Brazil's Long-Term Growth Performance—Trying to Explain the Puzzle

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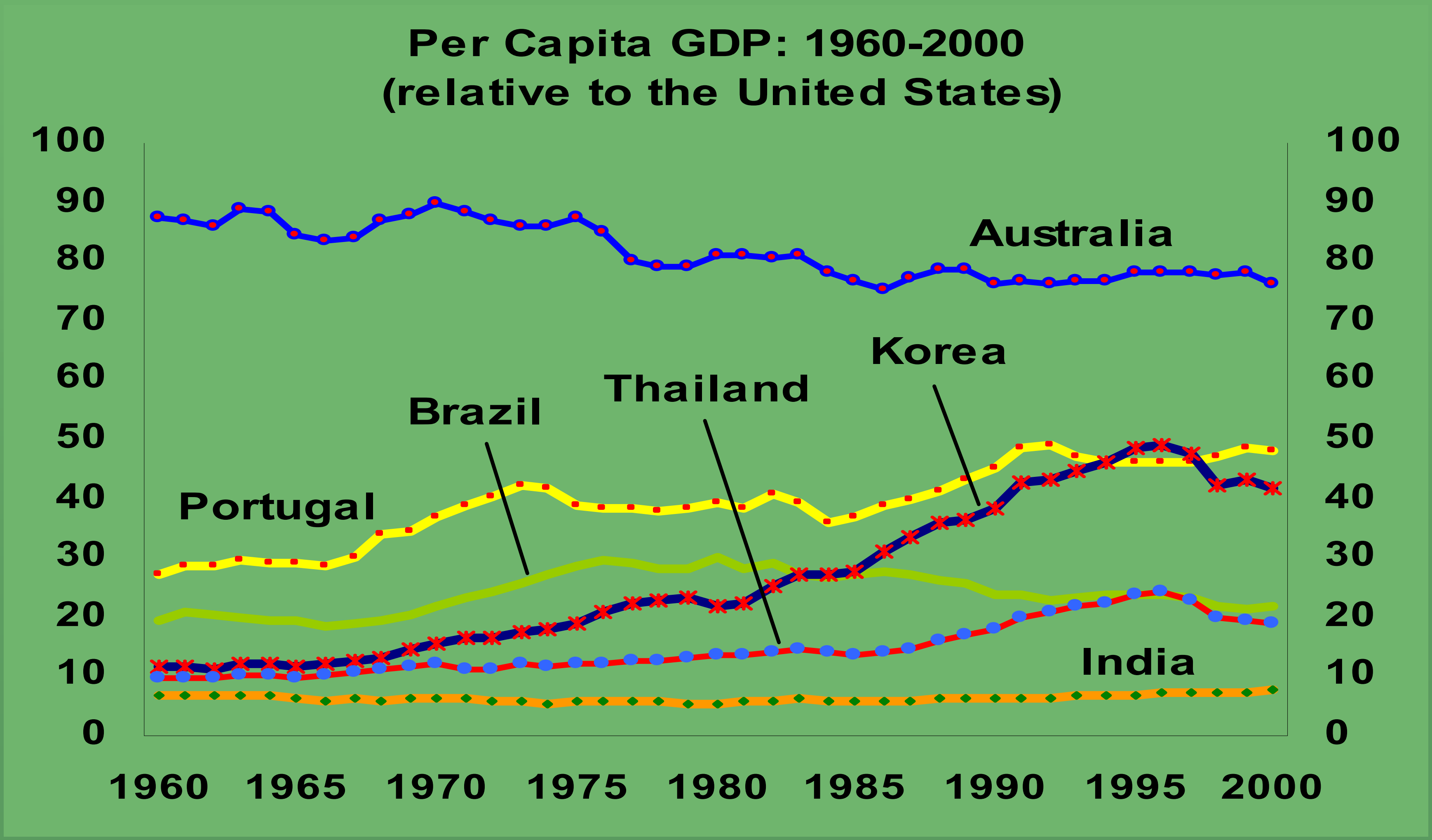
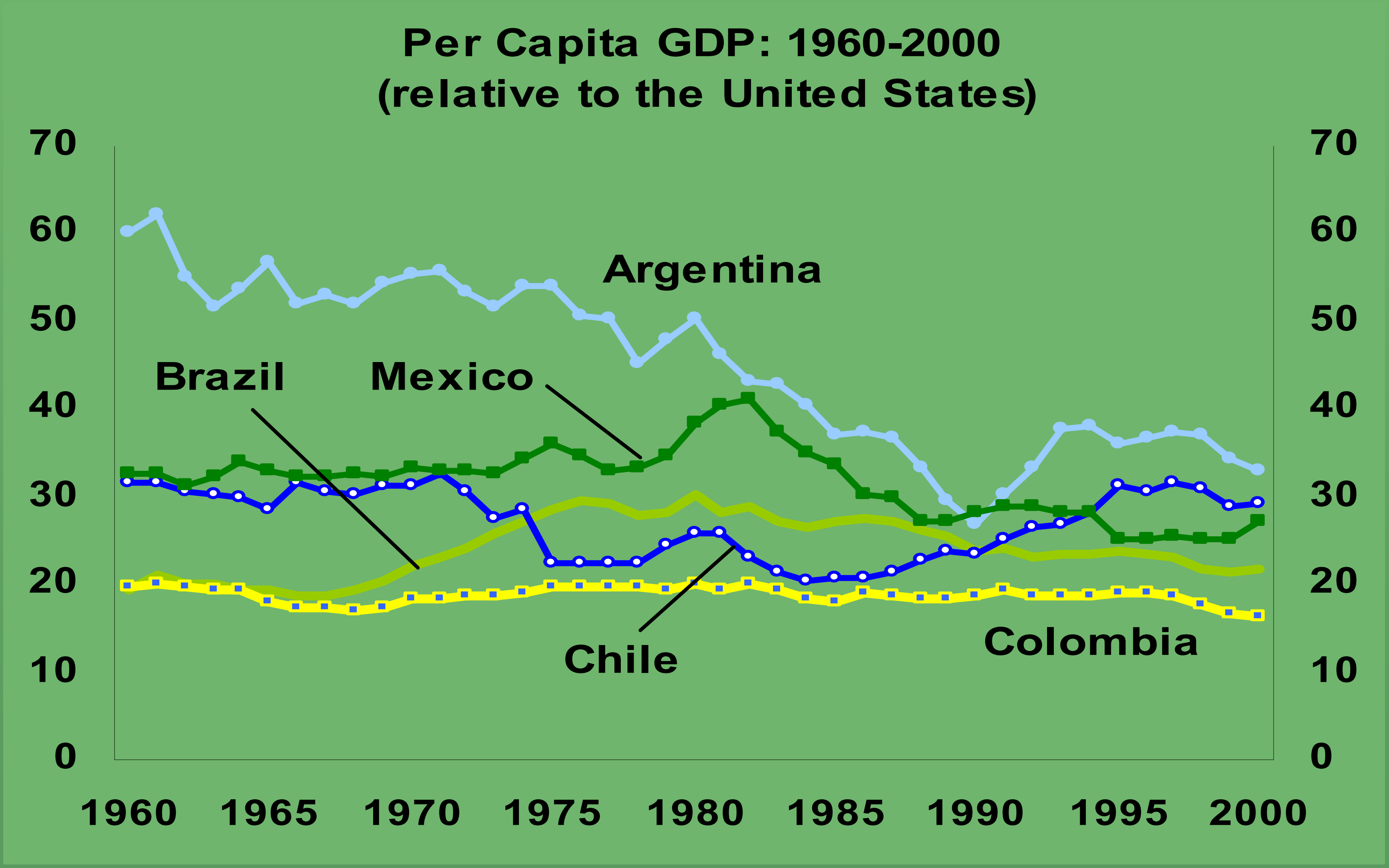
Brazil's growth performance over the past 25 years has been disappointing...



