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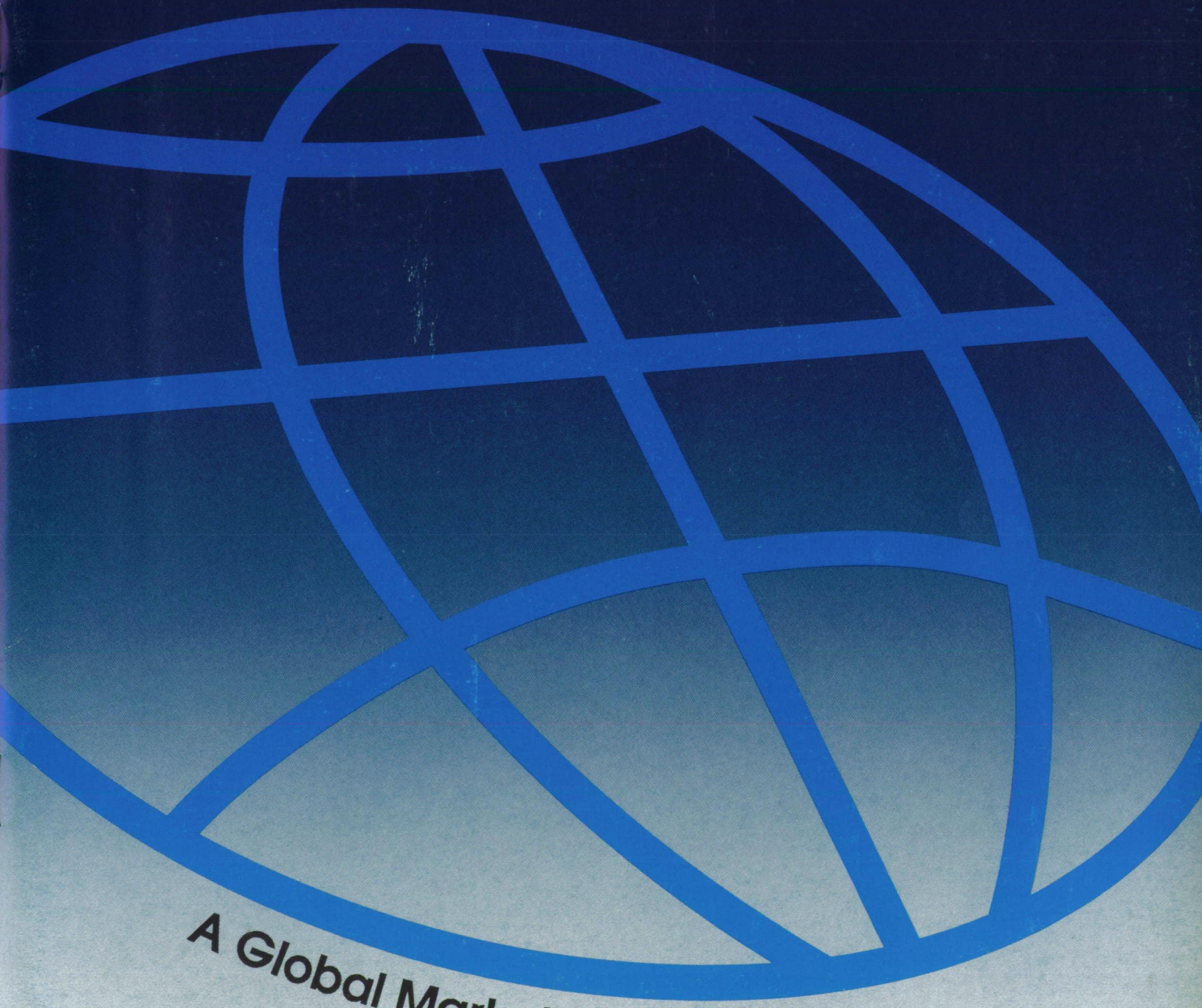

A Global Market for U.S. Foods

...Upfront

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A Global Market for U.S. Food Products

Many countries are experiencing economic growth—particularly developing countries. In Malaysia, Singapore, Thailand, and China, gross domestic product (GDP) rose on average at least 8 percent a year during 1989-93. In contrast, annual GDP growth in the United States, Canada, and Western Europe averaged less than 2 percent a year over this period.

With this growing prosperity comes increased demand for consumer goods, including American foods and beverages. U.S. food companies supply foreign customers by local production in foreign markets, by licensing agreements with foreign firms, and by export sales. This issue of *FoodReview* explores these strategies and the changing nature of U.S. food and agricultural trade.

Exports are the most familiar way U.S. food companies reach foreign markets. Rising incomes in many countries have expanded U.S. food exports. While Canada, the European Union, and Japan have been the biggest markets for U.S. food exports in the last few years, the fastest growth has been in Mexico and the Asian markets of Hong Kong, South Korea, Taiwan, Indonesia, Malaysia, and Thailand. U.S. food companies and trade organizations use media advertising, trade servicing, technical assistance, and other promotional activities to educate foreign consumers and marketers about the qualities of U.S. products.

U.S. food companies also license foreign firms to manufacture and sell products under their U.S. brand names. Licensing allows firms to gain "rental income" from their sought-after brand name and to avoid barriers to direct international trade, such as import tariffs and quotas, high transportation costs, and restrictive local business practices.

For processed food products, production abroad by foreign affiliates is a critical way for American firms to expand their global presence. In 1992, processed food sales from U.S.-owned foreign affiliates totaled $89 billion—almost four times the sales of U.S. exports of processed foods. Such U.S. ownership of foreign manufacturing plants allows U.S. food companies to control production and marketing of products to a greater extent than licensing allows. At the same time, however, ownership of a foreign plant exposes firms to risks. Firms weigh these risks against lower delivery costs and other cost reductions and efficiencies that foreign production offers over other avenues of sales.

Recent trade agreements that open foreign markets have helped expand U.S. food exports. For example, Japan's elimination of beef import quotas and reduction of tariffs under the 1988 bilateral Beef and Citrus Agreement helped boost U.S. beef exports to Japan from $900 million in 1991 to $1.2 billion in 1993.

However, differences in food-safety regulations among countries can impede trade. The recent General Agreement on Tariffs and Trade (GATT) provides a framework for distinguishing protectionist measures from legitimate food-safety concerns. Many of the details regarding how countries will harmonize their food-safety regulations while maintaining consumer protection and national sovereignty remain to be worked out. As these and other trade issues are debated, U.S. food companies will continue to pursue diverse strategies as they compete in the global market.

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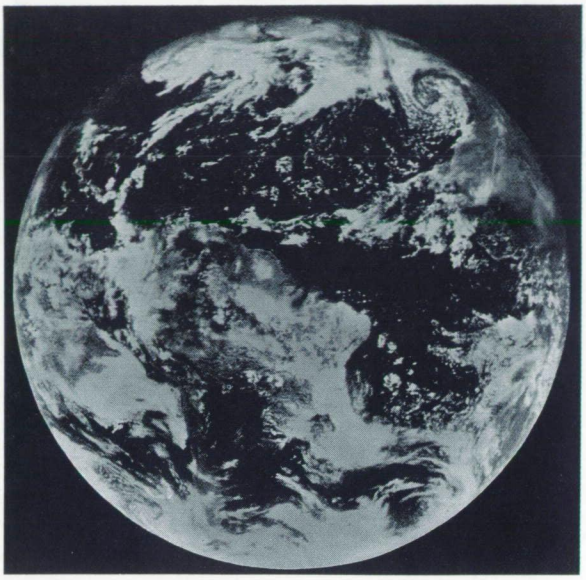

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International Trade Agreement Provides New Framework for Food-Safety Regulation

Laurian Unnevehr, Larry Deaton, & Carol Kramer
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On April 15, 1994, after 7 years of formal negotiations, the United States and over 100 other nations signed a trade agreement completing the Uruguay Round of the General Agreement on Tariffs and Trade (hereinafter referred to as GATT). Under the agreement, agricultural trade will be brought more fully under the disciplines that have served to expand trade in manufactured products in recent decades.

Major government subsidies to agricultural production will be reduced and trade barriers to agricultural imports will be lowered. At the same time, the GATT agreement seeks to balance the benefits of reducing nontariff barriers with assurances regarding protection of consumer safety.

Several trends contribute to making food-safety regulation an increasingly contentious trade issue. The value of food products traded between countries has more than doubled during the last 20 years. U.S. processed food exports doubled in value in only the last 10 years and now account for nearly half of U.S. agricultural exports.

As incomes grow and populations age, consumers in industrialized countries and many middle-income countries demand a higher level of food safety. Exporters, including the United States, will need to meet safety standards in order to compete in these markets. But countries may be tempted to use safety standards to shield domestic producers from competition. The GATT agreement addresses this issue, but not in a way that will eliminate disputes immediately, so differences in food-safety regulations will continue.

The negotiated sanitary and phytosanitary provisions of the recent GATT accord assure each country's right to guard the health of its citizens, while deterring countries from using health-related regulations to bar trade.

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The GATT Agreement Addresses Food-Safety Concerns

The GATT agreement requires member nations to adhere to certain trade rules and to seek reductions in trade barriers through periodic rounds of negotiations. Conflicting food-safety regulations were recognized as barriers to trade at the onset of the Uruguay Round. The GATT agreement sets up a framework for recognizing legitimate differences among countries over food-safety regulations and for resolving disputes. However, many details specifically relating to issues of harmonization remain to be worked out.

Harmonizing the Many Regulations, Through Many Forms

Harmonization is a general term that can mean several different things in practice. It can mean that product standards, such as established legal limits for pesticide residues, are the same in two different countries.

Another type of standard requires that specific safety controls are followed in food production. For example, with the recently proposed regulation that U.S. seafood processors implement Hazard Analysis Critical Control Points (HACCP) systems in their manufacturing plants, overseas suppliers to the United States also must have such process standards.

Also, regulators require certain information to determine if a product is safe. The U.S. Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) require pesticide, food additive, and animal drug developers to provide extensive information on the potential impact of their products on human health before the pesticide, food additive, or drug can be marketed in the United States. The harmonization issue is whether different countries require the same food-safety information to register a product for use in their countries.

Decisions on what constitutes a hazard and on the level of acceptable risk (the "risk standard") can differ widely among countries, and within countries for different hazards. For example, in the United States pesticide use on food commodities is regulated in the same way, regardless of whether the pesticide was applied before or after harvest. However, a different risk standard is sometimes applied to fresh and processed foods in certain cases. In Japan, pesticides applied after harvest are considered food additives and subjected to different risk standards than if they were applied before harvest. No differences exist for fresh and processed commodities. Differences in risk standards between countries can be challenging to harmonize.

Why "Harmonize"?

While often difficult to achieve, harmonization of food-safety regulations can provide economic benefits. For example, when different countries have the same information requirements for registering a new pesticide or food ingredient, the cost of developing new products can be spread over a larger market and unit costs are consequently lowered. As long as the harmonized regulatory process ensures safety of the new product, consumers should benefit from a wider availability of safe products at lower costs.

Another general type of economic benefit arises when producers compete to provide the required level of safety in world markets. Production can shift to where it is cheaper to attain a particular safety attribute, due to either advantageous natural resources or superior technology. For example, food production could shift to regions where particular pest problems are fewer, and hence fewer pesticide applications might be needed. And, livestock production could concentrate in areas without endemic disease.

Food-Safety Regulation Under GATT

The new GATT agreement provides a framework for distinguishing protectionist regulations from legitimate sanitary and phytosanitary (SPS) regulations, that is, from regulations intended to protect human, animal, or plant life or health that are scientifically based and do not arbitrarily or unjustifiably discriminate between nations. The desire to harmonize such regulations is balanced with other considerations. These include concerns relating to national sovereignty, appropriate levels of protection, a scientific basis for regulations, transparency, equivalency, regionalization, and dispute resolution.

Harmonization

The GATT agreement emphasizes the desirability of "common sanitary and phytosanitary measures" among member nations. In order to promote harmonization, three international organizations are recognized as sources of scientific expertise and internationally agreed-upon standards: the Codex Alimentarius Commission (commonly referred to as the Codex), the International Office of Epizootics (IOE), and the International Plant Protection Convention (IPPC). The Codex addresses trade and food-safety issues related to food additives, pesticide residues, contaminants, animal drugs, packaging, and food standards. The IOE deals with animal health issues; the IPPC with plant pests and plant health.

The Codex works to develop standards that protect consumers everywhere, while at the same time facilitating trade in food products.

Other Trade Agreements Deal With SPS Issues

Growth in trade has also spurred a variety of less formal negotiations by the United States to "harmonize" regulations with major trading partners.

As a result of the 1989 U.S.-Canada Free Trade Agreement, the U.S. Environmental Protection Agency (EPA) and its Canadian counterpart are evaluating for registration a new pesticide, tebufenozide, that has both agricultural and forestry uses. It has potential environmental benefits from lower application rates, less persistence, and a more selective mode of action than do current alternatives. The regulatory agencies are using this process to understand how the two countries differ in their approaches to assessing the risks and benefits of agricultural chemicals. EPA is also establishing tolerances (legally allowable amounts of residues) for pesticides used on food products traded between Canada and the United States where tolerances exist in Canada, but not in the United States.

The United States and New Zealand are currently working toward an agreement whereby New Zealand's Ministry of Agriculture and Fisheries (MAF) would certify that selected fruit and vegetables from New Zealand are, with a high degree of confidence, in compliance with U.S. pesticide-residue tolerances. In recognition of this New Zealand Government certification, the U.S. Food and Drug Administration would offer facilitated entry/inspection procedures for the selected commodities. The arrangement is based on strict control of pesticide usage and residues throughout the production process, including pesticide usage recordkeeping and residue analyses in-field and before export. To date, kiwifruit and strawberries are under discussion, and apples, pears, and several other commodities are being considered.

There is an eight-step process for developing Codex standards that often takes years to complete—even for measures which may be quite simple, such as the Codex rule stating peanut butter must be made from peanuts. Other Codex standards are much more complex, such as those setting maximum residue limits (called MRL's in other countries, and tolerances in the United States) for pesticides.

Where comparisons are possible, a recent Government Accounting Office (GAO) study showed that in 81 percent of the cases, the Codex standards are either similar to or are more stringent than the U.S. standards. U.S. standards are more stringent in 19 percent of the cases. The GATT agreement will not force the United States to adopt lower international food-safety standards even in these cases.

Appropriate Level of Protection

The GATT agreement clearly states that nations have the right to choose the risk standard that applies to a particular hazard, such as carcinogenic pesticide residues or animal diseases.

Some countries may choose to accept more risk than is allowed by the international standard. This will likely occur frequently in developing countries, where achieving the same levels of safety as exist in developed countries may make the foods prohibitively expensive. Many developed countries may opt for more stringent risk standards than the international standards.

Allowing national sovereignty works against the goal of harmonization, but recognizes that individual nations are unwilling to subscribe to uniform international standards for all hazards. Thus, the agreement balances national interests with the goal of harmonization.

Scientifically Based Measures

The new GATT agreement states that all SPS measures must be based on science. Although nations have the right to choose their own risk standards, they must be established in a scientifically defensible manner. Regulations cannot impose requirements that do not have a scientific basis for reducing risk. For example, a quarantine period for live animals should be no longer than necessary to ensure a disease is not present.

Realistically, however, there may be different interpretations of what is scientifically justified. Moreover, nations can adopt provisional SPS measures on the basis of pertinent available information when there is insufficient scientific information to make an objective assessment of risks. In such cases, nations are obligated to seek additional information in "a reasonable period of time." These problems notwithstanding, movement toward basing SPS measures on a scientific basis is a major step forward in eliminating trade barriers that are specifically established without a scientific basis to favor domestic producers over foreign suppliers.

Transparency

Food-safety regulations are often unclear and can appear capricious. Therefore, the GATT agree-

ment requires nations to publish their regulations, provide a mechanism for answering questions and receiving comments from affected trading partners, and notify trading partners about any new standards.

Equivalence

Regulations may differ for institutional or historical reasons. Member nations must accept that SPS measures of another country are equivalent if they result in the same level of public-health protection, even though the measures themselves might differ. However, the burden lies with the exporting country to demonstrate that the measures provide the same level of public-health protection as the importing country's regulations.

Regionalization

The GATT agreement directs member nations to recognize the concept of pest- or disease-free areas within a country. Presently, outbreaks of certain diseases in a country may prevent exports of selected products from that country even if other regions in that country have no disease problem at all. Thus, the agreement will allow exports from a disease-free region of the exporting country to an importing country, even though the disease might be endemic in other parts of the exporting country. Exporting countries are required to provide evidence that pest- or disease-free areas likely will remain that way.

Dispute Resolution

The GATT agreement also provides a clearly defined mechanism for resolving disputes between countries in a timely manner. Disputes regarding the legitimacy of a country's regulations are to be decided by a dispute-settlement panel.

If the standards under dispute differ from the international standards accepted by the three international organizations, then the country implementing the standards must show that they comply with the country's obligations under the agreement. For example, they must be scientifically based, transparent, and consistent. A dispute-settlement panel will not be forced to choose between two nations' scientific standards. It will be expected only to state whether the SPS measures under question have a scientific basis and if they are consistently applied. If the standards are not upheld by GATT, then the country holding such standards can retain them only if compensation (as established by the panel) is paid to the complaining trading partner.

The dispute-settlement process simply ensures that nations comply with the obligations that they have agreed to. A nation with an adverse panel finding against it is encouraged to work with the nation bringing the complaint to the GATT panel. Failure to reach a settlement results in trade retaliation at a level set by the GATT panel.

What Issues Remain?

There are concerns whether the SPS provisions of the GATT agreement can promote trade while safeguarding public health. Many specific concerns over food safety stem from the technical nature of the language of the SPS provisions of the GATT agreement.

The issue of harmonization—particularly with respect to how harmonization interacts with national sovereignty—is one that has prompted considerable debate. Some critics feel that U.S. food safety is threatened by the SPS provisions. Some wonder whether the higher U.S. standards may be challenged and eventually disallowed because they are more stringent than the international Codex standards. This criticism seems to reflect a basic misunderstanding of the GATT text.

