services, the Inspector General of Agriculture for Farm and Foreign Agricultural Services, the Inspector General for USAID, a representative of each private voluntary organization (PVO) and cooperative participating in FPA programs, representatives from African, Asian, and Latin-American indigenous nongovernmental organizations (NGO) determined appropriate by the Administrator, and representatives from US agricultural producer groups.

Challenges Facing International Food Aid Programs

Food aid has been essential for saving lives around the world, especially during a crisis or natural disaster. But its value in long-term development has been controversial. International food aid was initiated when agricultural support policies of North American and European countries had led to large surpluses of cereals. Food aid provided an outlet for the disposal of surplus and gained support of the farmers because it reduced storage costs and opened access to new overseas markets. Food aid had also become an instrument of foreign policy to gain support. The support of the shipping industry has been indicated as another major interest of US food aid as, according to the 1985 Farm Bill, at least 75% of US food aid has to be shipped by US Vessels (Mousseau 2005).

It is argued that the donor-driven food aid has led to a decline of the agricultural sector of the recipient countries, as a negative correlation between food aid flows and international cereal prices is observed (Mousseau 2005). It is also argued that in-kind food aid, while releasing resources in the recipient country, might not necessarily help the developing countries as the released resources might be used for nondevelopment purposes such as military purchases (Shah 2007). Additionally, the recent surge of interest in biofuel crops and the increased crop values and food prices has not only reduced the amount of the American food aid but also has made it harder for poor country consumers to afford food.

From an efficiency point of view, the theory of comparative advantage emphasizes that in order to maximize welfare, countries should specialize in the production

of the commodities for which they have a comparative advantage and export them and import those commodities for which they do not have a comparative advantage. However, when prices are distorted because of cheap food supplies through food aid, the recipient country producers will not receive the correct price signals and therefore, resources will not be allocated to their highest value use. This would lead to technical and allocative inefficiencies.

Improving aid effectiveness and developing "demand-driven" strategies considering the recipient country's needs and strategic plans for food security are challenges faced by international food aid programs. In addition, determining the best form for providing food aid and assistance, whether in the form of cash or commodities and determining the cost-effectiveness of US cargo preferences for delivering US food aid are also big challenges for food aid.

Measuring the Effectiveness of Export Market Development Expenditures

The US generic commodity promotion programs seek to both inform and change consumer perceptions and attitudes, with the objective of increasing domestic and export sales and market shares for US agricultural commodities and products (Henneberry et al. 2009). In an attempt to isolate and measure the effects of promotion on product sales, researchers have used a wide range of models and statistical methods, ranging from basic correlations to conjoint analysis of consumer preferences. These have included consumer behavioral approaches, quantitative models measuring the relationship between advertising and sales and the effects of prices, income, and promotion expenditures on consumer demand. Industry market researchers develop baseline data by tracking consumer attitudes and product sales. A notable portion of current research on promotion effectiveness has involved measuring consumer behavior by conducting primary data analysis. The data are collected through various means, including telephone and e-mail surveys of consumer awareness of products and advertisements, by establishing focus groups and consumer panels, and by conducting consumer tests in retail stores and shopping areas (Henneberry and Ackerman 1991).

Although many researchers have analyzed the effects of advertising and promotion expenditures on domestic consumer demand, the studies dealing with the effects of export promotion expenditures on import demand have been limited. Export market development expenditures, which have been typically used to fund promotional efforts, are intended to shift the importer's demand curve to the right or rotate the demand curve by changing the elasticity of demand schedule. Assuming no change in the supply schedule, promotion expenditures are expected to increase US exports and export value. It is important to note that several studies have used a benefit/cost analysis to measure the return per dollar of promotion expenditure.

