

Trade in High-Valued Food Products Under NAFTA: Implications for the PNW

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NAFTA was ratified in late 1993 and went into effect in January of 1994. There was great controversy over what the effects of the trade agreement were likely to be and ranged from complete devastation of the U.S. economy to visions of raging economic growth fueled by economic integration. Nearly three years into the experiment, it is obvious that neither extreme is likely and while some manufacturing industries have moved to Mexico, a mass exodus of jobs has not occurred as predicted by opponents of the agreement.

Prior to NAFTA, Mexico was experiencing rapid economic growth as a result of economic reforms. Growth under NAFTA continued in 1994, but slowed dramatically in 1995 as a result of the devaluation of the peso. Externally, Mexican purchasing power was cut in half. Internally a severe credit squeeze, soaring interest rates and widespread bankruptcies devastated business plans, and inflation and unemployment and widespread foreclosures devastated consumer confidence.

The Mexican economy has begun to recover in 1996 and is predicted to remain on a path of steady growth if political stability is maintained. Continued growth in Mexico is

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likely to result in increasing levels of trade with the U.S. and Canada. High Valued Food Products (HVFP) have been an increasing portion of trade among the NAFTA partners.

U.S. exports of most HVFP to Mexico increased from 1990 to 1994 as the Mexican economy grew. In 1994, exports of most products HVFP increased significantly, but then dropped in 1995 due to the peso devaluation and subsequent slowing of economic growth in Mexico (Figure 1). U.S. HVFP exports through June 1996 are already near 1995 levels and will likely match pre-NAFTA levels.

U.S. exports of HVFP to Canada remained stable over the 1990 to 1996 period, except for a strong increase in exports of vegetables, which exceeded \$1.3 billion in 1994 and 1995 (Figure 2). 1996 export levels through June suggest continued strong HVFP exports to Canada. U.S. imports of HVFP from Mexico have increased, with fruit and vegetable imports approaching \$1 and \$2 million, respectively. U.S. imports from Canada remained steady with vegetables and meat products the leading HVFP imports (Figure 3).

The Pacific Northwest (PNW) is a leading producer and exporter of many HVFP including fruits, vegetables, specialty crops, and processed products. Rapid pre-NAFTA growth and the peso devaluation had a significant effect on Pacific Northwest exports to Mexico. Washington State apples, is an example of the impact of the peso devaluation (figure 4). Apple exports to Mexico, which had doubled between 1991-92 and 1993-94, dropped precipitously to half that level in 1994-95 and remained depressed in 1995-96. An examination of monthly data and anecdotal information suggests that the number of traders involved in exports of apples to Mexico has shrunk to half the pre-devaluation number both on the export and on the import side. Nevertheless, continued post-devaluation growth in Mexico will likely result in a resurgence of PNW trade with Mexico.

GDP growth rates over the 1992/1995 period have averaged about 3 percent in the NAFTA countries (Figure 5). Mexican growth rates were higher in the earlier years, but slowed substantially in 1995, resulting in an average growth rate similar to those of the U.S. and Canada. Projected GDP growth rates through 2005 suggest a much stronger annual growth rate of over 5 percent per year for Mexico. U.S. and Canada are projected to grow by 2.5 to 3 percent per year. Population growth rates in the U.S. and Canada are projected to be

less than 1 percent per year, while the Mexican population is projected to grow by about 2 percent per year.

The consequences of stronger growth in the Mexican economy over the remaining years of NAFTA will likely affect the patterns of trade between the U.S., especially the PNW, and its NAFTA partners. To project the potential effects on HVFP trade and the implications for the PNW, a static applied general equilibrium model, GTAP, was used to assess the national level effects. A regional input/output model was used to assess the specific effects on the PNW.

Modeling NAFTA

In modeling the likely effects of NAFTA, a number of impediments to trade which may have affected the historic period and may impact outcomes in future years need to be considered. Two important factors need to be considered; one, the many deviations from trade liberalization that are permitted by NAFTA and, two, the unique shock to the system caused by the sudden devaluation of the Mexican peso against the U.S. and Canadian dollars in December 1994.

Both Canada and Mexico have retained key agricultural institutions that manage internal or external trade. These include both national organizations such as CONASUPO in Mexico and the Canadian Wheat Board in Canada, and subnational organizations such as the hundreds of marketing boards still operating in Canada. These organizations effectively prevent individual producers from responding directly to market signals. It is impossible to account for all the resulting trade distortions even in a comprehensive model.