National-sovereignty concerns have also been raised with respect to the dispute-settlement process of the new World Trade Organization (WTO), which will replace the GATT Secretariat. The WTO will provide the institutional framework for world trade in goods, services, and intellectual property rights. Some critics of the new GATT Agreement see the WTO as an entity which will diminish U.S. sovereignty through the establishment of an expanded, more powerful dispute-settlement process. However, WTO panel reports (which settle a complaint brought by one WTO member against another) essentially will be no more binding than current GATT panel findings. Individual nations will be responsible for deciding how to implement WTO decisions. Moreover, WTO findings will continue to be made by member nations and not by a new international bureaucracy.

Preemption of U.S. State and local laws is another important issue raised. National governments commit themselves under the agreement to ensure that subnational governments comply with the provisions of the law. This does not mean that State and local laws cannot be more restrictive—it means that they must be consistent with the SPS provisions. In recent years, some States have imposed food-safety standards that are stricter than Federal regulations. For example, California has passed Proposition 65 requiring labeling of potential carcinogens in food. Such measures will remain valid as long as it can be shown that they do not violate the GATT provisions.

There are some concerns about transparency—that the GATT dispute-settlement process is less transparent than it could be. Critics also have asked that there be more public information relating to WTO decisionmaking.

The GATT agreement does not recognize that SPS regulations may

be based on criteria other than safety—such as social concerns relating to animal welfare, consumer preferences, or environmental concerns. Other nations have applied or threatened to apply trade restrictions because of social concerns. For example, the European Union (EU) has recognized such concerns as legitimate grounds for banning new products or processes. In 1989, the European Community (the precursor to the EU) banned use of the recombinant bovine growth hormone (known as rbST, the product is an artificially synthesized copy of bovine somatotropin which is a naturally occurring protein hormone in cattle) believing it would favor large farms and change the current farm structure. While the EU has also considered banning of imports of products produced with the use of rbST, this prohibition has not yet been imposed. It is clear that such a measure would not be justified under the SPS provisions of the GATT agreement.

A similar issue is that science is not the only basis for policy. The science of measuring risks relies on value judgments and on assumptions that cannot be wholly objective. The GATT agreement recognizes this inherent uncertainty by allowing national sovereignty in the choice of acceptable safety standards and by requiring consistency and equivalency in the application of standards. It is worth noting that while the agreement requires that SPS measures be scientifically based, it does not require that they be based on the "best" science or on the "weight of the evidence." It thus avoids the potential for dueling scientists. Dispute-settlement panels will not be responsible for choosing among scientific views, but will determine only whether a particular SPS measure has a scientific basis.

The GATT agreement represents important progress that could ultimately improve product safety and information for consumers in member nations. Increased international competition should provide safety features at a lower cost. Imported and domestic goods will have to meet equivalent standards.

However, the process and impacts of harmonization and dispute resolution will evolve only over the long run. Differences in food-safety regulations and risk preferences across countries will continue to pose challenges for harmonization and food trade.

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International Licensing of Foods and Beverages Makes Markets Truly Global

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Peter Paul Mounds and Almond Joy...well-known brands of American candy bars? Löwenbrau Pils...an imported beer? What about a Sunkist drink in Tokyo or Planters nuts in Singapore?

These and many other foods are actually produced and sold by a local firm under license from a foreign firm. The candy bars are brand names owned by the British food and beverage company Cadbury Schweppes and produced in the United States under license by the U.S. company, Hershey Foods. The beer, brewed in the United States under license by Miller Brewing Company, is a brand owned by the German firm of the same name.

And what of the "American" foods abroad? Planters nuts in Singapore are produced by Britannia Brands, Ltd., a Singapore subsidiary of the leading French food manufacturer, BSN, under license from the U.S. firm RJR Nabisco. Sunkist has licensed the Japanese firm Morinaga to produce Sunkist drinks for sale in Japan.

These are just a few examples of familiar brand names that are owned by firms in one country and produced and sold under license by other firms in other countries. Indeed, international licensing of food brands is widespread. Information gleaned from corporate annual reports suggests that the production of foods under license is at least as great as the value of actual food product exports and imports.

Licensing Expands Markets for Brand Products

It is commonly believed that firms sell foods in foreign markets either as exports from their home

Since the mid-1980's, international brand licensing has grown dramatically. A large share of the food manufacturing firms that engage in international brand licensing are beverage and confectionary producers.

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country or as products made in facilities they operate abroad. U.S. food manufacturers, for example, annually export more than $20 billion worth of products, many of which are brand-name foods. And, U.S. firms typically sell more than $80 billion in foods produced by their foreign affiliates.

Yet, that doesn't tell the whole story. A review of annual reports from 120 publicly held multinational food manufacturing firms with annual sales of $100 million or more revealed that at least half are involved in some form of international product licensing.

Many of these firms license foreign firms to use their brands (called outbound licensing), and produce goods under names licensed from foreign firms (inbound licensing). Where there are barriers to direct entry, outbound licensing is a means for a foreign firm to establish a market presence and, thus, generate some foreign earnings from its investment in developing a unique brand name and product image without having to manufacture the product. When changes in demand create a need for new products, inbound licensing represents an alternative to in-house development of a new brand. Consumers have access to a broader variety of products that better matches their shifting demands. Licensing arrangements between breweries in the United States and the United Kingdom illustrate the motivations and market conditions that often encourage international brand name licensing in the food industry (see box).

An international license, as referred to in this article, is a contract by a food or beverage manufacturer which owns a brand name that is well established in one country (the licensor), with a firm in another country (the licensee) to manufacture and sell the brand product in the licensee's home country and/or third countries. In

Licensing Beer Names Abroad: Keeping 'A Head' of the Competition

Facing import restrictions and intense competition, beer manufacturers have turned to licensing their brand names overseas as an alternative to exporting. A profile of the brewing industry in the United States and the United Kingdom (UK) provides insights into how licensing can expand sales.

The brewing industry in both countries is dominated by a few large firms with fringes of smaller firms. In the United States, the three leading firms—Anheuser Busch, Miller, and Coors—each selling a portfolio of brand-name, heavily advertised beers, account for 83 percent of market share. In the UK, brewing has been dominated by six firms: Bass, Allied Lyons, Whitbread, Scottish/Newcastle, Courage, and Grand Metropolitan, with a combined market share of 76 percent.

Although total beer drinking in the UK did not change much in the 1980's, there was a marked shift in consumption from bitter to lager, a type of beer similar to that consumed in the United States. (Lager is brewed with a bottom-fermenting yeast; bitter, the traditional-style beer in the UK, is brewed using top-fermenting yeast.) In the UK, lager is brewed and marketed nationally by the major brewers; local brewers typically produce only bitter.

As tastes shifted, the large UK firms acquired licenses to produce and market foreign brands of lager. For example, Whitbread brews Heineken (Dutch) and Stella Artois (Belgian). Courage, prior to its acquisition by Elders, brewed Fosters (Australian) under license and now brews Miller Lite under license. The license to brew Budweiser is owned by Grand Metropolitan.

In responding to changes in consumer demand, some UK firms apparently found it more profitable to acquire new brands through licensing than through independent product development. Others may have done so in response to their competitors' strategies.

However, this would explain only one side—the inbound side—of a license. To gain insight into the motivation for U.S. and other foreign firms to license their brand names to UK brewers, two additional aspects of the UK brewing industry are important. First, not only do the leading UK brewers own many brands, they also spend large sums on brand promotion and advertising. This conveys a strong commitment to the market by the incumbent firms, which is visible to U.S. and other foreign firms and may discourage their direct entry.

Second, the leading UK brewers, unlike their U.S. counterparts, are vertically integrated into retailing. During the 1980's, the top six UK firms owned more than half of the licensed pubs, which are tied to selling their owners' products. The large brewers have recently sold some of their pubs, following investigation by the UK Monopolies and Mergers Commission into this industry practice. They also own a number of retail outlets that sell beer and other alcoholic beverages for off-premise consumption. Consequently, firms entering the UK market could have problems gaining access to distribution channels. Therefore, direct entry may be difficult.

addition to exclusive use of the brand name, the licensor often provides some technical assistance for producing the product and maintaining quality control. The licensor may also provide a product formula or recipe, supply critical ingredients such as a flavoring extract, and render some financial help for advertising and other market-development activities. In turn, the licensee produces and markets the product in the specified markets and remits to the licensor part of the sales revenues (in the form of a fixed fee and/or per-unit royalty).

Brand name licensing of food and beverages has been used as a commercial activity in the United States for many years. For example, it has been common for leading soft drink manufacturers to license the domestic bottling and distribution of their products.

Such licenses have also crossed national borders. Cadbury Schweppes and Britvic Corona have long held license rights to bottle and distribute Coca-Cola and Pepsi Cola, respectively, in the United Kingdom. But since the mid-1980's, international brand licensing appears to have grown dramatically. A large share of the food manufacturing firms that engage in international brand licensing are beverage and confectionary producers (tables 1 and 2 illustrate firms that enter into licensing arrangements).

Licensing Offers Several Advantages

We examined trade literature and annual reports of many of the world's leading food manufacturers and conducted personal interviews with international marketing executives of several of these companies to gain insights into what motivates firms to engage in international brand licensing.

Licensing abroad offers advantages that a firm may be able to capitalize on in international markets—notably ownership, location, and internalization.

Ownership

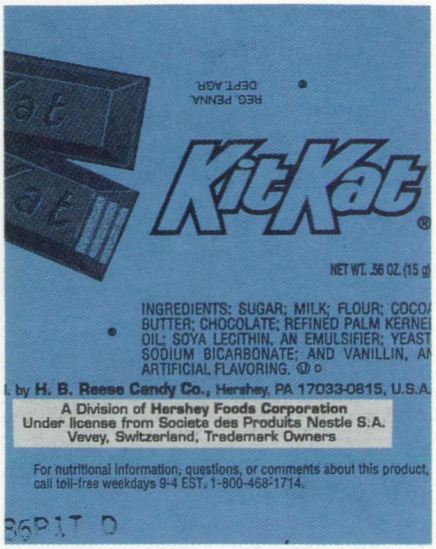
Ownership advantages refer to assets that are unique to the firm, which it wants to both protect and use to generate income. A licensee may have assets in the form of underutilized production, distribution, and/or merchandising capacity. The licensor's asset is the brand name and accompanying product image.

As evidence of such assets, we would expect both the licensee and the licensor to hold leading positions in their home markets and to be making substantial investments in promoting their brand names. For licensors, this leading position demonstrates control over a highly preferred brand or product image. For licensees, this leading position indicates control over an effective production, distribution, and merchandising capability.

Nearly all the firms sampled, whether licensor or licensee, hold a leading position in their home market for the class of product licensed. Forty-one percent hold the largest share of their home market, and 73 percent have either the number 1 or number 2 position. Fewer than 7 percent rank below the eighth largest.

The leading firms studied are equally aggressive in licensing a foreign firm to use their brand names and in selling products in their home market under license from foreign firms. Most executives interviewed said they would not license with another firm unless that firm was already successful in establishing a leading position in its own market.

The firms involved in licensing have made substantial investments in developing and promoting their products and brands. Advertising is one way of measuring such investment. The U.S. firms studied



Brand licensing is an important, but often overlooked, aspect of international commerce in food and beverages. Many familiar product names produced by U.S. food firms actually belong to foreign firms.

spent an average of nearly $350 million each per year for advertising. This level of expenditures is nearly 4 percent of the value of their annual sales, well above the average advertising-to-sales ratio for all food firms.

The book value of a firm's licensed brand names is another measure of a firm's ownership advantage. Albeit substantial, these are intangible assets. As such, they are difficult to value, and many firms do not include them on their balance sheets. However, for the companies in the sample that did so, the average value of their brand names exceeded 12 percent of their total assets. An unpublished study as reported in *Financial World* places the average value of 12 leading internationally licensed food brands at just over $7 billion each.

Locational Advantages

Firms can realize locational advantages from licensing by avoiding barriers to direct international

Table 1

U.S. Firms License Brand Names Out to, and in From, Foreign Firms

Licensor	Brand name	Licensee
Anheuser-Busch (U.S.)	*Budweiser*	Labatt (Canada)
"	"	United Breweries (Denmark)
"	"	Guiness (Ireland)
"	"	Suntory (Japan)
"	"	Oriental Brewery (South Korea)
"	"	Grand Metropolitan (UK)
"	*Bud Light*	Labatt (Canada)
Hershey Foods (U.S.)	*Hershey's*	Fujiya Confectionery (Japan)
CPC International (U.S.)	*Knorr*	Ajinomoto (Japan)
Geo. A. Hormel (U.S.)	*Spam*	Newforge Foods (UK)
"	"	K.R. Darling Downs (Australia)
"	*Hormel*	Lee Tan Farm Industries (Taiwan)
"	"	Blue Ribbon Products (Panama)
"	*Bacon Bits*	K.R. Darling Downs (Australia)
Adolph Coors (U.S.)	*Coors*	Molson (Canada)
Kraft General Foods (U.S.)	*Kraft*	Epic Oil Mills (South Africa)
Miller Brewing (U.S.)	*High Life*	Molson (Canada)
"	*Miller Lite*	"
"	"	Courage (UK)
Kellogg's (U.S.)	*Kellogg's*	Ajinomoto (Japan)
Ocean Spray (U.S.)	*Ocean Spray*	Pernod Ricard (France)
"	"	Ranks Hovis McDougall (UK)
"	"	Cadbury Schweppes (Canada)
"	"	Pokka (Japan)
Sunkist Growers (U.S.)	*Sunkist*	Morinaga (Japan)
"	"	Haitai Beverages (South Korea)
"	"	Rickertson (Germany)
"	"	Cadbury Schweppes (UK)
Welch Foods (U.S.)	*Welch's*	Cadbury Schweppes (Canada)
RJR Nabisco (U.S.)	*Planters*	Britannia Brands (Singapore)
Cadbury Schweppes (UK)	*Cadbury*	Hershey Foods (U.S.)
"	*Peter Paul Mounds*	"
"	*Almond Joy*	"
Rowntree Mackintosh (UK)	*Rolos*	Hershey Foods (U.S.)
"	*Kit Kat*	"
Haute Brasserie (France)	*Killian's Red*	Adolph Coors (U.S.)
Sodima (France)	*Yoplait*	Yoplait Foods (U.S.)
Löwenbrau (Germany)	*Löwenbrau Pils*	Miller Brewing (U.S.)

trade—a concept often referred to as tariff-jumping. Examples of such barriers are import tariffs and quotas, transportation costs, and local commercial practices. Obviously, licensing local production in a foreign market is a way to avoid import tariffs or quotas. Licensing the brand name rather than exporting the physical good can reduce transportation costs, particularly for bulky and perishable finished goods, such as bottled beverages.

Table 2

Foreign Firms License Food and Beverage Brand Names in Other Countries

Licensor	Brand name	Licensee
Arla (Sweden)	*L + L*	Morinaga (Japan)
Bond (Australia)	*Castlemaine XXXX*	Allied Lyons (UK)
"	*Swan Premium*	"
Brasserie Artois (Belgium)	*Stella Artois*	Whitbread (UK)
BSN (France)	*Kronenbourg*	Courage (UK)
Elders (Australia)	*Fosters*	Beamish & Crawford (Ireland)
"	"	Pripps (Sweden)
Guinness (Ireland)	*Guinness Stout*	Elders (Australia)
Lutz (Germany)	*Lutz*	Nichieri (Japan)
Morinaga (Japan)	*Bifidus Yogurt*	St. Herbert (France)
"	"	Südmilch (Germany)
"	*Morinaga*	P.T. Enseval (Indonesia)
Unilever (Netherlands)	*Lipton*	Morinaga (Japan)
United Breweries (Denmark)	*Carlsberg*	Photos Photiades (Cyprus)
"	"	Beamish & Crawford (Ireland)
"	"	Suntory (Japan)
"	*Tuborg*	Frydenlund Ringes (Norway)
"	"	Unicer (Portugal)
Cerveceria Modelo (Mexico)	*Corona*	Molson (Canada)
Kirin (Japan)	*Kirin*	"
"	"	San Miguel (Hong Kong)
Labatt (Canada)	*Labatt*	Vaux Brewery (UK)
Löwenbrau (Germany)	*Löwenbrau Pils*	Allied Lyons (UK)
"	"	Molson (Canada)
"	"	Asahi (Japan)
"	"	San Miguel (Hong Kong)
"	*Löwenbrau Strong*	Allied Lyons (UK)
Jacob Suchard (Switzerland)	*Sugus*	Nestlé Produtos Alimentaros (Portugal)
"	"	Beacon Sweets (South Africa)
"	"	Sanborn Hermanos (Mexico)
"	*Toblerone*	"
"	*Milka*	"
"	*Suchard*	"
"	"	Tong Yang Confectionery (South Korea)
"	"	Nestlé Produtos Alimentaros (Portugal)
"	*Van Houten*	Chocolate Products (Malaysia)
"	"	General Food Industries (Indonesia)
"	"	Sunshine Allied (Singapore)

As in the case of the beer market in the United Kingdom, licensing can provide a way around restrictive local commercial practices (see box).

A strong signal by an incumbent firm that it will fight the entry of others through aggressive competition, such as intensive advertising or sharp price cuts, can also be an effective entry barrier. Licensing avoids competitive fighting against the foreign brand by the domestic licensee.

Internalization

While a manufacturer could sell a product to a foreign reseller at relatively small transaction cost, the product's quality may be undermined by imprudent handling or merchandising. To protect its product's reputation, the manufacturing company has an incentive to do its own reselling and "internalize" the transaction.

License agreements typically substitute for such internalization by including a quality-control regime that grants the licensor the right to monitor product quality prior to sale. Thus, the licensor and licensee are jointly responsible for protecting the quality and image of the branded product.

Other Reasons for Licensing

We could not find data to measure entry barriers, excess capacity, product quality, and consumer demand for product variety as possible inducements for licensing. However, virtually all of the interviewed executives mentioned these as factors influencing their international licensing strategies.

