

# The Third Wave of Democratization, Debt Crisis, and Hyperinflation

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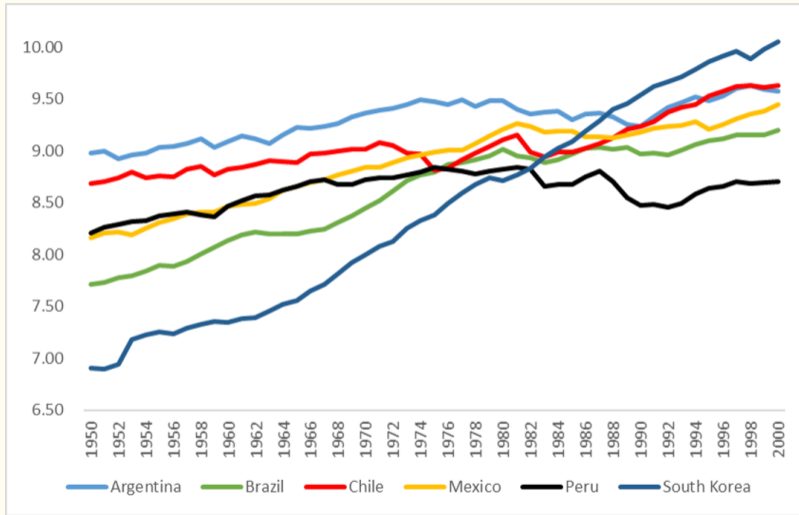
Angel Alvarado,<sup>1</sup> Fernando Arteaga,<sup>1</sup> Jesús Fernández-Villaverde<sup>1</sup> and Ivan Luzardo Luna<sup>1</sup>  
April 30, 2023

<sup>1</sup>University of Pennsylvania

## Recap: Latin America after WWII

- The 1950s/1960s: the consolidation of the Import-Substitution Industrialization (ISI) model.
- The 1970s: a debt-led growth era.
- The early 1980s: sovereign debt crisis and a new waves of defaults.
- The late 1980s: slow recovery and hyperinflations.
- But also a new wave of democratization.
- The 1990s: partial economic liberalization.

# Real GDP per capita in logs, 1950-2000 (2011 \$)



Source: Maddison dataset.

- State-Owned Enterprises during the ISI era.
- A debt-led growth era in the 1970s.
- The sovereign debt crisis of the 1980s.
- Adjustments and hyperinflations.
- A new wave of democratization in the late 1980s.

## State-owned enterprises during the ISI era

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# The state-owned enterprises in Latin America

- An important characteristic of the ISI model.
- Major recipients of preferential loans.
- Consolidation of development banking.
- In several cases, monopolistic or quasi-monopolistic position.
- Mainly in transportation, communication, and utilities.
- But also, in main export commodities.



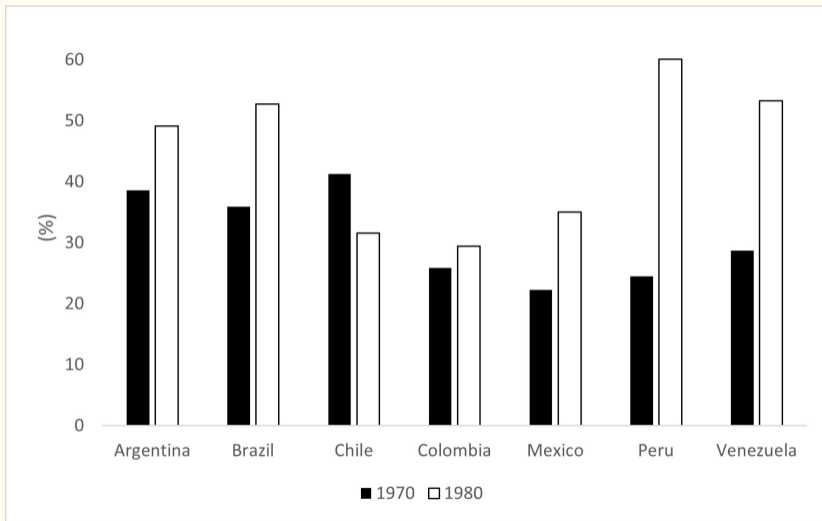


**PETROBRAS**



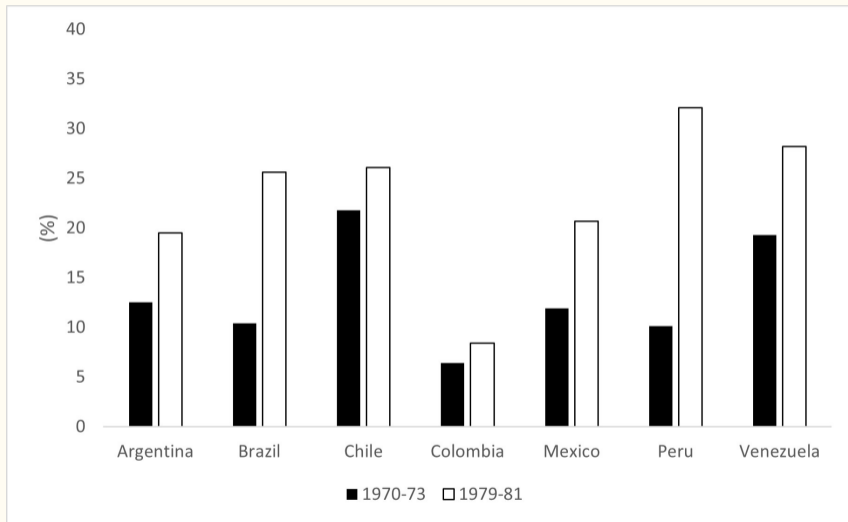


## Consolidated nonfinancial public-sector expenditure (% of GDP)



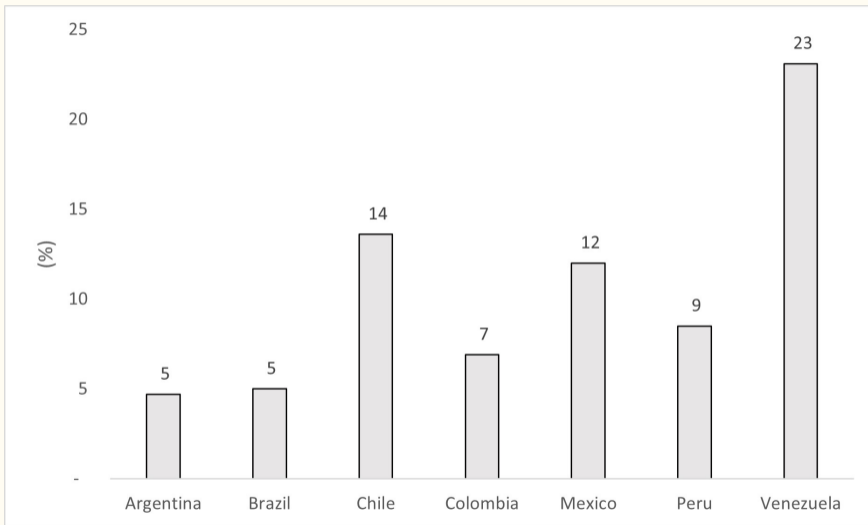
Source: Bulmer-Thomas (2014).

