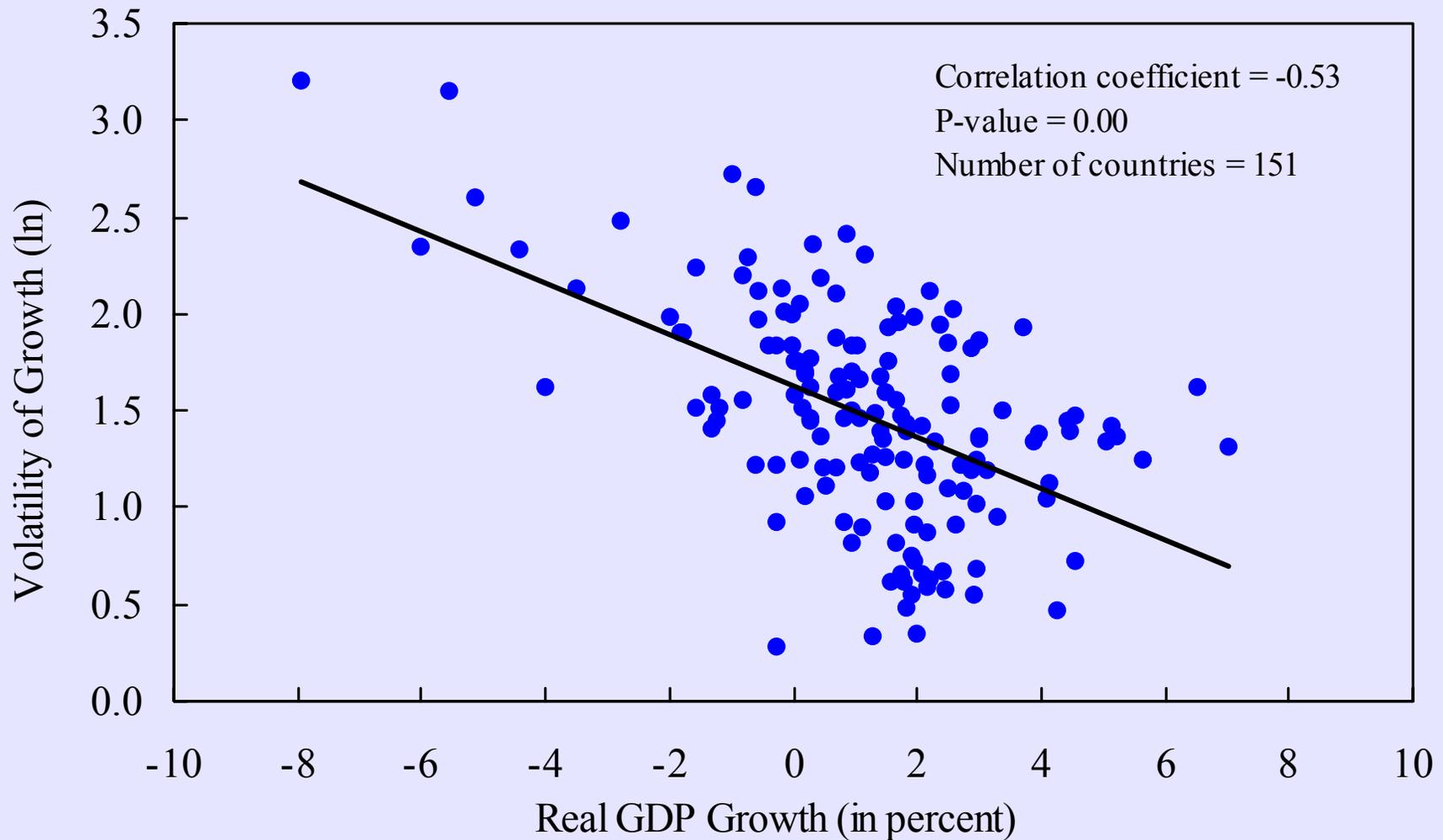


Volatility and Growth in Latin America: An Episodic Approach

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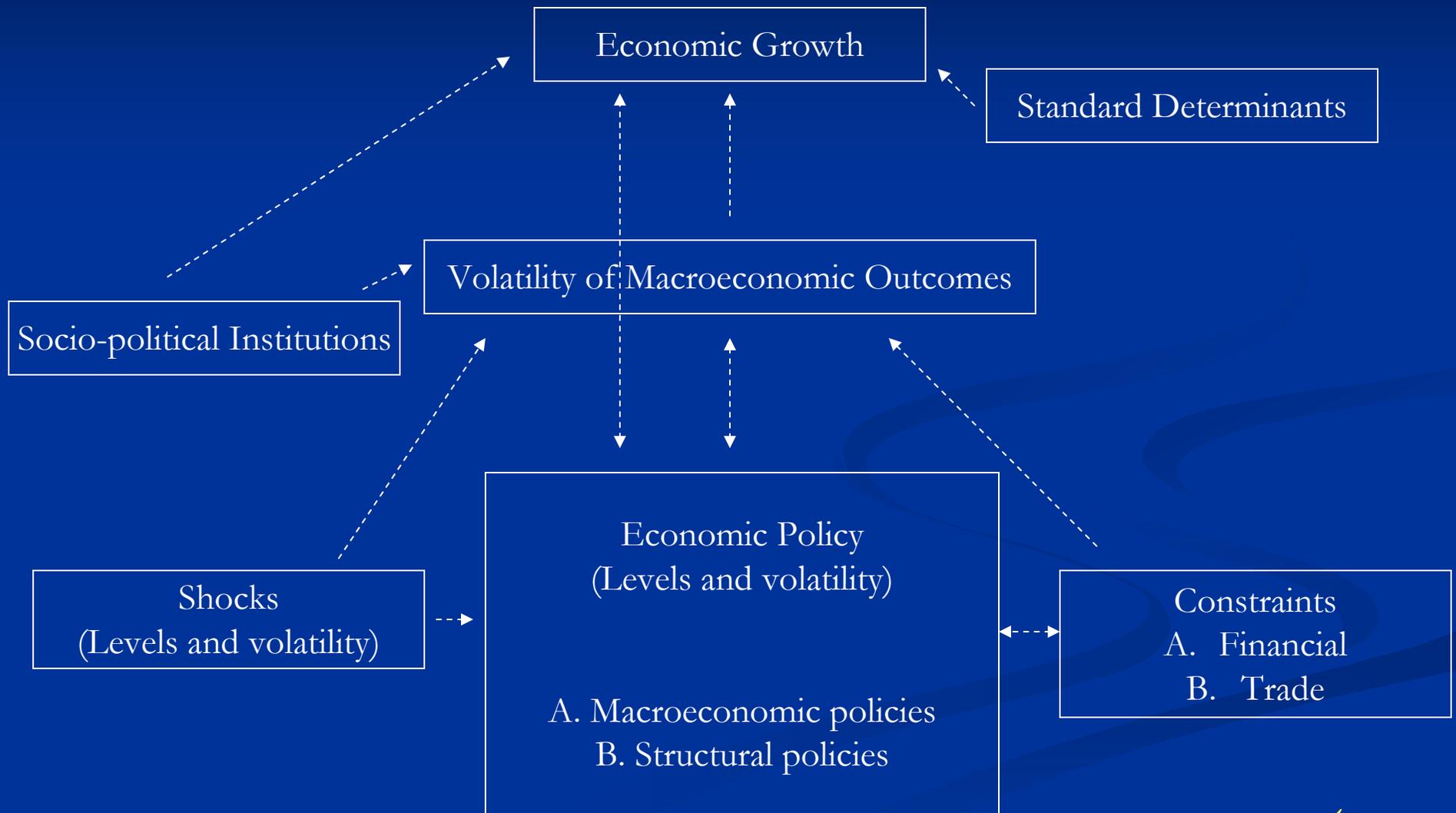
Volatility and growth are negatively related



Contributions of the paper

- Definitions
 - Volatility of macro outcomes, policies, shocks
 - Macro policy volatility vs. structural reform reversals
 - Total volatility of fiscal policy vs. discretionary vs. procyclicality
- Richer data set: 17 Latin American countries
 - Measures of volatility
 - Constraints
 - Institutions
- Conceptual framework ⇒
- Methodology: episodic approach
- Results
 - Controlling for shocks and constraints, macroeconomic policy volatility and reform reversals negatively impact growth

Conceptual Framework



Episodic approach findings: No surprises

■ Outcomes:

- Starting and ending years differ across countries
- Similar pattern of volatility in low-growth episode across macro variables, also crises

■ Shocks:

- US real interest rate (level and volatility) matters big time
- ODA marginally higher in high-growth episode

■ Policies:

- Exchange rate regime changes lower in high-growth episode
- Volatility of fiscal policies is higher in low-growth episode

Episodic approach findings: Surprises (but not really)

■ Outcomes:

- Negative growth in all countries in low-growth episode (except Uruguay)
- Most common occurrence of twin crises: currency and debt

■ Shocks:

- Natural disasters higher in high-growth episode
- G-7 growth and volatility similar across episodes

■ Policies:

- Fiscal policy procyclicality similar across episodes
- Number of structural reform reversals: 167
- Argentina was a reform leader in 1970 but falls behind most by 2004 ⇒

Episodic approach findings: Surprises

■ Outcomes:

- 1990s was not the best for most (only 6)
- Number of crises over the past 35 years: 312 (9 per year)
- Banking crises more frequent in high-growth episode
- Large output falls in multiple crises only if there is a currency crisis ⇒

■ Shocks:

- ToT (growth and volatility) similar across episodes (except Chile, Ecuador, Mexico)

■ Policies:

- Most countries had reform reversals since 2000 ⇒

■ Constraints:

