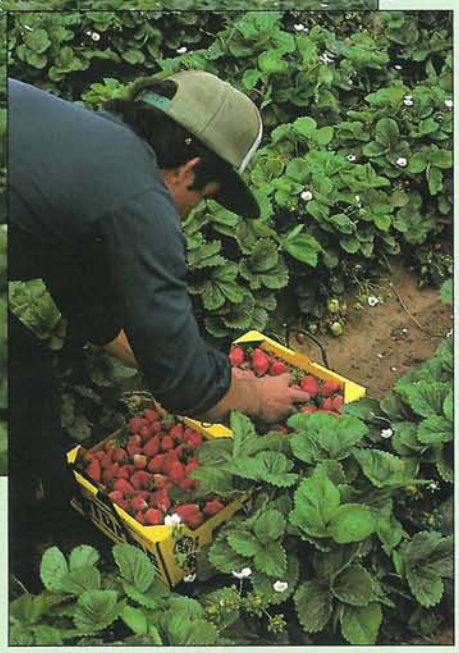
Franz Baumhackl



Franz Baumhackl

Farmworkers harvesting strawberries near Watsonville.

Is "free trade" really free?

How the FTA will affect California agriculture

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While the accompanying article discusses potential free-trade impacts on agriculture as a whole, it does not focus on individual industries. Within each agricultural sector there will be winners and losers. Much attention in California has focused on the potential losses in the domestic production of vegetables caused by increased imports of such products from Mexico. One difficulty in assessing the impact of such production and trade shifts is the lack of adequate data to permit sound analysis. Therefore, much of what is concluded is based on structural descriptions and opinions about relevant economic relationships.

The United States International Trade Commission (ITC) concludes that a free trade agreement (FTA) would significantly increase U.S. imports of horticultural products from Mexico. These results are consistent with many other studies with single-country and multi-country, trade-focused CGE models. The basis for this conclusion is that U.S. tariff and nontariff barriers for horticultural products are relatively high and U.S. demand for Mexican products is relatively price-elastic (in other words, if the product price drops by a certain percentage, the quantity of it sold will increase by the same or a greater percentage). The removal of barriers could result in significant price reductions and that, given the price sensitivity, would lead to proportionately more imports. Research is currently underway at the University of California to measure the impact of the FTA on California as distinct from the U.S. economy.

The ITC expects that the fresh products most affected will include tomatoes, cucumbers, asparagus, broccoli, cauliflower, lettuce, peppers, onions, squash, avocadoes, citrus fruits, grapes, melons, guavas, mangoes, and fresh cut roses. Some of these products are exported during periods when they are not produced in California and others are directly competitive with the California product. The ITC also expects increased imports of processed tomato products, frozen broccoli and cauliflower, frozen strawberries and orange juice concentrate.

Measurement of the impact that these changes would have on California and U.S. production of horticultural products is difficult. In the case of frozen broccoli and cauliflower, Mexico has already garnered a major share of the U.S. market because of significantly lower production costs and good product quality. This has caused plant closures in California and the loss of several thousand jobs as capital moved south to Mexico. Eliminating the tariff would make imports from Mexico more attractive. If the U.S. tariff was removed, import prices might drop by 15 to 20%, leading to a similar or greater percentage increase in imports. Such an increase is small when compared to the over 60% increase in imports that occurred between 1988 and 1989. The steady growth in imports, despite a high U.S. tariff, indicates that a developing industry can find a market position if the fundamental economic factors are favorable.

The tariff removal on fresh tomato imports could lead to moderate increases in imports, since the ad-valorem value of the U.S. tariff was close to 14% for imports during the winter period 1990-91. In 1990, Carlos Benito of the Berkeley Research Institute argued that the overall demand for winter tomatoes in the United States was

relatively inelastic, but that imported tomatoes faced a residual demand to fill out U.S. supplies, with a price elasticity that is higher than one (if price drops by a certain percentage, quantity sold will increase by more than that same percentage). Hence an elimination of import tariffs could lead to a moderate (15%) increase in imports. More significant to import levels would be the removal of production and export restrictions imposed by the Mexican National Vegetable Producers Association (Confederación Nacional de Productores de Hortalizas, or CNPH). Given the virtual dismantling of CNPH because of reduced (or eliminated) government funding, these restrictions may be eliminated by default. If buyers begin to accept Mexican winter tomatoes as perfect substitutes for U.S. produced tomatoes, then the added exports by Mexico caused by relaxed export restrictions could cause a significant lowering of price until U.S. production diminished.