U.S. Firms More Aggressive in Licensing Abroad

U.S. firms appear to be somewhat less aggressive in pursuing inbound licenses than in licensing the use of their brand names abroad. Our discussions with executives suggest several possible reasons. First, there is a perception among some U.S. executives that American consumers prefer an imported product to a foreign-brand product manufactured in the United States. Second, the large size of the U.S. market may mean that leading U.S. food manufacturers can realize most advantages of size without handling additional products under license. Third, some U.S. food manufacturers have purchased foreign brand names rather than "rent" them through a license. Fourth, a number of leading foreign food manufacturers have built or bought factories in the United States to produce their brands directly for the American market.

All told, it may be that U.S. food firms have an international comparative advantage in developing their own successful brand-name food products—an advantage that translates into more outbound licensing than inbound licensing of brand names.

Making Markets Truly Global

Brand licensing is an important, but often overlooked, aspect of international commerce in food and beverages. Many familiar product names produced by U.S. food firms actually belong to foreign firms. And, an even larger number of American brands of foods consumed abroad are actually produced abroad under license from American firms. Through outbound licensing, U.S. firms extend their reach to foreign customers. Through inbound licensing, they supply U.S. consumers with foreign foods that otherwise might not be available.

Brand name licensing is rational behavior—the licensor gains by capitalizing on its good name in a foreign market, the licensee gains from expanded sales and more efficient operations, and consumers gain from a greater variety of foods and beverages. Brand name licensing is a further example that food markets are becoming truly global.

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U.S. Multinational Food Manufacturers Choose Production in Foreign Markets Over Exports

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U.S. food manufacturers supply their products to foreign consumers primarily through local production in foreign markets. In fact, exports pale in comparison to sales by foreign affiliates of U.S. firms. In 1992, processed food sales from U.S.-owned foreign affiliates totaled $89 billion—almost four times U.S. export sales of processed foods. And while U.S. exports of processed foods continued to grow, the gap between them and foreign affiliate sales more than doubled between 1982 and 1992 (fig. 1).

Foreign production also occurs through licenses between U.S. and foreign firms. These agreements allow foreign firms to produce and sell the U.S. firms' products in specified foreign markets (see "International Licensing of Foods and Beverages Makes Markets Truly Global," elsewhere in this issue).

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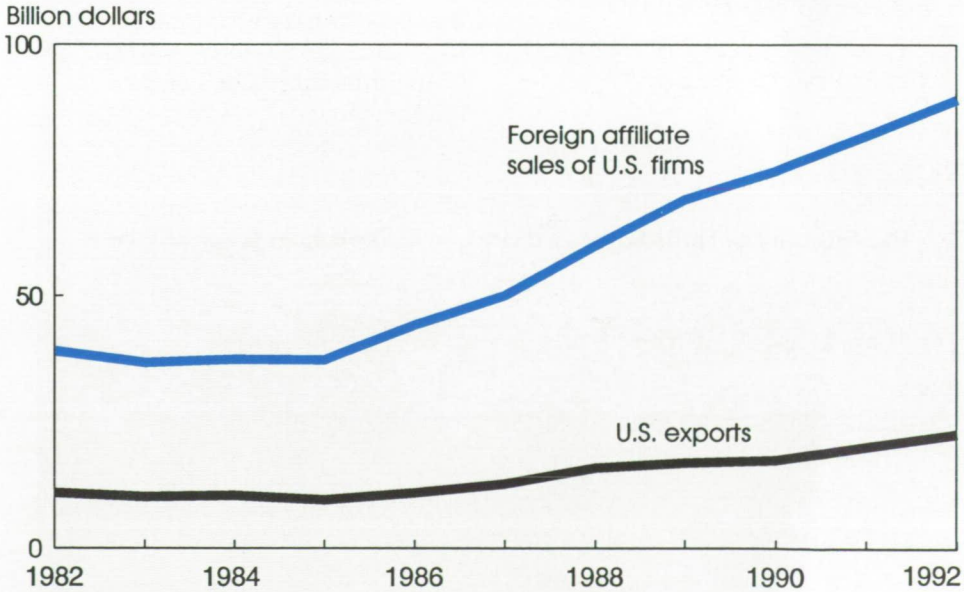
Ownership Advantages Favor Foreign Affiliates

In a recent survey of 17 multinational food manufacturing firms by Agriculture and Agri-Food Canada (AAFC) and USDA's Economic Research Service (ERS), a majority of firms said they chose to supply foreign markets through local production rather than exports for most of their products. (See box for details of the study.) Several of the firms use exports to supply foreign markets only if the foreign market cannot support local production.

Figure 1
U.S. Processed Food Sales by Foreign Affiliates Dwarf U.S. Exports



Food Manufacturing Firms Surveyed

Agriculture and Agri-Food Canada (AAFC), Canada's counterpart to USDA, and USDA's Economic Research Service (ERS) conducted personal interviews between September 1993 and January 1994 with senior managers of multinational food manufacturing firms operating in the United States and Canada. Cooperation was voluntary. An effort was made to include firms diverse in their international operations, size, and product type. Information from annual reports and secondary sources supplemented the interviews to obtain a comprehensive view of firms' international activities.

Eleven of the 17 firms included in the study are multinational food companies headquartered in the United States. The remainder are multinational firms from Canada, the United Kingdom, and Switzerland. All of the firms are relatively large, with median level of 1992 revenues of $5.9 billion (table 1). The firms operate primarily in North America and Europe. Other regions of operation include Latin America and Asia. Relative to their worldwide operations, most firms have limited exposure in the Middle East and Africa.

Food processing is the primary activity for the majority of the firms—all produce food for retail consumption. Five firms also supply food for further manufacture, and at least five others supply to the foodservice sector.

All the firms produce more than one food product, but the degree of diversity varies. Several firms produce closely related products of a certain form (such as frozen foods), while others produce a wide array of food products in many forms (such as cereals, canned goods, and snack foods). The degree of processing required for each food product also varies both within and between firms. Several firms refine raw agricultural ingredients, while others produce highly processed foods (such as frozen pizza and soup mixes) using processed ingredients.

All the firms included in the study supply markets outside their home country. Sales from foreign production account for at least 10 percent of total revenue for 14 firms (see also table 2). In contrast, exports account for less than 4 percent of total revenue for 11 firms. And, foreign sales of six firms exceed half of their total revenue.

Table 1

The Majority of Firms Surveyed Had 1992 Revenues Over $1 Billion

Total revenue in 1992	Number of firms
Greater than $10 billion	5
$5-7 billion	5
$1-4 billion	5
Fewer than $1 billion	2

The fundamental basis for these firms choosing production abroad to supply foreign markets seems to lie in their desire to capitalize on existing intangible investments in their brand, knowledge, and reputation, while serving foreign markets in a cost-effective manner. For this reason, firms generally prefer foreign affiliate arrangements where they possess majority ownership in local production facilities and exert some control over management.

A foreign affiliate enables a firm to capitalize on intangible investments because it allows for control over the quality and presentation of the product in the foreign market. It also enhances the ability of the firm to produce a good suited to the foreign customers' needs and preferences. These ownership benefits make exports less attractive and provide a strong motivation for foreign production by U.S. food manufacturing firms.

Firms Weigh Cost Considerations

Production abroad generally requires a sales volume in the foreign market sufficient to support local production facilities. If a foreign market can support local production, firms weigh cost considerations and their ability to control the quality, presentation, and delivery of a product with each production alternative. For each market and product, or product line, firms choose the production arrangement that allows for the greatest control with the least cost.

Firms identified several cost factors important to their choice of production location. These include: cost advantages gained from achieving economies of scale, delivery costs, and costs incurred in acquiring raw ingredients. While tariff and nontariff barriers to trade, such as quotas and differences in labeling laws or health and safety standards, also affect

Table 2

Foreign Sales Represent a Sizeable Portion of Total Revenue for Firms Surveyed

Share of total revenue	Sources of foreign sales		
	Exports	Foreign production[1]	Total
		Number of firms	
Greater than 50 percent	0	5	6
10-50 percent	1	9	10
4-10 percent	5	2	1
Less than 4 percent	11	1	0

Note: [1]Foreign production includes joint ventures, foreign affiliates, and licensing.

firms' costs, most firms in the study did not identify these as primary determinants of production location. Firms also consider the risks associated with entering foreign markets.

Firms consider each of the factors above as they weigh the cost advantages and disadvantages of each production location. In some cases, a single cost advantage dictates a firm's decision. For example, raw ingredient requirements for a product can dictate where a food is manufactured. More often, however, tradeoffs exist between production alternatives. For example, at least two firms discussed the tradeoff between production costs and delivery costs. Sufficiently low production costs in the home country may result in the export of a product despite high delivery costs if the sum of costs remains below that of foreign production.

As production, delivery, and raw material costs vary among products and as the potential size of the market varies among products and countries, so do the cost tradeoffs that firms must consider. Accordingly, the strategy for each product and market also varies. Many of the surveyed firms pursue a mixed supply strategy, exporting some products from the home country and opting for foreign production of other products.

The tradeoffs faced by firms also change with market conditions. Food firms actively pursue growing markets. The majority of firms first export, then work toward local production in the market. As the firm develops the foreign market for a product, the ability of a foreign plant to capture cost advantages from economies of scale increases and foreign production becomes more feasible.

Economies of Scale

With economies of scale, firms experience a lower per-unit cost for their goods as output is increased. Because exports increase output, they provide firms with an opportunity to realize economies of scale in their domestic plants. However, these same cost advantages can be captured with local production in a foreign market if demand within the market is of sufficient size.

Several firms commented on the importance of economies of scale in their decision to export goods. Most often, they viewed economies of scale as important for exports to nearby markets. For markets further away, they generally prefer to use foreign production through joint ventures and affiliates or licensing agreements. For example, a U.S. manufacturer of a popular sports drink exports from the United States to Mexico because of production cost efficiencies in the U.S. plant, but supplies Europe from a plant in Italy and licenses production in Asia. Only two firms in the study use exports as the sole method of supplying a product to foreign markets.

Delivery Costs

Delivery costs for exports to foreign markets reduce the cost benefits from economies of scale. Ten firms mentioned delivery costs as a factor in their decision to export or locate production abroad.

Several firms discussed the importance of comparing the unit value of a product at the point of sale to its delivery costs. For food products with a low unit value, freight costs may make it unprofitable for the firm to export. Under this circumstance, cost savings occur when firms locate production close to the market served.

Because delivery costs vary among products, their importance to firms' decisions on the location of production varies as well. For example, two firms that ship most of their product in bulk form indicated that delivery costs play no

role in their decisions to locate production abroad. Foods in bulk form generally have lower delivery costs than packaged foods in their final form. As a result, factors other than delivery costs will determine whether firms that manufacture bulk foods locate production abroad.

Delivery costs also vary among markets for a variety of reasons besides distance from the home market. For example, more than one North American firm spoke of the freight cost advantage created by the excess capacity on ships returning to Asia from deliveries to the United State and Canada. These firms find exporting goods from North America to Asia more advantageous than producing in Asia, despite the distance between the two markets.

Ingredient Requirements

Six firms remarked that the lack of suitable or affordable raw agricultural ingredients in the foreign market can limit local production. For example, one firm exports semiprocessed corn oil from the United States to their joint venture plant in a foreign market because desert conditions prohibit growing corn. Similarly, a lack of suitable or affordable ingredients in the home country can make production in a foreign market more cost efficient. Three of the firms interviewed said they locate production in foreign markets because the raw ingredients cannot be grown in the home market.

The importance of these requirements in firms' decisions seems to depend on the proportion of raw ingredients a product requires. Most firms discussed the limitation on production location with respect to products with a high proportion of raw agricultural ingredients. For example, one firm that produces goods with both high and low proportions of raw ingredients stated that production location was limited only for products with high proportions.

The availability of a semiprocessed form of the raw agricultural ingredient may reduce the constraints on production location. For example, because of the high local cost of chickens, a subsidiary of a U.S. firm in Canada imports skinned and deboned poultry from the United States for use in frozen dinners rather than shifting production of the dinners to the United States.

Because ingredient costs account for the majority of the production costs incurred by the firms, other inputs—including labor—have little impact on the choice of plant location. Only one firm shifted production outside the home country due solely to labor costs. This firm represents an exception because of its involvement in harvesting, a labor-intensive task.

Production in foreign markets can enhance a U.S. food manufacturing firm's understanding of the cultures, tastes, and preferences of consumers in those markets.

Trade Practices and Government Policies Have Little Effect

According to most firms surveyed, trade practices and barriers have little impact on firms' production location decisions. While most firms acknowledged that trade barriers hinder their ability to export, only 2 of the 17 firms cited instances where they chose production in a foreign market as a remedy.

This finding, however, may be misleading. A few firms did not distinguish between freight charges and costs due to trade barriers in their discussion of delivery costs. This suggests that firms implicitly treat tariffs and costs incurred from nontariff barriers as delivery costs. Therefore, tariff and nontariff barriers may increase the likelihood of production abroad.

Risk Plays a Role

In addition to the explicit cost considerations discussed above, firms also include the implicit cost incurred from risk when they weigh the tradeoffs between export and foreign production. The financial investment of owning a foreign plant exposes firms to greater risk from fluctuations in exchange rates and, possibly, unstable political and economic environments. Experience in international markets, however, may reduce the risk associated with locating production abroad. For example, one firm's considerable experience in Latin America reduces its risk of locating production in Brazil.

Control and the Need To Customize

The desire to maintain control over the production and/or marketing of a product motivates most of the firms in the AAFC/ERS study to seek ownership of production facilities in foreign markets.

U.S. food manufacturers expend a considerable amount of effort promoting brand names (see "Dramatic Growth in Mass Media Food Advertising in the 1980's," *FoodReview*, Vol. 16, Issue 3, Sept.-Dec. 1993).

Once a brand name becomes established, firms have a strong incentive to maintain its quality and reputation. The manufacturer must be sure the product maintains a consistent level of quality and reaches the consumer in a timely manner. Failure in any of these areas may diminish the value of the brand name. Foreign production can give firms an advantage over domestic production in meeting the needs of their customers and assuring timely delivery. The proximity between local management and distributors yields an additional benefit by providing firms with more control over distribution of their product. Thus, local production in a foreign market helps firms assure that their investment in a brand name remains undiminished.

A firm's success in the marketplace depends on the ability of its product to meet the needs of customers. Several firms in the study felt that local production allows for a better understanding of the culture, tastes, and preferences of consumers in the foreign market. An equal number of firms believed that tailoring a product to foreign tastes does not require local production. The majority of these firms, however, exert control over the distribution of their product either through their own facilities in foreign markets or through arrangements with firms already operating in the market. Thus, they gain greater assurance of product delivery and more control over distribution and presentation.

Although ingredient suppliers may be less involved than manufacturers in the development of brand names, they also have a strong interest in maintaining the reputation of their ingredients and in assuring delivery. An ingredient supplier's success depends in a large part on a quick response to customer needs and close interaction with customers. The majority of firms in the study involved in supplying ingredients indicated that they located production outside their home market to serve their industrial customers more efficiently. As customers move abroad, ingredient suppliers follow. For example, as U.S. fast food franchises, such as McDonald's, expand to foreign markets, they desire the same service and quality of french fries and other ingredients available to them in the United States.

Implications for U.S. Trade

The success of policies aimed at expanding the U.S. presence in global markets depends on recognition of the diverse nature of U.S. food manufacturers' strategies for selling their products in foreign markets. Strategically designed policies can help U.S. food firms in world markets, but the impact of any policy will vary among products, markets, and firms. For example, export-enhancement policies will have the greatest success for products with low delivery costs; products containing ingredients not readily available in the global market; products sold to nearby, risky, or low-sales markets; or products sold by firms with little experience in foreign markets. The fewer of these characteristics possessed by the product, firm, and market, the more likely the firm will choose production abroad as the long-term strategy.

International trade agreements such as the General Agreement on Tariffs and Trade (GATT) and the North American Free Trade Agreement (NAFTA), which lower tariffs and other barriers to trade, will have a limited influence on U.S. food manufacturers' decisions to locate production facilities abroad. Recall that most firms interviewed for this study did not move production abroad because of tariffs or nontariff barriers. Neither did they move abroad due to labor costs. The factors that motivated them to move production abroad—delivery costs, availability of raw ingredients, tailoring products to foreign needs—will remain largely unchanged with trade agreements.

Removal of trade barriers, however, can benefit firms and increase exports from the United States. The greatest impact will involve markets located close to one another. For example, U.S. exports to Canada, Mexico, and other nearby countries could increase. The reduction in trade barriers reduces delivery costs, making it possible for firms to capture cost efficiencies through regional economies of scale and to increase trade within the region. ■

High-Value Food Products Boost Agricultural Exports

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U.S. exports of high-value agricultural products (HVP's) reached a record $24 billion in fiscal 1993, accounting for over half of total U.S. agricultural exports of $42.6 billion. Continuing the trend of surpassing bulk commodity exports since fiscal 1991, the gap has kept growing. In fiscal 1994, HVP exports probably topped $25 billion, with the margin between HVP and bulk exports expected to broaden to nearly $8 billion. But the growth has not been even among HVP's.

"High-value" is a term given to a group of agricultural products, generally those with value added through processing (such as soybean oil) or because they require special handling or shipping (such as fresh fruit).

High-value products can be grouped into two categories—intermediate commodities and consumer food products. Intermediate commodities are those that have been partially processed (such as soybean meal and cattle hides) or those used as inputs on the farm (such as seeds and animal feeds) or used by food manufacturers (such as flour and sweeteners).

Consumer food products are primarily shipped for consumption in the retail market and foodservice sectors in the importing country. These include highly processed foods and beverages (such as condiments, wine and beer, processed meats, and frozen dinners) and less processed foods (such as fresh fruit, vegetables, and meats). (Fish, seafood, and distilled liquor exports are not included in this data set.)

HVP's Turn the Tide

During the past few years, HVP exports have been the positive side of the U.S. agricultural trade picture. Rising HVP sales abroad have kept exports near $40 billion since 1989, as bulk export growth stalled (see fig. 1). The value and quantity of U.S. bulk exports fell in the 1980's because the European Union (EU) and other U.S. competitors expanded their exports and grain

Just as U.S. export gains shifted from bulk commodities to HVP's, most of the recent growth in HVP exports has shifted from intermediate commodities to the more value-added consumer-ready food products.

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prices fell. Also, much lower demand for imported grains in the former Soviet Union (FSU) has sharply cut into U.S. bulk exports.

