

A BRIEF HISTORY OF BRAZIL'S GROWTH

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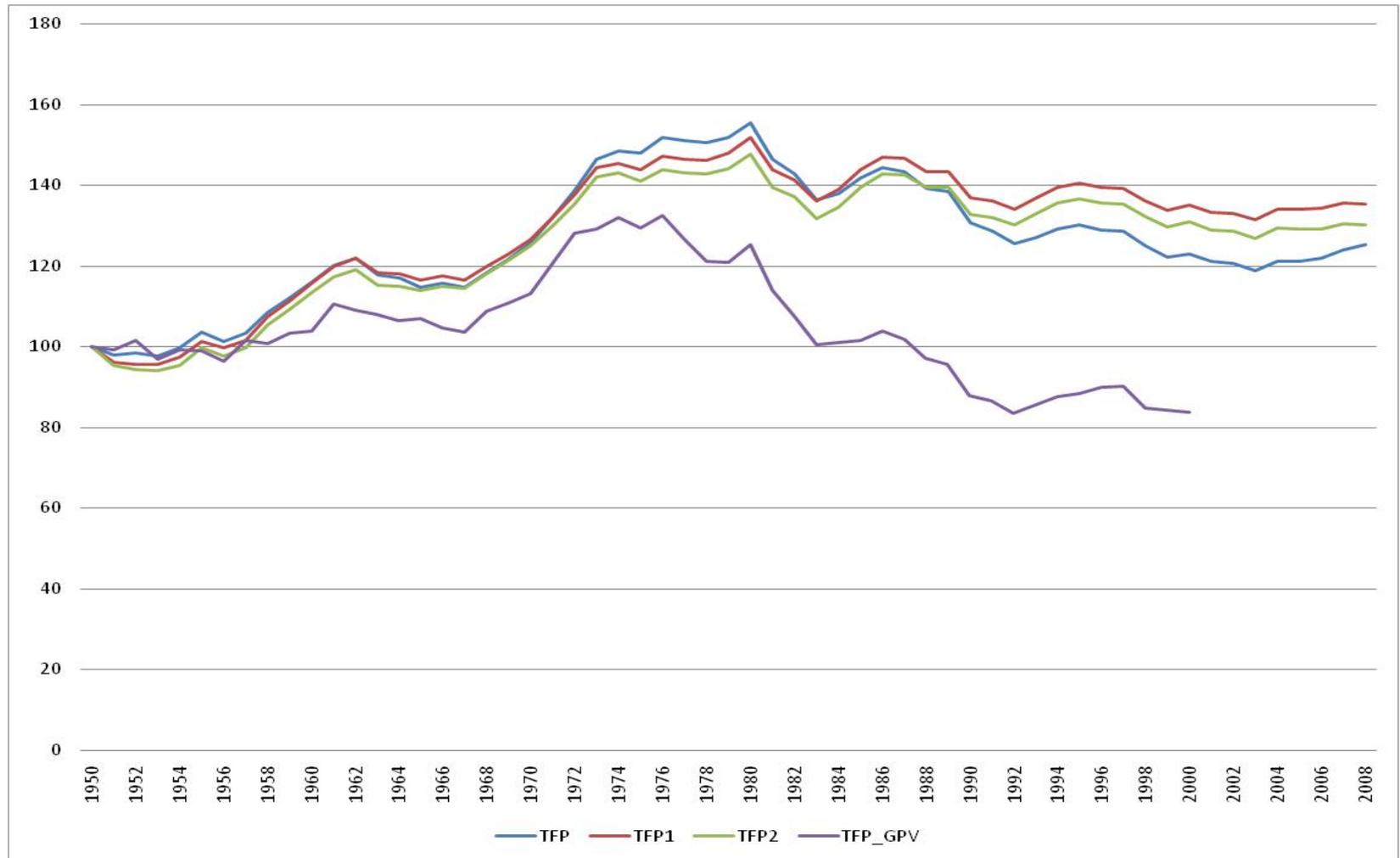
Summary

- **Breaks in Economic Growth**
- **Growth Accounting**
- **Trend, Cycles and Terms of Trade**
- **From Import Substituting Industrialization to the Economic Miracle**
- **From the Lost Decade to a New Era?**

Identifying the Changes in Trend of Brazil's GDP per Capita Growth Rate 1900- 2008

Number of Breaks	SBC Statistics	Year of Break
0	817.74	
1	815.00	1980
2	810.16	1918, 1980
3	808.75	1918, 1967, 1980
4	810.09	1918, 1967, 1980, 1992
5	811.36	1918, 1928, 1967, 1980, 1992
6	812.66	1918, 1928, 1942, 1967, 1980, 1992
7	813.89	1910, 1928, 1942, 1955, 1967, 1980, 1992
8	814.97	1918, 1928, 1942, 1955, 1967, 1977, 1987, 1998

