

Unreliable data: A serious obstacle for evaluating NAFTA

POVERTY INCIDENCE EVOLUTION TAKING INCOME DATA AT FACE VALUE

If an analyst disregards the reliability and comparability problems of household income data and takes the data at face value, the story of poverty incidence (defined as $H=q/n$ where q is the number of poor persons and n the population, usually expressed as a percentage) in Mexico since NAFTA would be as follows. First, H was at a similar level in 2000 as it was in 1992. Official poverty figures on patrimonial poverty were 53.1 percent in 1992 and 53.6 percent in 2000. "Patrimonial poverty" was defined by the Mexican government as the condition of those households whose income per capita was below the necessary level to meet the basic requirements for food, clothing, housing, health services, public transportation, and education.

According to the Integrated Poverty Measurement Method (IPMM) (which combines income poverty—the only dimension considered in the official method—with unsatisfied basic needs and a longitudinal timeline of poverty trends), the figures were 75.4 percent and 75.3 percent in 2006. Both data sets rely on the National Survey of Household Income and Expenditures (ENIGH), carried out by the National Institute of Statistics and Geography (INEGI). In both cases, the biannual evolution of H shows stability between 1992 and 1994, a huge increase between 1994 and 1996, a decrease from 1996 to 1998, and a more rapid decrease from 1998 to 2000.

In 2006, patrimonial poverty was 42.6 percent, ten percentage points lower than in 2000, according to the Mexican government, and five percentage points lower than its 2000 levels, according to the IPMM. Finally, in the official calculation, H during the whole NAFTA period shows a decrease from 53.1 percent in

BY JULIO BOLTVINIK

Julio Boltvinik is a professor at the Centre of Sociological Studies, El Colegio de México.

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1992 to 42.6 percent in 2006, while the IPMM calculation shows a decrease from 75.4 percent in 1992 to 70.9 percent in 2006.

An optimistic (or apologetic) interpretation of the above figures would focus on the period from 1996 to 2006 and on official calculations, suggesting that NAFTA is rapidly reducing poverty (from 69 percent in 1996 to 42.6 percent in 2006). On the other hand, a pessimistic (or critical) view would focus on the IPMM and the entire 1992 to 2006 period and would state that NAFTA is associated with a very slow decrease in H .

Neither interpretation would be accurate because both of them would be based on taking ENIGH's data at face value.

A CRITICAL LOOK AT MEXICO'S SURVEY OF HOUSEHOLD INCOME AND EXPENDITURE (ENIGH)

Mistrust of ENIGH began in 2002, when ENIGH data for that year indicated, in comparison with ENIGH data for 2000, a substantial decrease in H (3.6 percentage points) in a period when the economy was in a recession (GDP per capita decreased by 2.2 percent) and despite evidence of a growing polarization of income during the same time period. Changes in sample size and design, as well as important changes to the questionnaire, were made in the 2002 ENIGH and maintained in subsequent surveys.

These changes made data from the 1992 to 2000 and 2002 to 2006 ENIGHs noncomparable. In fact, a detailed analysis of the 2002 to 2006 ENIGHs, shows the following problems, inconsistencies, and biases.

Underestimation of income. In the 2004 ENIGH, total household income represented only 51.6 percent of the net disposable income in the household account (HA) of national economic accounts. In 1994, 1996, and 1998 these proportions were 57.3 percent, 46.9 percent, and 46.0 percent, respectively. These figures imply an overestimation of the extent of income poverty and also that the evolution of poverty can be biased through the use of non-adjusted ENIGH income data.

Overestimation of the decrease in household size. Because poverty is measured officially only by per capita income, poverty incidence would decrease over time if the decrease over time in household size (HS) was overestimated. Also, in any given year, H tends to be underestimated if HS is underestimated.