## Current and investment expenditure by state-owned enterprises (% of GDP)



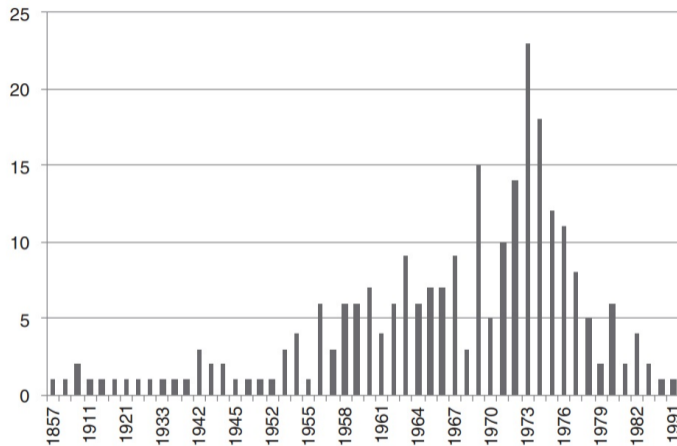
Source: Bulmer-Thomas (2014).

## State-owned enterprises output 1975-85 (% of GDP)

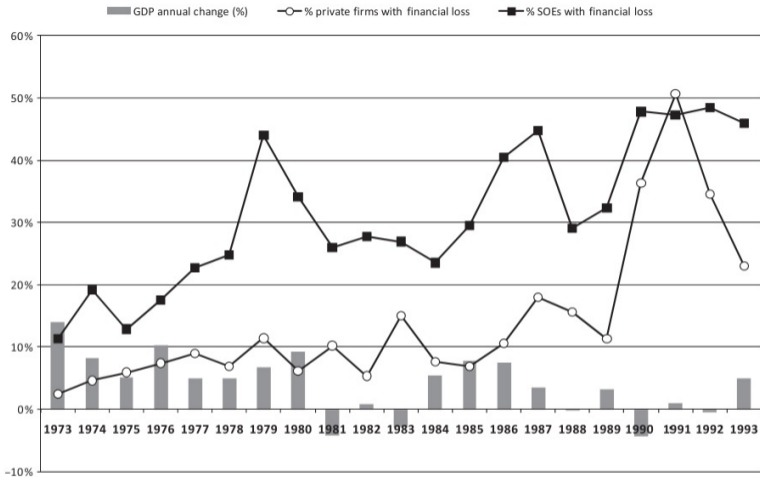


Source: Musacchio and Lazzarini (2014).

## New nonfinancial SOEs in Brazil, 1857-1986



**Figure 4.2.** Number of new nonfinancial state-owned enterprises per year, 1857–1986



**Figure 6.1.** GDP growth and the losses of private and state-owned firms in Brazil, 1973–1993

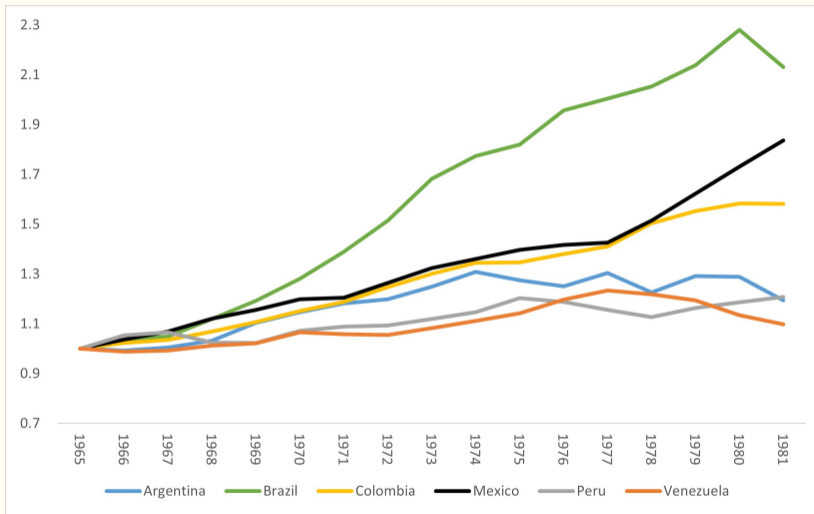
Source: Musacchio and Lazzarini (2014).

## A debt-led growth era in the 1970s

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- Before the 1970s, access to credit was mainly via export/import banks and multilateral institutions (IMF, World Bank, and the IDB).
- The collapse of Bretton Woods in 1971.
- Eurodollars and petrodollars (after 1973).
- Private banks: syndicated loans and flexible interest rates.

## Real GDP per capita index, 1965-1981 (1965=1)

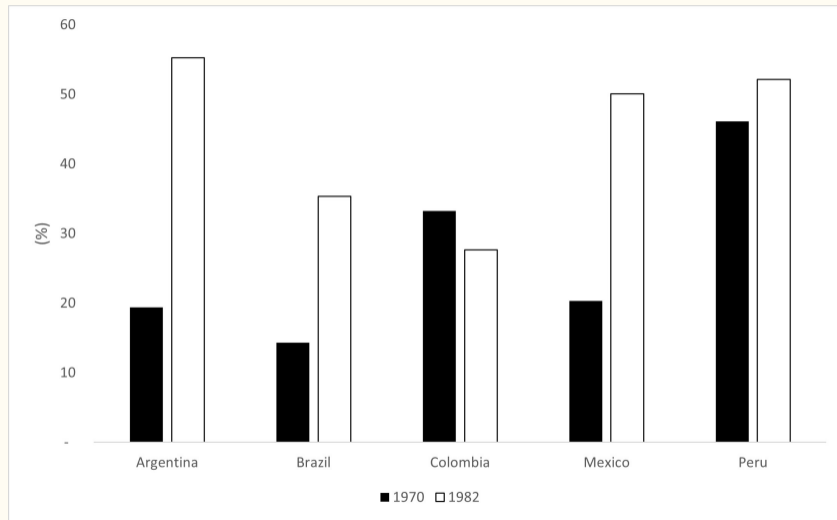


Source: Maddison dataset.



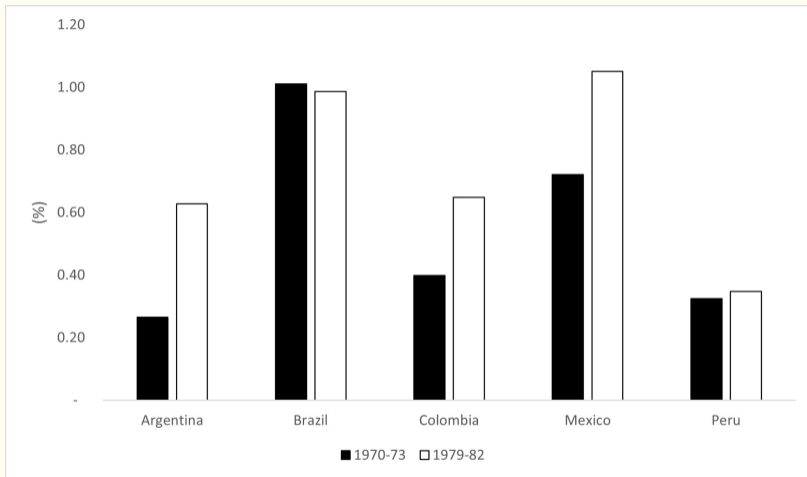
- Before the 1970s: financial repression.
- Some financial liberalization in the 1970s.
- Removal of capital controls.
- Exchange rate pegs, but appreciation.
- However, the financial sector remained substantially controlled by the government.