The HVP share of total agricultural exports approached 50 percent toward the end of the 1980's as bulk exports fell and as HVP export growth accelerated after stalling in the early 1980's. This is a marked shift from accounting for about a third of all U.S. agricultural exports from the 1960's to the early 1980's. HVP exports increased an average of 4 percent annually during the 1980's, while bulk commodity exports decreased an average of 3 percent annually. In 1990-93, export growth in HVP's picked up to 6 percent annually, while bulk shipments continued to decline.

The boost in U.S. HVP exports occurred after 1985 when the value of the dollar began to fall against other foreign currencies. Between 1985 and 1993, the U.S. dollar declined 37 percent relative to currencies of major U.S. trading partners, making U.S. agricultural exports more competitively priced in world markets. Reduced import tariffs and lower nontariff barriers in foreign markets also have provided increased access for U.S. food products.

Another factor improving U.S. HVP exports is income growth—notably a rising middle class in countries such as Mexico, Hong Kong, South Korea, and Taiwan. Changing lifestyles that require convenience and growing tastes for western foods has generated greater demand for a variety of food products.

Intermediate Commodity Exports Remain Flat

Just as U.S. export gains shifted from bulk commodities to HVP's, most of the recent growth in HVP exports has shifted from intermediate commodities to the more value-added consumer-ready food products. Intermediate commodity exports have remained flat at around $9 billion annually, due to declining sales of U.S. oilseed meals, live animals, and hides.

Animal feeds are the largest intermediate HVP commodity that the United States exports, valued at over $2 billion in 1993. This group has continued to grow at nearly 5 percent annually during 1988-93. In 1993, 45 percent of U.S. animal feed exports went to the EU, 23 percent to Japan, and 13 percent to Canada.

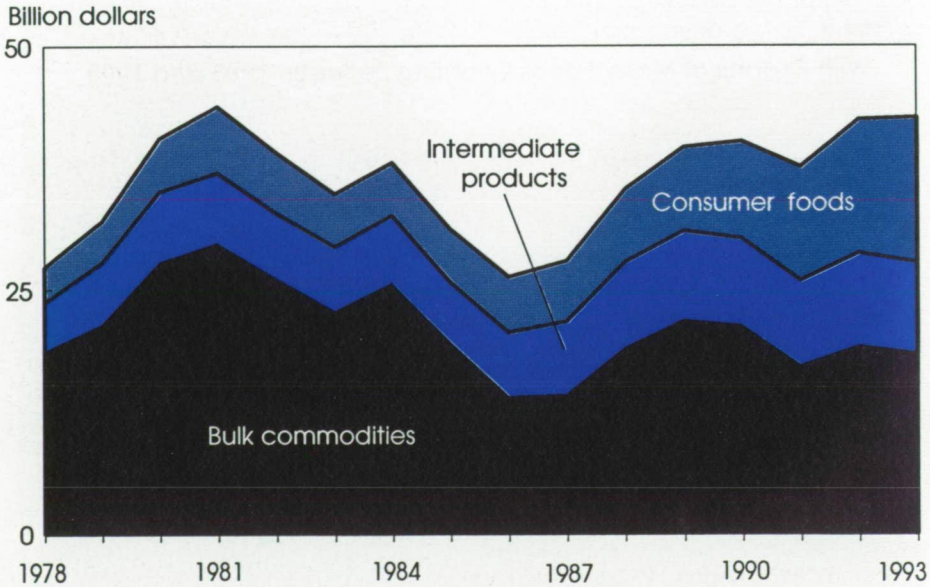
U.S. exports of hides and skins and oilcakes and meals are the next two largest groups in value, each with sales of about $1.3 billion in 1993. However, both have declined in recent years. Exports of hides and skins have fallen off because of weakened demand for leather goods in the slow economic climate of the last couple of years. The major markets for U.S. hides and skins have been South Korea (43 percent in 1993), Japan (21 percent), and Taiwan (10 percent), although Mexico (9 percent) may be gaining on Taiwan.

Oilcake and meal exports (mostly soybean meal) have fallen 3 percent annually since 1988. One of the biggest declines has been soybean meal shipments to the FSU because the shrinking livestock sector there has reduced demand.

Consumer Food Exports Rising

In 1990, consumer food exports reached nearly $10 billion and exceeded exports of intermediate products ($8 billion) for the first time. In 1993, the United States exported $14.6 billion worth of consumer food products, amounting to over 60 percent of all U.S. HVP exports (fig. 2). This group of HVP exports has increased an average of 14 percent annually during 1988-93, with gains in almost every product category (table 1).

Figure 1
HVP Sales Continue To Surpass Bulk Exports



Improving economic conditions as well as trade agreements that open foreign markets to imports are keys to the recent expansion of U.S. consumer food product sales abroad. Canada, the EU, and Japan have been the biggest markets for U.S. consumer food exports during the past 3 years. But the fastest growth in U.S. exports of these products has been in the Asian markets of Hong Kong, South Korea, Taiwan, Indonesia, Malaysia, and Thailand, as well as in Mexico where economic growth improved since the late 1980's.

The 1989 Canadian Free Trade Agreement with the United States and the 1994 implementation of the North American Free Trade Agreement between Canada, Mexico, and the United States have reduced tariffs on agricultural commodities and removed trade barriers, which resulted in increased U.S. exports of food products. Japan's elimination of quotas and tariff reductions under the 1988 bilateral Beef and Citrus Agreement increased U.S. exports of beef significantly. A 1993 U.S.-China agreement to relax Chinese quarantine regulations that prohibited U.S. apple imports because of the Mediterranean fruit fly and a 50-percent tariff reduction on imported apples in January 1994 should substantially increase Washington State apple exports to China.

Figure 2

Consumer Food Share of HVP Exports Has Taken Off in the Last Decade...

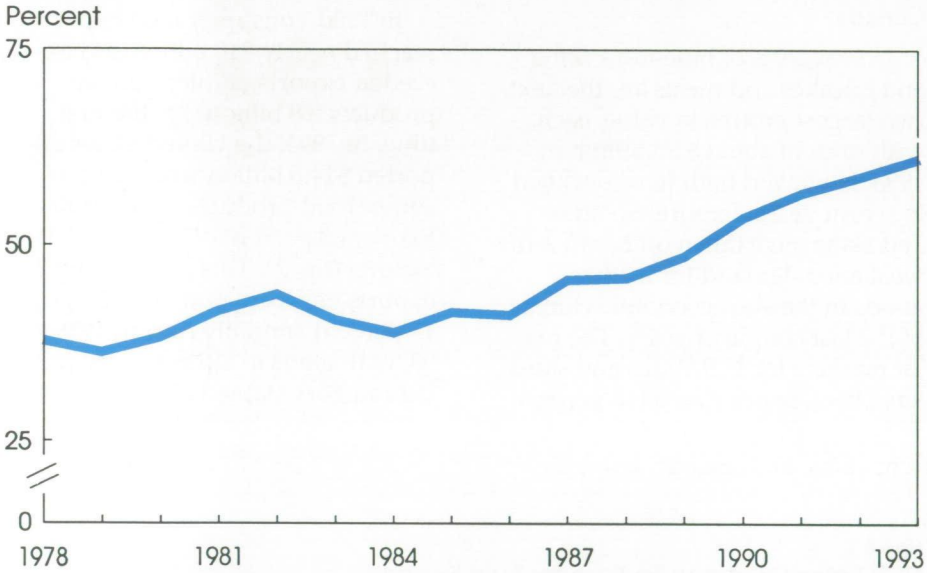


Table 1

...With Exports of Many Foods Doubling Between 1988 and 1993

Selected products	1988	1993
	Billion dollars	
Processed fruit/vegetables	1.4	2.9
Fresh fruit/vegetables	1.4	2.6
Beef	1.0	2.0
Nuts	.9	1.1
Poultry meat	.4	1.0
Dairy products	.5	.8
Grain products	.1	.6
Beer/wine	.1	.4

Source: "BICO Report," USDA, Foreign Agricultural Service, Trade and Economic Analysis Division.

Totaling $7.2 billion in sales in 1993, the largest group of consumer food exports is made up of fruit, nuts, and vegetables. Almost one-third of that is sent to Canada, and 20 percent goes to each the EU and Japan.

The United States exported $2.6 billion worth of fresh fruit and vegetables in 1993. Over half of the fresh exports went to Canada, and 20 percent went to Japan. The EU was the leading destination for nut shipments, with about 40 percent of U.S. exports. The majority of American processed fruit and vegetable exports—including canned, frozen, and highly processed products—were also destined for Canada, Japan, and the EU, with each buying a 19-percent share between 1988 and 1993.

However, U.S. exports of fresh and processed fruit, vegetables, and nuts to Mexico, Hong Kong, South Korea, and Taiwan have grown 24 percent annually during 1988-93 as rising incomes and preferences for western foods in these countries have increased the demand for high-quality U.S. food products.

Red meat exports—primarily beef, pork, and variety meats (mainly bovine offals)—are also important sales for U.S. producers, to-

taling $3.3 billion in 1993. Reduced tariffs and increased quotas in markets such as Japan and South Korea, combined with growing red meat consumption, have contributed to a 13-percent annual rise in U.S. meat sales since 1988. During 1988-93, beef and pork exports expanded 15 percent per year, and variety meat shipments rose 7 percent. Japan continues to be the largest market for U.S. beef, with exports of $1.2 billion in 1993—over half of foreign sales of U.S. beef. The strong Japanese yen relative to the U.S. dollar, the elimination of a beef import quota in 1991, and lower Japanese tariffs on beef have raised U.S. exports to over $1 billion per year since 1992.

Beef export growth to Canada, Mexico, and South Korea has also been strong. Trade negotiations with South Korea resulted in a broadening of its minimum import quota for beef. When the North American Free Trade Agreement was implemented in January 1994, Mexico removed the high tariffs on beef imposed in November 1992, and exports expanded from $55 million during January-May 1993 to $84 million in the same period of 1994.

With a 20-percent expansion per year since 1988, poultry meat has been one of the fastest growing exports, topping $1 billion in sales in 1993. U.S. poultry meat exports have risen because of greater market access and income growth. The United States is a competitive supplier of low-priced poultry parts. Low-priced parts, such as wing parts, chicken feet, and leg quarters, are less popular with U.S. consumers but are preferred in markets such as Hong Kong and the FSU. Growth has been above average in the biggest markets: Canada, Mexico, Hong Kong, Japan, and South Korea.

Processed grain products, such as breakfast cereals, pasta, and baked goods also have produced strong sales gains. These U.S. exports grew nearly 37 percent annually from 1988 to $620 million in 1993. The largest foreign markets for U.S. processed grain products are Canada, Mexico, and the EU.

Coffee, cocoa, chocolate, and tea exports have grown 22 percent each year since 1988 to over $600 million in 1993. These tropical commodities are imported raw, processed into such consumer products as instant coffee or chocolate candy bars, and then exported. Canada is the largest market for these processed U.S. exports, with 42 percent of U.S. shipments in 1993. About 10 percent of these exports each went to the EU and Japan, but recently the EU market has grown while Japan's market has remained relatively flat. Although Mexico's share reached 9 percent in 1993, it is the fastest growing of the larger markets for these commodities.

A Wave of New Markets for U.S. Consumer Foods

U.S. exports of consumer foods are concentrated in just a few regions (table 2). Canada, Japan, the EU, Mexico, and Hong Kong bought $11.2 billion worth of U.S. consumer food exports in 1993, over three-quarters of the total U.S. exports of these products.

This trade is weighted heavily toward Canada and Japan, with nearly $4 billion in consumer food exports to each. Almost 75 percent of all the U.S. agricultural trade with Canada is in consumer food products. The EU and Japan import 25 percent and 44 percent, respectively, as they purchase significant quantities of soybeans, feed grains, and intermediate HVP products from the United States. Consumer foods also accounted for 80 percent of total U.S. agricultural exports to Hong Kong and 73 percent to Singapore in 1993.

Growth prospects for U.S. consumer food exports have shifted somewhat to developing countries, as U.S. exports of consumer foods to the developed markets of Canada, Japan, and the EU have slowed.

Since 1990, Mexico and the Pacific Rim have been the fastest

Table 2

Leading Markets for U.S. Consumer Food Exports in 1993

Market	*Billion dollars*	Leading U.S. consumer food exports
Canada	3.8	Vegetables, fruit, meat
Japan	3.7	Meat, fruit, vegetables
European Union	1.7	Tree nuts, fruit, meat
Mexico	1.3	Meat, dairy products, poultry meat
Hong Kong	.7	Poultry meat, fruit, vegetables
South Korea	.4	Meat, fruit, vegetables
Taiwan	.4	Fruit, dairy products, tree nuts
Former Soviet Union	.2	Dairy products, poultry meat, snack food
Singapore	.2	Fruit, vegetables, poultry meat
Saudi Arabia	.1	Fruit, poultry meat, vegetables

Source: *Foreign Agricultural Trade of the United States*, USDA, Economic Research Service, various issues.

growing markets for these U.S. goods. For example, shipments of consumer foods to the Pacific Rim, excluding Japan, rose 19 percent annually. Growth has remained strong in Hong Kong, South Korea, and Taiwan, but the strongest increases were in Southeast Asia. The Philippines and Singapore have become the major markets there. The fastest growth was in Indonesia, Thailand, and Malaysia, where U.S. consumer food exports expanded annually since 1988 by 44, 32, and 19 percent, respectively. Some of the largest increases have been in U.S. exports of fruit, vegetables, and red meats.

Shipments of U.S. consumer food products to Latin America grew 19 percent a year since 1988 to $2.1 billion in 1993. In Mexico, these U.S. exports expanded over 30 percent to a record $1.3 billion in that period. During 1988-93, there was double-digit annual growth for many U.S. HVP exports to Mexico. The major U.S. consumer food products shipped to Mexico in 1993 were dairy products ($245 million), poultry meat ($199 million), vegetables ($184 million), and beef ($137 million). Growth also has been strong in Central America and South America.

Consumer Foods Exports Will Continue To Rise

Exports of all agricultural commodities will likely increase under the trade agreement established in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations. The agreement seeks to reduce tariffs and eventually eliminate many nontariff barriers, such as quotas and licensing requirements, in the world's agricultural markets. There will be greater opportunities for trade and exposure to U.S. food products in foreign markets as trade barriers fall.

The consumer food component of agricultural exports also is expected to continue increasing, as more countries' economies advance and as U.S. food firms actively promote their products in these foreign markets. Rising incomes will generate more demand for a variety of food products, as diets shift away from the traditional staple foods to the more convenient packaged consumer foods which will become more affordable.

Much of the growth is expected to occur in the Pacific Rim countries of Japan, Hong Kong, South Korea, Taiwan, Indonesia, Malaysia, the Philippines, and Thailand, and in Mexico because U.S. trade has shifted in recent years to these areas with growing economies. ■

Market Development Programs Help Expand U.S. High-Value Agricultural Exports

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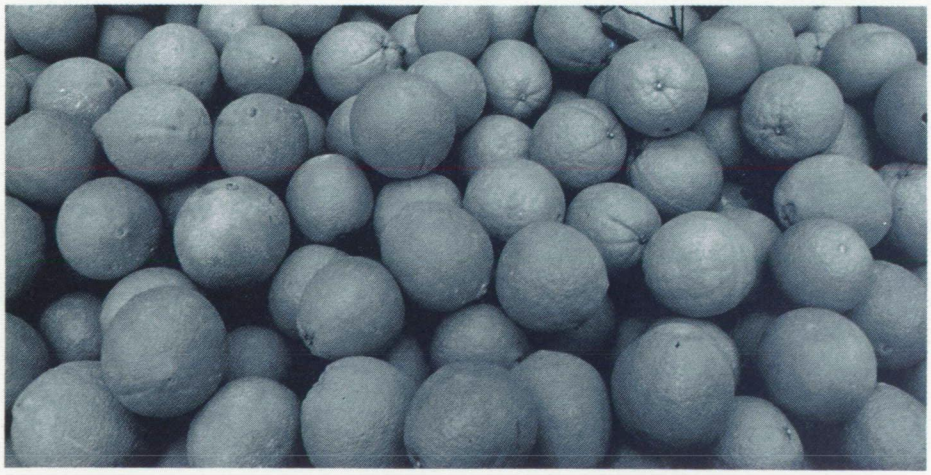
If the legislative bodies of 116 countries follow the recent U.S. congressional approval of the Uruguay Round agreement of the General Agreement on Tariffs and Trade (GATT), agricultural export subsidies will be reduced; import access will be expanded by converting import quotas to tariffs, which would subsequently be reduced; trade-distorting production subsidies will be lowered; and sanitary and phytosanitary standards for agricultural products will be based on scientific evidence. (See also "International Trade Agreement Provides New Framework for Food-Safety Regulation," elsewhere in this issue.)

Under the agreement, price subsidies will be reduced, but other types of export policies—credit guarantees, food aid, and nonprice market promotion—can be continued without reduction. As the European Union (EU) and other nations reduce their export subsidies to comply with the Uruguay Round agreement of the GATT, they also may increase their emphasis on nonprice market-development policies. Competition among exporters will increase for market opportunities created by reductions in import quotas and tariffs.

Market Promotions Are Directed to Foreign Consumers

USDA administers two nonprice export-market promotion programs: the Foreign Market Development Program (FMD) and the Market Promotion Program (MPP). Under the FMD and the MPP, USDA helps eligible nonprofit trade organizations and private firms finance activities to educate foreign consumers and marketers about the qualities of U.S. agricultural products. FMD and MPP funding levels averaged $32 million and $190 million, respectively, from 1989 through 1993, although



The Market Promotion Program is an important USDA export program for high-value and consumer-ready products—particularly fresh and processed fruit, vegetables, and tree nuts. Specialty products promoted by State regional trade organizations reflect USDA's increasing commitment to the promotion of small U.S. businesses' agricultural exports.

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Promoting U.S. Agricultural and Food Exports

USDA provides a variety of programs to help exporters compete in world agricultural and food markets. USDA assists U.S. agricultural exports by providing food aid, credit guarantees, price subsidies, and nonprice market promotion. The food aid, credit, and price-subsidy programs are aimed primarily at foreign governments and private importers, while the nonprice promotion programs are directed to consumers as well.