- Capital market access and trade openness similar across episodes

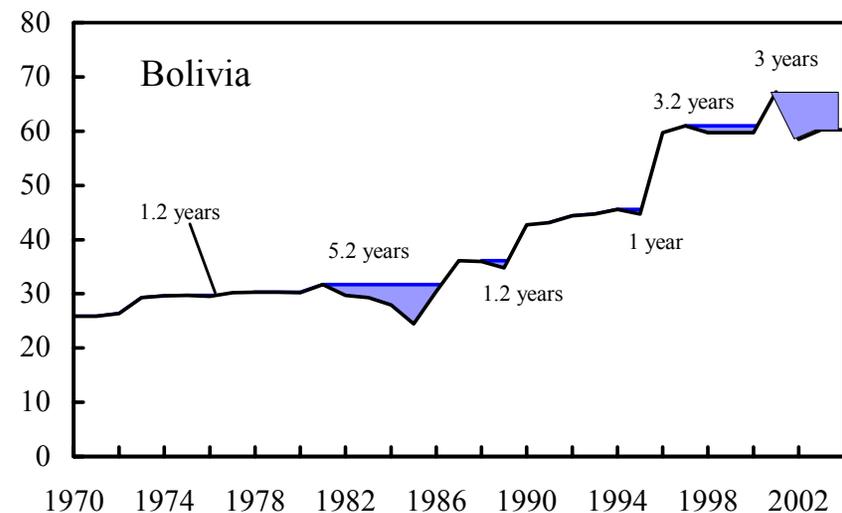
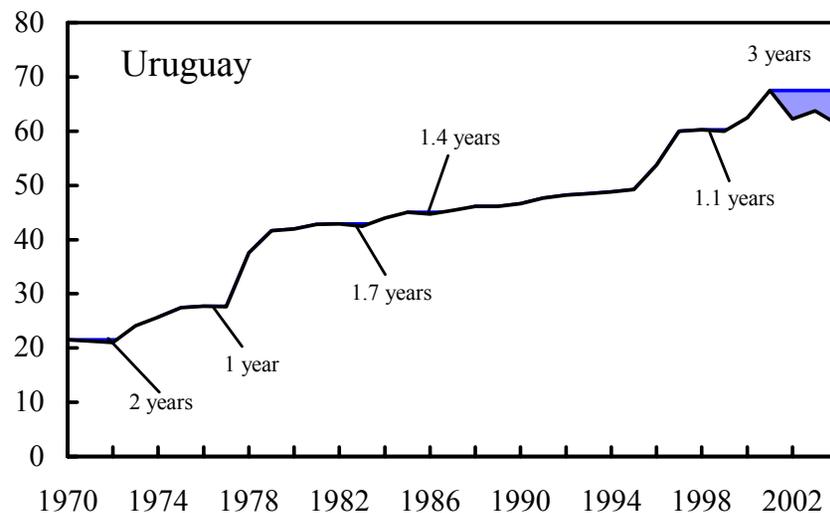
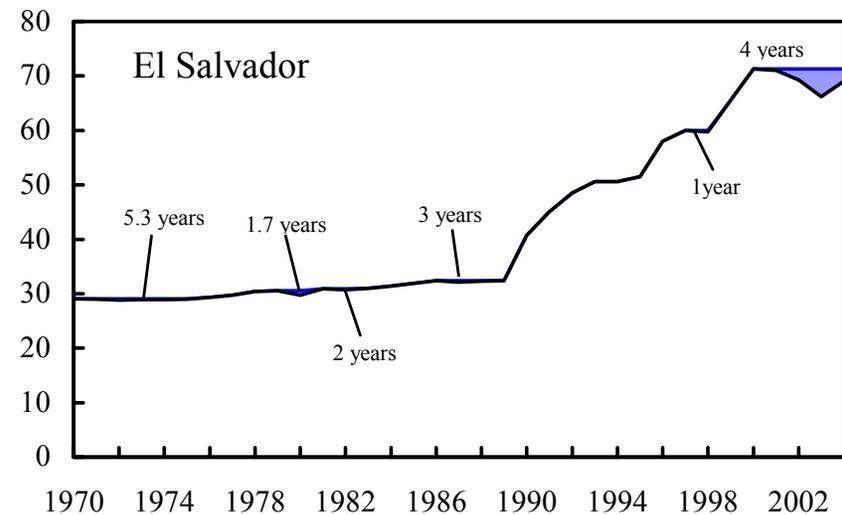
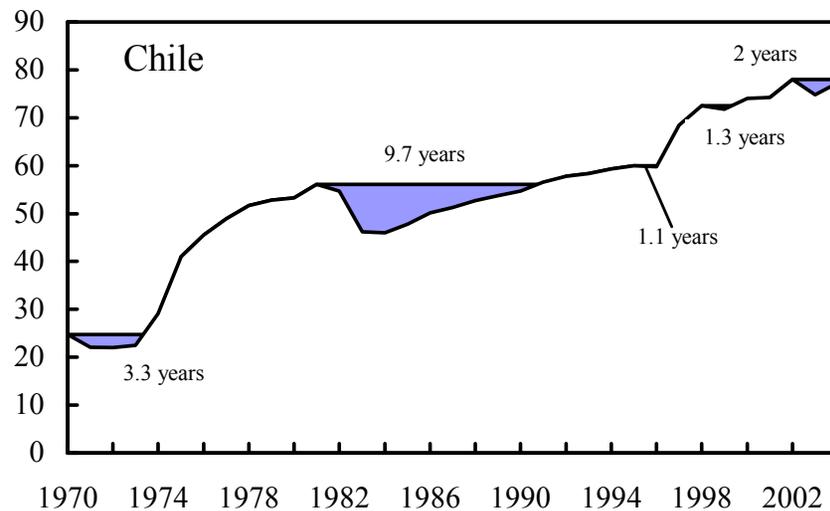
Fast and Slow Reformers in Latin America

