



Main growth shocks

Arthur Silve

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Real volatility

Slowdown
Overheating
External absorption

Nominal volat.

Financial volat.

Capital account
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Twin crises
Contagion

Sovereign debt

Price competitiveness

Cost competitiveness

Civil conflicts

Conclusion

Main growth shocks

internal and external factors of vulnerability

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2013



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Growth slowdown

Negative output gap

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A growth rate below its potential can be characterized by

- increasing unemployment
- below-potential levels of growth
- credit stagnation or contraction

A few public policy alternatives

- stimulus package
- monetary policy expansion



Overheating

Positive output gap

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Usually, excess liquidity

- domestic origin: a strong credit growth
- external origin: important capital inflows

The possible consequences of excessive liquidity

- inflation (cf. next section)
- asset price bubbles (cf. following section)
- worsening credit quality (financial system)
- currency mismatch (capital account)

Overheating: 2007 Vietnam

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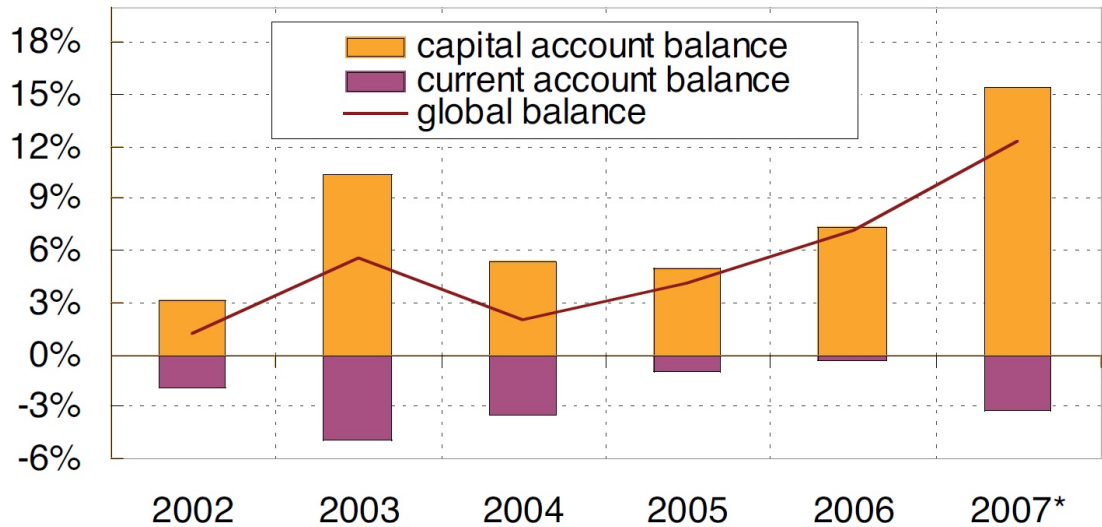
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Source: AS. Y:% of GDP

Overheating: 2007 Vietnam

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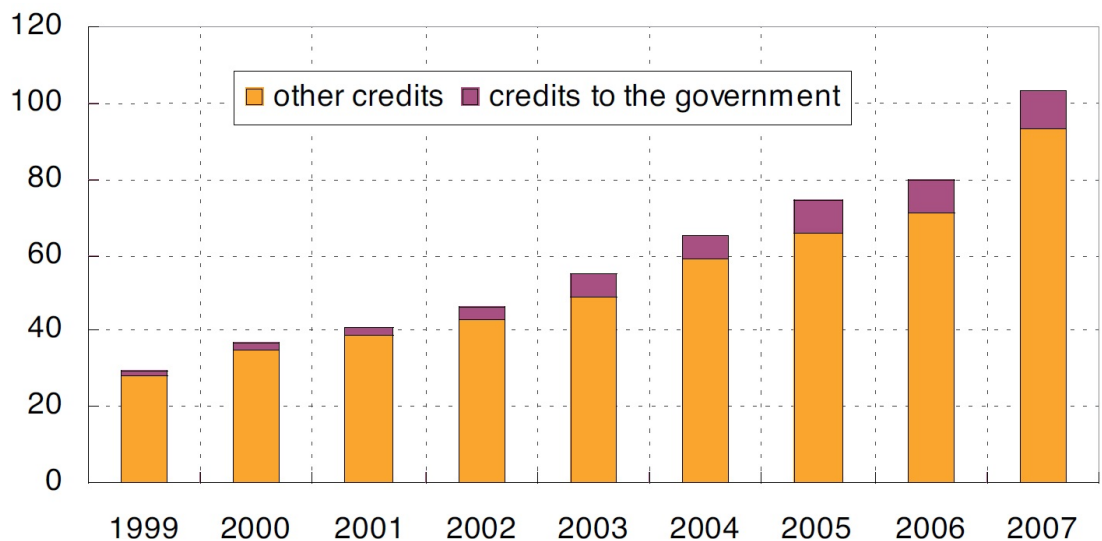
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Source: AS. y:% of GDP