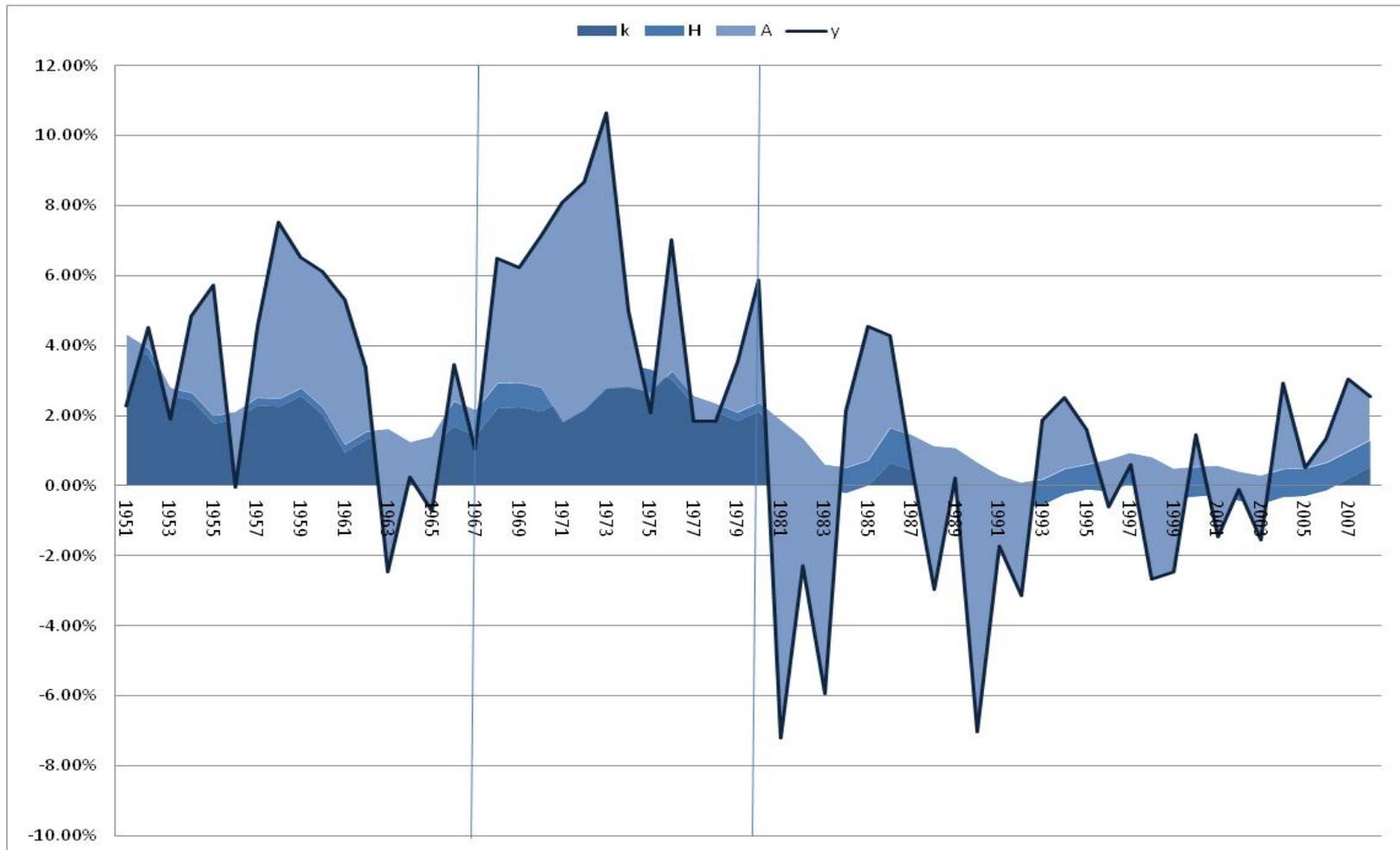
Total Factor Productivity Brazil, 1950-2008



Annual Growth Rates Average during the Period, Percent Brazil, 1951-2008

Period	Growth Rate of Output	Growth Rate of Output per Capita	Growth Rate of Output per Worker	Growth Rate of Human Capital	Growth Rate of Physical Capital per Worker	Growth Rate of Total Factor Productivity
1951-1966	6.36	3.24	3.27	0.41	5.16	0.96
1967-1979	8.90	6.22	5.67	-0.02	6.51	3.08
1980-2008	2.47	0.77	-0.38	1.35	-0.14	-1.13

