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# BANK OF MEXICO

*Daniel Garcés-Díaz*

## The Mexican Economy and the Asian Crisis

The Asian crisis is affecting the Mexican economy through two channels:

- Balance of Trade
  - approximately 20 percent of Mexican exports to the United States face intense competition from Asian countries;
  - Mexico had real exchange rate appreciation when measured against U.S. trading partners;
  - like other petroleum exporting countries, Mexico suffered a fall in oil prices in 1998; and on the
- Capital Account
  - Mexico has the perception of increased risk in emerging markets;
  - Mexico is concerned with the contagion phenomenon which was prevalent in 1998.

Following the Asian tumult, Mexico experienced a depreciation in the peso. New Zealand, Australia and Canada also experienced pressure to their exchange rates. But exchange rate movements do not have the same effects for all countries in some of the important macroeconomic variables. Because of the linkage of exchange rates to inflation, inflation expectations and wage adjustments, monetary policy has to respond to these movements to avoid feeding a shock into wages and non-tradable goods prices. In Singapore, the Philippines, Malaysia, Korea, Thailand and Indonesia, the inflation response to depreciation in the exchange rate was low.

The effects of exchange rates to price levels are very different among the countries suffering from the Asian crisis. In Mexico, it is often argued that more active real exchange rate policies should be adopted. The Mexican experience is that whenever that has been tried, the result has been an accelerated rate of inflation. Although, the response of total imports and exports to exchange rate adjustments can be shown to be significant, the case for agricultural imports and exports is not as clear.

There has been discussion in Mexico recently as to whether the country should keep its current exchange rate system or change it for something else. People are very concerned about fluctuations in the exchange rate, their effects on inflation, and the behavior of several other macroeconomic variables. Interestingly enough, if you

go to Mexico City, chances are that you will see demonstrations with large signs saying, "We want another Bretton Woods" or something similar. People, for one reason or another, are very interested in the effects of exchange rates on economic activity.

## The Orden Paper

David Orden's paper has a graph (Figure 6) with an impulse-response analysis for Mexico. He shows that the exchange rate shock had an effect from the first to the third quarter. At the end of the two-year period, the forecast error variance explained by the shock in the exchange rate is about 30 percent. The income shock is only significant after the sixth quarter, yet the forecast error variance explained is small.

I redid some of the calculations using monthly instead of quarterly data, applying a vector autoregression with 12 lags and seasonal dummies. A dummy variable was introduced to account for the effect of the beginning of NAFTA, but it was not significant, so it was left out. My result was that the response of agricultural imports to shocks of real exchange rates was smaller than that reported in Orden's paper. My results showed effects from the third to the fifth months of the simulation. At the end of the two-year period, the part of the forecast error variance explained by this shock is about 14 percent.

In Orden's paper, income becomes significant only after the sixth quarter. In my case, the shock to income on agricultural imports is more significant at the beginning (from the third to the fifth month), then it continues into the same period as in Orden's calculations. The forecast error variance explained by the shock is about 13 percent, very close to that of the exchange rate shock. These results indicate that it is not so clear that the exchange rate has large shocks on the behavior of Mexican imports. However, these are very preliminary results and are subject to revision.

An exercise that occurred to me, which is not in Orden's paper, was to check for the response of Mexican agricultural exports to shocks in the exchange rate. I used 12 lags and seasonal dummies and no dummy variables for the beginning of NAFTA. With this system, I only got significant response in the third month. This does not appear to be very impressive. From this result we could say that there is a small effect of the exchange rate on Mexican agricultural exports.

I ran another vector autoregression including the NAFTA dummy, which in this case was significant (it seems there was an effect coming from the beginning of NAFTA on Mexican agricultural exports). The effect that we detected previously (without the NAFTA dummy) in the third month disappears completely. The conclusion is that after controlling for the beginning of NAFTA, there is no effect from the exchange rate on Mexican agricultural exports. This seems to be consistent with the results obtained in Barichello's paper. Indonesian agricultural exports did not seem to respond to the devaluation of the Rupiah, even though it was a fairly large devaluation.

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## **The Barichello Paper**

I want to take issue with Barichello's interpretation of the slope of the decline of agricultural imports in Indonesia. The paper suggests that the effect of the exchange rate devaluation is mostly responsible for the decline. I am concerned about that interpretation because the GDP went down about 15 percent in Indonesia in 1998. That seems to me to be a very strong movement in economic activity and income to justify the swings that we saw in agricultural imports in Indonesia. I believe that we need to look more closely into the data to make sure we are not overstating the effect of the exchange rate on trade flows.

From these results, some people have suggested using the exchange rate as a tool to improve exports or control the level of imports. I believe that these suggestions should be taken with some care. What we have seen from the results of Orden's and Barichello's papers is that imports in Mexico and Indonesia did not respond very strongly to movements in exchange rates. This variable only seems to be very important for countries who have very strong export-orientated sectors, like the United States, but for countries like Mexico and other Latin American countries, this does not appear to be the case.



## Section 2

# Foreign Investment Arrangements

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*The objective of this section is to review literature and experience with various forms of private sector arrangements in commercialization of trade potential between countries.*