Mexico is in a good position to expand its exports of processed tomato products if U.S. tariffs are lifted. (See related article, p. 11.) Removal of the 13.6% U.S. tariff would lower by 3 or 4¢/lb the cost of Mexican tomato paste, duty paid at the U.S. border. If this cost reduction were reflected in import price reductions, Mexico could undersell many California producers in eastern markets by 10%. Over time this would cause some U.S. producers to give up tomato paste processing.

Asparagus imports from Mexico grew rapidly between marketing years 1989-90 and 1990-91. If tariffs were dropped, more imports would be attracted at prices below what they would otherwise be. The increase would be at the expense of U.S. producers. (See related articles, pp. 21, 24.) For example, if imports increased total asparagus supplies by 20%, a price reduction of 8% in the short run might be expected based on a price flexibility estimated by UC Davis Professor Ben French. This would be tempered in the long run as U.S. growers reduced their production in response to lower prices. Such a reduction in California asparagus production would result in job loss or diversion to other products.

The FTA would lead to increased U.S. horticultural exports to Mexico, just as it would for other U.S. agricultural commodities. The gains are expected to be modest because ITC estimates that demand is only moderately price-elastic. Horticultural products facing potential export growth include wine, canned peaches and pears, fresh apples and pears, and some canned vegetables. Exports of tree nuts may be enhanced also, particularly by increases in Mexican buying power stimulated by economic development. On balance, however, the export gains would not offset the losses to other horticultural producers. The ITC concludes that a free trade agreement is likely to result in moderate harm to the U.S. horticultural industry, with California, Florida, Texas and Arizona suffering losses in production and employment.

The grain and oilseed sector would gain from a free trade agreement with Mexico because the Mexican sector is highly protected and has higher costs than in the United States. This would have a small impact on California which has a very small share in the exports of these products. Expanded meat imports to Mexico might be beneficial for California meat packers, although this would not have much of an impact on the industry because of its low export propensity. The import of feeder cattle from Mexico is expected to increase and this could displace some feeder cattle from California, adversely affecting cow-calf operations. (See related article, p. 18.)

Overall, it is likely that California's horticultural sector will be more affected by the FTA than other sectors. It will experience a reduction in output or shift in production mix for commodities directly competitive with Mexico's products. In those sectors where production seasons are complementary, little or no effect is likely. As Mexico's economy grows, there will be long-run opportunities for California's horticultural products in Mexico's "off-season" markets.

To the extent that the FTA results in equitable production and environmental standards between the countries, and equivalent concerns for worker health and safety, then trade and competition will benefit. These conditions could lead to an increase in Mexican costs and a decrease in their exports in the short run, but in the longer term would encourage more efficient practices and help assure that trade responded more closely to comparative economic advantage. And, as pointed out in the accompanying article, economic development and growth in Mexico should generate long-term trade opportunities that will be attractive to California.

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economy has dealt with recurring crises.

- The creation of an FTA, by itself, has almost no effect on real wages in either country. If Mexico succeeds in its shift in development strategy, real wages rise in both countries for most labor categories, but relatively more in Mexico. The effect on wages for unskilled workers in the two countries is very sensitive to assumptions about migration behavior.
- The creation of an FTA, by itself, does not significantly reduce the pressure for Mexican migration to the U.S. On the other hand, successful Mexican growth significantly reduces the pressure for migration to the U.S. The migration results are very sensitive to assumptions about demographic trends and migrant response to wage differentials. Our modeling approach is to consider two extreme cases, which highlight the significant impacts that migration patterns have on output and income levels in both countries.
- For Mexico, there is a potential structural adjustment problem in managing the transition to a new, open development strategy under an FTA. Highly traded sectors whose performance is sensitive to changes in the real exchange rate have already experienced swings in profitability as the exchange rate devalued in the 1980s. A return to foreign capital inflows and trade deficits in the 1990s will lead to a transitory appreciation of the real exchange rate, with a negative effect on export sectors.