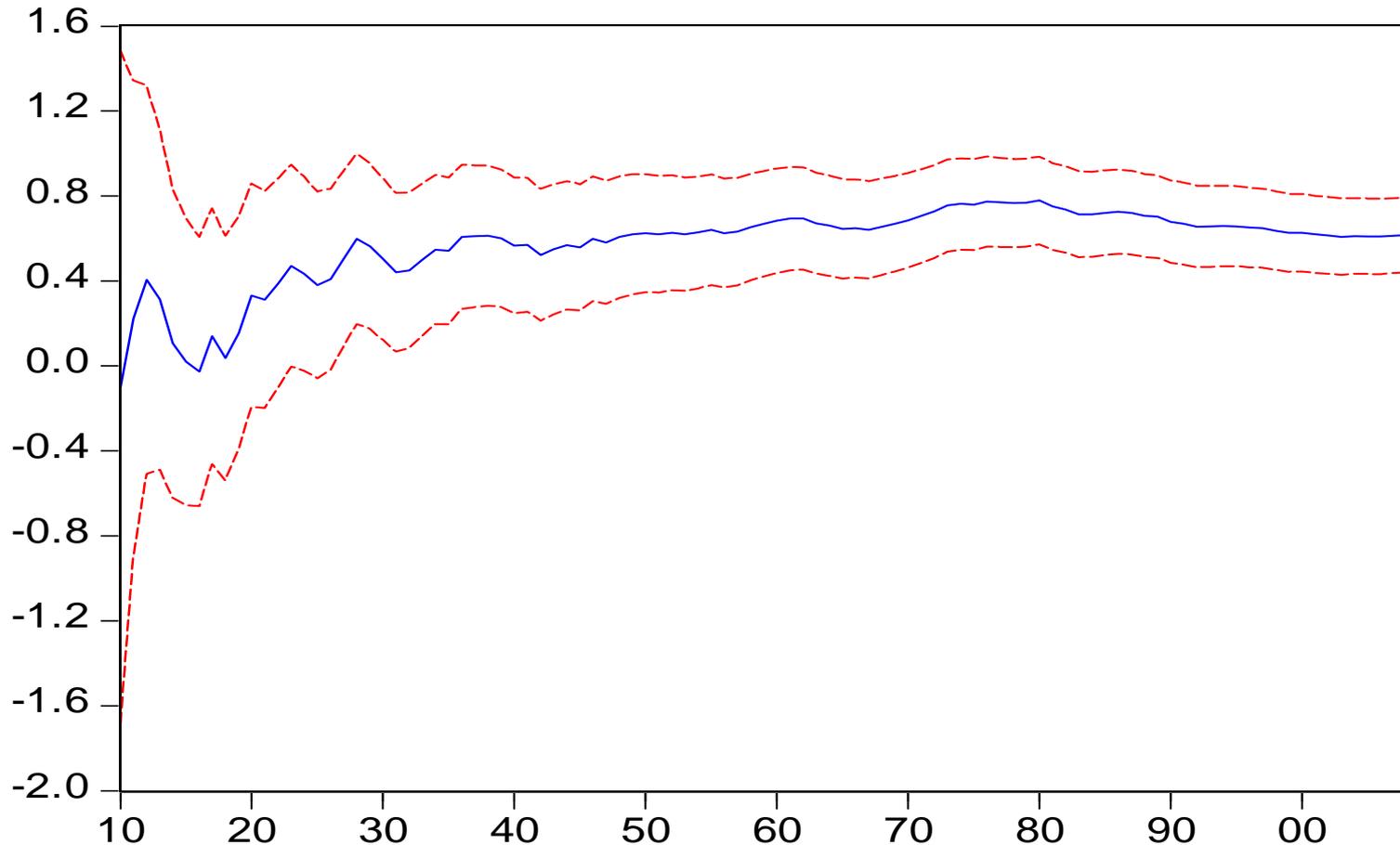
Decomposition of Growth of Output per Worker Brazil, 1951-2008