...in line with Latin America



Look at initial conditions in 1960: How did Brazil do?

- Extend Sala-i-Martin (2004) analysis using the 18 variables identified as "deep determinants", as well an extended set, including financial development, terms of trade growth, and fiscal policy volatility.

- Results show that:

  ✓ The "deep determinants" explain growth across countries relatively well, but less so for Brazil.

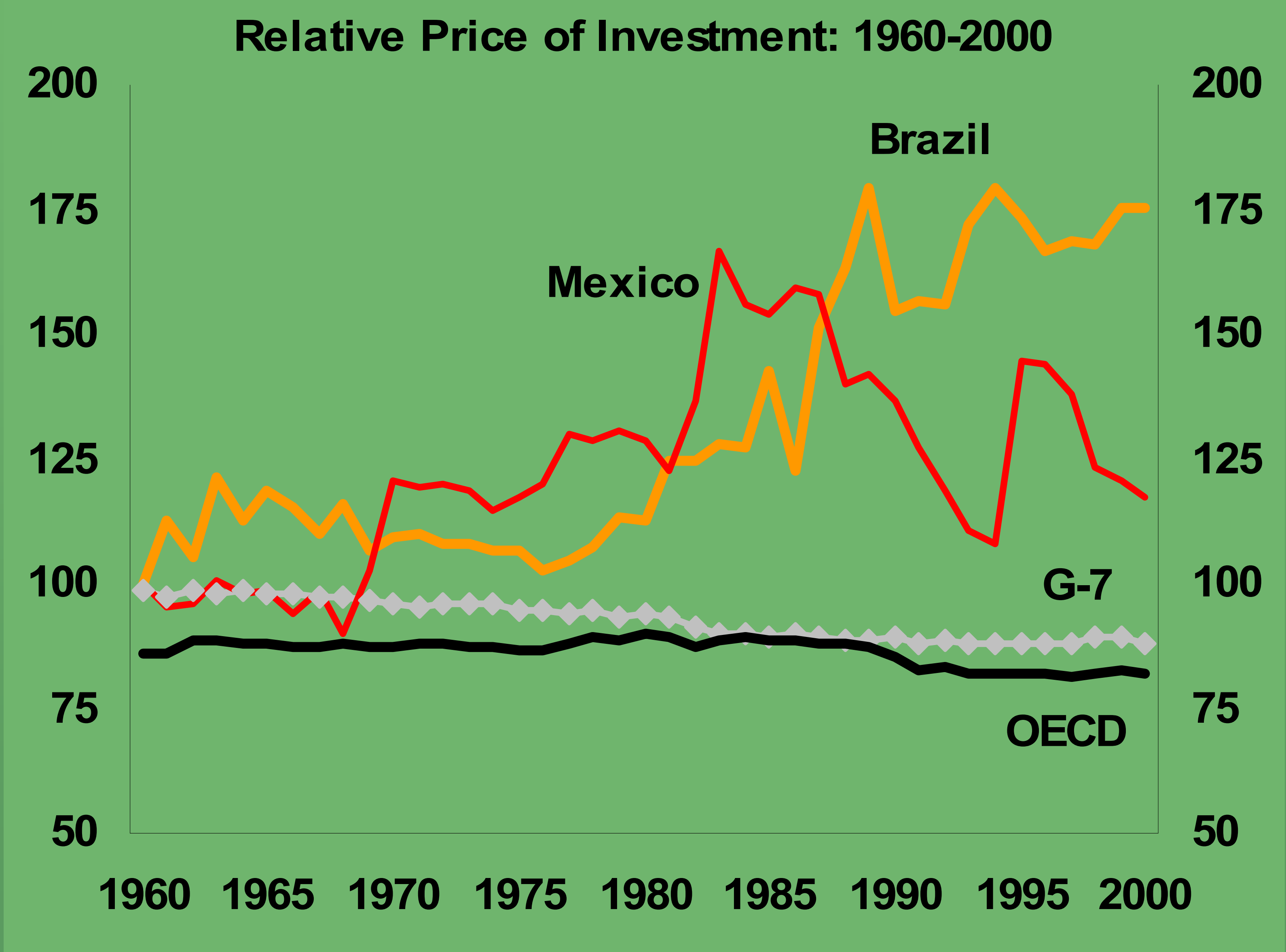
  ✓ Brazil's average growth performance was significantly *better* than predicted on average for all countries based on initial conditions in 1960.