Specific results

The results of various economic experiments using the computable general equilibrium model are shown for the agricultural sector in tables 1 and 2. Those for the other sectors were recorded as well and are detailed in Hinojosa-Ojeda and Robinson's 1991 study (see Editor's note, p. 5). The results are reported as a percentage change in production and trade from base year (1988) levels. The seven experiments involve progressive steps in the reduction of barriers, increases in productivity and capital, and the easing of migration restrictions. They are summarized as follows:

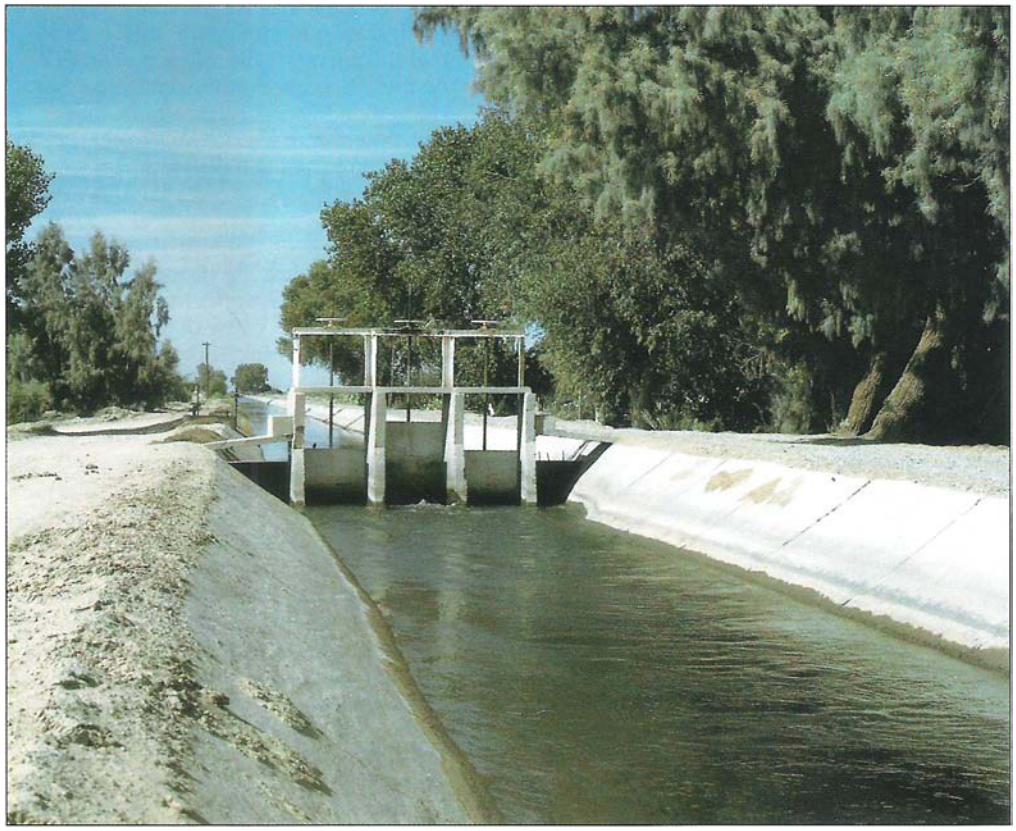
(1) Removal of tariffs only;
(2) Removal of tariffs and nontariff barriers;
(3) Removal of trade barriers plus increase in productivity;
(4a) Greater Mexican growth than in U.S., with capital stocks in Mexico up 7.6%;
(4b) Growth as above plus liberalized migration;

(5a) Lower Mexican growth than in U.S., with capital stocks in Mexico up 3.8%;
(5b) Growth as in 5a plus liberalized migration.