Food aid programs—including the Public Law 480 (PL 480) program, the Section 416(b) program, and the Food for Progress program—encompass humanitarian donations, long-term (30-year) credit, government-to-government grants to support long-term growth in the least developed countries, and the provision of commodities to support countries' efforts to promote free enterprise in their agricultural economies. In fiscal 1993, food aid programs totaled about $2.3 billion.

USDA's export credit-guarantee programs back commercial loans to importers in countries experiencing constraints on hard currency so they can purchase U.S. agricultural products. Credit guarantees totaling $3.9 billion were approved for agricultural product sales in fiscal 1993.

USDA also operates four price-subsidy programs to help U.S. exporters compete abroad on more equal terms by countering other exporters' subsidized prices in selected export markets: the Export Enhancement Program, Dairy Export Incentive Program, and the Cottonseed and Sunflowerseed Oil Assistance Programs. Price subsidies totaled $1.2 billion in fiscal 1993.

The price subsidy, credit guarantee, and food aid programs primarily assist bulk agricultural commodities. (See other box for a definition of bulk, semiprocessed, and high-value products.) From 1989 through 1992, 85 percent of price subsidy funding was aimed at export markets for wheat, barley, and rice (table 1). The remaining 15 percent assisted exports of semiprocessed and other high-value products, such as dairy products, vegetable oils, flour, frozen poultry, eggs, and barley malt. About one-quarter of credit-guarantee exports were high-value products, mainly vegetable oil and grain products. High-value products accounted for between 35 and 40 percent of food aid exports.

USDA also assists eligible nonprofit producer-funded organizations and private firms to fund and conduct promotions directed at foreign consumers and food processors. Under the Foreign Market Development Program (FMD) and the Market Promotion Program (MPP), USDA supports the efforts of eligible nonprofit trade organizations and private firms to educate foreign consumers and marketers about the qualities of U.S. agricultural products.

Table 1

Export Programs Assist Both Bulk and High-Value Product Exports

Program	High-value products	Bulk products
	Percent of funding	
Market Promotion Program (MPP) and Foreign Market Development Program (FMD)	75	25
Other export programs:		
Food aid	37	63
Credit guarantees	25	75
Price subsidies	15	85

Note: Percentages are calculated from 1989-92 annual funding levels.
Source: USDA, Foreign Agricultural Service, Commodity and Marketing Programs.

the 1995 MPP appropriation of $85.5 million is less than half of the annual MPP appropriations from 1989 through 1992.

Generally, MPP promotions are aimed at foreign consumers. Consumer promotions cover a variety of activities, including media advertising, point-of-purchase materials and demonstrations, cooking schools for consumers, and recipes for food magazine editors. U.S. ag-

ricultural promoters also provide educational materials to foreign industry partners, stage special events, and conduct food preparation training sessions for hotel and restaurant chefs, exporters, and food retailers in the potential import markets.

Expenditures for consumer promotions, particularly media advertising, far exceed MPP expenditures for trade servicing and technical assistance. FMD and MPP promotions for grains focus more on foreign industry buyers (such as national governments and private millers). Sixty-five percent of MPP activities and almost all FMD activities promote the high quality of U.S. agricultural products in a generic sense rather than particular brand-name products.

MPP Promotes a Wide Range of High-Value Products

The MPP is an important USDA export program for high-value and consumer-ready products, such as fresh and processed fruit, vegetables, and tree nuts, wine, meats, dairy products, and products promoted through regional trade associations (mainly high-value specialty products). The majority of MPP activities help promote high-value products. In contrast, grains and oilseeds account for about 70 percent of FAS' funding for the other market-development program, the FMD.

Fruit, vegetables, and tree nuts dominate MPP funding, accounting for 35 percent of MPP expenditures in fiscal 1993 (fig. 1). The next largest group of products are consumer-ready grocery items and specialty products promoted by State regional trade organizations, which accounted for 17 percent of MPP expenditures in 1993. Red meat, eggs, poultry, and seafood are also important MPP products, accounting for 13 percent of 1993 expenditures. The only bulk commodity commanding more than a 5-percent share of MPP funds is cotton, which accounted for 8 percent of 1993 expenditures.

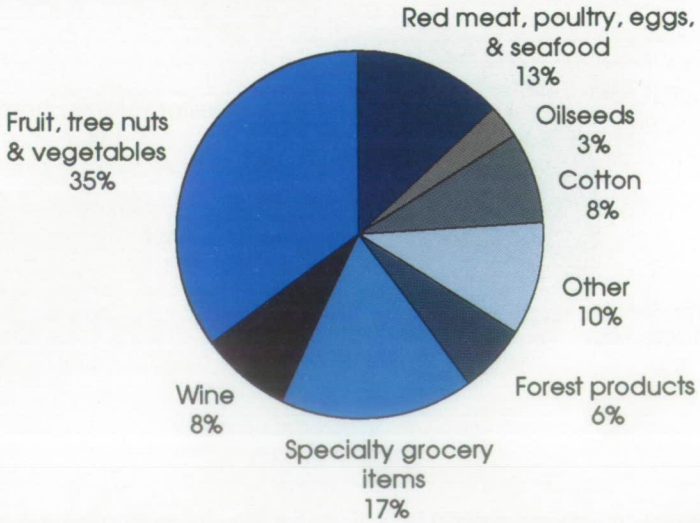
MPP expenditures in 1993 reflected some changes in the products promoted under the program. The greatest increase has been in funding for products promoted by State regional trade associations. The share of expenditures for these organizations averaged 10 percent from 1989 through 1993, compared with 17 percent for 1993 alone. The share of expenditures for fruit, tree nuts, and vegetables dropped from an average of 41 percent for the 1989-1993 period to 35 percent in 1993. The higher share of MPP expenditures for specialty products promoted through the regional trade associations reflects USDA's increasing commitment to the pro-

Bulk and High-Value Products Promoted

Agricultural products are classified as bulk or high-value. Bulk products include unprocessed grains and oilseeds, raw cotton, and raw tobacco (although tobacco is not eligible for U.S. market-development programs).

High-value products can be further classified as unprocessed, semiprocessed, and highly processed. Unprocessed products (including fresh fruit, nuts, and vegetables; honey; breeder livestock; and eggs) and highly processed products (such as dairy products, prepared meats, dried fruits, beverages, beer, and wine) can be consumed with little additional processing. High-value semiprocessed products require further processing and include flour; vegetable oil; oilseed meal; fresh, chilled, and frozen meats; hides and skins; and coffee, cocoa, and sugar.

Figure 1
Fruit, Vegetables, and Tree Nuts Received the Bulk of 1993 Market Promotion Funds



Source: Calculated from USDA's Foreign Agricultural Service Market Promotion Program expenditures.

motion of small businesses' agricultural products. The fiscal 1994 agricultural appropriations legislation required USDA to give priority to small-sized entities in the allocation process.

Canadian and Caribbean Consumers Growing Targets of MPP Activities

The FMD and MPP together assist promotions in a variety of markets throughout the world. In particular, the FMD seeks to expand exports of mainly bulk products in developing and developed countries. However, MPP activities are directed more toward consumers of higher-value products in highly-developed and middle-income countries.

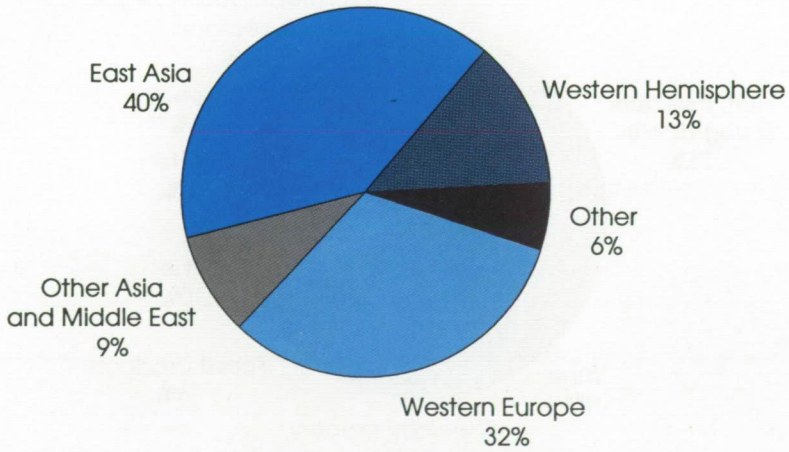
Based on expenditures for fiscal 1993, MPP promotions continue to be concentrated in developed Asian and Western European countries (fig. 2). Japan and other East Asian countries (Hong Kong, South Korea, and Taiwan) account for 40 percent of MPP expenditures. Japan and the United Kingdom continue to be the largest single-country markets for MPP promotions.

Fiscal 1993 expenditures also reveal that MPP participants increasingly are using the funds to compete in Canada, the Caribbean, and particularly Mexico. The share of MPP budgeted expenditures for Western Hemisphere countries in 1993 was almost double the average spent there from 1989 to 1993.

Market Development Programs Help Boost U.S. Exports

Studies of individual agricultural products indicate that nonprice market promotions helped boost U.S. exports. Based on data for 1973 through 1988, Oklahoma State University researchers estimated a short-term increase in export revenues of $5.36 per dollar spent on the promotion of diaphragm (or skirt) beef in Japan. In another study, Texas A & M researchers estimated an increase of $5 in export revenues for fresh grapefruit for every dollar spent on market promotion in Japan, France, and The Netherlands from 1969 through 1988. However, the researchers pointed out that the removal of import quotas for fresh grapefruit and rising incomes in Japan also contributed to expanding U.S. grapefruit exports to Japan. Other studies have found exports are affected by U.S. and competing prices of the exported food and substitute foods.

Figure 2
1993 Market Promotions Targeted Consumers in East Asia and Western Europe



Source: Calculated from USDA's Foreign Agricultural Service Market Promotion Program expenditures.

Support for MPP Assistance to Companies Questioned

Thirty-five percent of MPP budgeted expenditures for 1993 went to promote U.S. brand-name products. Under MPP, eligible U.S. agricultural cooperatives and other private companies may be reimbursed for up to half of approved promotion costs for specific brand products when USDA determines that brand promotion is the most effective promotion strategy.

Almost one-quarter of the 1993 expenditures for brand promotions were garnered by regional trade associations. These associations promote regional specialty products, which are often produced by small firms. (The firms apply for MPP funds through the regional trade associations to operate their own promotion activities.)

California wines accounted for about 12 percent of 1993 MPP expenditures on brand promotions. While European wines are promoted based on origin (regional or estate "appellations," such as Bordeaux), MPP funds are used to promote California wines in general as well as by individual wineries. Other products that received MPP funds for brand-label promotions in 1993 included: almonds, bourbon, brandy, canned corn, chocolate, cotton, citrus, mink, peanuts,

poultry, prunes, raisins, red meat, rice, salmon, and walnuts.

Critics of MPP brand promotions express concern about the allocation of MPP funds to large U.S. corporations that could finance such promotions themselves. Many would prefer that MPP funds assist only small firms. MPP participants argue that corporate promotions may be more effective for certain U.S. agricultural products than would generic promotions. Advocates of MPP assistance to corporations contend that brand promotions help firms increase or maintain exports in markets which they might not enter otherwise and, thus, contribute to U.S. economic activity and employment. In many cases, corporations contribute more funds than required to MPP promotions because the MPP funds do not cover expenses, such as travel.

International Competition Heats Up

Major agricultural producers in Australia, Canada, Europe, and New Zealand heavily promote their agricultural and food products throughout the world, including in the United States. According to a 1994 survey by USDA's Foreign Agricultural Service (FAS), the producers and governments of major exporting nations other than the United States spent an estimated $500 million for nonprice promotion activities in 1993. These activities included typical FMD and MPP activities as well as other activities, including manufacturers' and retail discounts, which are not allowed under the U.S. programs.

Seventy percent of the estimated $500 million spent by other nations to promote agricultural exports abroad comes from assessments on producers and food processors, while about 30 percent comes from government appropriations. In addition, European and Asian corporations finance and conduct brand promotions for their agricultural products. Other countries—notably Chile, Israel, Korea, and South Africa—also are promoting their agricultural products in Europe and Asia.

Some trade observers speculate that the governments of European nations may increase their support for nonprice promotions as the Uruguay Round disciplines of the GATT reduce their export subsidies. However, other trade observers believe that EU savings from export subsidies will be paid directly to European farmers for set-aside programs and production aid. ■

Time Worked To Earn the Value of Food Varies Widely Around the World

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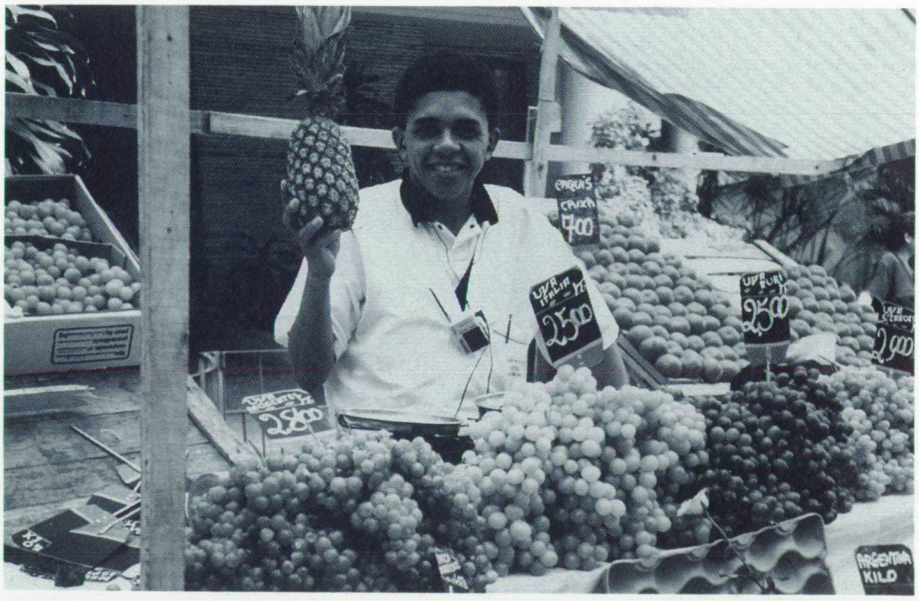
A survey of 16 capital cities around the world reveals that U.S. workers put in less time to earn the value of a market basket of foods than do most workers elsewhere.

In 1993, residents of metropolitan Washington, DC, had to work an average of 2 hours and 35 minutes to buy the selection of food and beverages (table 1). Brasilia, Brazil, workers had to work the longest—12 hours and 37 minutes. Workers in six other cities (Buenos Aires, Madrid, Mexico City, Paris, Pretoria, and Seoul) had to work at least 5 hours. Ottawa, Canada, was the only city in the sample with a shorter time than metropolitan Washington—but only by 4 minutes.

Relatively low U.S. food prices—the effect of an efficient food production and delivery system—and relatively high wages—the result of a high technology economy—combine to give Americans the edge.

These data are from a study of "time worked in a world capital to earn a market basket of food products"—a ratio of a country's average wages to the retail cost of a market basket of food in the capital (see box). The analysis reports how long an average person works to earn enough to buy 15 specific foods—not how much consumers in different countries spend at grocery stores. The selection in the food basket is to maintain a uniform comparison, and is not meant to represent typical diets in the capitals surveyed. Because consum-



Of the capital cities surveyed around the world, people in Brasilia, Brazil, put in the most time working to earn the value of a market basket of foods—a little over 12-1/2 hours. In comparison, residents of metropolitan Washington, DC, had to work an average of a little over 2-1/2 hours to earn the selection of food and beverages.

The author is an agricultural economist in the Rural Economy Division, Economic Research Service, USDA.

Table 1

Time Spent To Earn the Retail Value of Food Varies Widely

Item in the market basket	Bern	Bonn	Brasilia	Buenos Aires	Can-berra	London	Madrid	Mexico City
	Hours and minutes per pound (or other unit as indicated)							
Sirloin steak, boneless	1:00	0:27	1:04	0:50	0:22	0:37	0:52	0:53
Pork roast, boneless	0:21	0:14	1:16	1:23	0:10	0:25	0:36	0:55
Broilers, whole	0:08	0:05	0:29	0:24	0:07	0:08	0:13	0:17
Large eggs, dozen	0:18	0:05	0:30	0:37	0:08	0:13	0:15	0:19
Butter	0:19	0:09	0:47	0:50	0:08	0:11	0:28	0:27
Cheddar cheese, Emmenthaler	0:25	0:18	1:08	0:10	0:13	0:18	0:39	0:57
Whole milk, quart	0:05	0:03	0:31	0:17	0:04	0:05	0:07	0:10
Cooking oil, quart	0:14	0:05	0:39	0:49	0:11	0:10	0:25	0:17
Potatoes	0:03	0:02	0:32	0:16	0:05	0:04	0:04	0:23
Apples	0:09	0:07	1:21	1:10	0:12	0:11	0:13	0:23
Oranges	0:07	0:08	0:12	0:54	0:10	0:12	0:10	0:11
Flour	0:05	0:02	0:25	0:18	0:07	0:05	0:07	0:09
Rice	0:09	0:11	0:28	0:59	0:06	0:10	0:17	0:18
Sugar	0:04	0:05	0:24	0:14	0:05	0:06	0:09	0:11
Coffee	0:34	0:40	2:49	2:05	0:59	0:58	0:50	1:27
Total	4:03	2:42	12:37	11:14	3:07	3:52	5:26	7:19

Item in the market basket	Ottawa	Paris	Pretoria	Rome	Seoul	Stock-holm	Tokyo	Metro Washington
	Hours and minutes per pound (or other unit as indicated)							
Sirloin steak, boneless	0:19	0:51	0:43	0:42	2:11	0:46	1:14	0:21
Pork roast, boneless	0:15	0:30	0:26	0:24	0:25	0:48	0:21	0:24
Broilers, whole	0:05	0:23	0:17	0:14	0:13	0:18	0:09	0:04
Large eggs, dozen	0:05	0:14	0:18	0:14	0:21	0:15	0:05	0:05
Butter	0:12	0:18	0:31	0:21	0:45	0:14	0:14	0:09
Cheddar cheese, Emmenthaler	0:23	0:23	0:43	0:27	1:11	0:27	0:22	0:18
Whole milk, quart	0:06	0:08	0:14	0:08	0:16	0:05	0:05	0:04
Cooking oil, quart	0:10	0:19	0:27	0:08	0:21	0:31	0:09	0:07
Potatoes	0:03	0:07	0:11	0:05	0:16	0:03	0:08	0:04
Apples	0:08	0:10	0:22	0:10	0:31	0:09	0:10	0:08
Oranges	0:08	0:12	0:09	0:13	0:15	0:09	0:12	0:07
Flour	0:04	0:10	0:14	0:04	0:06	0:06	0:05	0:03
Rice	0:08	0:18	0:20	0:15	0:22	0:14	0:09	0:06
Sugar	0:02	0:11	0:13	0:08	0:09	0:06	0:06	0:05
Coffee	0:24	1:07	2:45	1:09	1:34	0:34	1:28	0:30
Total	2:31	5:20	7:53	4:42	8:56	4:46	4:57	2:35

About the Data

Comparisons among world capitals of how long people must work to purchase a similar market basket of food provide a sense of the affordability of food in different capitals. However, the extent to which a country taxes wages and supplements personal income also affects the affordability of food. International differences in these and other social policies make comparisons across countries difficult.