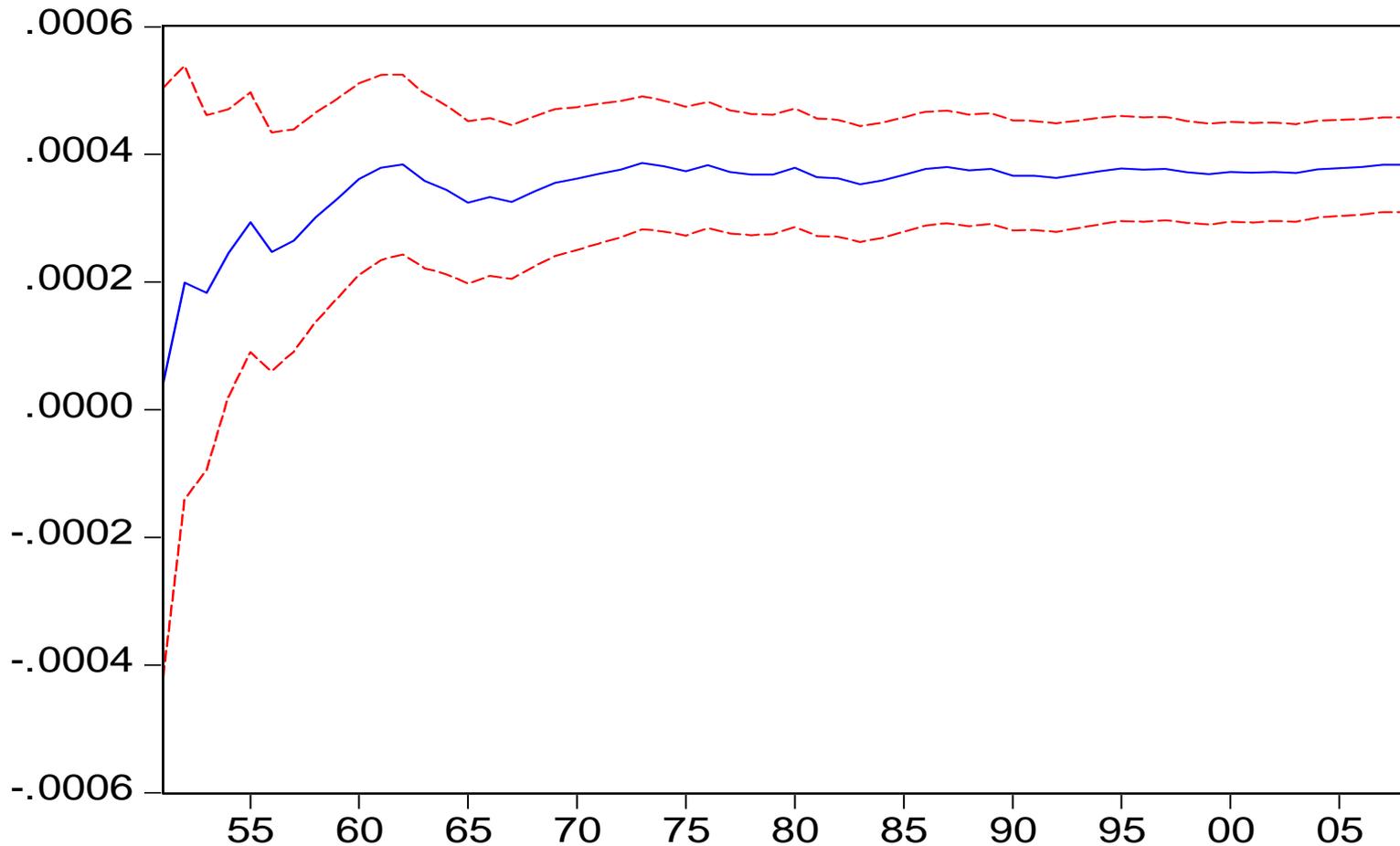
Changes in Growth Regime

- The significant increase in the rates of growth from the first regime (1951-1967) to the second (1968-1980) resulted from the growth in the rates of TFP growth.
- The change to the third regime (1981-2008) is marked by a fall in both the growth in productivity and the rate of accumulation of capital by worker

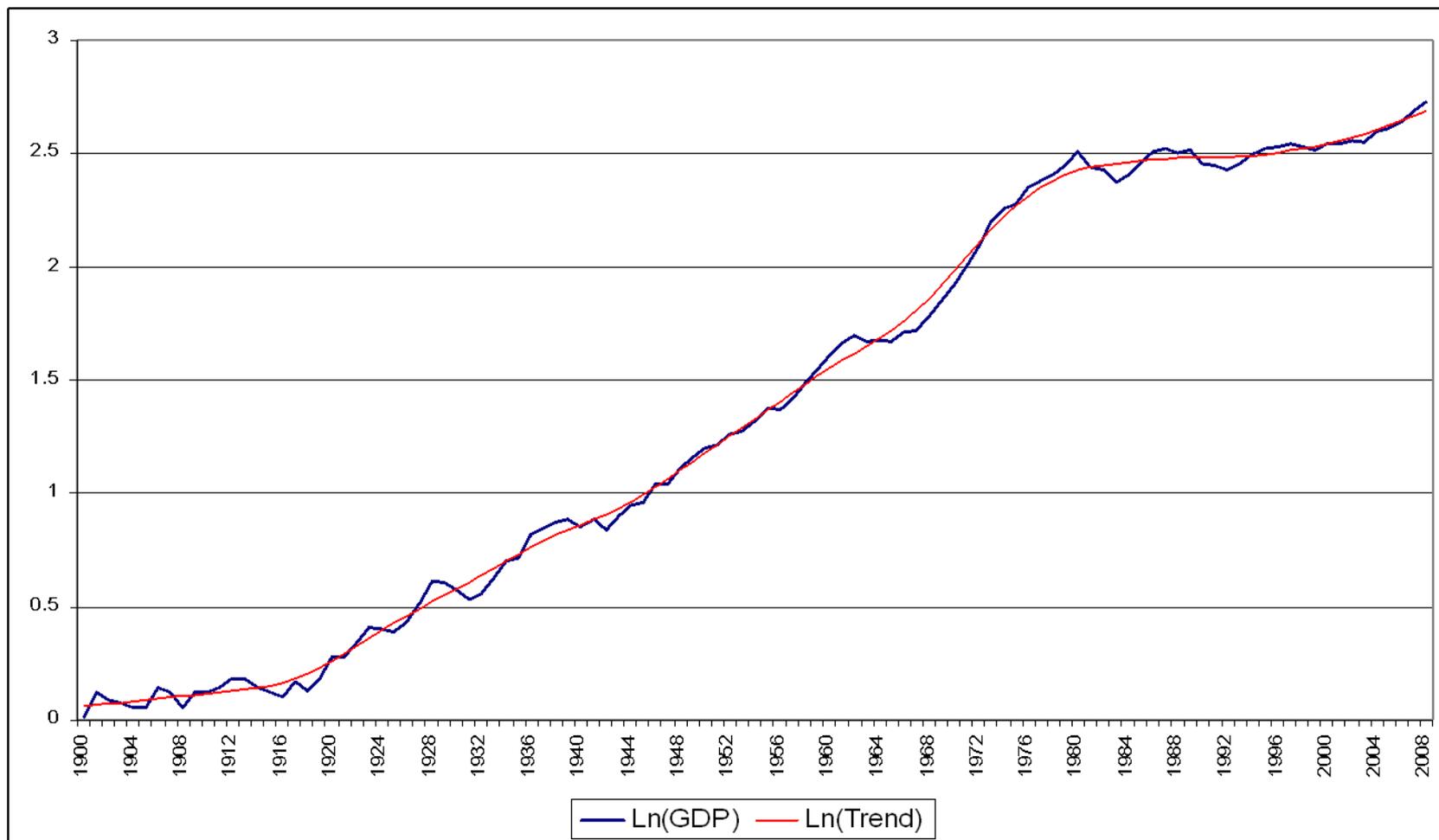
The Effect of Terms of Trade on the Growth Rate of GDP per Capita Brazil, 2010 - 2008



