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

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Outline

I. Introduction
II. Inflation targeting
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I. Introduction

• Crises of orthodox monetary policies:
  • 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
• “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).
<table>
<thead>
<tr>
<th>Countries</th>
<th>Chile</th>
<th>Mexico</th>
<th>Brazil</th>
<th>Colombia</th>
<th>Peru</th>
<th>South Korea</th>
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• 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:

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

(8) \[ dd = \alpha_1 f + \alpha_2 \frac{I}{Y} + \alpha_3 \dot{MS} \quad \text{con} \quad \alpha_i > 0 \quad \text{con} \quad i = (1,2,3) \]

(11) \[ \dot{MS} = (1 - z)w + (r_0 + n) + \lambda g - c - \psi \dot{e} - \psi \pi^*. \]
A Cumulative causation model:

\[
g = \left\{ \left[ \gamma a (1 - \psi) - \phi \alpha_3 \psi \right] \left( \dot{\epsilon} + \pi^* \right) + \\
\quad \left( \phi \alpha_3 (1 - z) - \gamma a z \right) w \\
\quad + \gamma b g^* + \phi \alpha_1 f + \phi \alpha_2 \frac{l}{Y} \right\} \frac{1}{1 - (\gamma a + \phi \alpha_3) \lambda}.
\]

\[(13)\]

\[(15)\] \(\gamma a (1 - \psi) > \phi \alpha_3 \psi\).

\[(16)\] \(\phi \alpha_3 (1 - z) > \gamma a z\).
\begin{itemize}
\item (15) $\gamma a (1 - \psi) > \phi a_3 \psi$
\item 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.
\end{itemize}
\( (16) \quad \phi \alpha_3 (1 - z) > \gamma az. \)

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:
\[ ymex_t = -0.091 \cdot ychi_t + 0.452 \cdot iy_t + 0.772 \cdot yusa_t + 0.268 \cdot fmx_t + 0.005 \cdot qmex_t, \]

\[ imex_t = -0.078 \cdot ychi_t + 1.083 \cdot yusa_t + 0.003 \cdot fmx_t - 0.15 \cdot qbra_t. \]
•Brazil:
(20) $ybra_t =
-0.521 ychi_t + 0.586 yusa_t + 2.058 iybra_t + 0.309 fbra_t -
-0.141 qbra_t,

(21) $cbra_t =
-0.621 ychi_t + 0.355 yusa_t + 1.309 iybra_t + 0.563 fbra_t -
-0.178 qbra_t,

(22) $xbra_t =
0.245 ychi_t + 0.406 yusa_t + 0.011 iybra_t + 0.0002 fbra_t +
0.036 qbra_t,

(23) $obra_t =
-1.203 ychi_t + 0.199 yusa_t + 1.442 fbra_t - 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!