		Pace of Reform	
		<i>Fast reformers</i> <i>(Above median change in index)</i>	<i>Slow reformers</i> <i>(Below median change in index)</i>
Initial level of market orientation	<i>High level of initial market orientation</i> <i>(Above median in 1970)</i>	Costa Rica (32, 26) El Salvador (29, 40)	Argentina (34, 4) Mexico (31, 21) Venezuela (29, -8) Paraguay (28, 12) Honduras (27, 10)
	<i>Low level of initial market orientation</i> <i>(Below median in 1970)</i>	Bolivia (26, 34) Chile (25, 53) Guatemala (22, 24) Uruguay (22, 40) Peru (20, 34)	Ecuador (25, 10) Colombia (25, 22)

Brazil (26, 22)

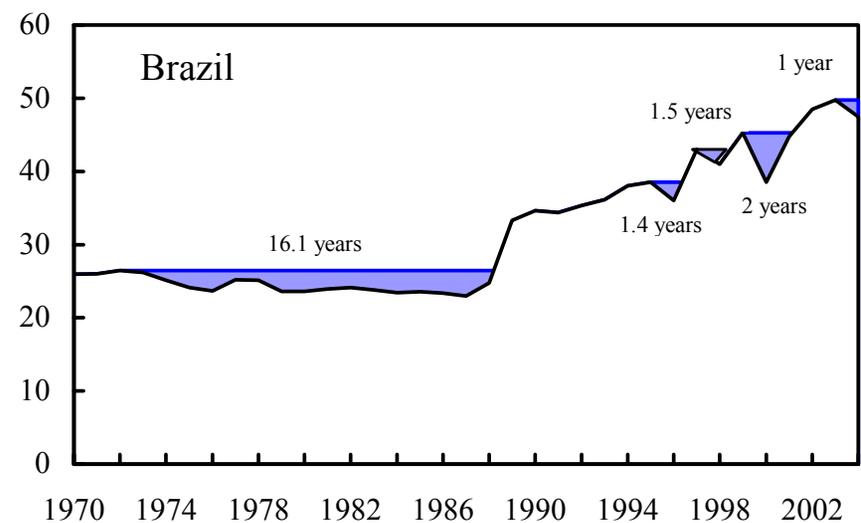
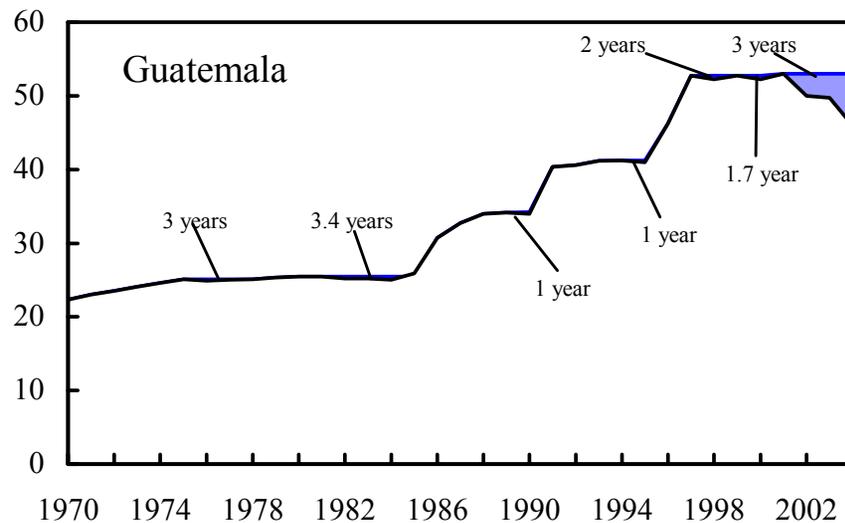
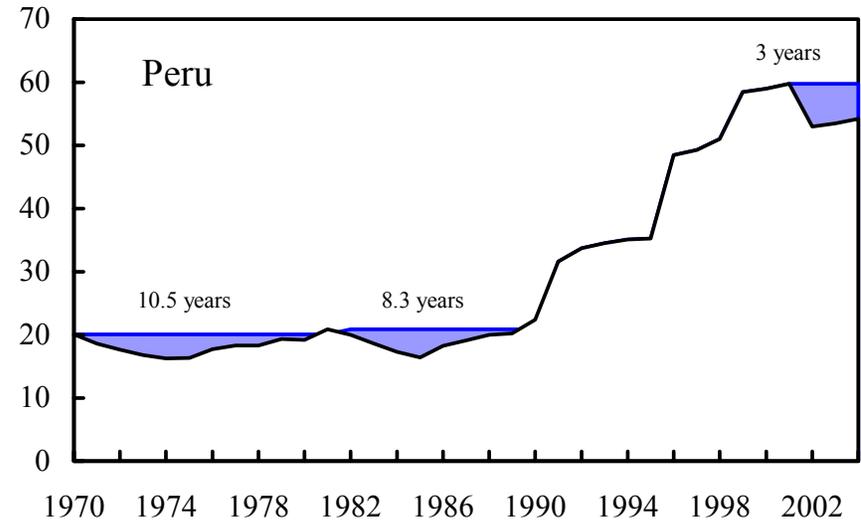
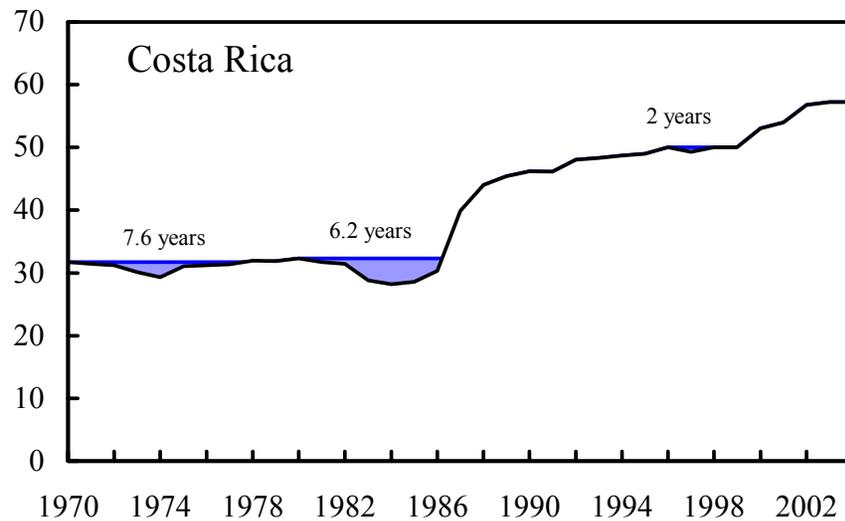
Structural reforms and reversals