  ✓ Other variables (volatility of terms of trade, income distribution, level of financial development), do not improve the explanatory power of the models. Volatility of terms of trade seems to matter more than fiscal policy volatility.

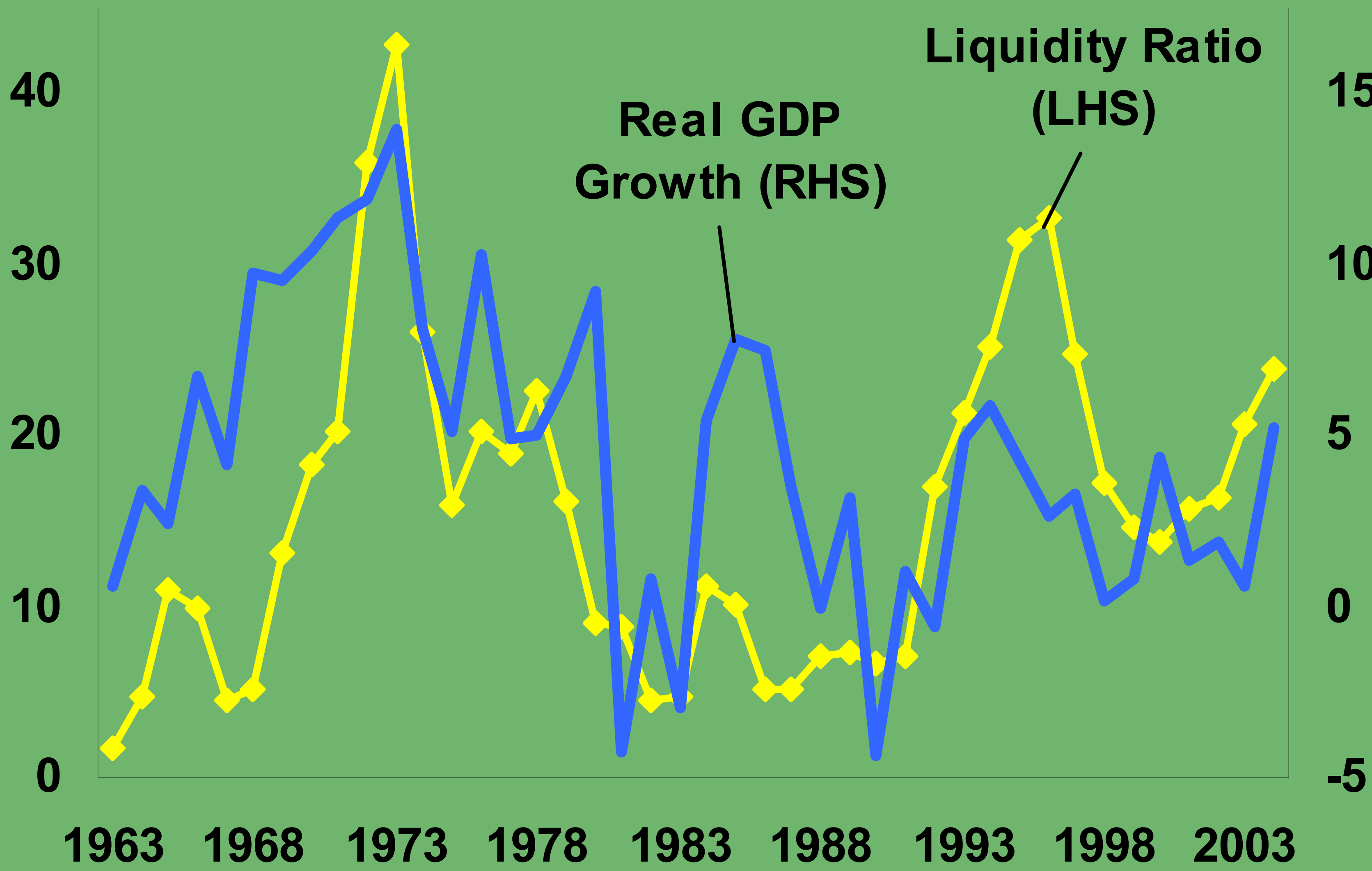
Look at the some growth determinants over time. How does Brazil stand out?