## External debt stocks (% of GNI)



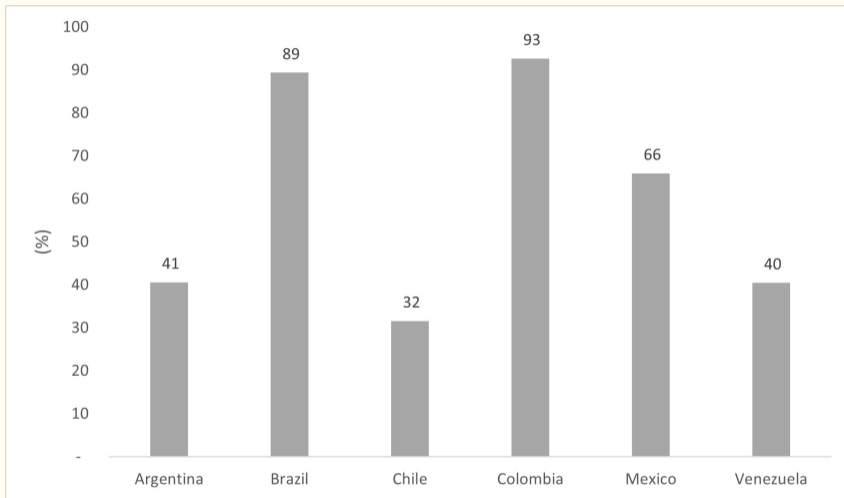
Source: World Bank.

## Foreign direct investment, net inflows (% of GDP)



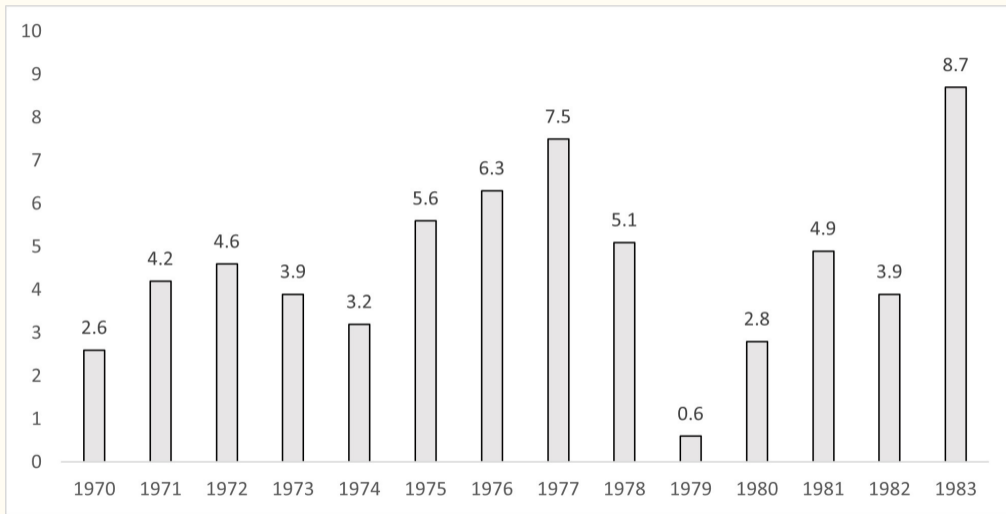
Source: World Bank.

## External public debt in 1981 (% of Total External Debt)



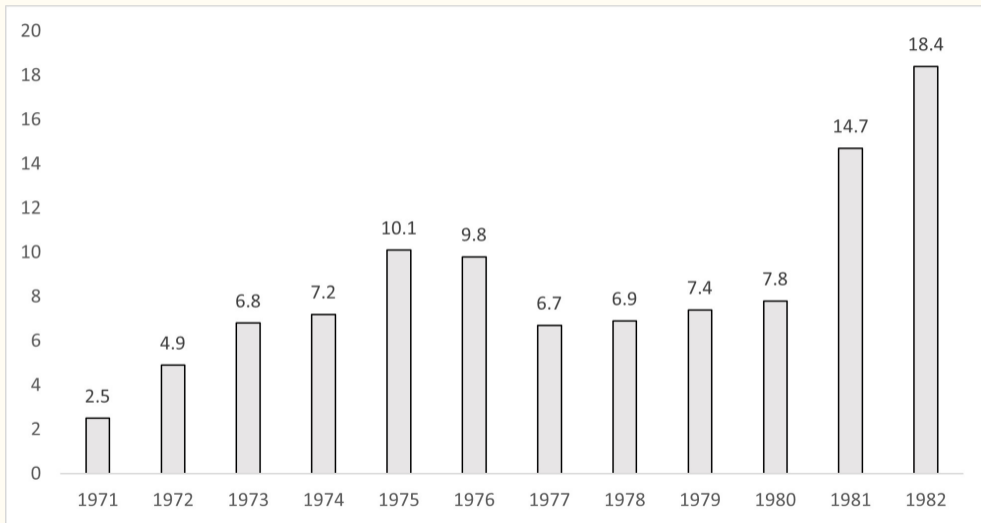
Source: Hartlyn and Morley (1986).

## Fiscal deficit Brazil, 1970-83 (% of GDP)



Source: Hartlyn and Morley (1986).

## Fiscal deficit Mexico, 1971-82 (% of GDP)



Source: Hartlyn and Morley (1986).

# The sovereign debt crisis of the 1980s

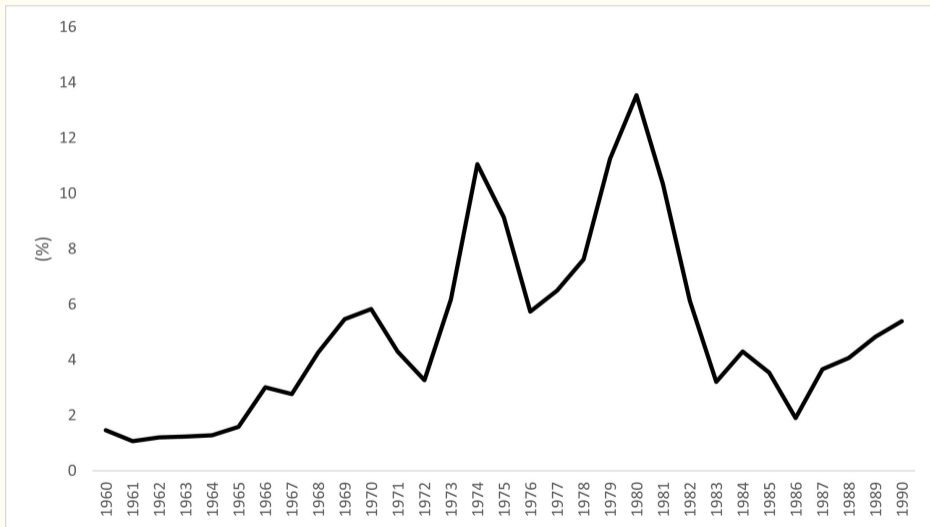
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## The 1980s, the “lost decade”

- Financial repression up to the mid-1970s (capital controls, public development banks, cap on nominal interest rate, direct government intervention on credit allocation).
- Financial liberalizations in the late 1970s.
- Financial crises in 1981-1982.
- In August 1982, Mexico went into default.
- Slow recovery.