Fast Reformers I



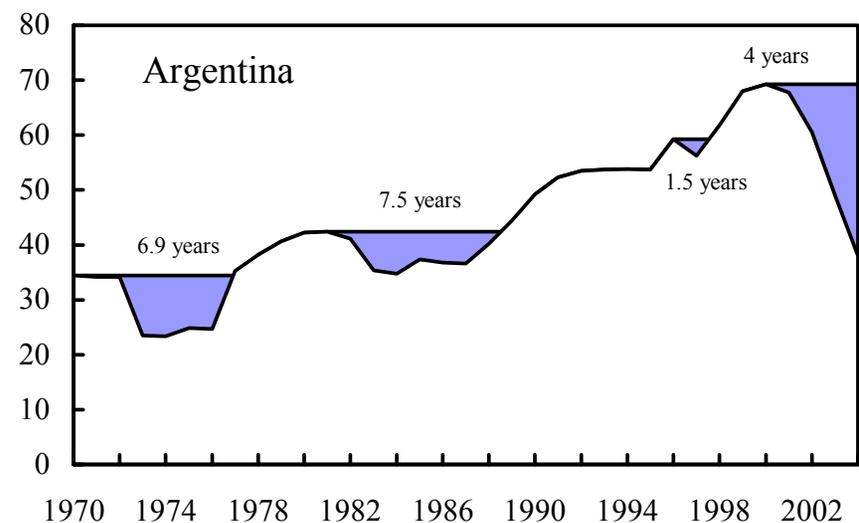
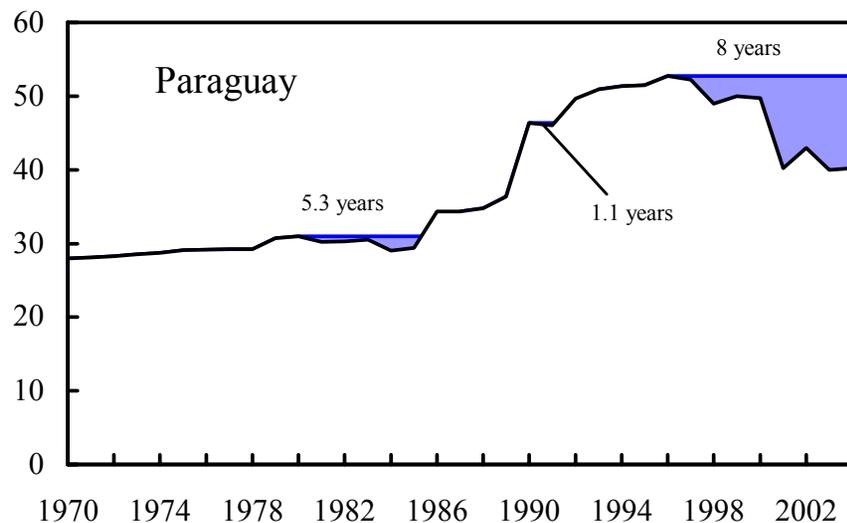
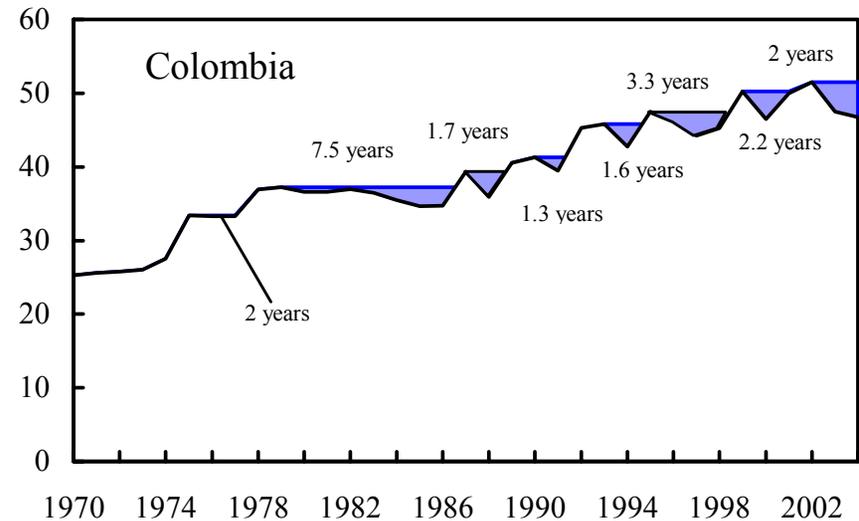
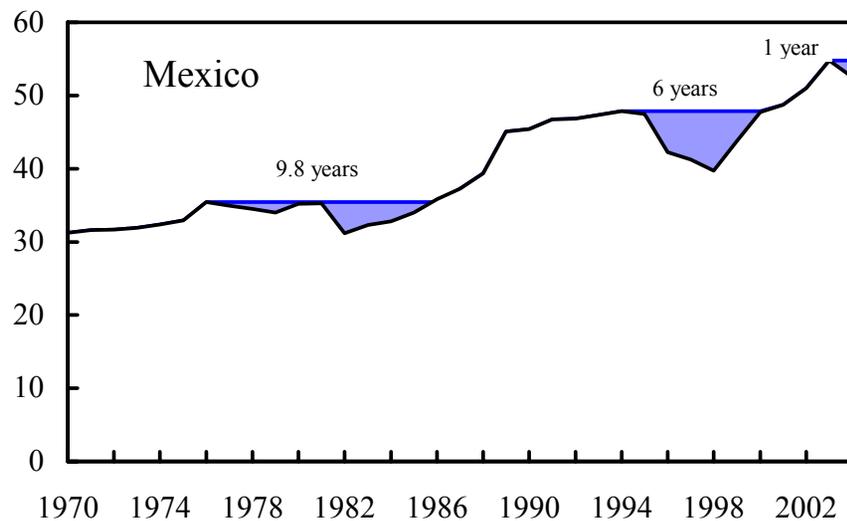
Structural reforms and reversals