In this section, an overview of the studies that have analyzed the impacts of foreign market promotion programs and challenges faced by researchers are discussed. Table 8.2 provides a synopsis of 12 export promotion studies that have been published since 2000, in terms of key assumptions, including regions and time period

Table 8.2 Impact studies on US export promotion programs, selected studies from 2000 to 2011

Study	Author	US export promotion programs	Products	Location	Period covered	Type of model	Results
Measuring the impacts of US export promotion programs	Adhikari et al. (2003)	FMD and MAP	US wheat	Middle East, Pacific Rim, and Mexico	1996–2001	Single export demand function	Export promotion has a positive impact. The per dollar returns to wheat export promotion were $1.49 in Middle East, $0.42 in Pacific Rim, and $2.01 in Mexico.
The Effect of the US FMD program	Boonsaeng and Fletcher (2008)	FMD	US shelled peanuts	European Union	1991–2005	Differential factor allocation model (DFAM)	Positive impact of FMD program on EU demand for US shelled peanuts. The marginal return per EURO dollars of US FMD expenditures is 240 Euros.
The impact of US Non-price export promotion	Boonsaeng and Fletcher (2010)	FMD and MAP	US peanuts	Canada and Mexico	1991–2006	Single equation, export demand	US peanuts exported to Canada and Mexico are own-price elastic. US export promotion return in Mexico is $35.92 per dollar invested.
Global welfare impacts of US meat promotion activities	Henneberry et al. (2009)	FMD and MAP	US beef and pork	World	2002	Equilibrium displacement model	US producer welfare increases from a 10% increase in promotion expenditures, ranging from −$1.29 million to $2.60 million for beef producers and from −$0.96 million to $1.67 million for pork producers.
A benefit–cost analysis of US agricultural trade promotion	Kinnucan and Cai (2010)	FMD and MAP	US agricultural commodities	World	2000–2004	partial-equilibrium model	Subsidies for nonprice export promotion can harm domestic consumers by increasing prices and by diverting funds from domestic market promotion. Federal expenditures for export promotion may be too high.
An analysis of cotton research and promotion program	Murray et al. (2001)	Cotton research and promotion programs	US cotton	World	1975–2000	Structural model	The Cotton Program has a strong and positive effect on the demand for US upland cotton. The returns to producers substantially outweigh the costs.

Effectiveness of US dairy export promotion programs	Olukoya (2008)	FMD and MAP	US cheese, whey, and Nonfat dry milk	Mexico, South Korea, Japan and Thailand	1998–2005	AIDS, CBS, NBR, and single equation for import demand	The US promotion activities were not found effective, with the exception of cheese in South Korea.
Export demand for US walnuts	Onunkwo and Epperson (2000)	TEA and MPP	US walnuts	Asia and EU	1986–1996	Single equation, export demand	The marginal return per dollar to promotion expenditures for walnuts is $6.14 in Asia. There is no detectable response to promotion expenditures in the EU.
Export demand for US pecans: impacts of US export promotion	Onunkwo and Epperson (1999)	FMD, MAP, MPP, and SUSTA	US pecans	Asia and EU	1986–1996	Single equation, export demand	The returns per dollar of promotion expenditure for pecans are $6.45 in Asia and $6.75 in EU. The US pecan industry can benefit substantially from increased export promotion in both Asia and the EU
Export demand for US almonds	Onunkwo and Epperson (2001)	FMD, MAP, and MPP	US almonds	Asia and EU	1986–1996	Single equation, export demand	The marginal return per dollar to promotion expenditures for almonds in Asia is $47.74. EU appears to be a mature market for US almond exports with no detectable response to promotion expenditures.
Effectiveness of US rice export promotion programs	Rusmevichientong and Kaiser (2009)	FMD and MAP	US rice	World	1984–2005	Double logarithmic export demand	Export promotion has a positive impact on demand for US rice exports. The US is underinvesting in rice export promotion compared to the optimal amount.
Are there halo effects on US grain export promotion?	Rusmevichientong and Kaiser (2011)	FMD and MAP	US rice, wheat, and sorghum	World	1990–2005	Dynamic LA/AIDS model	US grain export promotion has a positive direct impact on exports, while the indirect effects are not found (anti-halo effect) on competing country exports.
International market promotion effectiveness for soybeans	Williams (2012)	Soybean checkoff program	US soybean	USA, Brazil, Argentina, EU, Japan, and ROW	1980–2006	180-equation simulation model	Soybean checkoff investments in international market promotion have enhanced the international competitiveness of the US soybean industry and increased the global market share of US soybean and product exports.

MAP Market Access Program, *MPP* Market Promotion Program, *TEA* Targeted Export Assistance, *FMD* Foreign Market Development, *ROW* The rest of the world, *SUSTA* Southern United States Trade Association, *EU* European Union

covered, locations, type of expenditure, techniques used, and results. The studies are organized by commodities studied. A summary of the export promotion effectiveness studies prior to 2000 is given by Rusmevichientong and Kaiser (2009).