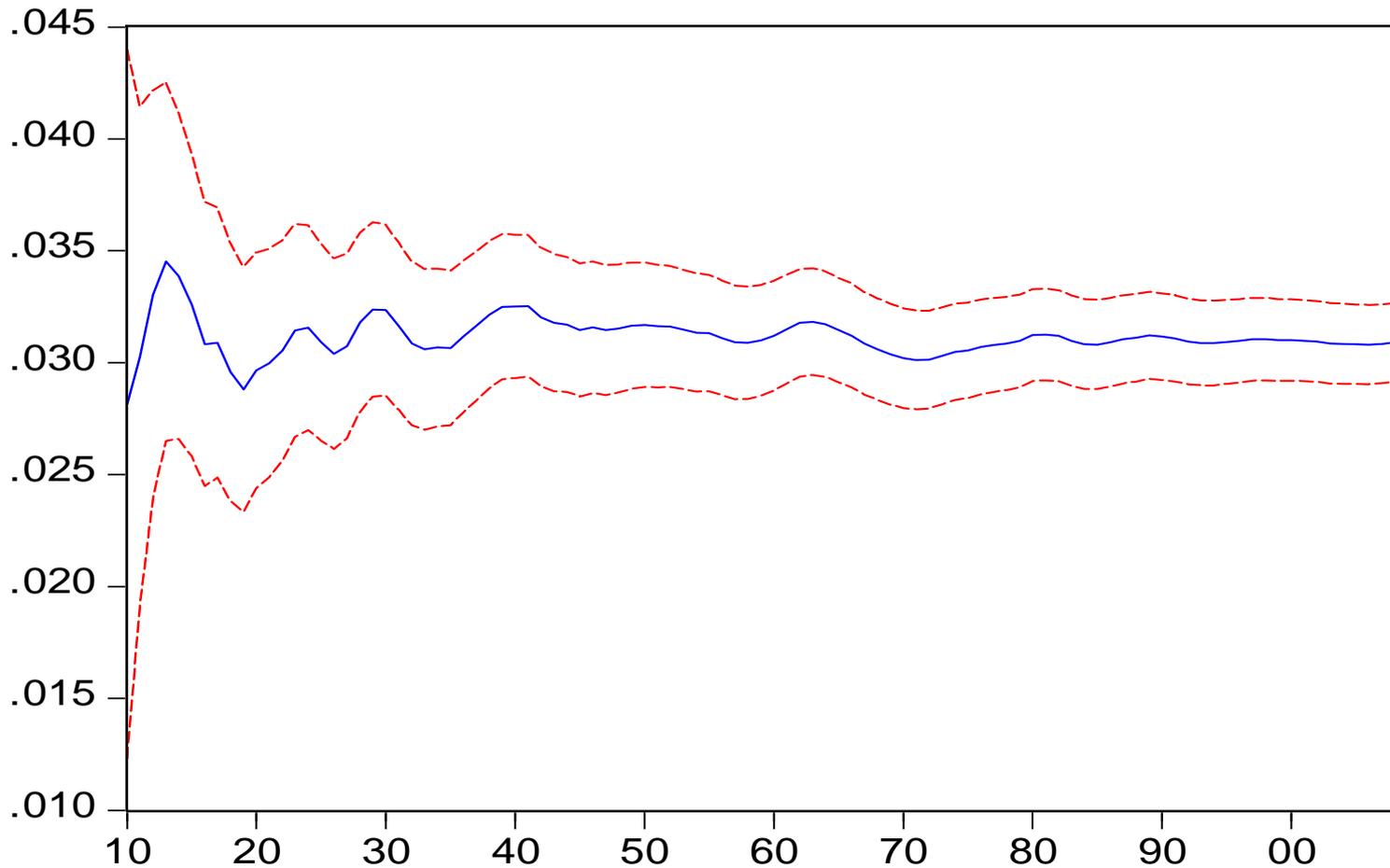
Effect of Terms of Trade on Output per Worker (for a model including control variables) Brazil, 1950-2008