# Annual inflation rate US, 1960-90

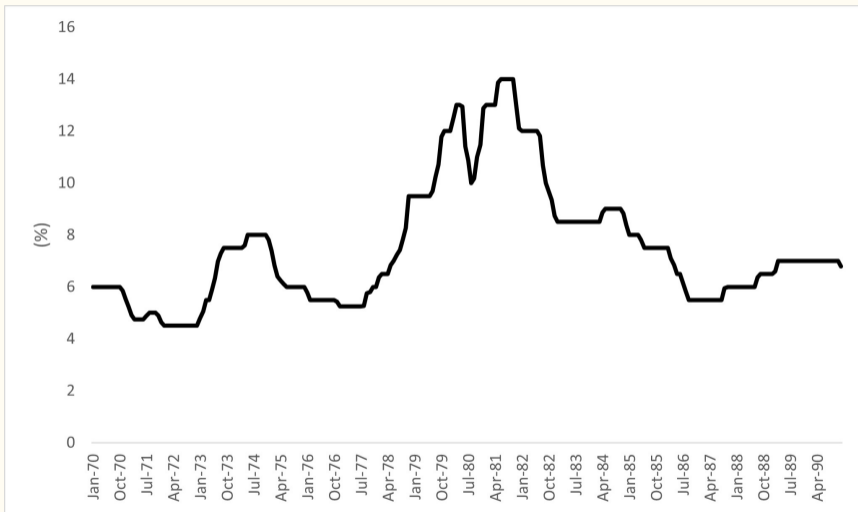


Source: World Bank.

## Paul Volcker, Chairman of the FED (1979-87)

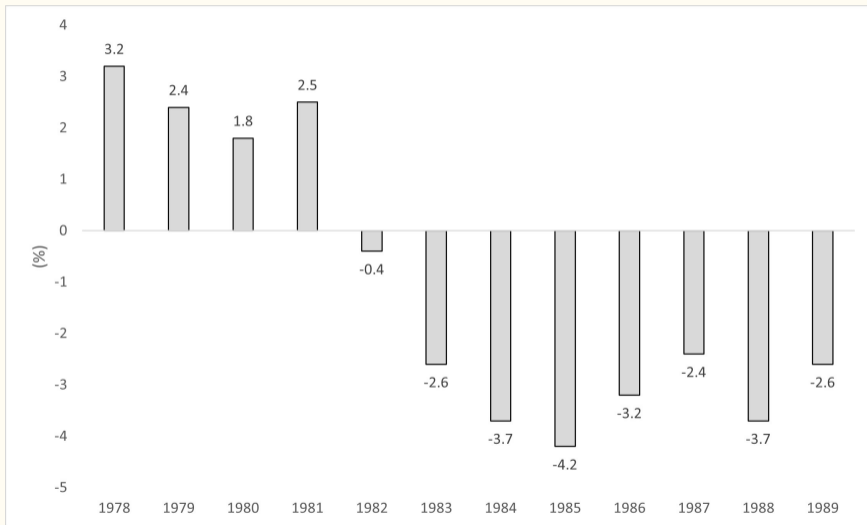


# FED discount rate (monthly average), Jan. 1970-Dec. 1990



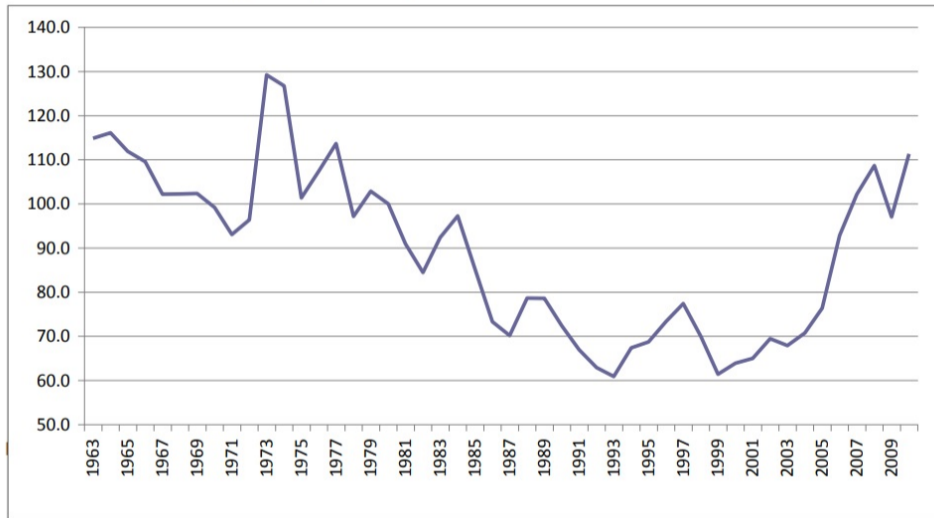
Source: Board of Governors of the Federal Reserve System (US).

## Basic external transfer (% of GDP), Jan. 1970-Dec. 1990



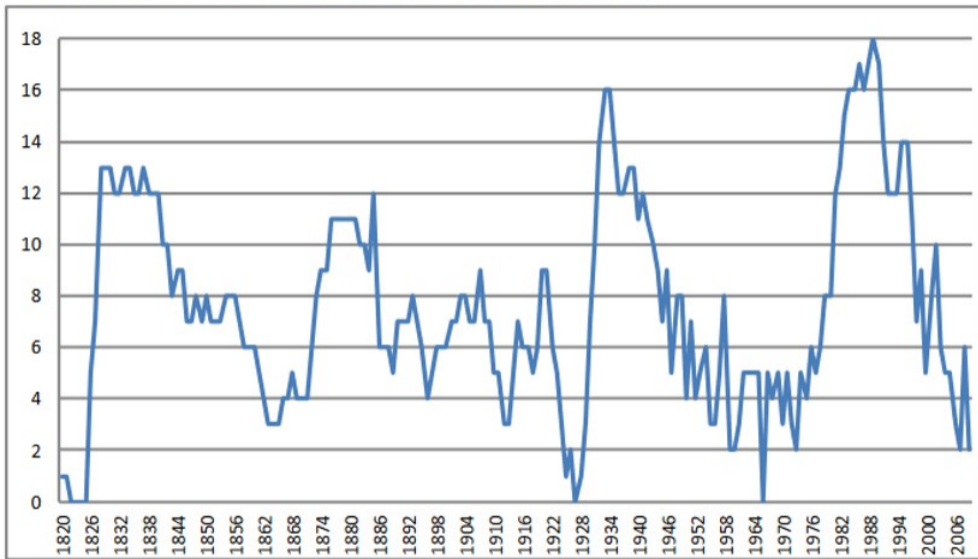
Source: Pastor and Dymski (1991).

## B. Real Non-Oil Commodity Prices (1980=100)



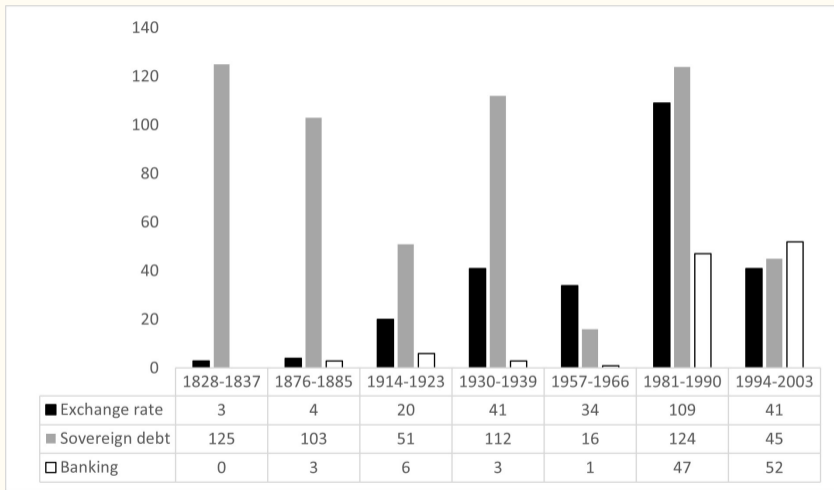
Source: Bertola and Ocampo (2012).