USDA's Foreign Agricultural Service collected grocery store food prices in 16 world capitals: Bern, Switzerland; Bonn, Germany; Brasilia, Brazil; Buenos Aires, Argentina; Canberra, Australia; London, England; Madrid, Spain; Mexico City, Mexico; Ottawa, Canada; Paris, France; Pretoria, South Africa; Rome, Italy; Seoul, South Korea; Stockholm, Sweden; Tokyo, Japan; and metropolitan Washington, DC.

The "market basket" consists of 15 food products. Most foods in the basket are minimally processed products (such as milk, cooking oil, and cheddar cheese), and a few are unprocessed commodities (such as potatoes and apples). The cost of the individual foods and the total basket are based on 1-pound quantities of rice, flour, boneless sirloin steak, boneless pork roast, whole broilers, butter, cheddar cheese, potatoes, apples, oranges, coffee, and sugar; a quart of cooking oil and whole milk; and a dozen large eggs.

Wages in this study are based on data from the International Monetary Fund and the International Labor Organization. (Wages for Argentina and Brazil are based on data from a government publication and a private research company, respectively.) Wages are an average across industries in each country. These country averages are used as proxies for wages in the capital, because wage rates were not available for capitals. Individuals whose wages are significantly higher (or lower) than the country's average would need to work less (or more) time to buy the market basket of foods.

ers will purchase foods that are relatively cheaper in their countries, this study considerably overstates the differences in hours actually worked to buy food.

Wages and Food Prices Determine Ratios

The amount of time people in a city must work to purchase the food basket depends on the relationship between the wages they earn and the prices they face in the grocery store. When food prices are high relative to wages, people will need to work longer than those in cities with smaller wage-to-food-price ratios. For example, consumers in Paris and Madrid had to work almost 5-1/2 hours to earn the market basket of food, while consumers in Bonn had to work just 2 hours and 42 minutes. People in London and Rome spent less time working to earn the value of the market basket than did those in Paris and Madrid.

Of the 16 cities in the study, consumers in Brasilia, Buenos Aires, and Seoul had to work the longest to buy the market basket of food. Consumers in Brasilia and Buenos Aires had to work about 10 and 9 hours more, respectively, than people living in metropolitan Washington, DC, to buy the same basket of foods. Both Brazil and Argentina have experienced hyperinflation over the past several decades, with food prices rising faster than wages.

Consumers in Seoul, South Korea, had to work almost 3-1/2 times as long as consumers in metropolitan Washington, DC, to buy the market basket. Higher prices for the meat and dairy products included in the basket account for part of this difference. Also, South Korea's average wages are about half of America's wages.

Even though prices in Mexico City for the meat and dairy products are very similar to prices in the metropolitan Washington area, Mexicans had to work nearly 2-1/2 times longer than Americans to earn these foods. This is because average Mexican wages are a little more than a quarter of American wages.

High Wages Can Counter High Food Prices

Of the 16 cities in the study, the market basket of foods cost the most in Tokyo, Japan. The grocery bill for the items amounted to $59.21 in Tokyo, almost 3-1/2 times more than in the metropolitan Washington area (table 2). The price of rice in Tokyo in 1993 was a little under 3 times that in metropolitan Washington, and prices for steaks and coffee beans in Tokyo were the highest of the cities surveyed.

However, high wages for Japanese workers result in consumers in Tokyo working just under 5 hours to buy the market basket of food (about twice as long as the metropolitan Washington, DC, consumers). Wages for the average

Table 2

Average Retail Food Prices Also Vary

Item in the market basket	Bern	Bonn	Brasilia	Buenos Aires	Can-berra	London	Madrid	Mexico City
				*U.S. dollars per pound**				
Sirloin steak, boneless	15.01	5.39	1.21	2.27	3.03	4.91	5.63	2.40
Pork roast, boneless	5.23	2.73	1.43	3.75	1.40	3.23	3.94	2.64
Broilers, whole	1.99	1.05	.55	1.10	1.03	1.08	1.40	.84
Large eggs, dozen	4.49	1.08	.57	1.67	1.13	1.71	1.66	.93
Butter	4.83	1.84	.90	2.27	1.08	1.45	3.02	1.30
Cheddar cheese, Emmenthaler	6.15	3.68	1.28	.45	1.82	2.32	4.23	2.76
Whole milk, quart	.55	.30	.25	.32	.27	.27	.32	.20
Cooking oil, quart	3.66	1.03	.76	2.30	1.56	1.35	2.89	.87
Potatoes	.40	.19	.26	.30	.28	.22	.19	.47
Apples	1.12	.58	.66	1.36	.70	.63	.60	.48
Oranges	.82	.66	.10	1.06	.56	.70	.47	.22
Flour	1.11	.91	.23	1.14	.42	.54	.78	.38
Rice	.62	.21	.21	.34	.36	.27	.35	.18
Sugar	.48	.45	.20	.27	.27	.35	.43	.22
Coffee	4.09	3.42	1.37	2.43	3.48	3.26	2.34	1.80
Total	45.94	22.31	9.22	18.78	15.86	20.57	25.65	14.65

Item in the market basket	Ottawa	Paris	Pretoria	Rome	Seoul	Stock-holm	Tokyo	Metro Washington
				*U.S. dollars per pound**				
Sirloin steak, boneless	3.19	6.37	2.22	5.30	9.90	8.44	21.14	3.39
Pork roast, boneless	2.49	3.79	1.33	3.06	1.87	8.75	6.00	3.84
Broilers, whole	.89	2.86	.87	1.76	1.00	3.29	2.57	.63
Large eggs, dozen	.83	1.71	.93	1.77	1.62	2.68	1.35	.82
Butter	2.11	2.19	1.60	2.65	3.38	2.59	4.00	1.45
Cheddar cheese, Emmenthaler	3.87	2.85	2.21	3.38	5.40	4.97	6.32	2.89
Whole milk, quart	.46	.44	.32	.44	.54	.39	.60	.25
Cooking oil, quart	1.83	2.42	1.47	1.01	1.63	5.86	2.60	1.24
Potatoes	.25	.35	.24	.25	.52	.24	1.00	.29
Apples	.63	.54	.48	.56	1.01	.70	1.25	.58
Oranges	.63	.63	.21	.70	.48	.70	1.46	.49
Flour	.35	.52	.30	.22	.18	.51	.58	.19
Rice	.63	.99	.44	.81	.70	1.06	1.12	.38
Sugar	.15	.57	.30	.42	.30	.47	.76	.36
Coffee	1.93	3.59	3.67	3.75	3.06	2.66	10.72	2.03
Total	18.71	27.46	15.20	24.50	29.74	38.39	59.21	17.64

Notes: Inflation-adjusted 1993 data, converted to current exchange rates. *Per pound or other unit as indicated.

worker in Japan are a little over 1-3/4 times the wages of an average U.S. worker.

Similarly, relatively high wages in Bern, Switzerland, allow consumers to work less time (4 hours and 3 minutes) to buy the market basket than people in many of the other cities surveyed, even though Bern is the second most expensive city for buying the market basket.

Real Cost of Market Basket Less in 1993

Consumers in metropolitan Washington worked 16 minutes less time in 1993 than in 1985 to earn the market basket of foods, mainly because the inflation-adjusted price of the total basket dropped almost 22 percent. Pork roast and whole milk were the only foods in the basket for which consumers in the metropolitan Washington area had to work longer to purchase. They worked less in 1993 for 10 of the remaining foods.

Of the countries included in the study, only the people in Pretoria, South Africa, and Canberra, Australia, had to work longer in 1993 than in 1985 to buy the market basket. In Pretoria, for example, consumers worked 7 hours 6 minutes in 1985—47 minutes less than in 1993. Steep rises in retail prices for dairy products, eggs, broilers, flour, potatoes, and sugar in Petoria were not offset by similar wage increases, thereby contributing to this trend.

Table 3

Time Spent Earning the Market Basket Has Declined Significantly Between 1985 and 1993

Capital city	Change in time spent by workers to earn the retail value of market basket foods
	Percent
Bern	-15.7
Bonn	-6.5
Brasilia	-72.0
Buenos Aires	-58.2
Canberra	+31.7
London	-17.7
Madrid	-25.9
Mexico City	-74.5
Ottawa	-8.3
Paris	-3.2
Pretoria	+25.9
Rome	-1.5
Seoul	-63.7
Stockholm	-16.2
Tokyo	-21.5
Metro Washington	-10.1

Note: 1985-93 data, except Canberra values, which are based on 1993 wages and 1992 food prices.

The time consumers in Mexico City and Brasilia spent working for the market basket shrank more than for the other cities between 1985 and 1993 (table 3). In Mexico City, employees worked 5 hours and 27 minutes fewer in 1993 than in 1985 to purchase the market basket, and residents of Brasilia worked 9 hours and 5 minutes fewer. This trend was caused by inflation-adjusted wages rising in both countries. Declining inflation-adjusted prices for the foods in the market basket also contributed to this trend in Mexico City.

If the U.S. food production and delivery system remains efficient and the wage structure remains strong, U.S. workers will continue to work fewer hours to purchase the market basket of food than will most other workers in the world.

For workers in cities with high ratios of wages to food prices to be able to work less for the market basket, earnings must increase faster than food prices. ■

1993 Food Spending Picked Up

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With slow economic growth following the 1990-91 recession and with small price increases, food spending rose to $617 billion in 1993 (table 1). This 3.7-percent increase is more than twice that of 1992. Food away from home led the increase, rising 5.5 percent in 1993, and food at home rose 2.2 percent. Adjusted for inflation, food spending per person rose 0.5 percent in 1993—food at home went down 1.2 percent and food away from home rose 2.5 percent—following 2 years of modest declines (table 2).

As the Nation struggled out of the recession, personal food spending increased less than that for most other major categories of personal consumption, as is typical (table 3). Federal, State, and local governments paid for a slightly larger share of food in 1993, up 0.1 percent to 5.8 percent. Most of the increase was due to expanding Federal food assistance programs—notably food stamps, as participation increased with persistent unemployment.

Price increases were modest—as they had been in 1992—due to ample supplies. Vigorous competition among food retailers and among restaurants helped moderate the price increases.

Share of Spending Away From Home Hit New Highs

One of the ways by which people economized during the 1990-91 recession was to cut down on eating out or to eat out in less expensive places. The share of total food dollars spent for food away from home declined from 1989 to 1991, reflecting the economic slowdown and the subsequent recession. In 1993, spending for food away from home increased more than for food at home and the share reached new highs—45.9 percent of food dollars and 34.9 percent of food quantities (fig. 1), continuing the recovery begun in 1992.

Vigorous competition among fast food chains drove dollar sales down in 1990 and 1991. This

Spending for food away from home rose more than for food at home in 1993, and the share reached new highs—45.9 percent of food dollars and 34.9 percent of food quantities.

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Table 1

Food Spending Rose Almost 4 Percent in 1993

Expenditures	1990	1991	1992	1993	Change, 1992-93
	Billion dollars				Percent
All food and beverages[1]	**646.2**	**669.7**	**681.1**	**702.6**	**+3.2**
All food (excluding alcohol)	**563.8**	**584.7**	**595.3**	**617.1**	**+3.7**
At-home food	313.3	326.1	327.0	334.1	+2.2
Sales	304.6	318.4	319.7	327.0	+2.3
Home production and donations	8.7	7.7	7.3	7.1	-2.1
Away-from-home meals	250.5	258.6	268.3	282.9	+5.5
Sales	222.8	229.6	237.9	251.2	+5.6
Supplied and donated[2]	27.7	29.0	30.4	31.8	+4.5
Alcoholic beverages	82.4	85.0	85.9	85.5	-.4
Packaged	48.2	49.8	49.2	48.1	-2.2
Drinks	34.2	35.2	36.7	37.4	+2.0

Notes: [1]These expenditures include all food and alcoholic beverages, regardless of who paid for them. Data may not total due to rounding. [2]Includes subsidies for school lunch.

Table 2

Food Spending Adjusted for Inflation Picked Up in 1993

Year	Year-to-year change in real food spending per person		
	Total	At home	Away from home
	Percent		
1988	+1.4	-0.5	+3.8
1989	0	-.5	+.4
1990	+1.2	+1.4	+1.0
1991	-.5	+.2	-1.3
1992	-.8	-2.1	+.6
1993	+.5	-1.2	+2.5

caused their share of sales of food away from home to drop from 34.1 percent in 1989 to 33.5 percent in 1991 rather than to increase during the recession, as would be expected. However, the share rebounded to 34.6 percent in 1993 as people ate out more, but kept a wary eye on prices and did not trade up to full-service restaurants.

Restaurants, lunchrooms, cafeterias, and caterers did not lower prices as much as fast food places did during the recession, and their share of sales of food away from home increased from 39.1 percent in 1989 to 39.6 percent in 1991 and then declined to 38.5 percent in 1993.

The comparison between dollars spent for food at home and dollars spent for food away from home re-

Table 3

Personal Food Expenditures Rose More Than Disposable Personal Income in 1993[1]

Component	1991	1992	1993	Change, 1992-93
	Billion dollars			Percent
Disposable personal income	**4,236.6**	**4,505.8**	**4,688.7**	**+4.1**
Total personal consumption expenditures	**3,902.4**	**4,136.9**	**4,378.2**	**+5.8**
Food	**495.5**	**502.1**	**528.1**	**+5.2**
At home	320.6	320.7	330.5	+3.1
Away from home	174.9	181.4	197.5	+8.9
Alcoholic beverages	74.1	74.1	73.5	-.8
At home	49.8	49.2	48.1	-2.2
Away from home	24.3	24.9	25.4	+2.0
Housing, household operation, supplies, fuel, furniture	1,027.9	1,078.0	1,137.2	+5.5
Transportation, cars, gasoline	433.6	466.3	504.2	+8.1
Medical care, drugs	646.6	705.1	760.5	+7.9
Clothing, shoes, toiletries, personal care, jewelry	325.1	347.1	359.6	+3.6
Recreation, tobacco, toys, sporting goods	204.0	221.4	231.7	+4.6
Personal business	326.0	354.0	373.3	+5.5
Other	369.6	418.8	410.1	-2.1

Notes: [1]As of July 27, 1994. Data may not total due to rounding. The food expenditures in this table are only those paid for by consumers with cash or food stamps. Sources: Food and alcoholic beverage data are from USDA's Economic Research Service. All other data are from Bureau of Economic Analysis, U.S. Department of Commerce.

flects both the higher prices of away-from-home meals and snacks—due to the added costs of preparing, cooking, and serving—and changes in the number of meals eaten out. Also, prices in restaurants and other foodservice outlets do not change in lockstep with prices in grocery stores. Adjusting for these differences in price levels, the quantity of food eaten away from home rose from 33.5 percent of total food in 1991 to 34.9 percent in 1993 (fig. 1).

New Types of Retail Competitors Grew

Where consumers buy their groceries has changed dramatically over the last decade and a half. Supermarkets' share peaked in the mid-1980's at almost 65 percent of the sales of food at home, dropping to 61 percent in 1993 (fig. 2). The remaining purchases of food for use at home occurred in other smaller grocery stores, specialty food stores, and a wide variety of other outlets.

In addition, the formats of supermarkets have shifted sharply. Conventional supermarkets' share of total supermarket sales (including nonfood) dropped from 73 percent in 1980 to 48 percent in 1986 and 30.5 percent in 1991. Sales by superstores and combination food/drug stores increased from 22 percent of total supermarket sales in 1980 to 36 percent in 1986 and 51 percent in 1991. Shares for other supermarket formats that emphasize lower prices—such as warehouse, superwarehouse, and limited assortment stores—increased from 5 percent in 1980 to 16 percent in 1986 and 18 percent in 1991.

More competitors strongly emphasizing low prices have come on the scene in recent years. The new competitors—warehouse clubs, mass merchandisers, and deep-discount drug stores—increased their combined share of food-at-home sales to consumers from 1.7 percent in 1982 to 4.5 percent in 1992 and 5.2 percent in 1993 (fig. 2).