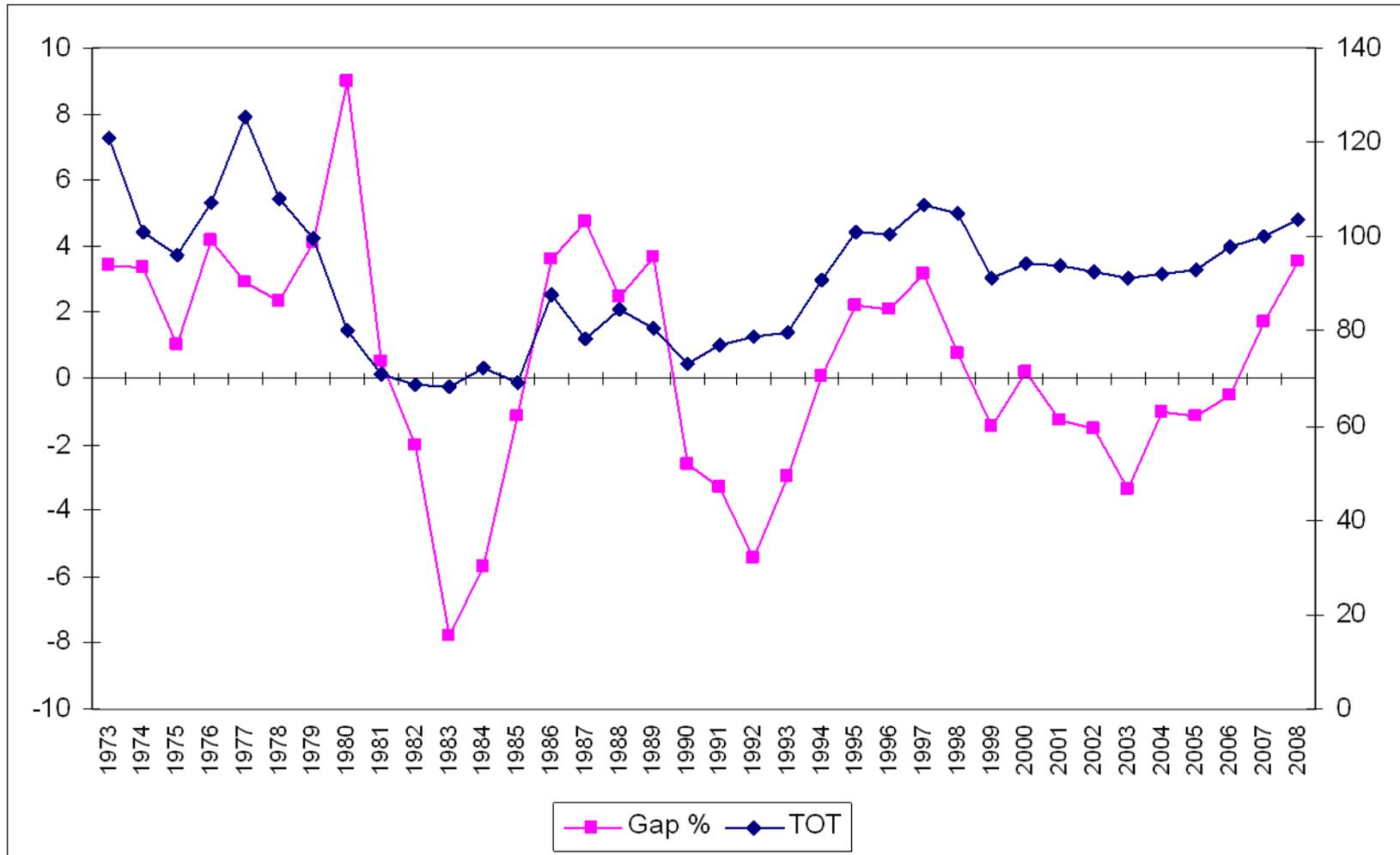
GDP per Capita and Trend GDP Brazil, 1900 – 2008