## Number of countries on a currency, external debt, or banking crisis



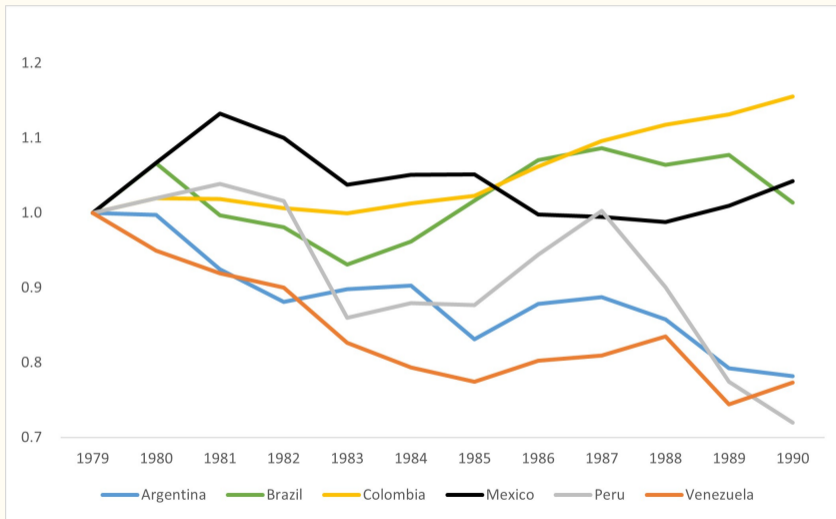
Source: Reinhart and Rogoff (2009).

# Latin American countries in crisis by period



Source: Ocampo et al. (2014).

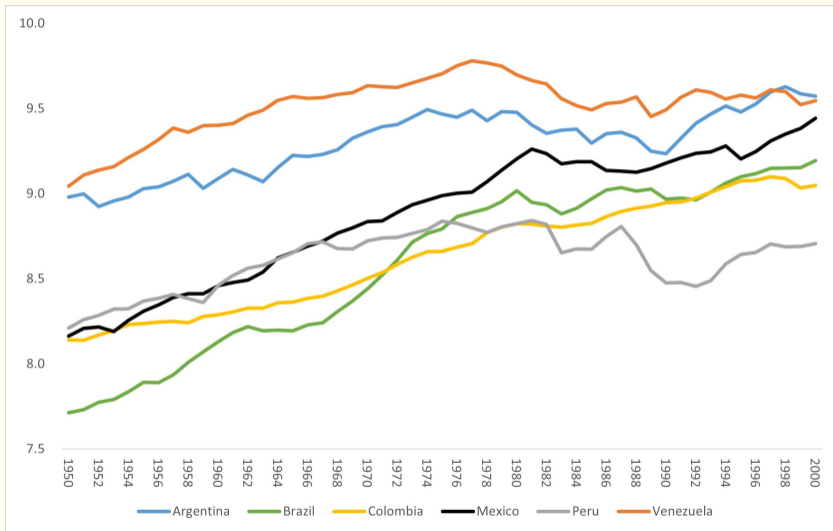
## Real GDP per capita Index, 1979-1990 (1979=1)



Source: Maddison dataset.

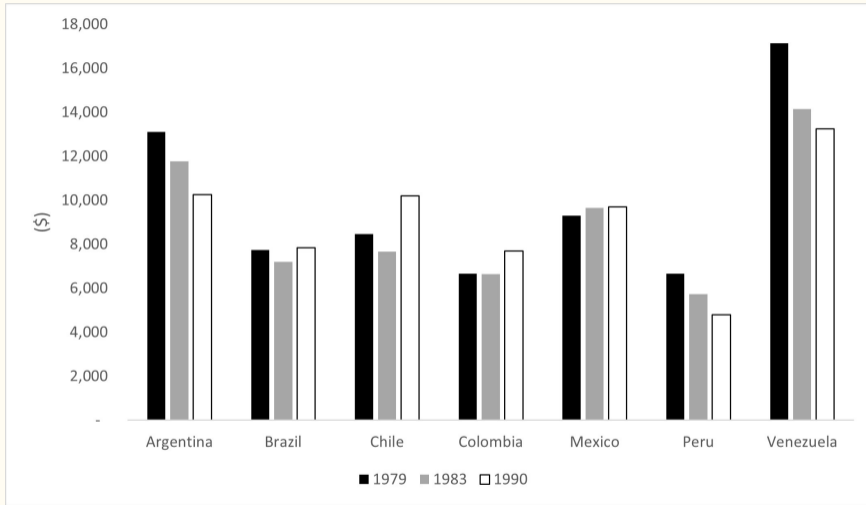


# LN Real GDP per capita, 1950-2000 (2011 \$)



Source: Maddison dataset.

## GDP per capita, 1970-90 (PPP, 2011 \$)

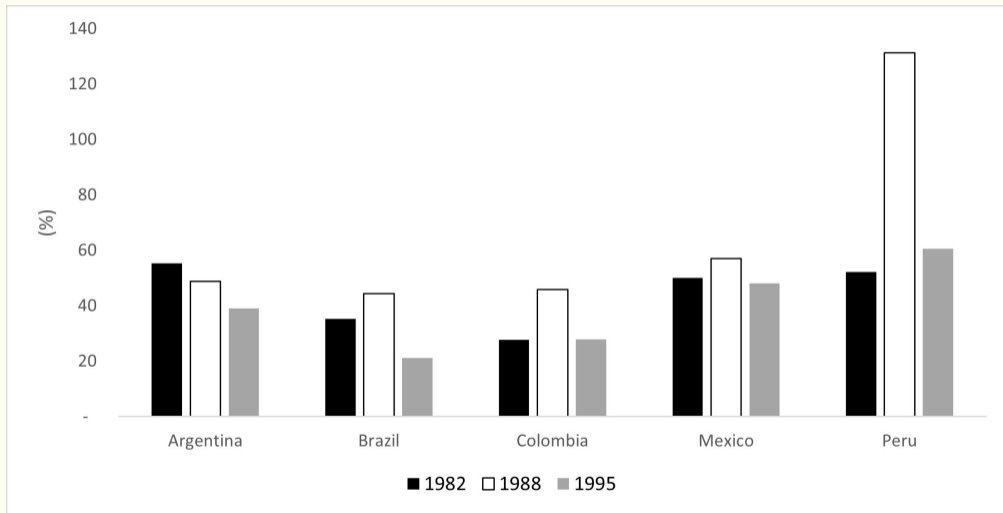


Source: Maddison dataset.

## **Adjustments and hyperinflations**

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## External debt stock (% of GNI)



Source: World Bank.

