Real Exchange Rate and Output Growth in Inflation-Targeting Small Open Economies

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Outline

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III. A Cumulative Causation Model
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I. Introduction

- Crises of ortodox monetary policies:
- Monetarist experiment (1970s-1980s) (Kaldor, 1970, 1979, 1986; Desai, 1981; Moore, 1986).
- Rational Expectations experiment (1980s-1990s)
- Collapse of fixed exchange rate regimes (1980s, 1990s, 2000s).

- **Main message of the paper:**

- According to our empirical findings, there doesn't seem to be a positive relationship b'n the real exchange rate (q) and GDP during the period under scrutiny (1960-2010) in Brazil, South Korea and Mexico.
- Heterogenous effects of q on Consumption, Investment and exports in each different country.
- Ergo, not possible to recommend a general policy for all countries without taking into account the specific structure of the economy under consideration before we can predict the effect of real exchange rate fluctuations.

III. Inflation targeting

- 1987-1992: gradual drop of M aggregates.
- “we did not abbandon monetary aggregates; instead, they did abbandon us” (a curious central banker).
- Hence inflation targeting (Taylor, 2001; Woodford, 2003; Svensson, 2007).
- Old wine in new goatskins (Wicksell, 1898).

Countries	Chile	Mexico	Brazil	Colombia	Peru	South Korea
Date of Adoption of Inflation Targeting Policy	Jan 1991	Jan 1999	June 1999	Sept 1999	Jan 2002	Jan 1999

• The new monetary consensus (IT monetary policy frameworks):

•It is said to diminish inflation and guarantee long-run price stability through interest rate reaction functions with no intermediate targets **whatsoever**.

•Yet, the role of real exchange rates in IT monetary policy strategies:

✓Fear of floating

✓**Exchange market sterilised interventions**

- The role of the exchange rate as a nominal anchor for inflation tends to appreciate the currency.
- To be sure, the exchange has played an outstanding role in IT models.
- However, it has been said, this may entail negative effects on growth and employment (cf. Frenkel, Ros, Bresser-Pereira, Rapetti, López, Sánchez and Spanos).

- III. A Cumulative causation model

- A Cumulative causation model:
- $g = \gamma x + \phi dd$ con $\gamma, \phi > 0$ (1)
- $X = \left(\frac{eP^*}{P}\right)^a (Y^*)^b$ con $a, b > 0$ (2)
- $P = \frac{CW^z(eP^*)^\psi}{R}$ con $0 < z \leq 1, 0 < \psi \leq 1$ (4)
- $r = r + \lambda g$ con $\lambda > 0$ (6)
- $x = \mathrm{a}((1-\psi)\dot{\mathrm{e}} + (1-\psi)\pi^* - c - zw + r_0 + \lambda g) + bg^*$ (7)

- A Cumulative causation model:
- (8) $dd = \alpha_1 f + \alpha_2 \frac{I}{Y} + \alpha_3 \dot{M}S$ con $\alpha_i > 0$ con $i = (1,2,3)$
- (11) $\dot{M}S = (1 - z)\boldsymbol{w} + (r_0 + n) + \lambda g - c - \psi \dot{e} - \psi \pi^*$.

- A Cumulative causation model:
- (13)

$$g = \left\{ \begin{array}{c} [\gamma a(1-\psi) - \phi\alpha_3\psi](\dot{e} + \pi^*) + \\ (\phi\alpha_3(1-z) - \gamma az)w \\ + \gamma b g^* + \phi\alpha_1 f + \phi\alpha_2 \frac{I}{Y} \end{array} \right\} \left\{ \frac{1}{1-(\gamma a + \phi\alpha_3)\lambda} \right\}.$$

- .(15) $\gamma a(1-\psi) > \phi\alpha_3\psi.$
- .(16) $\phi\alpha_3(1-\mathrm{z}) > \gamma az.$

