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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).

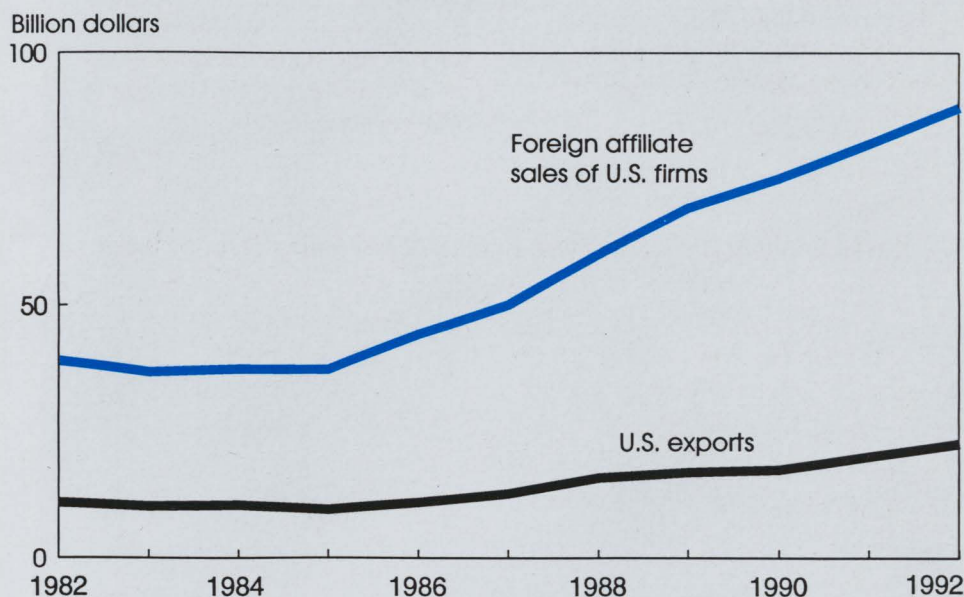
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Ownership Advantages Favor Foreign Affiliates

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.

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 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

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
	<i>Number of firms</i>		
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: ¹Foreign 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 li-

censing 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 States 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 loca-

tion 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. ■