## Assessment of the crisis and adjustment programs

- All Latin American countries (except Colombia) went into default
- A liquidity or solvency problem?
- Predominant view among multilateral institutions: a liquidity problem.
- Solution: fresh loans conditional to adjustment programs.
- Adjustment: fiscal balance and expenditure cuts.

- But, what about the political economy of adjustments?
- Slow reaction, countries looked to improve their conditions via renegotiations with lenders.
- In the meantime, the situation continued deteriorating.
- By the mid-1980s (the Baker Plan was proposed in 1985), still the crisis was unsolved.  
The Baker Plan (1985) failed.
- Hyperinflation in the late 1980s.

## James A. Baker III, Secretary of the Treasury (1985-88)



## Any benefit for repaying?

- Caselli et al. (2021) examine the case of Colombia.
- The only large country which did not default.
- Better performance in terms of inflation.
- Marginally better in terms of growth.
- Worse in exporting. Why?
- Persistent productivity problem.

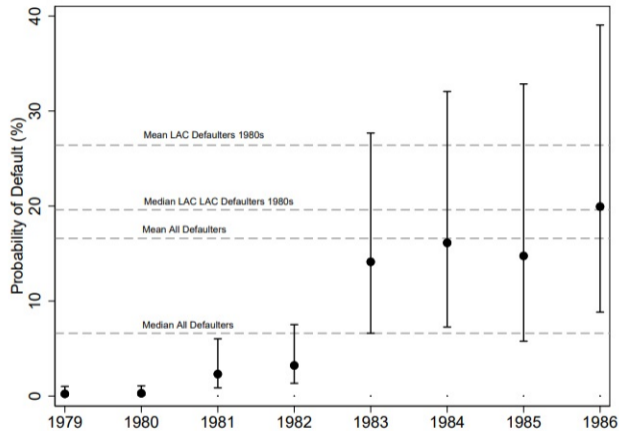


Table 2: Secondary Market Prices of Syndicated Loans

	1986	1987	1988	1989	1990	1991	1992	1993	1994
Argentina	66	35	21	13	21	32	43		
Brazil	75	46	40	22					
Chile	67	61	57	59	73.3	90	90	90	95
Colombia	84	63	58	64	64	75	75	85	90
Ecuador	65	37	13	14	19.8	22	28	52	
Mexico	56	50	43	36					
Panama	67	35	20	12	13	21	29	53	53
Peru	18	7	5	6	4	11	19	67	56
Venezuela	74	57	41	34					

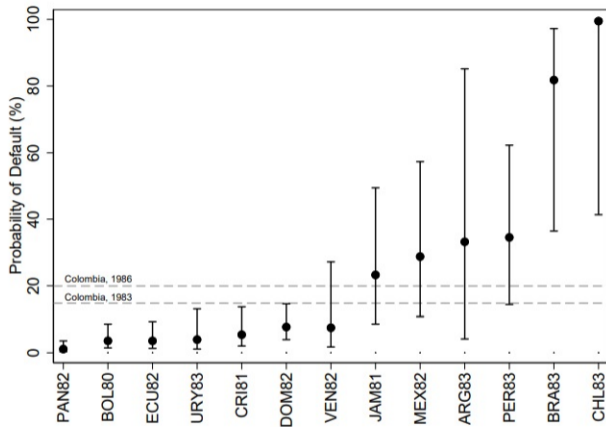
Source: [Klingen, Weder di Mauro, and Zettelmeyer \(2013\)](#)

Figure 1: Predicted Probability of a Colombian Default



Note: The graph plots the predicted probability of a Colombian default (with a 95% confidence interval) over 1979-86. The dashed lines plot the average and median predicted probabilities of default (measured in the year of the actual default) for all Latin American countries that defaulted in the 1980s and for all defaulters in our sample.

Figure 2: Predicted Probabilities of Default for Latin American and Caribbean Defaulters



Note: The graph plots the predicted probability of default (with a 95% confidence interval) in the year of the actual default. The dashed lines plot the predicted probabilities of default for Colombia in 1983 and 1986.

Source: Caselli et al. (2021).

**Roberto Junguito Bonnet (1943-2020), Minister of Finance (1984-85)**

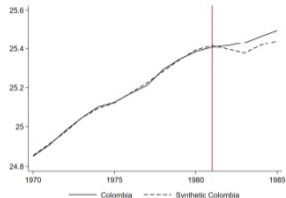


# Colombian adjustment program

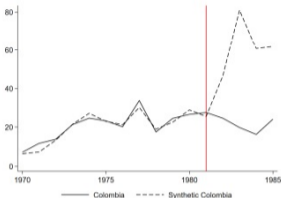
- Agreement with the IMF.
- Conditional to an adjustment program.
- Why was that program credible?
- Implementation: complicated part at the beginning.
- Paul Volcker's endorsement.

Figure 3: Effect of non-defaulting on Colombia macroeconomic conditions

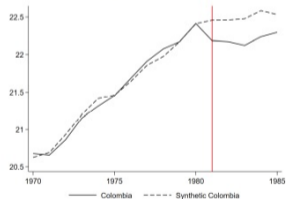
(a) Log of real GDP



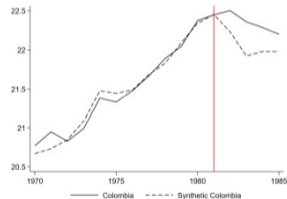
(b) Inflation



(c) Log of Export

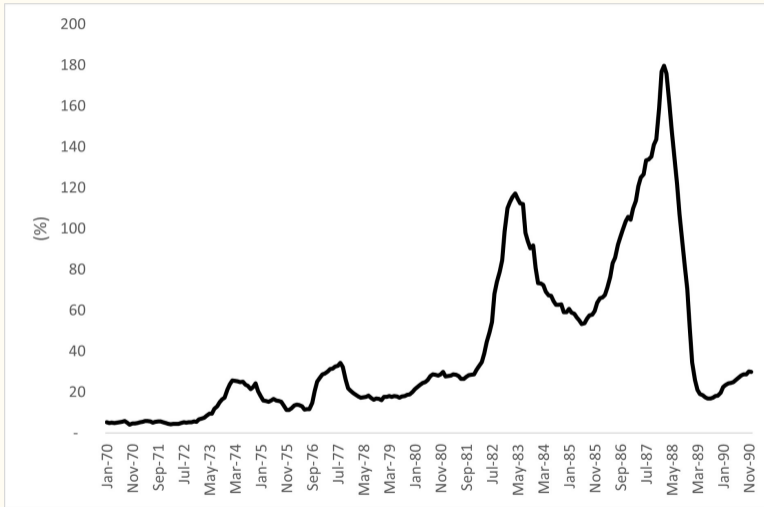


(d) Log of Import



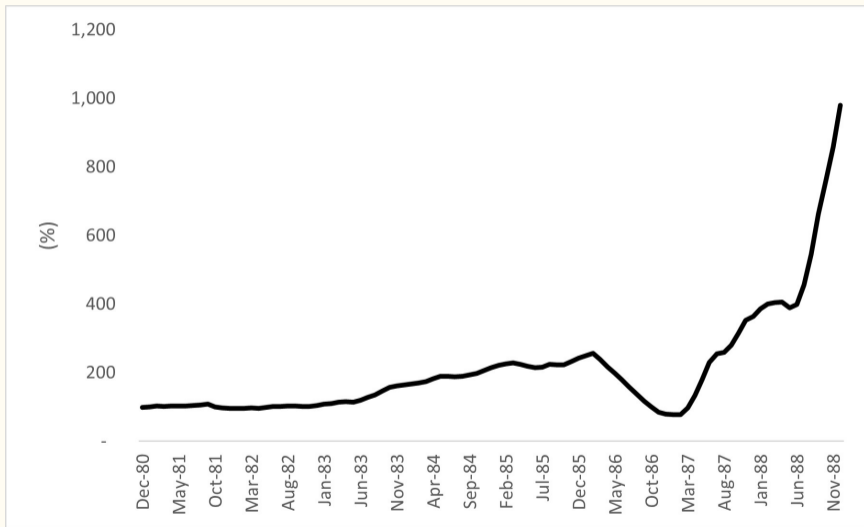
Note: This figure reports Colombia's synthetic controls (dashed line) and the actual series (solid line) for the log of GDP, inflation, the log of export and import. The treatment year is 1981. The synthetic estimate is based on the baseline model which includes all the pre-treatment outcomes as covariates.