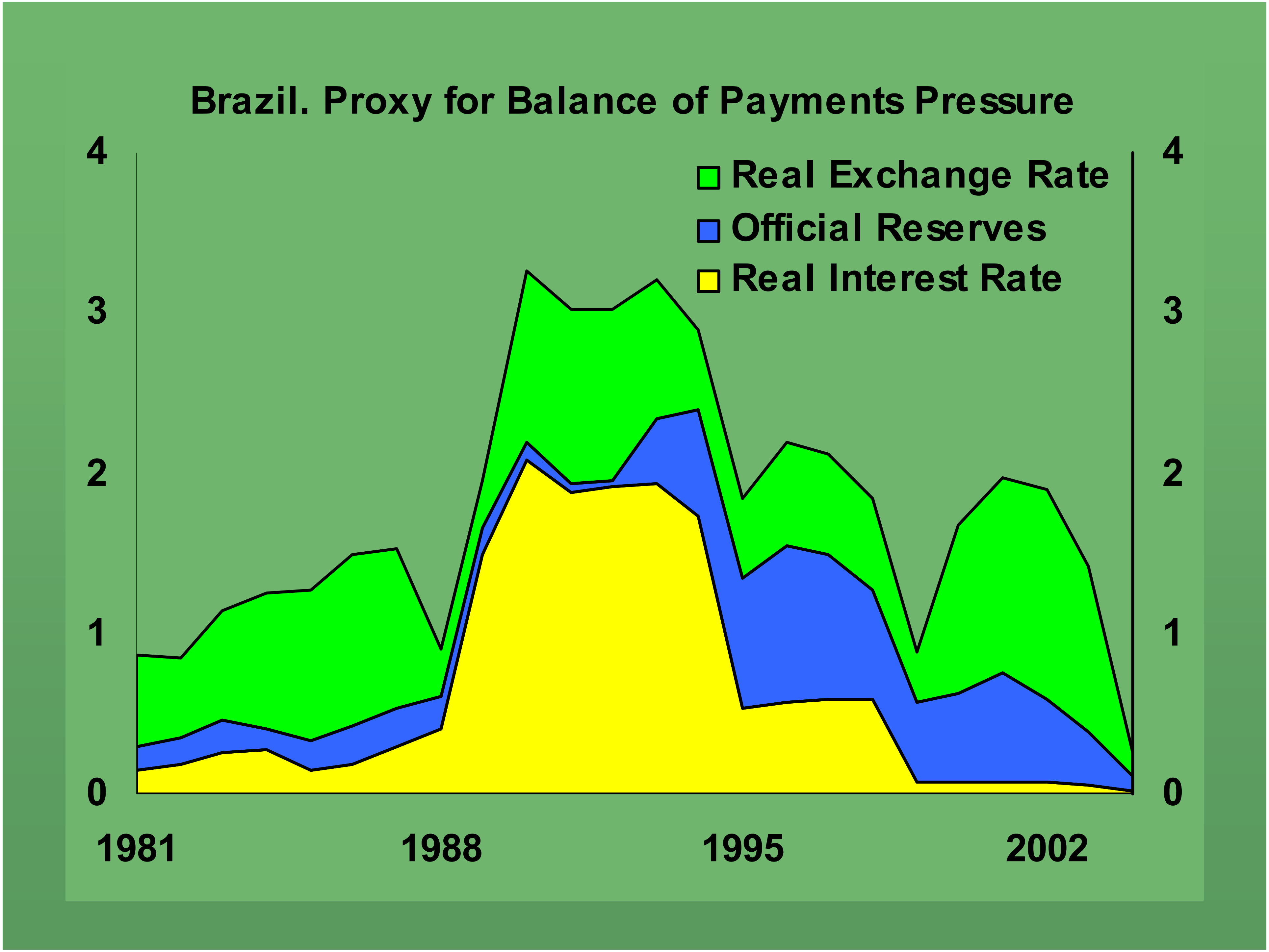
- ✓ Sharp rise in government consumption since 1980.
- ✓ Sharp rise in the relative price of investment since 1980.
- ✓ High dependency on international liquidity or external conditions.

Government Burden: 1960-2000
(general government consumption, in percent of GDP)
20
15
10
5
Brazil
Argentina
India
Mexico
Korea
1960
1965
1970
1975
1980
1985
1990
1995
2000


Relative Price of Investment: 1960-2000
200
175
150
125
100
75
50
Brazil
Mexico
G-7
OECD
1960
1965
1970
1975
1980
1985
1990
1995
2000

Brazil. Liquidity Ratio: 1963-2004
(foreign reserves to total foreign debt, in percent)




Brazil. Proxy for Balance of Payments Pressure
Real Exchange Rate
Official Reserves
Real Interest Rate
4
3
2
1
0
1981
1988
1995
2002

Used Loayza's (2005) framework to estimate the impact on growth of several determinants

- Dynamic model of per capita GDP growth using a panel dataset (with variables defined for 5-year averages
- Sample period extended back to 1970 for Brazil, but reduced number of: 40 and 62
- Assess how well the determinants help explain Brazil's real per capita growth rate.

