

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 down-

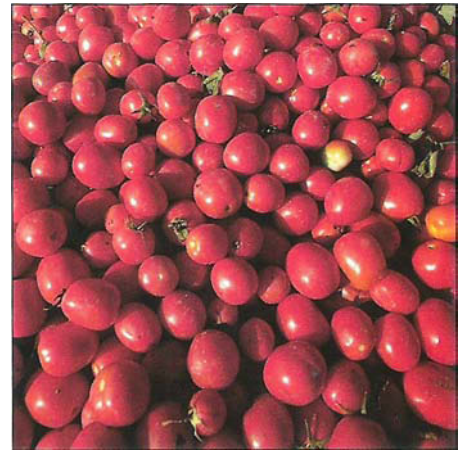
side economic risk for the U.S. is very small since our empirical results indicate that the impact of the creation of an FTA on the U.S. economy, assuming no other changes in Mexico, is tiny. In the longer run, however, if Mexico fails to achieve a transition to an open development strategy, the economic 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.

R. Hinojosa-Ojeda is Assistant Professor of Urban Planning, UCLA; S. Robinson is Professor and K. S. Moulton is Cooperative Extension Economist, Department of Agricultural and Resource Economics, UCB.



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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