The terms of both CUSTA and NAFTA permit temporary reversals of liberalization measures when domestic production is "unfairly" threatened. Snapback provisions allow the injured member country to temporarily raise duties to pretreaty levels. Invariably, snapbacks have been invoked at the peak season for product shipments when they would have the greatest impact on trade volume. Canada has imposed temporary snapback provisions against a number of U.S. products including fresh peaches, fresh potatoes, fresh head lettuce and fresh cabbage.

Canada has also retained many restrictions from pre-NAFTA days that impede trade. For example, imports of most fresh fruits and vegetables must be in containers of 20 kilograms or less. This impedes the flow of raw product to the food service industry and to the processing industry. Bulk potato shipments have been excluded from Prince Edward Island to protect the industry there. Temporary waivers have been allowed when PEI processors ran short. Outmoded Mexican transportation and custom regulations continue to add considerable cost to product as it crosses the Mexican border. Tariff rate quotas on selected imports into Mexico have been set to be triggered at levels below pre-NAFTA experience, e.g. on fresh apples and fresh potatoes.

In May, 1995, Canada began charging a plant health inspection fee of \$30 on selected shipments of imported fruits and vegetables. This fee is scheduled to apply eventually to all shipments of plant and animal products. Mexico has insisted on a protocol for storage of fresh apples and pears destined for its market that is onerous in record-keeping and sharply increases storage costs.

U.S. apple shippers have found themselves in the strange position of being pressured by their buyers in Canada to over-invoice and simultaneously by their buyers in Mexico to under-invoice. Between 1989 and 1994 and again since 1995, Canada has imposed minimum prices on imports of U.S. Delicious apples, effectively shutting off low price imports (usually smaller sizes or lower grades). In contrast, Mexican import duties were a fixed percentage of the declared import price, which gave importers an incentive to under-report the price they paid. In an attempt to seal this loophole, the Mexican government has set reference prices for each variety, grade and size of apple imported. The duty is now based on the official reference price rather than the invoiced price, if lower.

All NAFTA member governments have taken actions which appear to breach both the letter and the spirit of the agreement. For example, the U.S. reached a "voluntary" agreement with Canada to curtail the inflow of Canadian wheat. Mexico has continued its outright ban on sweet cherry imports on indefensible phytosanitary grounds. However, it is likely that this is merely a bargaining chip to overcome what Mexico considers to be indefensible U.S. restrictions on imports of Mexican avocados.

The timing and severity of the devaluation of the Mexican peso also clouds the interpretation of our model results. This sort of structural shift is difficult to quantify and simulate effectively in an economic model. Nevertheless, while these models do not capture the dynamics inherent to rapidly growing economies, the deviations allowed by NAFTA or the explicit effects of the peso devaluation, they do provide evidence to suggest changes in the overall patterns of trade and production.

The Effects of NAFTA on Trade

The aggregate sectors of the GTAP model are grains (GRN), livestock (LIV), non-grain crops (NGC), meats (MEAT), milk products (MILK), other food products (OFP), natural resource based industries (RSC), primary product manufacturing industries (PMF), final product manufacturing industries (FMF), and services (SVC). The regions in the model include the U.S., Canada, Mexico, Japan, Korea, China, remaining ASEAN countries, the EU, Eastern European countries, and the rest of the world. The model, based upon a 1992 data set, is simulated sequentially over three periods, 1992 to 1995, 1995 to 2000, and 2000 to 2005. A baseline is developed based upon the projected GDP and population growth rates, which are taken from U.S. and World Bank publications. The GDP growth rates are used to develop a set of exogenous technological change parameters that become part of the baseline. GDP is endogenous in the analysis. A NAFTA scenario is then simulated in which tariffs or tariff equivalents in the 1992 base year dataset are reduced linearly from 1994 to 2005 over the simulation period. The resulting NAFTA scenarios are compared to the baseline to estimate the effects of NAFTA. The comparison of the results project the effects of NAFTA on trade patterns between the NAFTA partners as well as with the other regions represented in the model.

NAFTA results in changes in aggregate U.S. exports ranging from a -.02 percent decrease in aggregate grains exports to a 1.4 percent increase in livestock exports over the simulation period (Figure 6). U.S. aggregate HVFP, manufactured products and services exports increase under NAFTA by less than .5 percent in any period. Aggregate Canadian exports increase under NAFTA with agricultural exports increasing by .2 to nearly 1.2 percent

and manufactured products increasing by less than .4 percent (Figure 7). NAFTA results in increased exports from Mexico for all sectors except for natural resource based industries, which fall by less than .5 percent (Figure 8). Mexican agricultural exports, in general, increased by more than manufactured exports.