Challenges in Measuring Effectiveness of Expenditures

The US promotion effectiveness results presented in Table 8.2 vary widely across commodities and countries. Generally, the estimated benefit–cost ratio is positive but not always. A diverse set of quantitative models have been used by researchers in estimating the effects of promotion and advertisement on demand. These studies have differed in terms of the choice of variables and source of data on promotion expenditures, which may lead to different outcomes and conclusions about the effect of promotion (Coulibaly and Brorsen 1999). Many researchers have focused on the appropriate model selection in the context of a demand systems approach. Typically, import demand models include price variables (own- and substitute/complement prices), income, exchange rates, population, a measure of international restrictive or expansionary trade policies, and export promotion expenditures (own- and competitors).

Data and Exchange Rate/Deflator Issues

Because data on some of these variables (especially competing country promotion activities/expenditures) might not be readily available, it would not be possible to include all the variables, which would lead to estimation biases resulting from the omitted variables. Given that most of the studies of export promotion effectiveness have utilized time-series data, accounting for inflation on the variables that are measured in monetary terms must be considered. Various techniques have been used to deflate nominal data into real terms. Some have expressed all monetary variables in US currency and have used the real exchange rate as an additional variable to account for the weakening or strengthening the dollar. Another approach has been to enter all the monetary variables into local currency. These varying approaches might lead to different promotion coefficients.

In order to incorporate the effects of seasonal marketing trends and shocks (e.g., drought or flood) or trade barriers and import bans on exports, many researchers have used dummy variables as an intercept, or as a slope shifters. Some have also used dummy variables to take into consideration trade and structural barriers, as well as trade bans—such as those which have occurred in recent years due to animal disease. Dummy variables have also been incorporated to take into account the international trade and domestic policies that restrict imports, such as, taxes, quotas, and subsidies; as well as infrastructural limitations, such as limited access to ports, the lack of availability of refrigerated storage, food regulations regarding genetically modified foods, additives, chemicals, growth hormones, and packaging and labeling requirements. The use of too many dummy variables will create estimation challenges, including limiting degrees of freedom.

Selection of a Model

Economic researchers have analyzed relationships between income, prices, and promotion expenditures on sales or consumption. Earlier published research on the evaluation of nonprice export promotion programs includes a single-equation approach for relating promotion expenses to US exports (Lee 1977; Lee et al. 1979; Priscott 1969; Rosson et al. 1986). A major limitation of the single-equation approach is that the inter-commodity effects of various advertising programs are ignored. The complementary and substitution effects resulting from the promotion expenditures on other commodities or the same commodity originating from other exporting countries may have as significant impact on the effectiveness of the market development programs for the studied commodity as its own (Henneberry and Ackerman 1991).

Types of Promotion Expenditure

As mentioned earlier, nonprice export promotion programs involve various activities, ranging from consumer promotion to trade servicing and technical assistance. In most of the past studies on promotion effectiveness, market development activities have not been separated by the type of activity. Aggregating promotion dollars implicitly assumes that the promotional activities for the same commodity will have the same impact on importer demand, regardless of the type of activity. This might not be an accurate assumption as, for example, trade servicing activities are expected to sustain medium- and long-term demand for US agricultural exports; while in consumer media advertising or in-store promotions, the impact is expected to peak during or immediately after the advertising campaign and then decline. In the case of technical assistance which involves the adoption of a new technology, increased US exports are not expected until several years after the implementation of the activity which make the modeling of the effects more complicated (Henneberry and Ackerman 1991).

Another estimation challenge has involved measuring the impact of promotion activities when both generic and brand advertising are involved. While the goal of generic advertising is to increase the size of the market, the objective of brand advertising is to increase market share through product differentiation. Therefore, these two types of promotion are intended to have different impacts on market development. Therefore, there can be both complementary and competitive aspects of these two types of promotion, which makes measuring their impact on exports more complicated when they are conducted simultaneously.