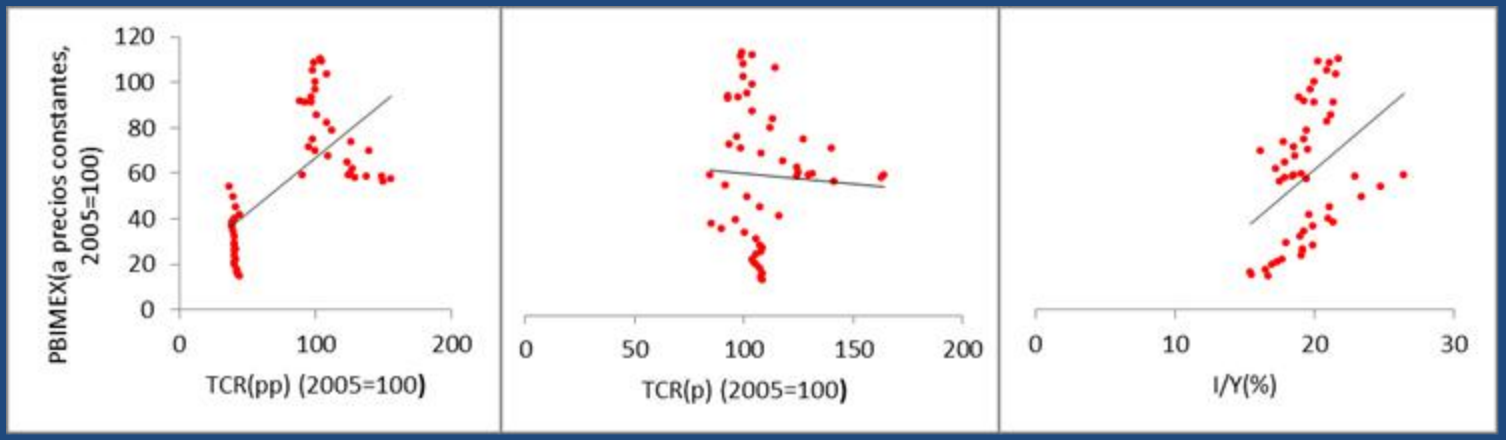
- $.(15)\ \gamma a(1-\psi) > \phi\alpha_3\psi$
- Condition (15) implies that a currency devaluation will bear a positive impact on growth if and only if the positive impact on exports is greater than the negative impact on aggregate demand due to the reduction in real wages.

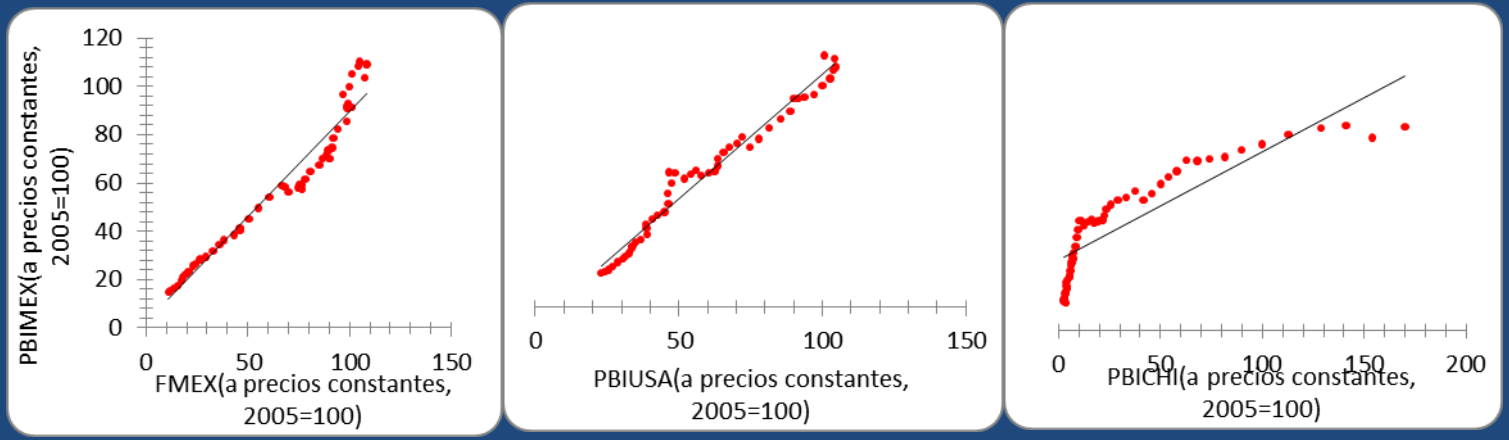
- $(16)\ \phi\alpha_3(1-z) > \gamma a z.$

Condition (16) means that an increment (diminution) in nominal wages will increase (diminish) effective demand if and only if the negative (positive) effect on exports is compensated by the positive (negative) effect of an increasing wage on aggregate demand.