# Monthly inflation rate for Mexico, Jan. 1970-Dec. 1990



Source: World Bank.

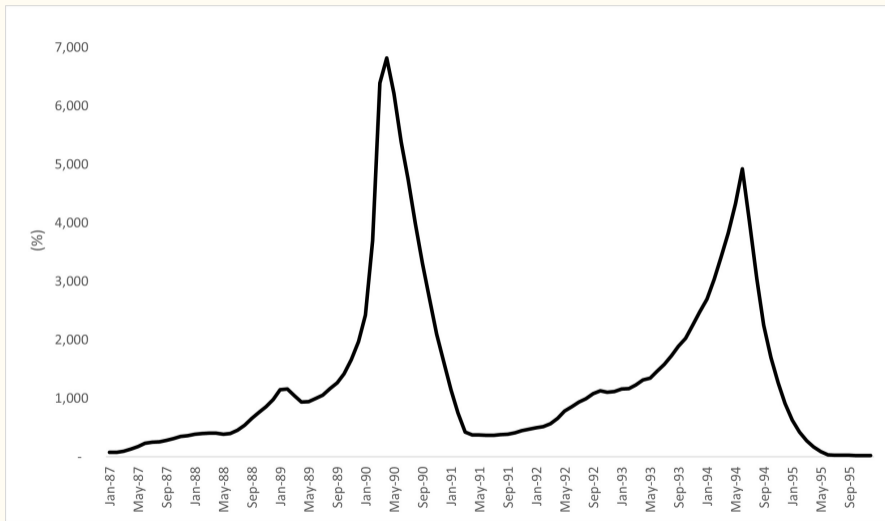
# Monthly inflation rate for Brazil, Dec. 1980-Dec. 1988



Source: World Bank.



# Monthly inflation rate for Brazil, Jan. 1987-Dec. 1995



Source: World Bank.

# Hyperinflations

- Argentina: 1976 (444%), 1984 (626.7%), 1989 (3,079.5%).
- Bolivia: 1984 (2,177%), 1985 (8,170%).
- Brazil: 1989 (1,431%), 1990 (2,948%).
- Peru: 1989 (3,399%), 1990 (7,482%).







# The end of the crisis

- Brady Plan (1989).
- Bond swaps and new “conditional” loans.
- What conditions?
- Structural reforms: macroeconomic stability and economic liberalization.
- In practicality: the end of the Import Substitution Industrialization.
- Different circumstances I: policymakers were more open to adopting structural reforms.
- Different circumstances II: a new wave of democratization.

## Nicholas Brady, Secretary of the Treasury (1988-93)



# The 1990s reforms

- Structural reforms oriented to solve the persistent macroeconomic instability.
- Substantial differences in the intensity and duration of the reforms.
- Partial trade and financial liberalization.
- Privatizations: the fall of the SOEs in Latin America.
- But a persistent problem of low productivity.



## Fundidora de Hierro y Acero de Monterrey, 1900-1986



# Diesel Nacional-DINA, privatized in 1989



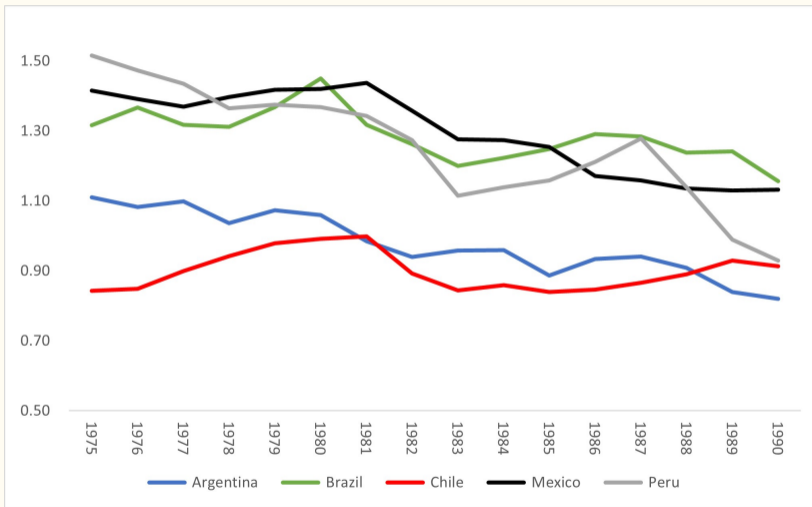
**Diesel  
Nacional, S. A.**

FABRICANTES DE:

MOTORES  
CAMIONES MEDIANOS, SEMIPESADOS  
Y TRACTOCAMIONES,  
AUTOBUSES INTEGRALES.

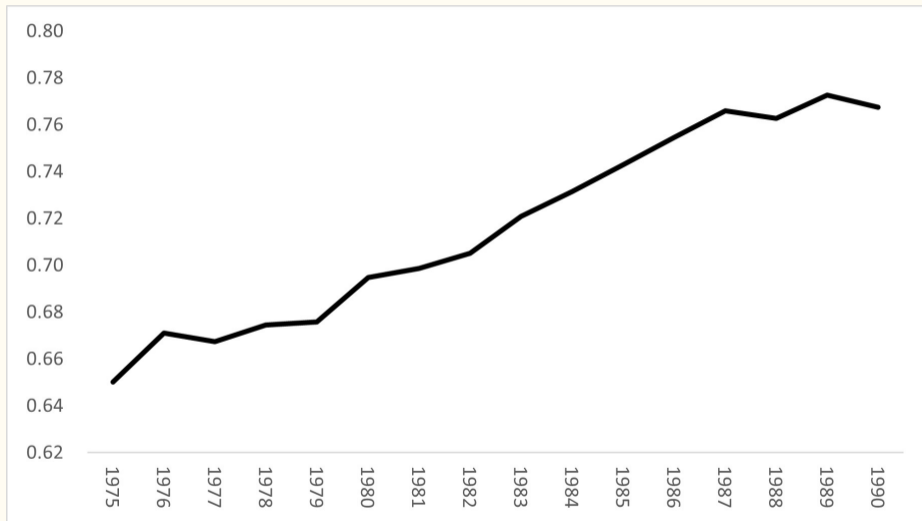


# TFP index 1975-90 (2017=100)



Source: Maddison dataset.

## TFP index for the US 1975-90 (2017=100)



Source: Maddison dataset.