If experiments 1 (tariff removal) and 2 (tariff and nontariff barrier removal) indicated all the changes that would affect the agricultural sectors of the two countries, the exercise would hardly seem worth the trouble. The existing tariff and nontariff trade barriers between the two countries are relatively small for most sectors, and one would not expect large aggregate effects from removing them. The experiments do indicate that the removal of non tariff barriers would have a greater trade effect than removal of tariffs alone. The major benefits from the creation of an FTA will come from effects which are likely linked to trade liberalization, but do not arise simply from changing relative prices, as happens when removing tariffs. Trade liberalization should be seen as a necessary, but by no means sufficient, condition for achieving the potential benefits of an FTA.

An increase in productivity is part of the development process and is assumed in experiment 3. It should lead to lower prices and increased trade and income. The agricultural trade benefit appears to favor the United States more than Mexico, since U.S. exports to Mexico increase more than Mexican exports to the United States. Production in Mexico, however, would increase more than under the preceding scenarios. An increase in Mexican economic growth relative to the United States and the related increase in capital stocks might also be expected in the development process.

Experiments 4 and 5 illustrate what might happen under two growth assumptions each with two migration conditions attached. The two sets of migration assumptions in the "a" and "b" experiments represent extremes and should bracket actual behavior. The largest growth rate assumption (experiment 4) leads to the greatest increase in agricultural production in Mexico and the greatest level of agricultural exports from Mexico. What is of particular interest to U.S. agricultural groups is that the percentage increase in U.S. agricultural exports to Mexico would be greater than that for Mexican agricultural exports to the United States. The transition growth rate experiment, number 5, results in lower production and export changes in Mexico than in the United States. The liberalization of migration restrictions in the CGE model experiments results in greater production in Mexico because of an increase in the agricultural labor force due to back migration, but does



Alejandro Plasencia

U.S. and Mexican irrigation canals show that water delivery systems will influence competing agriculture in the two countries. Above, a concrete canal in Imperial County reduces water loss due to soil percolation and weed competition, in contrast to the Mexicali gate ditch canal below. Soil salt buildup is also a more severe problem in Mexico, where there is no equivalent of Imperial Valley's subterranean tile drain system.

Carlos Hernandez

not change U.S. production. Liberalization results in greater two-way trade as well.

The results of these experiments support what is generally believed: that the FTA, if it is part of a general development process, will lead to expanded agricultural production and trade. The United States would appear to gain from the export opportunities created by an improved economy in Mexico.

What can safely be concluded from the migration results is that the formation of an FTA will generate pressure for back migration or, in a dynamic setting, for reduced migration. These results also indicate that migrants are good for the U.S. economy. Both migration experiments showed an increase in wages for U.S. rural and unskilled workers, as did the trade liberalization and the dynamic growth experiments. Experiments based on greater growth for Mexico and increased capital stocks showed a slight reduction in U.S. rural wages, but these reductions were reversed when migration was liberalized. Skilled and white collar wages in the U.S. increased as well (except for a 0.2% decline for skilled workers in experiment 5b.) While consistent with trade theory, these spillover effects into other labor markets are quite small.

The model neglects potential dynamic countervailing forces such as induced changes in technology to economize on the use of scarce factors, which might easily offset the spillover effects in the medium run. (Current research by Robinson and Hinojosa-Ojeda shows that complete liberalization of the maize sector in Mexico would cause a profound increase in emigration to the United States resulting from lost employment in that sector. If current migration patterns prevail, California would receive an important share of that immigration.)

Conclusion

A robust result from our empirical analysis is that the creation of a free trade area (FTA) between Mexico and the U.S. can significantly benefit both countries, if it is accompanied by other policies that enable Mexico to shift to an open development strategy and achieve renewed growth based on increased trade with the U.S. The success of an open development strategy, however, depends on many factors. The creation of an FTA is a necessary part of Mexico's policy shift, but will not by itself suffice to guarantee success. While Mexico stands to gain relatively more than the U.S., given the relative importance of the FTA to the two economies, the downside risk for Mexico is also great. If it fails to achieve the transition to a new development strategy, it faces further economic stagnation, with increasing political and social unrest. The short-term downside economic risk for the U.S. is very small since our empirical results indicate that the impact of the creation of an FTA on the U.S. economy, assuming no other changes in Mexico, is tiny. In the longer run, however, if Mexico fails to achieve a transition to an open development strategy, the economic risks for the U.S. are greater.