Warehouse clubs (formerly called wholesale clubs) are hybrids

Figure 1
The Share of Food Away from Home Reached New Highs in 1993

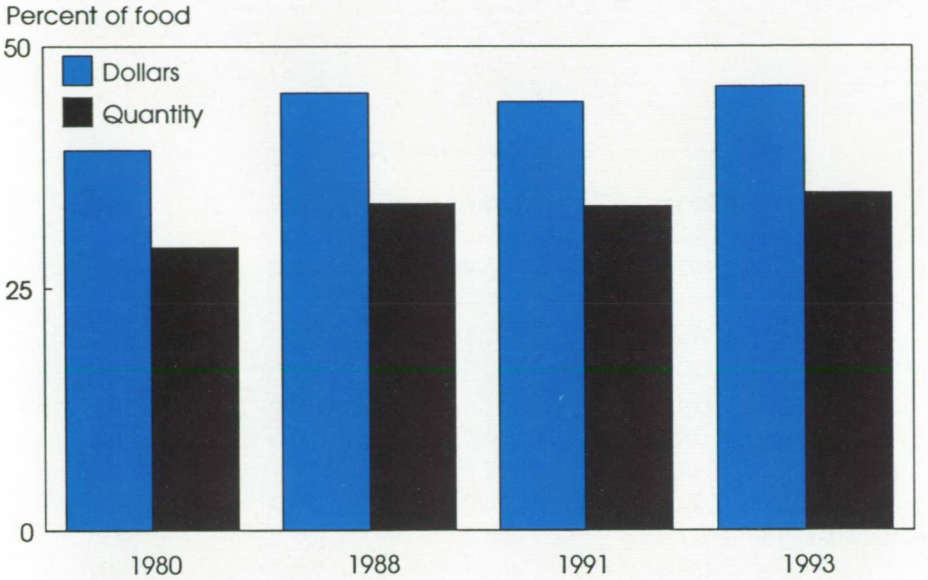
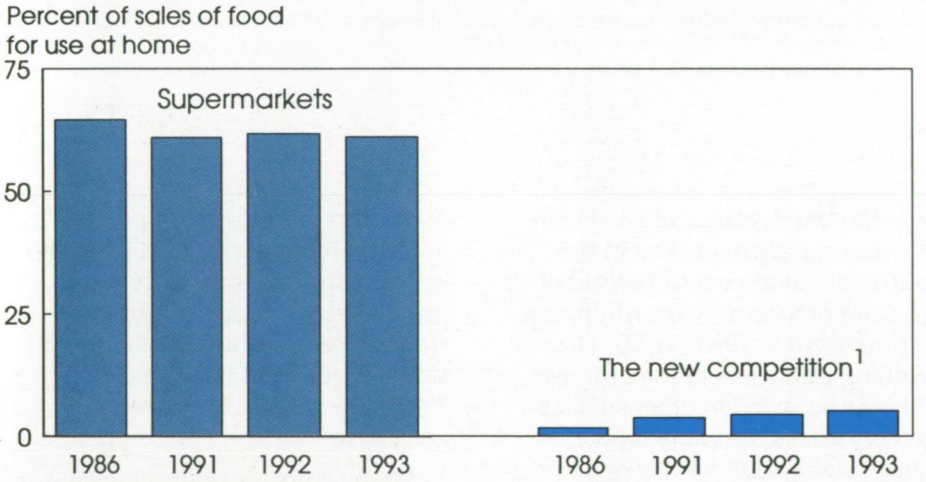


Figure 2
New Competition Captures an Increasing Share of Sales of Food for Use at Home



Note: [1]Includes food sales for home use by warehouse clubs, mass merchandisers, and deep-discount drugstores. Excludes sales by warehouse clubs and supermarkets to food service.

of membership wholesale outlets and retail stores. They carry a wide assortment of general merchandise, groceries in large packs, and perishables (such as meat and some produce). More than 40 percent of their food sales are to operators of small restaurants, institutions, and noncommercial groups (such as churches and clubs). The remaining 60 percent are sales to consumers. The share of total food-at-home sales by warehouse clubs increased from almost nothing in 1982 to 1.7 percent in 1993.

Growth of warehouse clubs seems to be slowing as they approach market saturation in many areas. K-Mart, one of the major warehouse club operators, sold its clubs to Wal-Mart. Price Club and Costco, the other major operators, merged in 1993 as the club boom tapered off. Wal-Mart is turning the emphasis of its clubs back to supplying small restaurants, lunchrooms, and institutions.

Some mass merchandisers, also called discount department stores, have included an entire supermarket in their stores since the early 1960's, when a number of supermarket chains built their own discount department stores. Many such chains left the discount business in the 1970's as the field became crowded. More recently, Wal-Mart and K-Mart have opened very large hypermarkets and supercenters that include a large supermarket section.

Mass merchandisers' share of at-home food sales to consumers rose from 1.1 percent in 1982 to 2.6 percent in 1992 and 2.9 percent in 1993.

The most recent entrant has been super-discount drugstores, which sell dry groceries (no perishables) at discount prices. The share of food-at-home sales to consumers accounted for by deep-discount drugstores increased from nothing in 1982 to 0.5 percent in 1993.

Operators of all kinds of supermarkets feel the hot breath of competition as these newcomers invade their markets. Many supermarkets are fighting back by featuring bulk sales and large club packs at competitive prices. ■

Food Marketing Costs Rose Modestly in 1993

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Marketing costs are by far the largest chunk of food expenditures. Over three-fourths of what U.S. consumers spent for food in 1993 went to pay for marketing, and only 22 percent represented the farm value of food. While the cost of providing marketing services beyond the farm gate increased modestly in 1993 due to the slow pace of the economic recovery, it continues to be the most persistent source of rising food expenditures.

Food expenditures are divided into two main components: the farm value and the marketing bill. The farm value is a measure of the payments farmers receive for their raw commodities used in food purchased by consumers at foodstores and eating places. The marketing bill represents the difference between the farm value of food produced on U.S. farms and the final cost to consumers. Such costs of processing agricultural commodities into food and bringing them from the farm to the dinner table include labor, packaging, transportation, and energy.

Eating Out Drives Spending Increases

Consumers spent $491 billion for food originating on U.S. farms in 1993 (table 1). (This amount was less than the $617 billion total that U.S. consumers spent on all food because it excludes expenditures for seafood and imported foods. See "1993 Food Spending Picked Up" in this issue for a discussion of total food expenditures.) Consumer expenditures for food in 1993 rose approximately 3.5 percent. This rise was up just 1 percent over 1992's smallest increase of the last decade, and roughly the same as in 1991. Shoppers actively sought values at grocery stores and restrained the rise in expenditures by buying more store brands and using more coupons.

Over three-fourths of what U.S. consumers spent for food in 1993 went to pay for the cost of marketing. Higher labor costs accounted for most of the rise in the marketing bill. Costs of other inputs—such as packaging, energy, and transportation—rose modestly.

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Table 1

Labor Costs Make Up the Largest Share of Food Expenditures

Component	1980	1990	1992	1993
		Billion dollars		
Labor[1]	81.5	154.0	168.4	177.6
Packaging materials	21.0	36.5	39.2	40.5
Intercity transportation[2]	13.0	19.8	20.6	21.1
Fuels and electricity	9.0	15.2	16.7	17.3
Pre-tax corporate profits	9.9	14.8	15.7	15.3
Advertising	7.9	18.5	19.4	19.8
Depreciation	8.4	17.6	18.5	19.1
Net interest	3.7	14.6	15.3	15.8
Net rent	7.3	15.0	15.9	16.4
Repairs	3.9	6.7	7.0	7.3
Total marketing bill	182.7	343.6	369.4	382.1
Farm value	81.7	106.2	105.1	109.2
Consumer food expenditures	264.4	449.8	474.5	491.3

Notes: [1]Includes employees' wages/salaries and health and welfare benefits. [2]Excludes local hauling charges.

About 54 percent of consumers' food dollars went to retail grocery stores. The remaining share was spent on food away from home, which represents the retail value of food served in public eating places, hospitals, schools, and other institutions. The division between spending on food at home and away from home in 1993 was about the same as in 1992. The away-from-home share of consumer food expenditures has increased steadily over the years, from about 35 percent in 1973 and 41 percent in 1983 to 46 percent in 1993.

Spending on food away from home grew more quickly than food purchases at grocery stores. Sales data reported by the U.S. Census Bureau suggest that not only are expenditures for food away from home rising over the years, but consumers are purchasing greater quantities of food in eating places. Sales at eating places rose 5.7 percent in 1993. When adjusted for the rise in menu prices, 1993 sales were still 3.9 percent higher than those in 1992. Meanwhile, consumers purchased roughly the same quantities of food for at-home consumption in 1993 as in 1992. Expenditures at grocery stores increased 2.6 percent, but they were unchanged once adjusted for inflation.

Several explanations can be offered for the larger real growth in away-from-home food sales in 1993. First, menu prices posted the smallest increases in 29 years. And, the wave of value meals offered by fast food chains has increased sales. Second, with higher employment levels increasing household income and reducing the amount of time available to prepare food, consumers purchased a higher percentage of meals at restaurants—a return to the spending pattern prevalent before the 1990-91 recession.

Farm Value Rose

The farm-value component of food expenditures rose about $4 billion to $109 billion in 1993. This 3.9-percent increase was slightly larger than in 1992. Much of the 1993 increase stems from higher prices for broilers and fats and oils, and larger cash receipts for fruit, vegetables, and tree nuts. The farm value of commodities represented 22 percent of consumers' food expenditures in 1993, unchanged from 1992 but down from 24 percent in 1990.

The farm value is a much smaller part of expenditures for food eaten away from home than for food bought at grocery stores,

because the cost of preparing and serving food is a major part of the cost of food eaten away from home. The 1993 farm value accounted for about 16 percent of expenditures for food away from home, compared with about 26 percent for food at home.

The farm value share varies greatly among foods, depending on the degree of processing and the amount of services required to move a commodity through the marketing system. Animal products generally have the highest ratios of farm value to retail price, and the more highly processed crop products have the lowest (table 2). For example, the 1993 farm value of eggs (a commodity requiring little processing) represented 58 percent of retail prices. On the other hand, the farm value of cereal and bakery products (which require a great deal of processing and marketing) accounted for only 6 percent of retail prices.

Table 2

Farm Value Share Is the Smallest for Highly Processed Foods

Food	Retail price	Farm value	Farm value share of retail price
	-----Dollars-----		Percent
Animal products:			
Eggs, Grade A large, 1 doz.	0.91	0.53	58
Beef, Choice, 1 lb.	2.93	1.64	56
Chicken, broiler, 1 lb.	.89	.48	54
Milk, 1/2 gal.	1.39	.58	42
Fruit and vegetables:			
Fresh—			
Apples, Red Delicious, 1 lb.	.83	.19	23
Potatoes, 10 lbs.	3.48	.81	23
Oranges, California, 1 lb.	.59	.13	21
Lettuce, 1 lb.	.66	.12	18
Processed—			
Frozen orange juice concentrate, 12 fl. oz.	1.22	.40	33
Frozen peas, 1 lb.	.90	.13	15
Canned whole tomatoes, 17-oz. can	.47	.04	9
Crop products:			
Flour, wheat, 5 lbs.	1.17	.33	28
Margarine, 1 lb.	.80	.19	24
Prepared foods:			
Bread, 1 lb.	.75	.05	6
Corn flakes, 18-oz. box	1.54	.09	6

Note: 1993 data.

Marketing Bill Up Modestly

The marketing bill for domestic farm foods rose 3.4 percent to $382 billion in 1993, the result of only small-to-moderate price increases for most inputs purchased by the food industry. The 1993 rise was larger than the 1.6-percent increase in 1992, but smaller than the 5.2-percent annual average gain of the last 10 years. Higher labor costs accounted for most of the rise in the marketing bill. Costs of other inputs—such as packaging, energy, and transportation—rose modestly. Profits dropped slightly.

Consumer expenditures for farm foods have risen 56 percent since 1983, with marketing costs the most persistent source of rising food expenditures. The marketing bill rose 66 percent during this period, while the farm value increased only 28 percent (fig. 1).

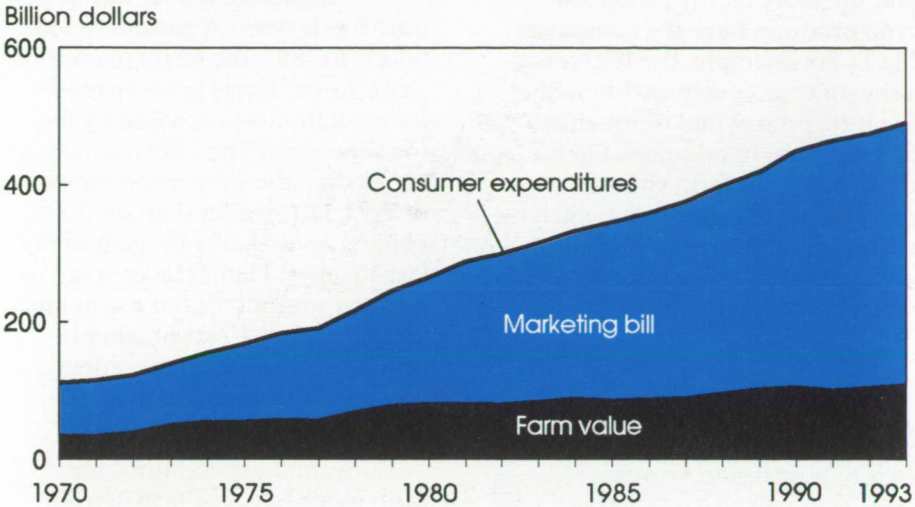
Labor Costs: The Main Catalyst

Labor costs overshadow all other components of the marketing bill. Rising labor costs are responsible for nearly half the increase in the marketing bill during the last 10 years, and are the primary factor underlying the 3.4-percent increase in 1993.

Direct labor costs came to about $177.6 billion in 1993, or 36 percent of food expenditures (fig. 2). Direct labor costs include wages and salaries; employee benefits, such as group health insurance; estimated earnings of proprietors and family workers; and tips. These costs do not include labor engaged in for-hire transportation of food or labor employed in the manufacturing and distribution of supplies.

1993 saw the largest increase in food industry employment since 1988—up 2.5 percent, with 12.6 million workers processing and distributing food. More than half (6.8

Figure 1
Marketing Costs Accounted For Over Three-Quarters of 1993 Food Expenditures



Note: Data are for foods of U.S. farm origin purchased by or for consumers for consumption both at home and away from home.

million people) worked in eating places. Employment jumped nearly 4.0 percent in eating places, reflecting larger sales of meals away from home. Foodstores employed 3.2 million people, food processors 1.7 million, and food wholesalers about 870,000.

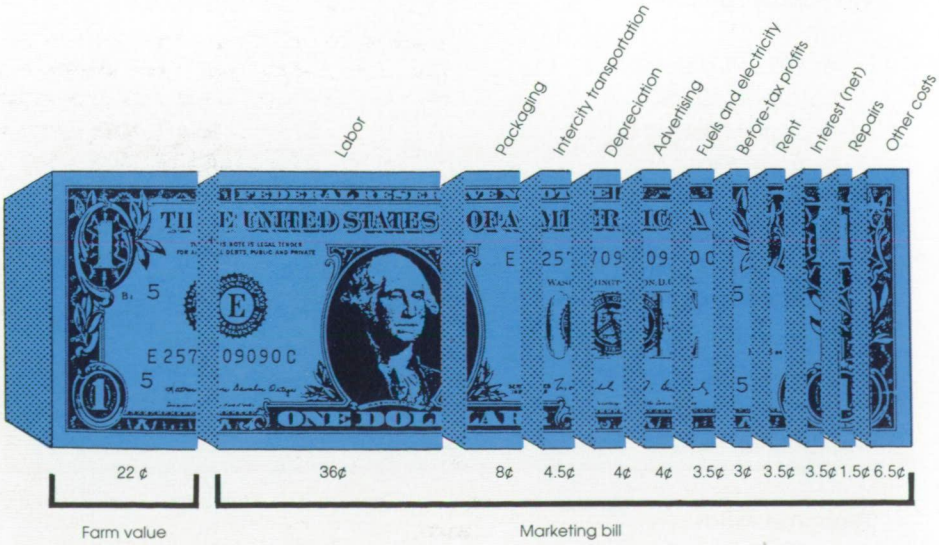
Food retailing employment rose about 1.0 percent in 1993, reflecting flat retail sales and managerial efforts to restrain cost increases. Food manufacturing employment fell 0.3 percent, as higher labor productivity and increased use of technology alleviated the need for additional hirings.

With higher wages and benefits, labor costs in the food industry rose about 5.5 percent in 1993, a faster rate of gain than 1992's 4.7-percent rise. Employees of food wholesaling firms saw their wages rise the fastest, 3.5 percent, in 1993. Hourly earnings increased 2.4 percent in food manufacturing, compared with 2.9 percent in 1992. Earnings of foodstore workers rose 3.2 percent, up from 2.2 percent in 1992. The 1993 rise for manufacturing employees was 0.5 percent below the previous year. Wages for workers in eating and drinking places rose only 1.1 percent, about half the 2.1-percent increase in 1992.

Wage supplements increased because of rising health-insurance premiums and pensions. The rising cost of medical care pushed up health insurance costs. However, the 6.5-percent increase in the Consumer Price Index (CPI) for medical services in 1993 was smaller than the 7.3- percent average annual increase over the last 10 years.

The Employment Cost Index (ECI), a quarterly series published by the Bureau of Labor Statistics, measures labor compensation and further illustrates developments in labor costs. The index for foodstores rose 2.9 percent in 1993, smaller than the 3.8-percent gain in 1992. The 1993 increase included a 2.5-percent wage and salary gain, also smaller than the 3.3-percent rise for 1992. The ECI indicates that compensation costs rose more than wages and salaries in 1993 because the cost of benefits rose more than wage rates. Although not reported

Figure 2
About One Third of Consumers' Food Dollars Went To Pay Food Marketing Labor Costs in 1993



Note: Includes food eaten at home and away from home. Other costs include property taxes and insurance, accounting and professional services, promotion, bad debts, and many miscellaneous items.

separately, the increase in benefit costs was probably about 4.5 percent in 1993, or 1.8 times the rise in the wage rate of foodstore workers. Labor compensation rose slower in foodstores than the 3.6-percent increase in private industry as a whole.

Foodstores used several methods to cut labor costs in 1993. Of the 29 major union contracts negotiated last year, over half provided for lump-sum payments or back-loaded wage structures.

Lump-sum payments were a popular method of restraining labor cost increases during the mid-1980's, but have been less prevalent in recent years. These payments restrain labor cost increases by holding down the wage base used to calculate benefits and pensions. Moreover, contracts with lump-sum provisions generally provide for smaller wage-rate changes than do contracts without lump-sum coverage. Back-loaded contracts provide lower wage increases in the first year of a contract than in subsequent years. Back-loaded contracts dampen wages by basing increases in the later years of a contract on a lower initial wage.

Retailers also continued to cut costs by making extensive use of part-time employees, which likely held down the rise in hourly earnings in food retailing.