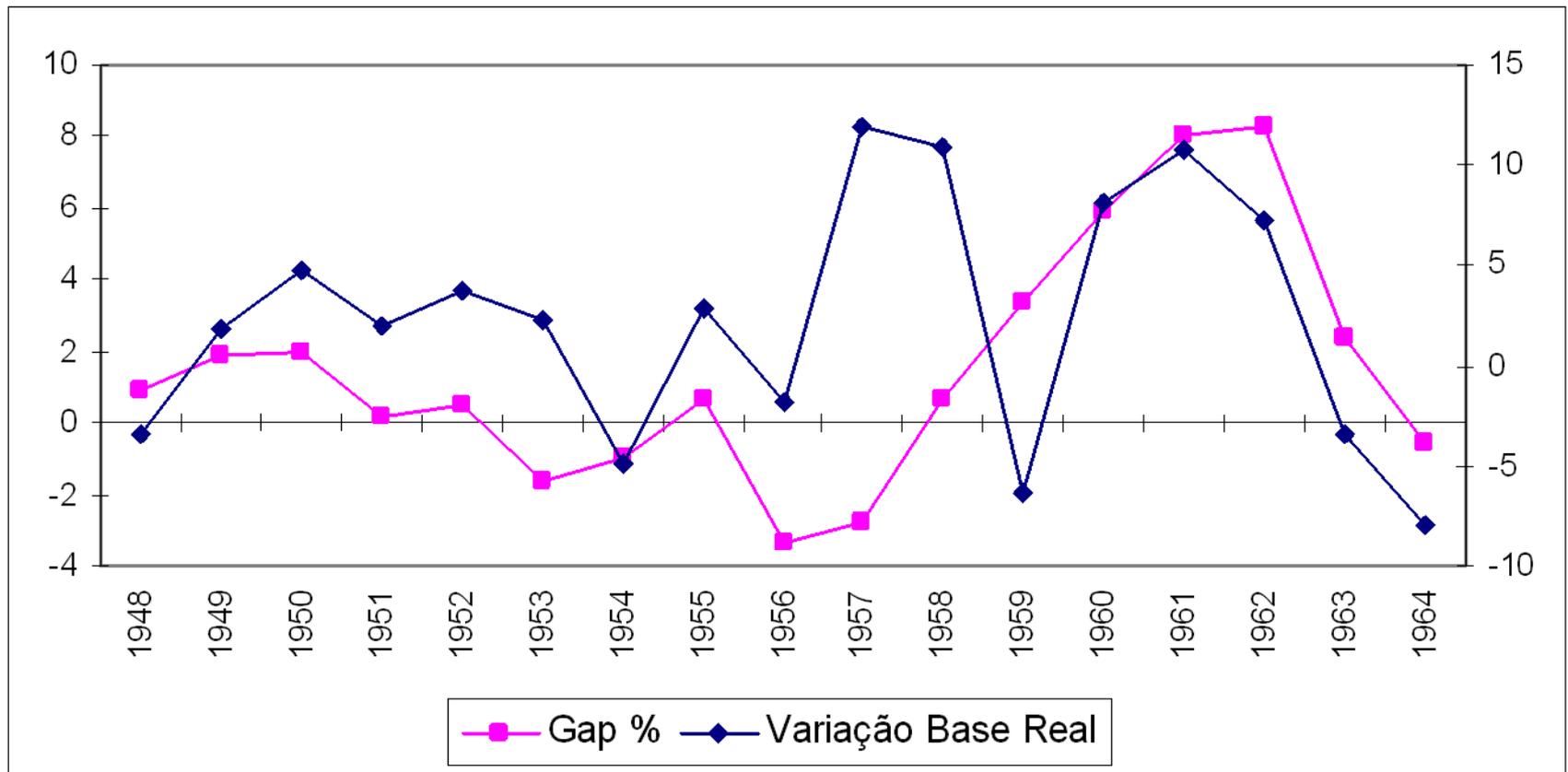
The Effect of Terms of Trade on GDP Gap, Brazil, 1910 - 2008



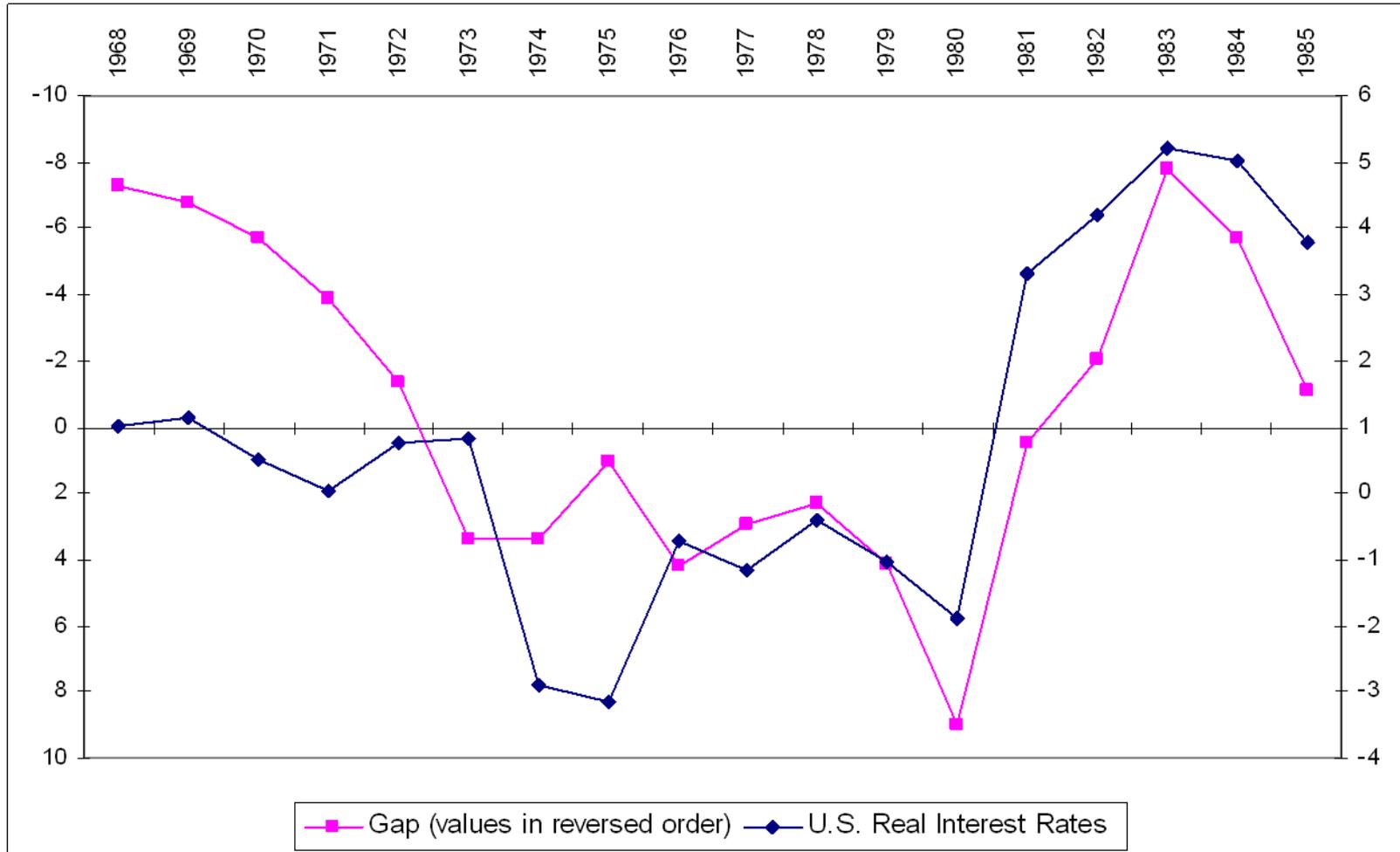
GDP Gap and Terms of Trade Brazil, 1973-2008