What are some of the key growth determinants?

Macroeconomic Policies

- ✓ Lack of Price Stability
- ✓ Real Exchange rate misalignment
- ✓ Systemic banking crises

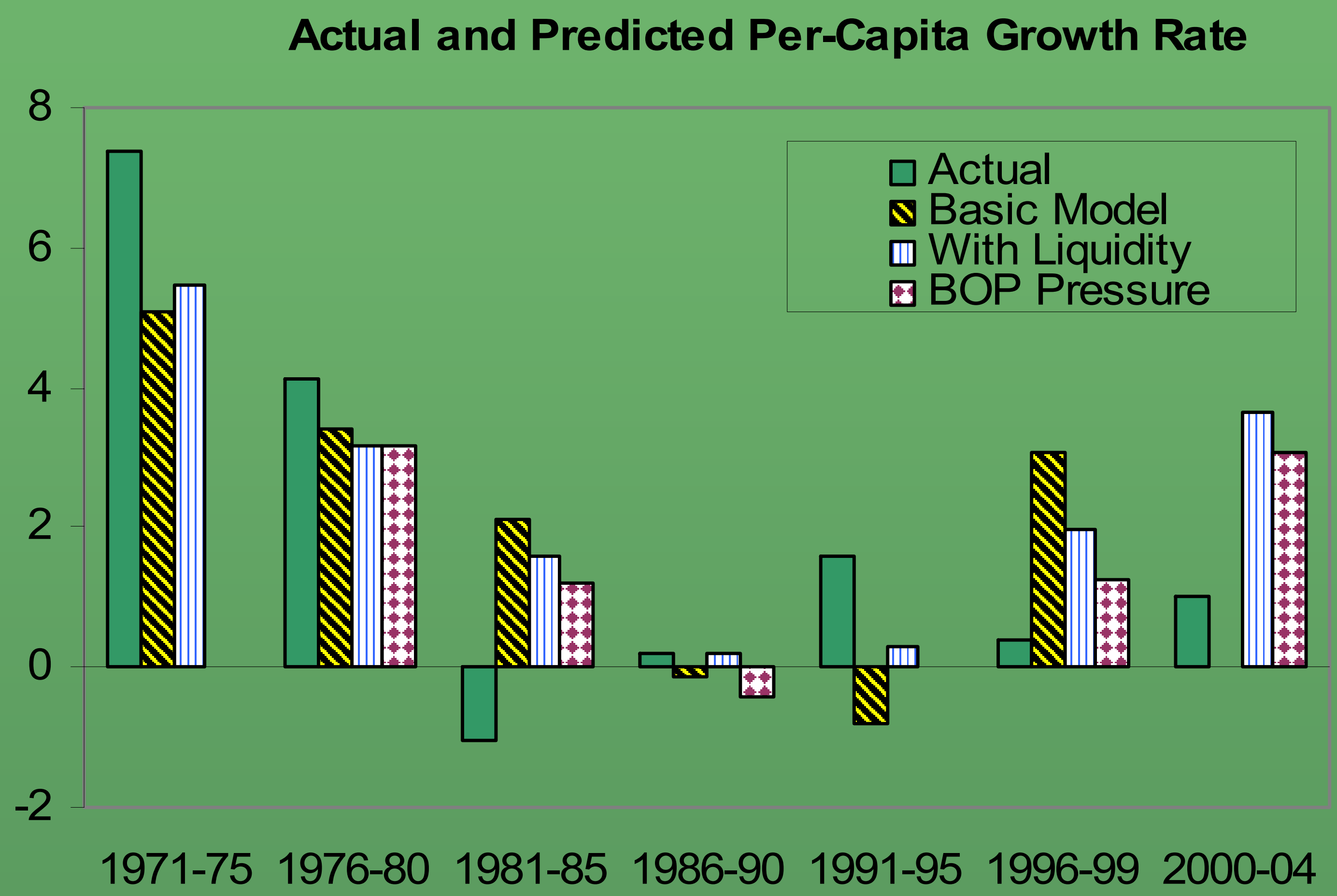
Structural Factors

- ✓ Trade Openness
- ✓ Government burden
- ✓ Public Infrastructure
- ✓ Relative Price of Investment