This is the case in the ENIGHs. National average HS in the 2000 and 2006 ENIGHs was 4.15 and 3.95 persons,

respectively, yet in the 2000 and 2005 Census/Conteo, the figures were 4.38 and 4.04. In addition to providing a general underestimation of household size, the ENIGH's figures indicate inconsistencies by area. The ENIGH's observed HS decrease from 2000 to 2006 was only 4.9 percent at the national level but 10.4 percent in rural settlements (RS) (settlements smaller than 2,500 persons), and more than 14 percent in the most impoverished groups within RS. This is significant for two reasons: (1) 70 percent of the reduction in absolute terms of patrimonial poverty was concentrated in localities with fewer than 15,000 persons, and all of it took place in RS and (2) according to the ENIGHs, HS increased in localities with 2,500 to 15,000 persons (which can be called semi-urban), so that the impact of HS reduction on poverty is only applicable in RS.

Inconsistencies in the evolution of income. The period 2000 to 2006 saw a low growth rate in GDP per capita (a 7 percent increase in the period), but according to the ENIGH, households increased their current total income per capita (CTIPC) twice as much (15.3 percent). Furthermore, although primary sector GDP (not per capita but total) grew 14.9 percent in the same period, the CTIPC of households, according to the ENIGH, grew 62.6 percent in RS, decreased 20.9 percent in semi-urban settlements, and grew only 13.9 percent in urban settlements (settlements with more than 15,000 inhabitants). In addition, the ENIGH reported that RS per capita income from wages grew 83.4 percent, contributing much more to the now-apparent "rural miracle" than family remittances.

Increasing overestimation of occupied population. Partly explaining the overestimation of income and wage growth is the fact that the ENIGH overestimated occupied population (OP) in 2000 by a bit more than 0.50 million persons compared with the National Occupation Survey (ENOE): the ENIGH estimated OP at 39.48 million while the ENOE estimated OP at 38.96 million. This overestimation increased almost

TABLE 1 Changes in living conditions in rural, semi-urban, and urban areas: Percentage change in availability or use of the specified item, 2000 to 2006

Item	Rural	Semi-urban	Urban
Fridge	48.4	-6.8	3.5
Washing machine	83.9	14.3	14.7
Gas for cooking	66.7	-1.9	0.01
Wood for cooking	-58.3	22.2	-33.0
Piped water inside the dwelling	108.8	-13.6	7.2
Toilet connected to drainage	127.1	-27.5	4.3
No sanitary service	-51.3	2.5	-54.6
Drainage	246.6	-6.9	5.4
Burns garbage	-42.8	-12.1	-52.8
Garbage pick-up service	161.3	1.8	-2.2

Source: Own calculations using the ENIGH's 2000 and 2006 databases.

sixfold in 2006, when it reached 2.85 million (45.45 million versus 42.60 million).

Increasing underestimation of the rate of dependency (RD). As a consequence of the downward bias in HS and the upward bias in OP, RD is highly underestimated by the ENIGH for the period 2000 to 2006. At the national level, RD decreased from 1.77 to 1.52 dependants per occupied person, while in RS the corresponding figures were 1.97 and 1.66. In this case, while HS diminished from 4.61 to 4.13, the number of occupied persons per household remained the same (1.55) and dependants per household decreased from 3.05 to 2.58. The total number of occupied persons in RS grew because of the increase in the number of households (460,000).

Overestimation of living conditions in RS. Table 1 shows the percentage change in living conditions in rural, semi-urban, and urban settlements for the period 2000 to 2006. According to these figures, living conditions in RS are improving at very high rates (e.g., up to 246.6 percent for drainage). In contrast, urban rates of improvement are very moderate, and semi-urban areas seem to be taking a turn for the worse. In semi-

urban areas, negative indicators such as the use of wood for cooking or lack of sanitary services are increasing, and positive indicators such as fridge availability, indoor plumbing, and sewage facilities, are decreasing. Although these figures depict stagnation in urban areas and regression in semi-urban areas, the rural picture is one of radical positive transformation. This "rural miracle" is not supported by any other evidence.

NECESSARY CHANGE IN SOURCES FOR EVALUATING NAFTA

It is difficult to argue that, despite all the problems and biases of the ENIGHs, the reported drop in patrimonial poverty during the 2000 to 2006 period is accurate. Once the figures of this period are challenged, the optimistic post-NAFTA view no longer holds water. Under this framework, it is necessary to evaluate the impact of NAFTA on the basis of different sources and sets of variables such as real wages, formal employment, emigration, GDP, and private consumption, to name a few. On all these counts, the pessimistic (or critical) view is much more probable. 