GDP Gap and Percent Change of the Monetary Base Brazil, 1948-1964



GDP Gap and U.S. Real Interest Rate Brazil, 1968-1985



After the 1980s

- The increase in risk, both political and economic, experienced by the Brazilian economy for the majority of the period starting after 1980 would have inhibited investment, braking economic growth.
- A fall in productivity implies in a fall in the marginal product of capital and, consequently, of investment. Thus, the fall in the accumulation of capital could be seen also as a consequence of the fall in productivity.
- Mussolini and Teles (2009) find the explanation for the variations in productivity growth in Brazil in the behavior of public infrastructure investment.
- The very high inflation rates of the 1980s may also be a reason for the “down-break” of trend growth observed after 1980.

A New Era?

- Between 2002 and 2008, Brazil benefited from global growth with its demand for commodities, the production of which Brazil has an undeniable comparative advantage. Between August of 2002 and August of 2005, the price of Brazil's semi-manufactured exports rose by 43 percent and the price of its basic products by 59 percent. The benefits wrought by the positive shock of the terms of trade to the economy were visible. The exchange rate appreciation allowed for a reduction in the external debt and the increase in the prices of exports on investment for the production of raw materials was remarkable. Such prosperity came under threat in the second half of 2008 as a result of the global financial crisis.

The Brazilian economy responded to the 2007-09 international crisis differently than it used to respond to international crises in the past.

Past Crises

- In the past, exchange rate devaluation resulting from external shocks would cause at least two serious problems: an inflationary impact and an increase in the public debt/GDP ratio (because part of the debt was indexed to the dollar). The Central Bank would be forced to increase the interest rate in order to control the inflationary effect of the currency devaluation. In turn, this measure contributed to a new rise in public debt. To maintain confidence in the solvency of the public sector, the government would have to increase the primary surplus. Both the monetary and the tax policies multiplied the external shock's contracting impact, aggravating the recession induced by the external shock.

In the current crisis, Brazilian credit and external accounts suffered a significant impact during the final months of 2008. Since then the country has been able to partially contain its effects.

- As opposed to what has occurred in the past, the devaluation of the real did not translate into an increase of the public debt during the crisis at the end of 2008 – in fact, there was a profit that created a margin for emergency financial aid actions. The high international reserves served to soften part of the devaluation shock, which brought losses for companies that speculated in the exchange rate derivatives market, but there was no capital flight. And the Central Bank was also able to reduce interest rates.

Concluding Remarks

- After stabilization in the mid-1990s, the country seems to be mending its way to judge from the economy's response to the last international crisis. Yet, Brazil's fiscal strategy remains questionable. The government has relied on a steadily rising tax burden to finance steadily rising fiscal spending. In 2008, tax collection amounted to 36 percent of GDP, nearly 14 percentage points higher than levels between 1991 and 1993.
- By mid-2009, Brazil's short term fiscal picture looked under control despite some deterioration. However, both the primary surplus and the budget deficit have weakened lately. In mid-2009, the ratio of the primary surplus relative to GDP had declined by about 2 percentage points in less than a year and, despite the decline of the burden of fiscal interest payments, the budget deficit had worsened to 3.2 percent of GDP.

Concluding Remarks (continued)

- Brazil's fiscal deterioration appears mild by recent international standards. Counter-cyclical policies, however, have to be temporary. It is true that recent tax breaks fit this description, but the rise in spending inspires caution. Federal expenditures have risen in areas such as public sector wages and hiring, which seem hard to unwind quickly if necessary. There is also reason for concern in the potential quasi-fiscal costs associated with the current aggressive expansion of credit by public sector banks.

From the point of view of stimulating Brazil's growth potential, it appears that important fiscal reforms and infrastructure investment will be needed for leading productivity to a higher and sustainable path. A hypothesis worth investigating in future work is whether high and complex taxation is one reason for the poor performance of GDP growth in Brazil relative to other emerging countries.