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## **Ciudad Universitaria - UNAM**

*Fernando Rello*

There are two key asymmetries between Mexico and the United States/ Canada that should be taken into consideration:

- more than 25 percent of the total labor force in Mexico works in primary agriculture, but in Canada and the United States, the comparable number is only about 2 percent;
- whereas in the United States and Canada poverty exists only in isolated pockets, in Mexico more than 40 percent of rural inhabitants are poor and 25 percent are in extreme poverty.

In other words, rural poverty is pervasive and deep. In this economic and social context, the design of rural policy should be based on three criteria:

1. It is essential that agricultural growth be accelerated, creating a sector offering productive employment to a quarter of the population. A stagnant or declining agriculture has heavy social costs.
2. Given the importance of non-agricultural employment as a source of rural income, a regional development policy is needed that enhances forward and backward linkages, and creates jobs in rural regions.
3. It is absolutely essential to decrease poverty and to attain a better distribution of income.

So, we could ask: *is NAFTA creating conditions to speed agricultural growth, regional development, and to curb rural poverty?* On the basis of research results coming from available models and studies, it is possible to conclude that NAFTA i) will decrease the production and increase imports of grains and ii) increase the production and exports of fruits and vegetables, commodi-

ties in which Mexico has a comparative advantage. *What will be the economic and social consequences of this trade-off?*

Let us examine the case of grains. Yunez has pointed out that Mexican agriculture is very heterogeneous by type of producers and by products as well. Regarding maize, most critics of NAFTA predicted a collapse of production in Mexico and a massive migration of crowded-out, poor peasants to cities or to the United States. Yunez has shown that this has not happened. His explanation of why this has not been the case is, in my opinion, correct. It could be added that around 50 percent of maize producers are either self-sufficient peasants or are not buyers of corn. They will not be affected by a drop in prices due to increased competition of foreign corn in the domestic market.

It is important to note that small peasants producing maize for self-consumption are not really farms in the traditional sense of the word. They would be better defined as complex family units striving for economic and social reproduction. They combine the cultivation of maize with beans and other subsistence vegetables. They have other economic activities and sell their family labor in different markets. They will continue producing maize no matter what its price will be. The commercial producers of maize will be more at risk, particularly those that rely on corn for their only cash income and are vulnerable to price drops. However, the available data show that some of them, cultivating in advantaged rainfed regions, have comparative advantage. Surprisingly, maize yields per hectare have been increasing in the last two decades. Remittances or migration savings are often invested in the land. However, more research is needed to evaluate the future impact of NAFTA on these types of producers.

On the other hand, according to Yunez data, wheat production has declined as a result of liberalization and imports increased substantially. Why has wheat production declined since NAFTA and corn has not? Wheat in Mexico is cultivated in the irrigated plains of northwest Mexico, particularly in Sonora state, by medium-size commercial oriented producers. It is not a competitive crop under present conditions and could be even less competitive if government support policies were abandoned. In order to evaluate its competitiveness two indicators could be used:

1. *producer subsidy equivalent* expressed as a percentage of total value of production, which amounts to 20 percent in the case of Sonora wheat. This means that producers would lose 20 percent of their crop cash income if subsidies and other supports measures were eliminated.
2. the *domestic resources cost coefficient* (DRC) for Sonora wheat, is greater than one, which means that Mexico has to invest more than a dollar to produce wheat domestically, in order to save one dollar not importing wheat.

At the same time, the *effective protection coefficient* is greater than one showing that Sonora wheat is protected from foreign competition, and in the absence of support policies, its competitive position would be weaker. Being commercially oriented producers, it would not be a surprise if Sonora wheat growers continue to reduce wheat production in the context of increased liberalization of Mexican agriculture. This would pave the way to bigger imports from the United States.

The fall of wheat production could have very negative consequences for entire regions. For example, the Yaqui Valley in Sonora would lose its main economic activity. Substitution for wheat by other commercial crops is possible but that takes time to materialize. In the meantime, a regional crisis could take place and social tensions would arise. The task of policy is to reduce the social cost and accelerate the transition.

On the other hand, the increased production and export of vegetables has benefitted producers and created a significant amount of jobs, due to the labor-intensive methods of cultivation employed. However, *to what extent is production and export of vegetables contributing to the alleviation of poverty?* Let's take the example of tomato production and packing, which is the most important agroindustry in terms of exports and employment creation. Most of the laborers employed by the tomato agroindustry located in northwest Mexico, are temporary migrants coming from poverty-stricken regions in southern Mexico, particularly Zapotecas Indians from the state of Oaxaca. Research aimed at estimating the importance of migrant income, concluded that migrant in-

come earned in the tomato fields and packing plants, is fundamental to the basic survival of villages in poor regions. However, this does not provide a solution to poverty alleviation because migrant income is not sufficient to contribute to capital formation in the migrant communities, nor to create conditions for endogenous local development<sup>1</sup>.

To sum up, there is no doubt that liberalization and NAFTA are producing efficiency gains and new opportunities to firms and agricultural producers with some comparative advantage. The case of vegetables is very clear. However, for some grain producers, NAFTA could make things worse and, eventually, they could be crowded out creating social costs and tensions. The role of policy is to create conditions for efficiency gain through market participation and, at the same time, reduce those costs and tensions. For the Mexican government, the implementation of farm and economic policies is crucial and unavoidable because its main commercial partners, the United States and the EU, are heavily subsidizing their agricultural producers. The problem for the Mexican government lies in its scanty budget and its institutional weakness.

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<sup>1</sup> M.A. Barróón and F.Rello, "The Impact of the Tomato Agroindustry on the Rural Poor in Mexico." *Agricultural Economics*, 23 (2000) pp. 289-297.