Measuring the Lagged Effects of Non-price Promotion Expenditures

Many types of export promotion activities are expected to affect export demand beyond the year that the promotion expenditures occurs. Therefore, the type of the

lag structure that is used in export demand models is very crucial in having an accurate estimate of promotion effectiveness. Realizing this, many researchers have used elaborate forms of lag structure. These include a distributed lag model to measure the long-run impact of generic advertising expenditures on per capita consumption. In this form, advertising expenditure is usually specified as a weighted sum of current and lagged advertising expenditures. Some have referred to the weighted sum of lagged expenditure variable as the "good-will" variable.

However, a more elaborate formulation of lag structure may lead to degrees of freedom problems. And therefore, given the time-series data limitations in export demand models, some researchers have used a simple linear lag structure.

Measuring Promotion Effectiveness

Depending on the choice of the model, data, variables, and type of promotion activity involved, the measurement of promotion effectiveness can vary, even for the same commodity and during the same time frame. Researchers conducting studies on promotion effectiveness have to be aware of any or all of these challenges. The selection of the functional form or the type of data and variables included can affect the outcome of measuring the impact of promotion.

In assessing the impact of export promotion on US producer welfare, it is important to take into account the effect on domestic market promotion. For example, the FMD funds provide a strong incentive for industry to divert funds from domestic market promotion to export promotion (Kinnucan and Cai 2010). Also, advertising spillovers may be an issue (Kinnucan et al. 1996). More specifically, there might be spillover effects of export promotion activities into industries that are related to the promoted industry through consumer preferences. For example, pork might be substituted for beef due to pork promotion activities. Therefore, looking at the total US producer welfare, the gain to welfare might be over- or underestimated if these spillover effects are not considered.

Researchers planning to analyze the economic effect of US nonprice export promotion programs should be aware of the limitations in available public data. Researchers planning to analyze the economic effects of these programs should be aware of the limitations in available public data. FAS keeps detailed accounts of program budgets and expenditures for every nonprofit organization and private company which directly participates in the programs. The FAS expenditures reflect actual claims filed by the program participants for reimbursement of eligible expenses. Therefore, the complete data might not be available for current promotion years. In addition, data might not be available for each detailed category of promotion and only be available for general descriptions of promotion activities. Finally, FAS promotion expenditures represent the government's share of promotion costs. In order to determine the total costs of promotion, researchers might also want to include contributions from private organizations and companies (Henneberry et al. 1992).

Another limitation to export promotion studies is the lack of the availability of competing country promotion data. Not including competing country promotion data, may lead to biased estimates of the US promotion effectiveness.

Concluding Remarks

The US agricultural export promotion programs seek to both inform and change global consumer attitudes and perceptions, with the goal of increasing export sales and market shares for US agricultural commodities. However, in recent years, there has been a lot of debate about the continuation of these programs (Henneberry et al. 2009). For example, some of these programs have been highly criticized as promoting corporate welfare and helping promote US competing country products. Given the significant amounts of tax payer, producer, and US government funds devoted to export promotion of agricultural products, it is important to understand these programs and their intended economic impacts. This chapter gives a critical review of US export market development programs and their impacts.

The support of US producers and industries is the foundation for the US export promotion programs. The USA is one of the major players in world agricultural markets. However, US market share for several agricultural commodities has been declining. Effective export promotion programs can help the US maintain or increase its market share. Additionally, many small to medium sized agricultural industries and food processing firms do not have enough funds to be effective and efficient in advertising their products. These export promotion programs can be of a great value to these smaller firms. The impact of promotion of a certain group of agricultural commodities or products on related industries, such as the shipping industry, can also be significant.

The number of published studies on export promotion impacts has been limited. While most of these studies have found positive benefit cost ratios associated with US export promotion activities, the payoffs indicated are widely variable within commodities and among markets. Some studies indicate an increase in market shares (Table 8.2). However, it is important to consider the types of the models and data that have been used to estimate promotion effectiveness and the shortcomings of each study. Also, there are many data limitations that cause biases in estimation results. Therefore, caution should be exercised in interpreting the results of the analyses regarding promotion effectiveness and applying the results to design or revise policy.

Another issue that policy makers might consider in future farm bills is regarding the required match from the industry for some of these export promotion programs. For example, other than imposing a minimum match for certain programs, the nonprice US export promotion programs do not require a 100% match from the industry. For example and as mentioned earlier, for generic promotions under MAP, trade associations and other organizations are required to contribute only a minimum of 10% cost match. Increasing the minimum match level for these programs might be a future policy consideration for increasing the efficiency of the investment in export promotion.

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