Openness and Inflation: Evidence from the Seven Largest Latin American Economies

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Abstract

During the 1980s, the annual average inflation rate in Chile was 20.3% while in Colombia it was 23.8%. These rates seem quite high when compared with the 5% to 12% average rates of inflation experienced during this decade by most developed nations. Yet, during the 1980s, Colombia and Chile experienced the lowest inflation rates in Latin America.

To bring down their high rates of inflation, the Latin nations started, during the early 1990s, to reduce the rate of growth of their money supplies and to implement free-market policies. Among these polices was the slow but steady reduction of tariffs and non-tariff barriers, *i.e.*, the steady increase in the openness of their economies.

In theory, the effect that openness had on inflation could be estimated by measuring the increase that imports had in the aggregate supply, or by measuring the economy-wide intensification in competition and gains in productivity attributable to increases in imports. However, the data needed to make this type of estimations were not found. Thus, to come up with an approximate measure of the effect that openness had on inflation, the variables of Fisher's Equation of Exchange were estimated as rates of growth. This equation is:

$$\approx \quad - \quad +$$

where , , and are, respectively, the annual average rates of growth of the price level -inflation-, the money supply, the velocity of money and real income. What this equation indicates is that, on average, the growth of money will be absorbed by the growth in prices, real income and the velocity of money.

The table below shows the values of these average rates of growth for the 1995 to 2007 period for Brazil, and for the 1991 to 2007 period for the other six nations. The data used for the estimation of were the M1 figures reported in the web page of the central bank of each country. These M1 values and the GDPs at market prices were used to estimate the for each nation. The values of the GDPs were found in the *Series Históricas de Estadísiticas Económicas 1950-2008* published by the ECLAC. The CPIs used to calculate came from the 2008 edition of the Statistical Yearbook for Latin America and the Caribbean also published by the ECLAC. Finally, the GDP of each nation in dollars of 1990 was used to calculate . The data for the estimation of came from the 42nd, 47th and 52nd issues of the Statistical Yearbook of the United Nations.

Average rates of growth of the price level, money, velocity, and real GDP for the 1991-2007 period

	%	%	%	%	- %	(- +) - %
Argentina	16.8	35.6	3.4	- 8.9	23.3	6.5
Brazil 1995-2007	11.9	21.4	1.7	- 0.9	18.8	6.9
Chile	6.8	18	6.1	- 4.2	7.7	0.9
Colombia	14.3	20.2	4	- 1	15.2	0.9
Mexico	12.9	23.3	3.4	- 3.6	16.3	3.4
Peru	9.2	17	2.6	0.2	14.6	5.4
Venezuela	34.6	46.1	1.9	- 2.1	42.1	7.5

According to the equation above, (- +) - should be equal to, or approximately equal, to zero. Yet, as can be seen in the last column to the right of table, for each country (- +) - is equal to a positive number. This number is the average yearly inflation that failed to materialize due to the growing openness.