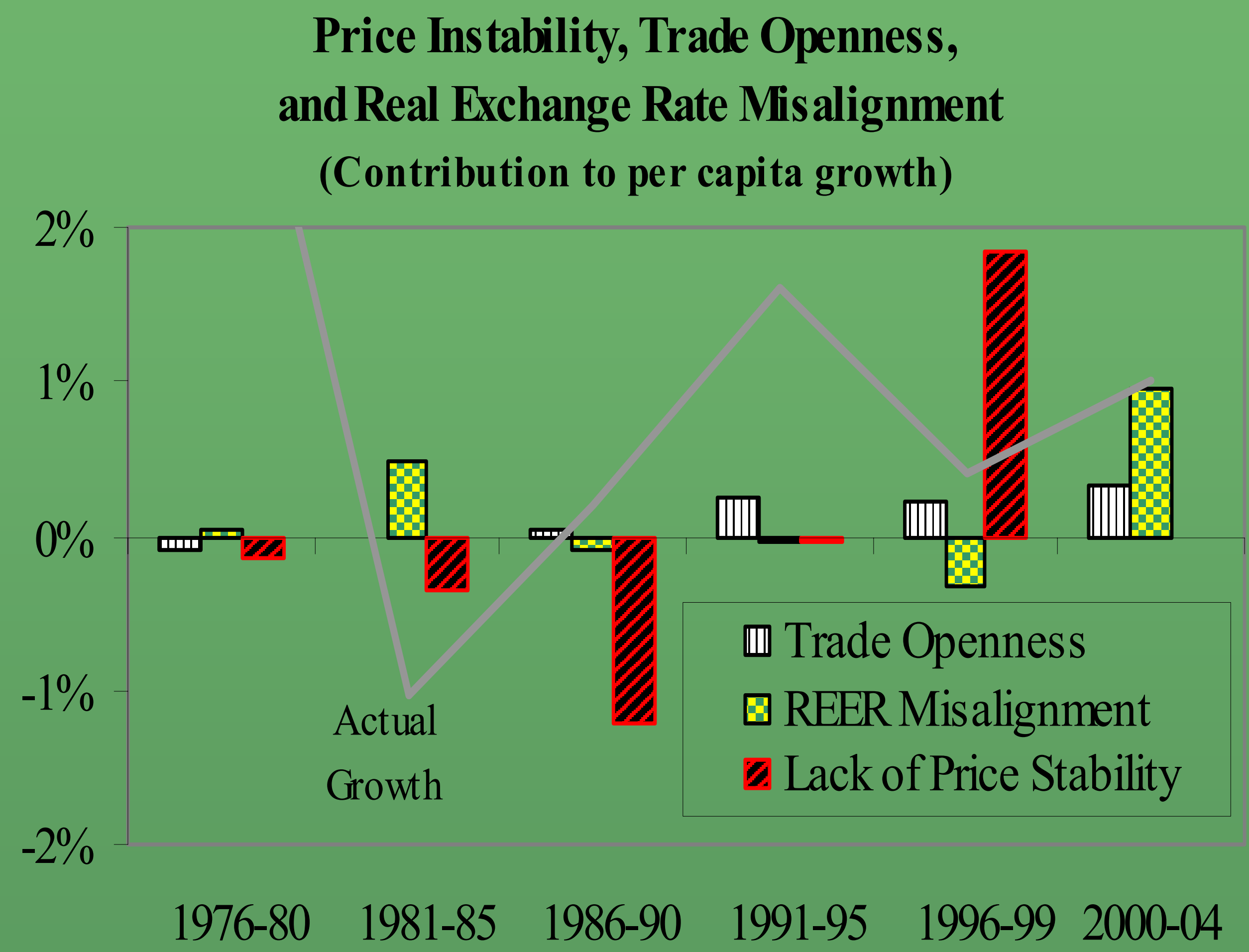
External Conditions

- ✓ Terms of Trade shocks (growth rate)
- ✓ International liquidity/BOP pressure

Models track Brazil's growth relatively well.