IV. Econometric Results

Mexico:

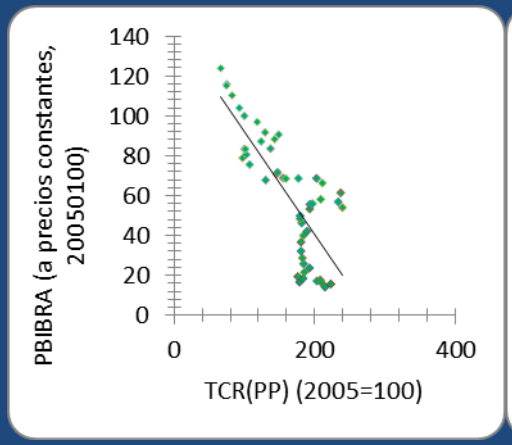


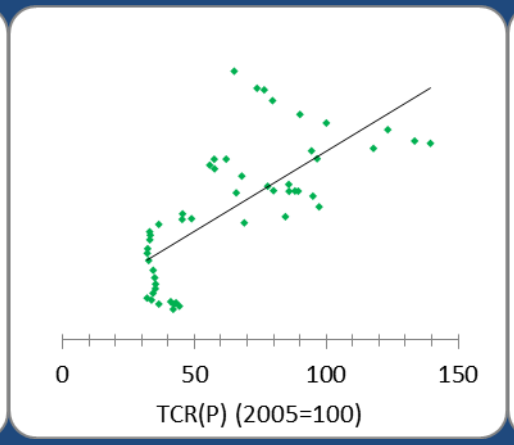


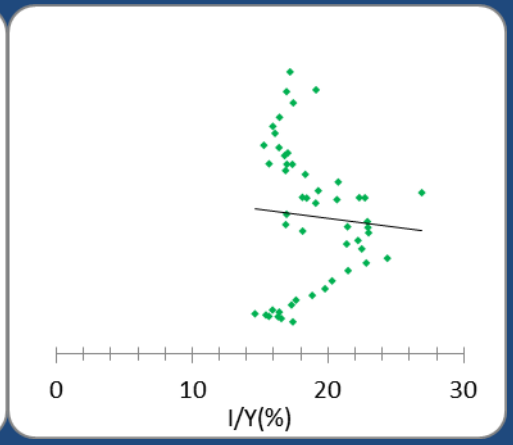
- $ymex_t =$
$\underset{(-0.046)}{-0.091}{}^{*} ychi_t + \underset{(-0.18)}{0.452}{}^{*} iy_t + \underset{(-0.103)}{0.772}{}^{*} yusa_t +$
$\underset{(-0.048)}{0.268}{}^{*} fmex_t + \underset{(0.02)}{0.005} qmex_t ,$

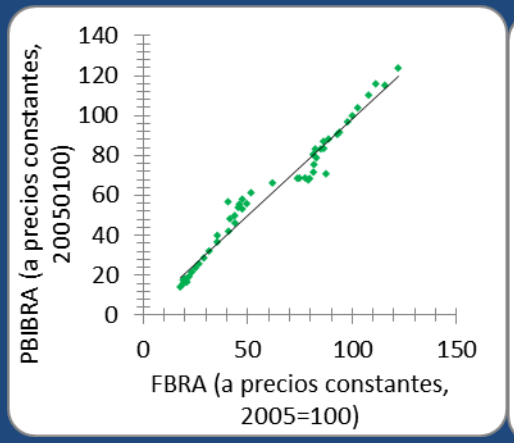
- $imex_t =$
$\underset{(-0.089)}{-0.078} ychi_t + \underset{(0.206)}{1.083}{}^{*} yusa_t + \underset{(-0.098)}{0.003} fmex_t -$
$\underset{(-0.039)}{0.15}{}^{*} qbra_t .$