Fast Reformers II



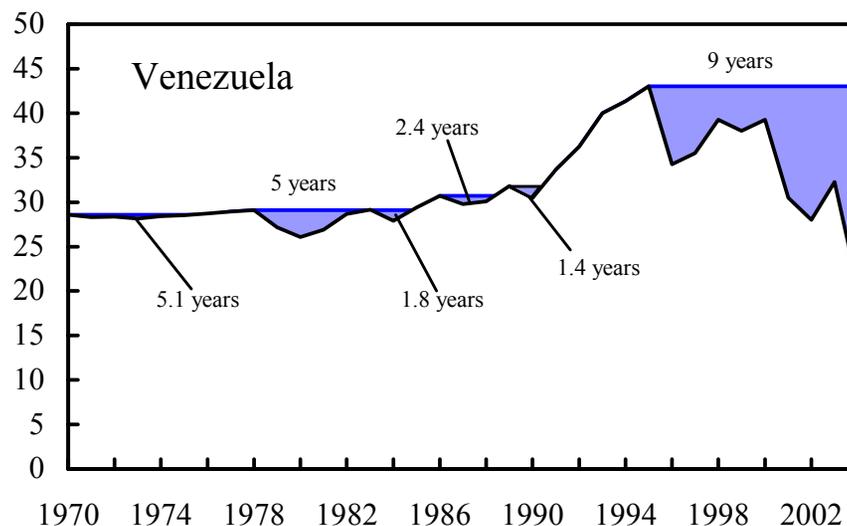
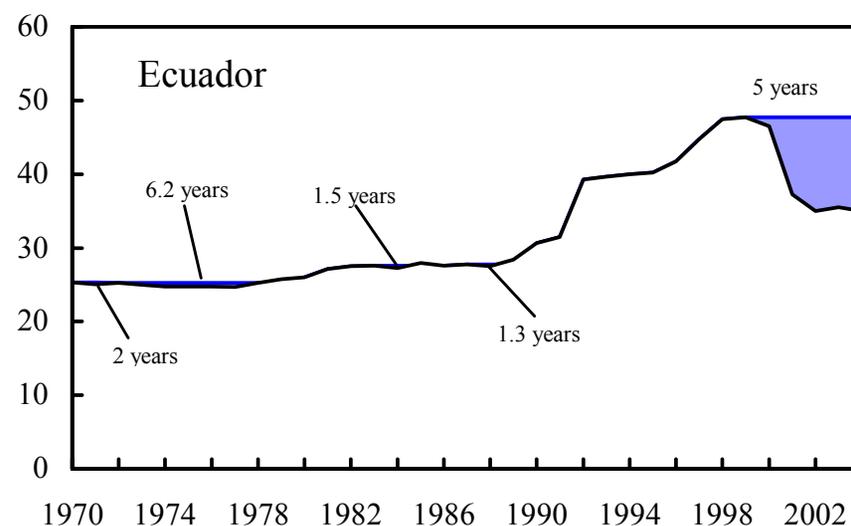
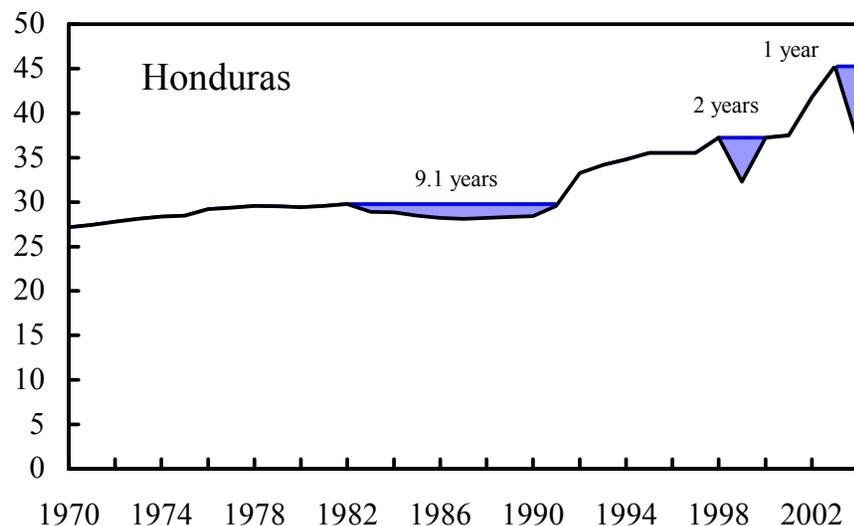
Structural reforms and reversals