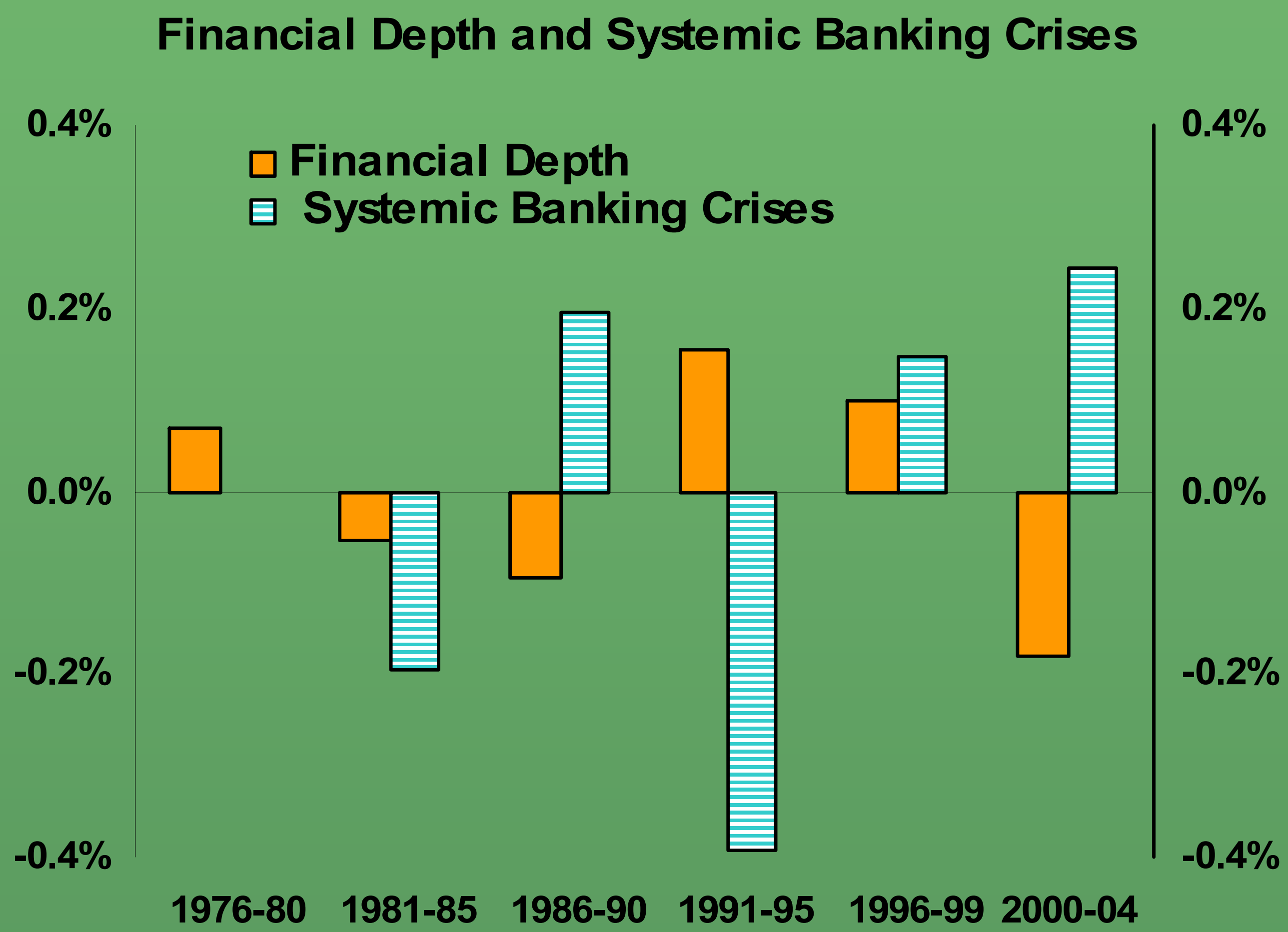


"Macro matters"

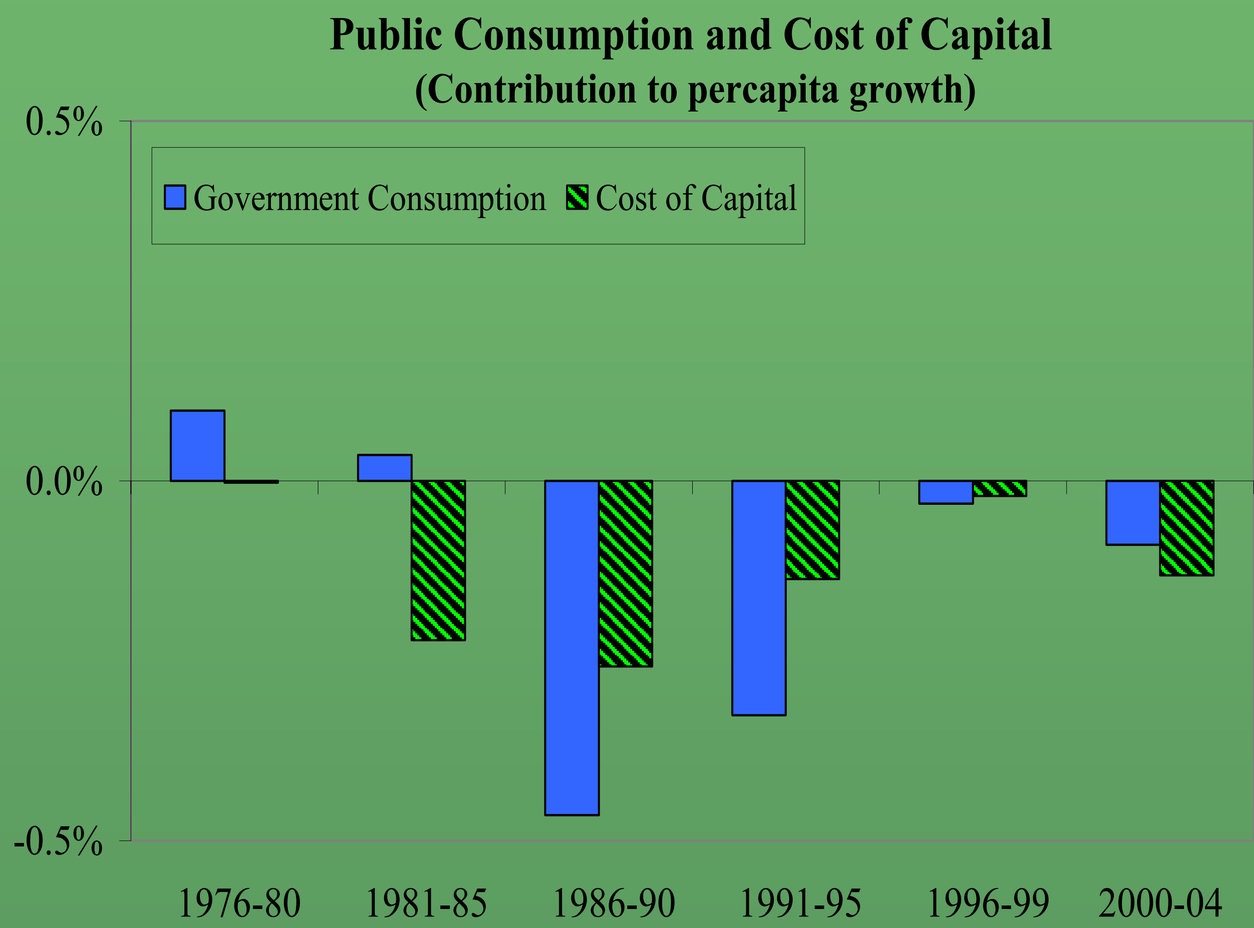


Source: Fund staff estimates; based on Liquidity Model

"Macro matters"