Labor Productivity Also Up

Labor productivity in food manufacturing has increased moderately. Output per unit of labor in seven food manufacturing industries for which data are available rose an average of 2.2 percent annually from 1981 to 1991 (table 3). These increases generally resulted from higher output and a slightly lower number of hours worked, mainly because of widespread mechanization and technological improvements. Labor productivity among those seven industries has increased the most in grain milling and fluid milk processing. However, productivity has grown erratically for most food processing industries, partly because of fluctu-

Table 3

Food Industry Labor Productivity Up, But Uneven

Year	Food manufacturing							Retail food stores	Eating and drinking places
	Meat-packing plants	Poultry dressing and processing	Fluid milk	Preserved fruit and vegetables	Grain mill products	Bakery products	Sugar		
	Index of output per employee hour (1987=100)								
1980	82.2	77.8	74.7	83.7	70.4	81.5	84.7	107.5	106.5
1981	86.0	85.5	77.2	82.4	74.2	83.7	83.6	104.2	103.9
1982	90.2	92.4	81.6	89.6	80.9	89.8	76.6	102.2	103.5
1983	94.1	96.9	86.1	92.1	83.7	93.4	82.3	102.1	102.5
1984	96.7	96.1	89.4	93.4	88.6	93.9	82.5	102.4	98.9
1985	101.1	98.2	92.2	94.6	93.8	95.5	85.9	102.4	96.2
1986	99.2	93.9	96.4	98.6	94.5	101.1	88.5	102.0	99.2
1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1988	100.6	95.3	104.0	98.7	100.0	92.7	97.4	98.1	103.0
1989	91.5	100.1	106.8	97.9	99.8	92.4	92.7	95.4	102.9
1990	91.1	106.1	108.0	97.7	104.1	93.8	93.9	94.6	104.6
1991	94.6	112.5	110.8	99.9	104.6	90.5	97.0	93.8	106.1
1992*	97.3	NA	112.5	NA	NA	89.9	101.9	94.5	104.6

Notes: NA = Not available. *Preliminary. Some historical data were revised. Source: U.S. Department of Labor, Bureau of Labor Statistics.

ating output and business conditions.

Output per unit of labor among supermarkets declined each year between 1985 and 1991. In 1992, output of foodstores rose 0.3 percent, while hours worked dropped 0.5 percent, resulting in a small productivity increase of 0.7 percent. Some store operations have become more efficient over the past decade because of computer-assisted checkouts, data processing systems, and new store formats (such as warehouse stores) which incur lower operating expenses than do supermarkets. Warehouse stores offer a limited assortment of products and provide fewer services, thereby reducing labor requirements and fostering higher sales per unit of labor.

On the other hand, many food retailers have expanded their service-oriented operations (such as delicatessens, salad bars, and in-store bakeries)—thus labor requirements—in response to consumer demand for convenience.

Labor productivity among eating and drinking places slipped 1.4 percent in 1992, but has risen slightly since 1985. The recent decline is due to a rise in hours worked of about 1.8 percent, while output increased only 0.4 percent.

Packaging, Energy, and Transportation Rose Little

Packaging is the second-largest component of the marketing bill, accounting for 8 percent of food expenditures. Costs of these materials rose about 3.3 percent last year (roughly the same rate of increase as the marketing bill), mainly because of greater use of shipping boxes, food containers, and plastic materials.

The price of most major packaging materials rose little or declined. For example, the price of paperboard shipping boxes and other paper products declined 0.6 percent in 1993, while the price of paper bags and sacks dropped 0.1 percent. These decreases reflected large paperboard supplies stemming from excess production and inventory levels. At the same time, the price of plastic fell 0.6 percent. Plastic is an oil derivative and became cheaper to produce in the last few years due to lower crude oil prices. The price of glass containers rose 0.5 percent, while metal can prices remained about the same as in 1992.

Intercity truck and rail transportation for farm foods amounted to $21.1 billion in 1993, or about 4.5 percent of retail food expenditures. The transportation cost index, representing railroad freight rates, advanced 0.9 percent in 1993, slightly more than the gain recorded in 1992. Most foods shipped by railroad are canned and bottled products. Operating costs of trucks hauling produce increased 2.6 percent in 1993, pushing up truck rates for shipping fresh produce in most corridors. Fuel and labor accounted for half of total truck operating costs. Trucking wages rose 3.4 percent, while fuel costs slipped 2.9 percent. Other expense items—depreciation and maintenance, overhead, licenses, and insurance—rose an average of 3.6 percent.

The 1993 energy bill for food marketing came to about $17.3 billion, or about 3.5 percent of retail food expenditures. That is up 3.6 percent since 1992, slightly greater than the increase in the marketing bill. Natural gas prices jumped 6.8 percent and were largely responsible for higher energy costs, while electricity prices rose only 1.6 percent.

Energy costs for processing and retailing food are primarily affected by natural gas and electricity prices. Electricity makes up 55 percent of the energy costs incurred in food manufacturing, with natural gas accounting for the remaining 45 percent. Electricity accounts for 85 percent of energy used by public eating places and nearly all of the energy used in foodstores.

Profits Fell in 1993

U.S. firms generated approximately $15.3 billion in pre-tax profits from manufacturing and marketing food, a 2.5-percent drop from 1992. 1993 profits made up about 3 percent of food spending.

Lower profit margins for food retailers were primarily responsible for the decline in profits. Profit margins of retail food chains averaged 1.6 percent of food sales, slightly less than last year's margin of 1.8 percent. Most of the drop occurred in the first quarter of 1993, and was due to a write-off against income of post-retirement benefits other than pensions. Profit margins for these stores were higher during the remainder of 1993.

The growth in profit margins of retail food chains in the rest of the year mainly reflected the gradual strengthening in the economy and technological improvements. Retailers continued to make greater use of technology—particularly checkout scanning, satellite communications, and more sophisticated merchandising and labor scheduling systems—to control labor costs, their largest operating expense.

Food manufacturing profits rose slightly, following modest price increases and nearly stable costs of raw materials. Food manufacturers have also been able to hold down costs with gains in labor productivity. However, manufacturing profits were tempered by increased consumer purchases of less costly store-label foods, which cut into sales and profits of the manufacturers of brand-name foods. ■

A Unique Food Assistance Program Serves American Indians

Masao Matsumoto
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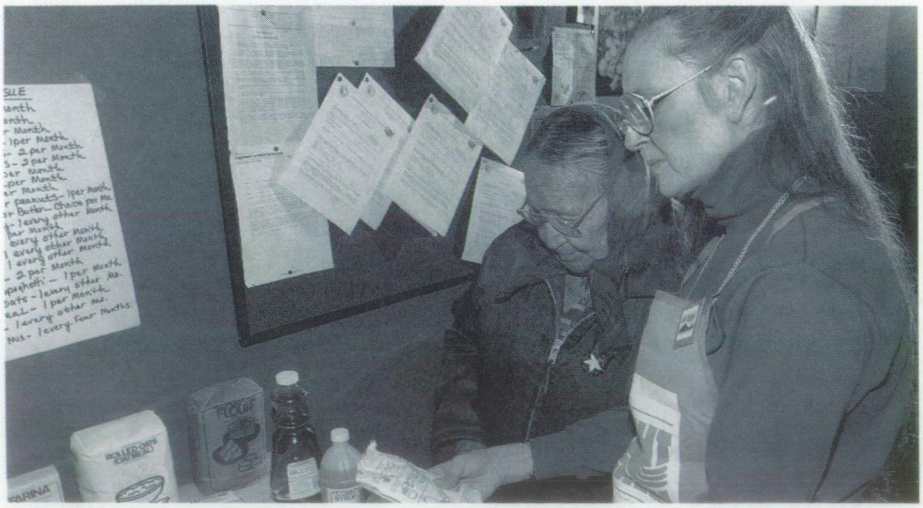
Food assistance programs contribute to the improvement of the nutritional and economic well-being of low-income Americans. Through general assistance programs, such as the Food Stamp Program, and programs designed to meet the needs of specific target groups, USDA is working to improve diets on Indian reservations by making available more nutritious foods and nutrition education. Although such programs have helped to improve dietary levels of low-income American Indian households, there are persistent indications that hunger, malnutrition, diet-related diseases, and other conditions symptomatic of chronic poverty remain prevalent on many reservations.

In 1977, Congress established the Food Distribution Program on Indian Reservations (FDPIR) to provide supplemental food to low-income households living on or near rural American Indian reservations as an acceptable alternative to Food Stamp Program benefits. Because of the remote and geographically dispersed locations of many reservations and other Indian lands, many otherwise eligible American Indian families have been unable to participate in the Food Stamp Program, because access to food stamp offices and grocery stores has been difficult.

This article reports some information from a 1988 study commissioned by USDA's Food and Consumer Service (FCS) to assess the operation of the FDPIR and to identify the socioeconomic characteristics of the program's clientele. The results of this study (published in 1990) provide the primary source of data and specific information used in this article.

For Some, an Alternative to Food Stamps

The FDPIR is unique among USDA's federally subsidized food assistance programs. The vast majority of local FDPIR programs are



The Food Distribution Program on Indian Reservations works to improve diets on American Indian lands by making available more nutritious foods and nutrition education. In fiscal 1993, the program served about 116,000 people each month through 6 State agencies and over 80 tribal organizations on over 200 reservations.

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administered not by a Federal, State, or local government agency but instead by federally recognized tribes through their tribal councils or other American Indian governmental bodies (called Indian Tribal Organizations, or ITO's). The ITO's enter into contractual agreements between the Federal Government and the American Indian tribe to work cooperatively to provide supplemental foods to needy households on or near the reservation. The initial establishment of a program is based on the need and demand for such assistance by the individual tribe.

To participate in the FDPIR, all households must meet income criteria and either reside on an American Indian reservation, or include a tribal member and reside in specific areas near the reservation. In Oklahoma, however, there are no reservation lands by which to define program coverage, so program eligibility is determined by tribal membership within a particular service area.

The income guidelines are based on the Food Stamp Program net monthly income limits, increased by the food stamp standard deduction.

Individuals or households may not participate in both the FDPIR and the Food Stamp Program in the same month. The FDPIR differs from the Food Stamp Program in that the amount of food each household receives is determined solely by the number of members it contains, and not the household's level of income. The monthly food package, valued at between $30 and $35 for each person in the household in 1993, consists of canned and packaged commodities, such as canned meats, canned and dried fruit and vegetables, canned juices, dairy products, grains, and cereals. USDA pays for the full cost of this food, using some surplus commodities from Government farm price-support programs, as well as foods purchased in the open market with annual appropriations specifically for the program. Although the program was not intended to be the sole source of food for participating households, the FDPIR food package is designed to provide balanced levels of most nutrients and food energy.

Since the mid-1980's, monthly participation in FDPIR has slowly and steadily declined from a high of nearly 150,000 to about 116,000 in 1993 (table 1). Much of this de-

Table 1

The Food Distribution Program on Indian Reservations

Fiscal year	Local programs	Participation*	Costs
	Number	*Thousands*	*Million dollars*
1977	44	81.90	18.87
1978	46	89.77	13.03
1979	45	97.38	21.30
1980	72	74.83	22.03
1981	86	87.95	30.53
1982	83	91.00	39.07
1983	88	98.86	48.15
1984	101	114.18	53.38
1985	104	138.50	62.94
1986	106	144.95	60.76
1987	107	145.68	63.25
1988	108	136.71	61.47
1989	109	141.12	67.68
1990	109	138.93	66.35
1991	109	129.87	64.63
1992	108	120.12	61.99
1993	108	115.80	61.97

Note: *Participation and cost data include both the Food Distribution Program on Indian Reservations (FDPIR) and the Needy Family Program in the Marshall Islands. In fiscal 1993, average monthly participation in the Marshall Islands was 3,978 people.

cline likely stems from FDPIR participants opting to switch to the Food Stamp Program, which has become more accessible to reservations.

The Food Stamp Program offers households greater flexibility and variety in the choice of foods. But for many FDPIR households, these advantages may be offset by the real or perceived difficulty of applying for and using food stamps, as well as any stigma which may be associated with spending the stamps.

In addition to programs targeted to meeting the needs of those on or near reservations, American Indians, as citizens of the United States, may qualify for any and all public-welfare assistance that the Government offers. Low-income American Indians can seek assistance from such programs as Aid to Families with Dependent Children (AFDC) or Medicaid, which are available to all needy persons. Other programs offered by USDA are also available, such as the School Lunch Program and the Special Supplemental Food Program for Women, Infants, and Children (WIC). Participation in WIC and the School Lunch Program does not exclude American Indians from participation in FDPIR.

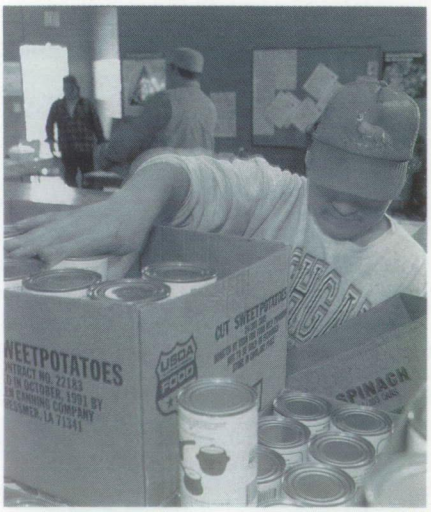
Most Are Small Local Programs

In fiscal 1993, the FDPIR served approximately 116,000 people each month through 6 State agencies and 88 tribal organizations on over 200 reservations. Food valued at approximately $50 million was distributed through FDPIR. In addition, food valued at $1.4 million was donated to USDA without charge to FDPIR from Section 32 surplus removal and Section 416 price-support activities. Administrative funding for States and territories totaled approximately $18 million.

Local programs participating in FDPIR vary considerably in size and, therefore, in costs of administration. Many of the FDPIR programs are relatively small, in terms of costs of operation, the number of staff administering them, and the number of persons being served. Nearly half of the 108 programs serve an average of 250 or fewer households per month. The smallest programs have annual budgets under $10,000 and serve fewer than 50 people. However, 50 local programs provide commodities to between 250 and 1,200 households each month. The largest program, run by the Navajo Nation, has a budget of $8.5 million and serves over 16,000 people each month. The five largest programs, which serve over 1,200 households monthly, together account for over one-third of all participants in FDPIR.

The local program administrators (ITO's) must contribute resources to meet 25 percent of the administrative costs of the local programs, unless there is "compelling justification that this matching requirement cannot be met." Program history indicates that this requirement is more of a guideline than a strict requirement, although some ITO's match in excess of the 25 percent. To date, no penalties have been imposed for not meeting the 25-percent matching requirement.

A number of FDPIR programs involve more than one reservation or tribe. In fact, the 108 programs served 217 reservations and other American Indian land areas. There



The FDPIR is unique among USDA's federally subsidized food assistance programs. The vast majority of local FDPIR programs are administered not by a Federal, State, or local government agency but instead by federally recognized tribes through their tribal councils or other American Indian governmental bodies.

are a number of local programs in which several ITO's are cooperating to administer a program, typically through a service-delivery organization that coordinates other welfare services in addition to food assistance. In other instances, one tribe may agree to extend its service area to include a nearby reservation. For example, one of the larger programs may provide warehousing and transportation services to one or more smaller neighboring tribes that lack such facilities.

Addressing the Widespread Need

Low-income Indians share many of the same problems facing other rural Americans with few financial resources, such as declining job opportunities and limited access to health and other welfare services.

However, at the time of the 1988 study, FCS estimated that 32.7 percent of all American Indians living on reservations received food stamps and an additional 17.3 percent received monthly food commodities through the FDPIR. That translates into at least half of all American Indians receiving food assistance in any given month. In comparison, about 10 percent of all Americans receive some form of household food assistance. More recent surveys conducted by the General Accounting Office and the Bureau of Indian Affairs have indicated that economic conditions on Indian reservations have not materially improved since that time.

Most FDPIR participants come from small households. The average participating household contained 3.2 members in 1988, compared with the national average for all low-income families of 3.7 people. About 40 percent of all FDPIR households consisted of one or two members.

About half of the FDPIR households included children, and most of these were couples with children. Female-headed households, which make up 47 percent of all low-income families nationwide, constituted only 8.5 percent of the FDPIR caseload. However, many of the female-headed Indian households opted to participate in the Food Stamp Program instead, since it is more convenient for those mothers who also receive AFDC because the two programs often coexist at local welfare agencies.

A substantial proportion of FDPIR households—over 33 percent—include elderly members (age 60 years or more). This prevalence, especially of elderly living alone, presents both a concern and a challenge to program administrators not only relating to the delivery of food assistance, but to other services as well. The elderly accounted for over 60 percent of the one-person households in the program. Half of the FDPIR households with an elderly member also included non-elderly members. About 33 percent of all elderly households were persons living alone and the remainder of elderly households consisted of two or more elderly persons living together.

Like most low-income households, FDPIR recipients have a low educational achievement level: adults averaged 10 years of schooling, with less than 10 percent formally educated or trained beyond high school. This situation clearly reflects the nexus between education and economic well-being, particularly since young American Indians must leave the reservation to seek educational and employment opportunities elsewhere.

Although over 35 percent of all FDPIR households reported earnings from wages or self-employment, compared with 20 percent of all Food Stamp households, the economic status of FDPIR participants remains significantly lower than that of other low-income populations. The impoverishment of FDPIR households is reflected in their level of assets as well as their income. More than three-fourths of the FDPIR households indicated they had no cash on hand and could claim no financial assets of any kind.

Providing food assistance only addresses one facet of the multidimensional socioeconomic distress that is facing many American Indians. Many factors affect the quality of life of American Indians residing on reservations, including the availability of the basic necessities of life, access to health and medical services, and opportunities for employment and education. A variety of programs are attempting to address these needs. The Indian Health Service, for instance, provides medical care and hospitalization services on a number of reservations. Federal programs administered by the Bureau of Indian Affairs and other agencies have been initiated to provide assistance such as job training, public housing, and agricultural development.

FDPIR, with a somewhat declining number of clientele, will in all likelihood remain as an operative food assistance program for some years to come. Together with food stamps and other food assistance programs that are made available, FDPIR will continue to contribute to helping meet the special food assistance needs of American Indians on reservations.

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