Slow Reformers I



Structural reforms and reversals

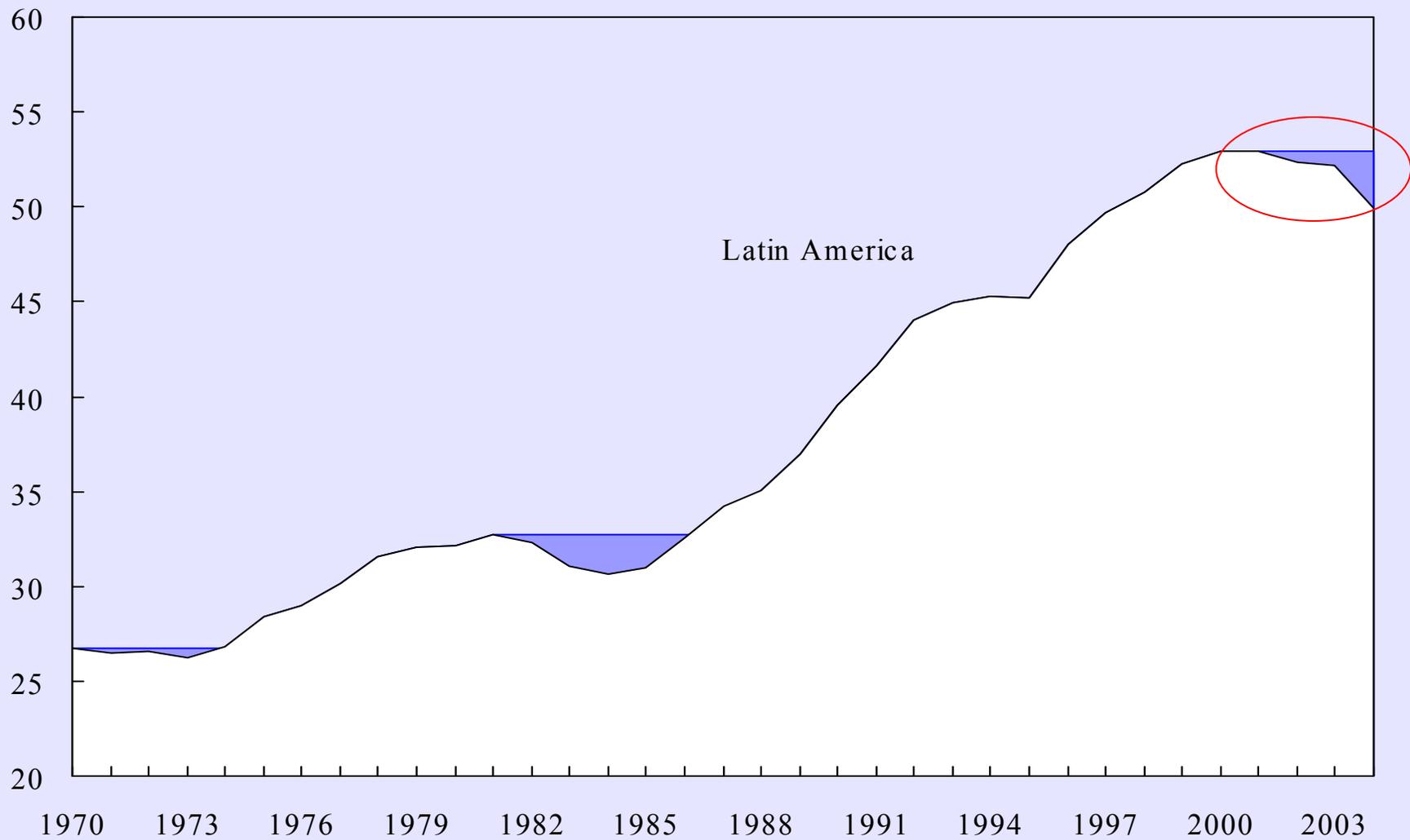
Slow Reformers II



Output drops during concurrent crises

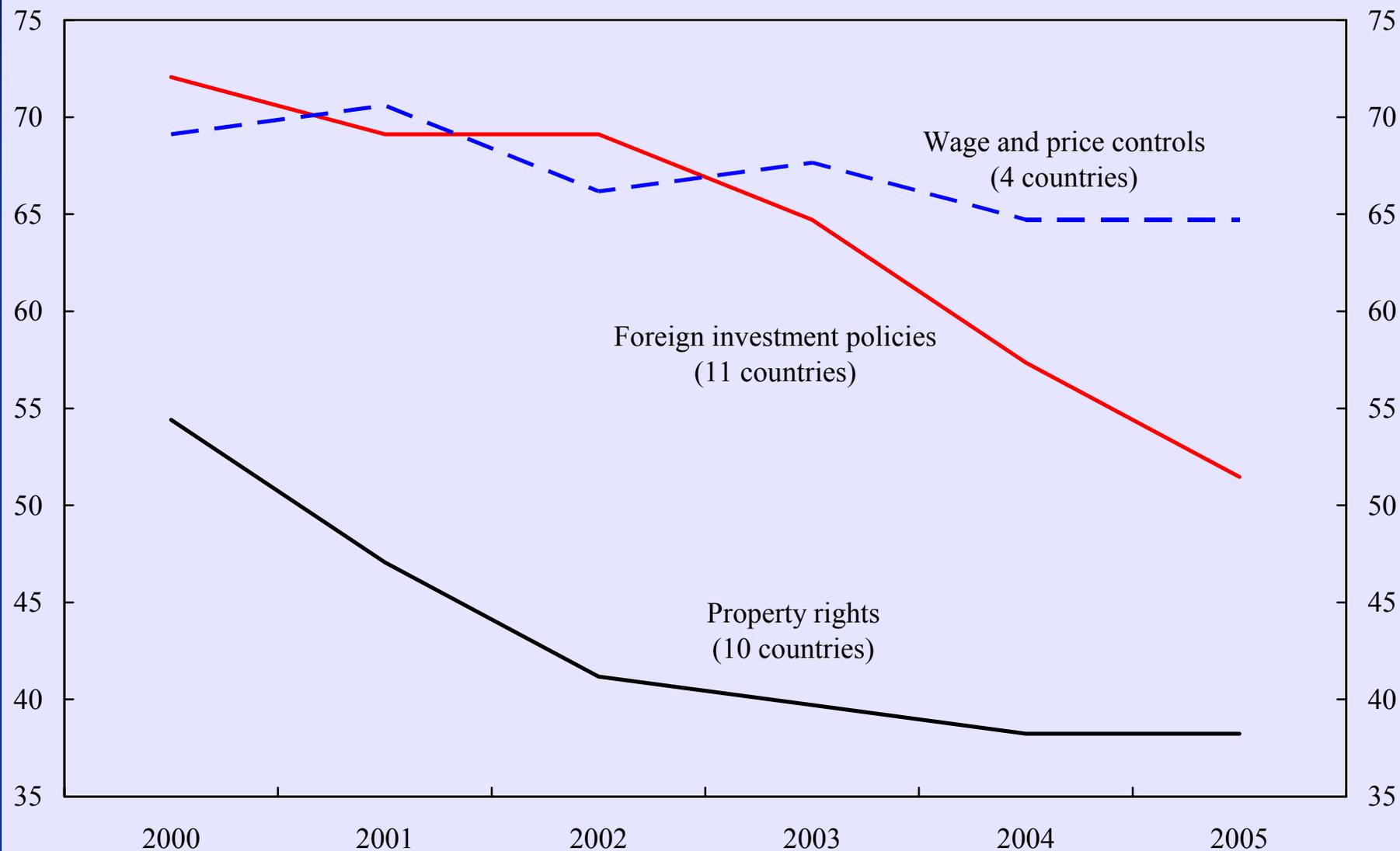
	Number	Cumulative growth per capita during t-1, t, t+1
Currency and banking crises	3	-9.1
Currency crisis and debt default	26	-6.3
Banking crisis and debt default	13	1.8
All three crises simultaneously	7	-8.9

Structural reforms and reversals: 1970-2004



Source: Heritage-Morley Composite Index.

Structural reform reversals: 2000-05



Source: Heritage Foundation (2006). Normalized from 0-100. Higher values denote greater market orientation.



Statistically significant bivariate relationships from the episodic approach

- Outcomes:
 - Output volatility
 - Extreme events: currency crises, debt defaults
 - Inflation, devaluation, fiscal balance
- Shocks:
 - US real interest rates: levels, volatility
- Policies:
 - Reform reversals (Morley-Heritage index)
 - Fiscal expenditures/GDP: levels, volatility
 - Exchange rate regime changes: number
- Constraints:
 - Capital flows/GDP
 - Public debt/GDP

Key econometric results

- Average real GDP per capita growth = -0.91
 - -0.34^{***} Std dev real GDP per capita growth
 - -0.49^{***} Average US real interest rate
 - -0.12^{***} Std dev discretionary fiscal policy
 - $+0.10^{***}$ ICRG index

- Std dev of real GDP per capita growth = -0.06
 - $+1.53^{***}$ Std dev US real interest rates
 - $+2.16^{***}$ Financial liberalization dummy
 - $+0.32^{**}$ Intensity of structural reform reversals