## **A new wave of democratization in the late 1980s**

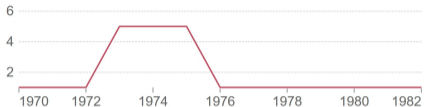
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- Authoritarian regimes showed poor economic performance and crisis management.
- A wave of democratization during the 1980s.
- But also of structural reforms (the Washington Consensus).
- Initially (the late 1980s): political fragility and hyperinflation.
- Only in the early 1990s new governments consolidated.
- And Latin America finally overcame the 1980s crisis.

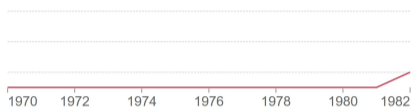
# Constraints on the executive, 1970 to 1982

Based on the classification and assessment by Polity 5 (2021).

## Argentina



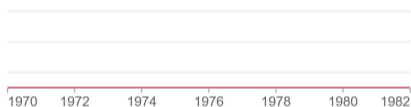
## Brazil



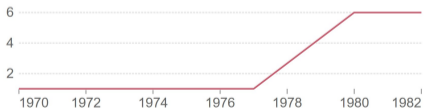
## Chile



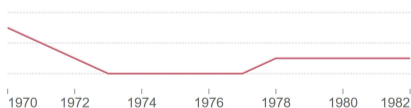
## Paraguay



## Peru



## Uruguay



Source: Polity 5 (2021)

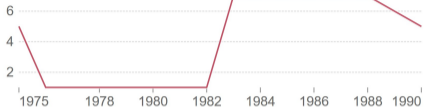
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Note: The Chart tab uses numeric values, ranging from 7 for an subordinated or on-par executive, to 1 if executive is unconstrained.

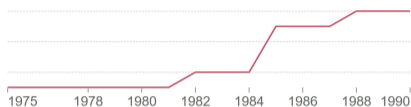
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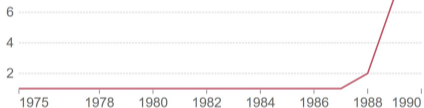
## Argentina



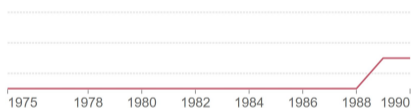
## Brazil



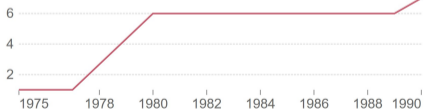
## Chile



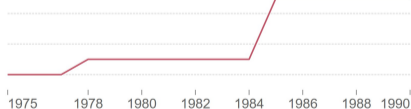
## Paraguay



## Peru



## Uruguay



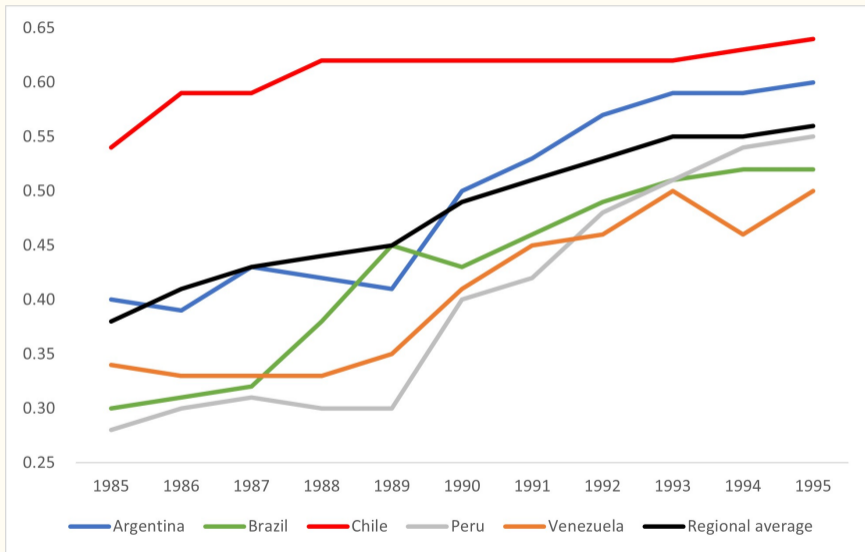
Source: Polity 5 (2021)

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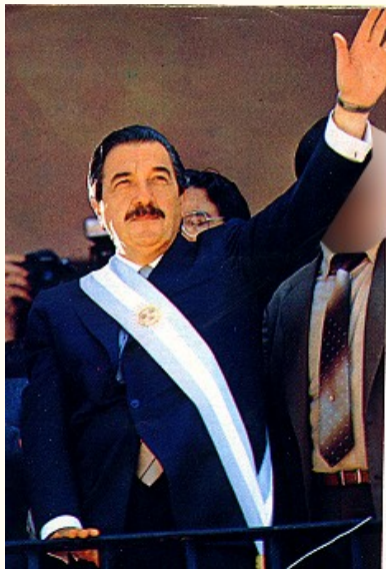
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# Index of structural reforms



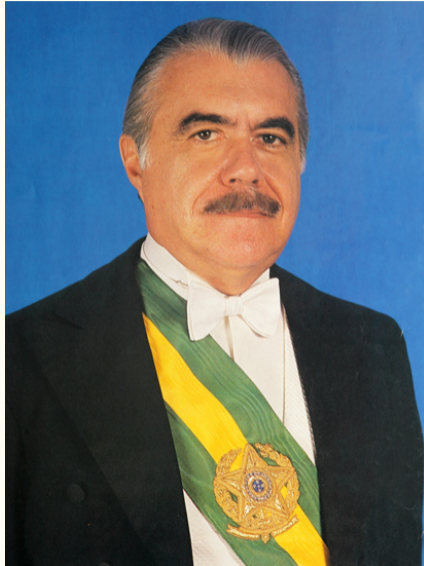
## Raúl Alfonsín, President of Argentina 1983-89



## The Argentinean case

- Alfonsín initially followed (heterodox) expansionary monetary and fiscal policies.
- Austral and Spring plans (1985-91).
- Hyperinflation and resignation in 1989.
- Convertibility in the 1990s during President Carlos Menem administration.

## José Sarney, President of Brazil 1985-90



## Julio Maria Sanguinetti, President of Uruguay 1985-90 and 1995-2000



## Patricio Aylwin, President of Chile 1990-94



# Change in real government expenditure under standby arrangements, 1954-84

**Table 7** Percentage Change in Real Government Expenditures under Standby Arrangements<sup>a</sup>

	Democratic Regimes	Authoritarian Regimes	Mixed Regimes	All Standby Years
Argentina	1.4 (3)	17.0 (5)	-7.6 (1)	8.0 (9)
Bolivia	2.9 (4)	13.6 (7)	10.8 (1)	7.7 (12)
Brazil	6.0 (3)	7.3 (8)	--	6.9 (11)
Chile	8.4 (10)	-3.1 (2)	--	6.5 (12)
Ecuador	11.7 (6)	17.9 (3)	4.7 (3)	7.6 (12)
Honduras	0.9 (5)	12.2 (5)	0.4 (2)	5.5 (12)
Peru	12.9 (5)	-2.4 (4)	13.4 (4)	8.3 (13)
Uruguay	2.6 (5)	6.4 (6)	10.4 (1)	5.1 (12)
<b>Average</b>	<b>5.4 (41)</b>	<b>9.0 (40)</b>	<b>5.2 (12)</b>	<b>6.9 (93)</b>

Source: Remmer (1986).