Canadian agricultural exports to the U.S. increase under NAFTA liberalization, except for grains (Figure 9). Exports of HVFP from Canada under NAFTA increase from .2 to nearly 3 percent per year over the simulation period. Livestock exports increase from 1 to 2 percent per year over the same period. Exports of natural resource based industries are nearly unaffected by NAFTA.

Mexican exports to the U.S. increase by up to 11 percent per year under NAFTA over the forecast period (Figure 10). Agricultural product exports increase by more than manufacturing or service sector exports. Milk product exports increase most rapidly.

Increases in U.S. exports to Canada under NAFTA range up to 5 percent per year (Figure 11). In general, agricultural exports increase by more than exports of manufactured products or services. Non-grain crops, meat, and milk products exports increase most rapidly from 1 to over 5 percent per year. Grain exports increase by about 1 percent per year on average. Exports of natural resource based industries range increase slightly due to NAFTA.

Mexican exports to Canada under NAFTA vary substantially with grain, non-grain crops, milk products, and resource based industry exports decreasing, while livestock, meat, other food products, manufacturing, and services exports increase (Figure 12). Agricultural exports change more rapidly than manufactured or service sector exports.

U.S. exports to Mexico under NAFTA increase by less than 1.5 percent per year over the forecast period, except for decreases in milk products exports (Figure 13). Milk product exports likely decrease because of decreased export subsidies. Agricultural exports, except for grains, change by less than manufacturing and service sector exports. Grain exports increase from .75 to 1.5 percent per year.

Canadian exports to Mexico increase from almost zero for milk products to nearly 7 percent for final manufactured products (Figure 14). Manufactured products exports increase much more rapidly than agricultural exports. Increases in non-grain crops and meat products

exports range from 2 to 3 percent over the period, while grains, livestock, milk products, and other food products increases are less than 2 percent per year. Exports to non-NAFTA countries from the U.S., Canada, and Mexico generally decrease over the life of the agreement.

U.S. output increases from about 2 to 3 percent over the forecast period (Figure 15). Manufacturing sectors increase the most, while milk product and natural resource based sectors increase the least. Changes in output in Canada range from .3 percent decreases in the non-grain crops sectors to .15 percent increases in the livestock and resource based industries sectors (Figure 16). The smallest changes are in the primary manufacturing and service sectors.

Changes in Mexican output range from up to a .2 percent decrease in the grains, resource based, and service sectors to up to a .45 percent increase in the final manufacturing sector (Figure 17). The results suggest little change in the meat, other food products, or primary manufacturing sectors.

Overall, the effects of NAFTA on trade suggest that there is a shift of exports from third country destinations to partner countries, but that overall trade levels are relatively unaffected. Output levels in NAFTA countries do not change significantly as a result of the agreement. Equivalent variation, a measure of consumer welfare, increases for each of the NAFTA partners with the U.S. and Canada benefitting more in the earlier periods and Mexico benefitting the most by the end of the agreement (Figure 18).

Effects on the PNW

To assess the effects of the NAFTA agreement on the PNW, a regional input/output model of the PNW was simulated using the estimated effects on the national economy as exogenous input. The model aggregation is consistent with GTAP sectors. The model is run sequentially using the effects on demand from the national model as exogenous shocks. However, given the small effect on U.S. output, the effects of NAFTA on the PNW are similarly small (Figure 19). There is no measurable effect on the PNW during the 1992/1995 period and only slight decreases in output over the 1995 to 2005 period. The milk products

and service sectors are affected the most and the livestock and resource based sectors are unaffected.

The PNW is likely to be more affected by the deviations sanctioned as well as the “actions” that the NAFTA partners have agreed upon. The snapback provisions of NAFTA, inspection fees, “voluntary” agreements, and phytosanitary bans will likely affect the PNW to a greater degree because of its proximity to Canadian markets and the relative importance of the Mexican market to the PNW fruit industry.

Summary and Conclusions

The results of the analysis do not present any compelling evidence to suggest that NAFTA affected the overall economic well being of the United States, Canada, or Mexico in any significant way. There is a shift in trade patterns towards NAFTA partners, but without significant effects on the overall levels of trade. In essence NAFTA simply redirected some exports to the NAFTA market to take advantage of favorable tariffs. However, the low levels of pre-NAFTA tariffs for most commodities tends to make the overall results insignificant. It is likely that the most beneficial effects of NAFTA will be in the areas of harmonization of standards, improved dispute resolution, the termination of ad hoc barriers to trade and improved transportation. The growth rate of the Mexican economy may well be the best predictor of the overall success of NAFTA.