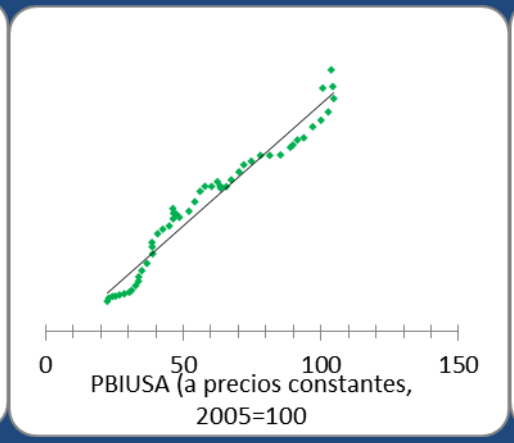
- Brazil:

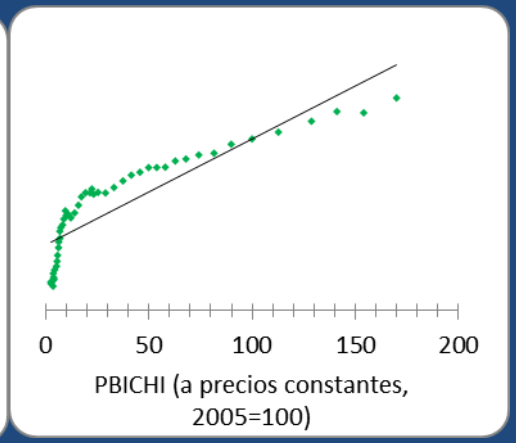

PBIBRA (a precios constantes, 20050100)
140
120
100
80
60
40
20
0
0
200
400
TCR(PP) (2005=100)


0
50
100
150
TCR(P) (2005=100)


0
10
20
30
I/Y(%)


PBIBRA (a precios constantes, 20050100)
140
120
100
80
60
40
20
0
0
50
100
150
FBRA (a precios constantes, 2005=100)


0
50
100
150
PBIUSA (a precios constantes, 2005=100


0
50
100
150
200
PBICHI (a precios constantes, 2005=100)

•(20) $ybra_t = \underset{(-0.141)^*}{-0.521} ychi_t + \underset{(-0.271)^*}{0.586} yusa_t + \underset{(-0.426)^*}{2.058} iybra_t + \underset{(-0.141)^*}{0.309} fbra_t - \underset{(-0.052)^*}{0.147} qbra_t,$

(21) $cbra_t = \underset{(-0.178)^*}{-0.621} ychi_t + \underset{(-0.330)}{0.355} yusa_t + \underset{(-0.515)^*}{1.309} iybra_t + \underset{(-0.168)^*}{0.563} fbra_t - \underset{(-0.064)^*}{0.21} qbra_t,$

(22) $xbra_t = \underset{(0.036)^*}{0.245} ychi_t + \underset{(0.074)^*}{0.406} yusa_t + \underset{(-0.120)}{0.011} iybra_t + \underset{(-0.044)^*}{0.0002} fbra_t + \underset{(-0.015)^*}{0.063} qbra_t,$

(23) $ibra_t = \underset{(-0.448)^*}{-1.203} ychi_t + \underset{(0.859)}{0.199} yusa_t + \underset{(0.453)^*}{1.442} fbra_t - \underset{(0.159)^*}{1.226} qbra_t.$

V. Conclusions and final remarks

1. **Expansionary effects or contractionary effects of devaluations?**

V. Conclusions and final remarks

- ✓ No positive relationship b'n real exchange rate and output in Brazil and Mexico.
- ✓ Therefore, the contractionary effects of IT should be found elsewhere.
- ✓ Fiscal policy, for instance (there is a positive relationship b'n fiscal policy and growth).
- ✓ Swan (1955).

Muchas gracias!