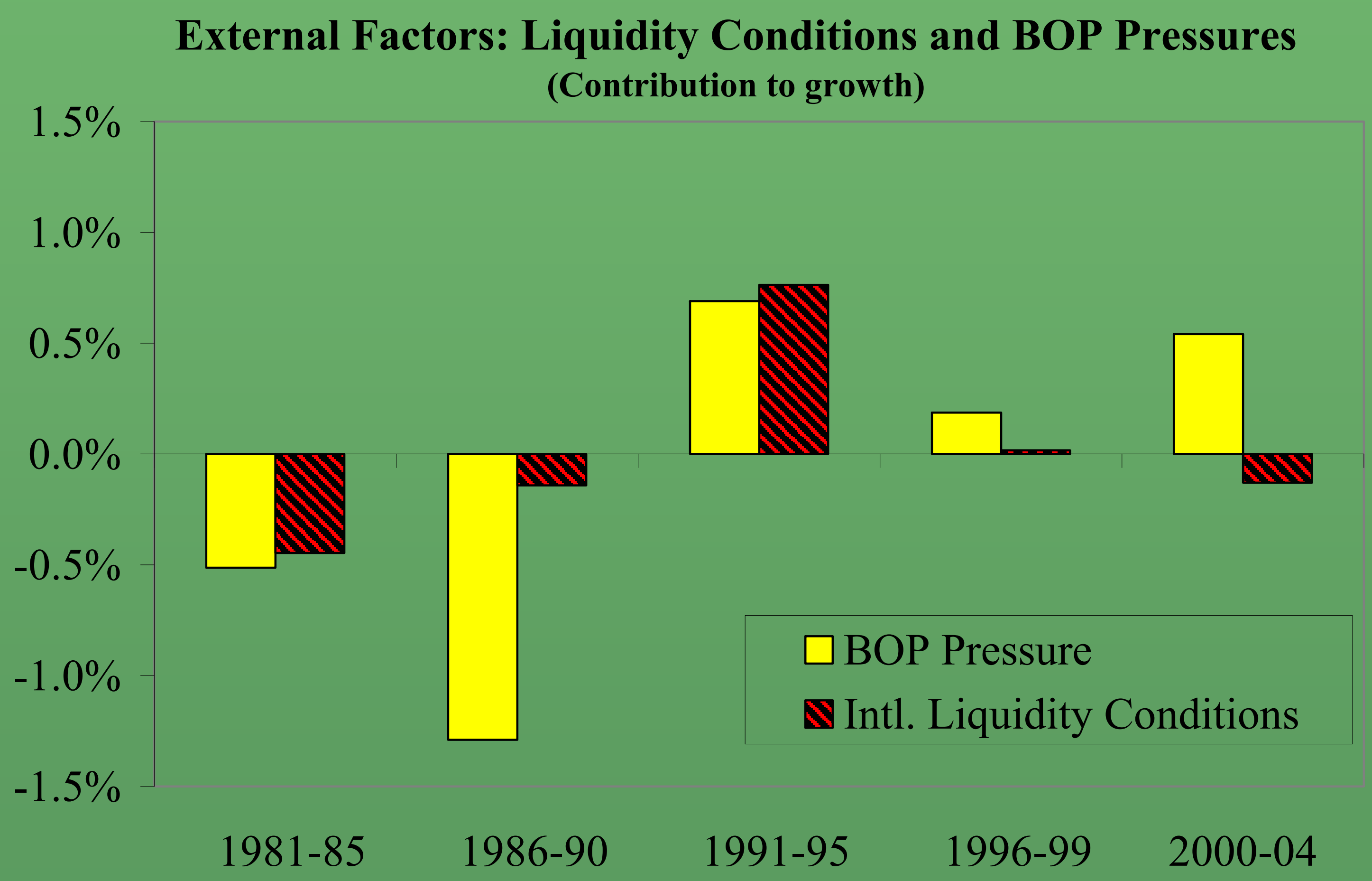


Structural factors continue to be a drag



Source: Fund staff estimates; based on Liquidity

External Conditions have also played an important role



Source: Fund staff estimates; based on Liquidity and BOP Pressure Models.

To conclude

- ✓ Macroeconomic policies and several structural factors have become "growth supportive".
  - ✓ Price stability, lack of systemic banking crises, and a flexible exchange rate regime, which has minimized risks of overvaluation.
  - ✓ Trade liberalization and increased openness.
  - ✓ Policy framework has led to less disruptive external shocks; lower volatility of policy interest rates and international reserves.
- ✓ Other structural reforms are needed as additional sources and to further boost per capita growth.
  - ✓ Reduce the high level of government consumption.
  - ✓ Higher productivity, particularly in the tradable sector needs to follow exchange rate "undershooting" as an engine for trade openness.
  - ✓ Lower the cost of capital, reforms to further reduce the relative price of investment and to lower real interest rates.
- ✓ Models do not fully capture many of the complex factors associated with Brazil's phenomenal growth and sharp deceleration, including the debt overhang of the 1980s and sudden stops of the 1990s.