The impact on California's agricultural sector is less clear. It will not follow the pattern of the U.S. agricultural sector, set forth in table 1, because of the substantial difference in product mix. The horticultural sector will experience a reduction in output or shift in production mix for commodities directly competitive with Mexico's products. In those sectors where production seasons are complementary, little or no effect is likely. As Mexico's economy grows, there will be long-run opportunities for California's horticultural products in Mexico's "off-season" markets. Overall, the FTA alone is not likely to have much of an impact because relatively little of California's agricultural output is affected by trade with Mexico. However, the economic growth that may accompany the FTA should generate long-term trade opportunities that will be attractive to California.

Finally, it is worth noting that, in analyzing the impact of a comprehensive change in policy, it is usually worthwhile to use a variety of approaches. In terms of aggregation, CGE models represent a "mezzo" approach, falling between detailed micro studies of particular industries and macro models which focus on broad aggregates. Their strength is in capturing general equilibrium linkages that work through the operation of markets in the medium to long run. Micro and macro studies are potentially complementary, focusing on somewhat different issues.

Using models to analyze the economic consequences of establishing a U.S.–Mexico FTA is fraught with difficulties. Policy makers are never satisfied, economic advisors rarely make unconditional recommendations, and academic economists talk constantly of assumptions and caveats. Our preliminary work indicates that multi-country CGE models can provide a useful framework for analyzing important links between policy changes and economic performance. Our FTA-CGE model incorporates some advances in state-of-the-art trade modelling, but our results also indicate that there is much yet to be done and many possibilities for improvement in the modelling framework.

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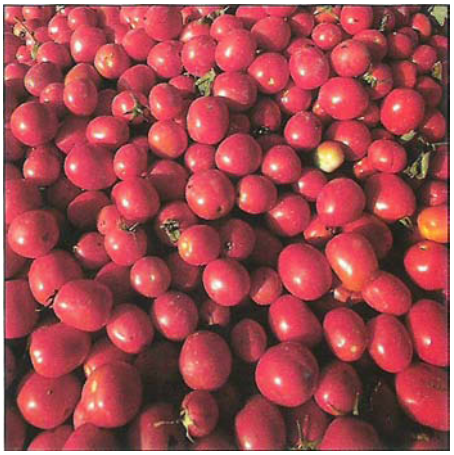

Beatrice/Hunt-Wesson, Inc.

The tomato processing industry has expanded more rapidly in Mexico than the fresh tomato industry. Export of tomato paste to the United States has doubled since 1986 and will increase still further when the U.S. tariff is eliminated under the Free Trade Agreement (FTA). This will permit Mexico to displace other suppliers to the U.S. market (such as Chile, Turkey and Taiwan). It will probably cause lower prices for U.S. producers as well.

(Editor's note: Most tonnage statistics in this paper are in metric tons. In a few cases, U.S. tons have been used, and so designated. For conversion purposes, 1 metric ton = 2,205 lb; 1 U.S. ton =2,000 lb.)

Tomato production in Mexico is an important component of Mexico's agricultural production and more particularly, of its agricultural exports. Most of the output is destined for fresh markets in Mexico and the United States; about 20% is used for processing. In 1989, for example, 947,000 metric tons (mt) were shipped to domestic fresh markets, 361,000 mt were exported, and another 318,000 mt were processed in Mexico. Fresh tomatoes account for 10% of total agricultural exports and are the first or second most valuable export, depending on the year. Processed tomato products account for less than 1% of these exports. This disparity is reflected in U.S. imports from Mexico during the same year: $223 million for fresh tomato imports and $17 million for processed.

However, during the 1980s the tomato processing sector grew much more rapidly than the fresh sector in Mexico and almost three times as fast as the processing sector in the United States. Despite this change, most attention in the United States has focused on competition in fresh tomato markets and how it might be impacted by the proposed North American Free Trade