Overheating: 2007 Vietnam

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Source: AS

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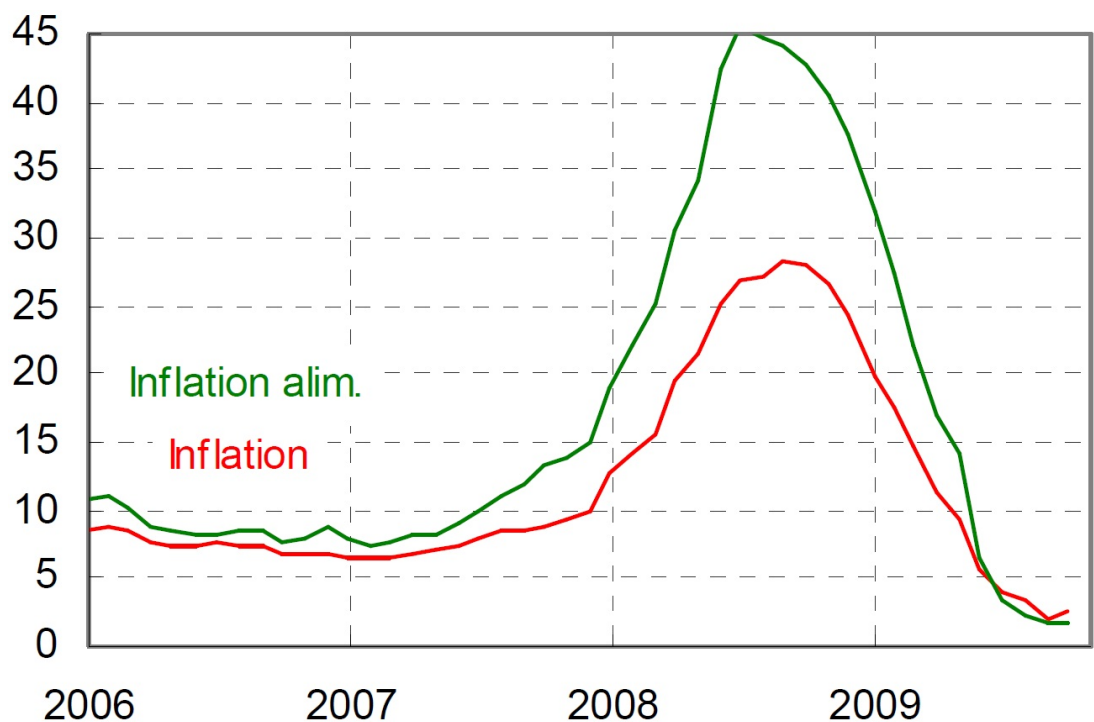
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Source: AS. y:% of growth yoy



Diagnose the overheating

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Indicators

- capital inflows
- rapid credit growth
- inflation
- volatility of asset and good prices

Some policy alternatives

- inflation: countercyclical monetary policy + credit and capital flows regulation
- asset price bubbles: difficult to diagnose
- NPL and mismatches: prudential regulation of banks and firms



External demand shocks

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External demand volatility leads to

- limited physical and human investments / restrained innovation
- hampered factor allocation between sectors
- volatile budget revenue
- volatile political process



Some examples

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The cotton sector in Burkina Faso

- higher international competition
- no absolute advantages in Burkina Faso
- an integrated sector

A contrario, the Lomé Convention

- prices and quotas guarantees
- enabled the development – in particular – of Mauritius



Diagnose trade dependence

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Indicators

- share of raw commodities in total exports
- price volatility of main export goods
- redistribution of the mineral rent

Some policy alternatives

- price agreements are market distortions
- failure of stabilization funds
- unconvincing takeoff of forward markets
- international coordination of donors



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Price volatility and inflation

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- inflation has a negative impact on ST and LT growth
- it is a symptom of other weaknesses of public policies
 - fiscal imbalance (deficit)
 - overheating
 - persistence of supply shocks
 - price inertia
- inflation is a tax on the poor



Main indicators and response

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In developing countries, inflation should be

- positive, stable, not too high (between 2 and 10%)
- but higher than in developed countries

Its determinants must be under control:

- fiscal deficit, monetary expansion, devaluation
- oil or food price shock

Some public policy alternatives:

- key importance of budgetary conservatism
- monetary policy
- external indicators and financial depth



The impact of hyperinflation

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During historical periods of hyperinflation

- GDP already declined by more than 50%
- banks balance sheets contract
- and important institutional restructuring



A few historical examples

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Some inflation records (from one month to the other)

- Germany in 1923: +3.25M%
- Hungary in 1946: +40MB%
- Zimbabwe in 2008: +79B%



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Advanced indicators of a hyperinflation episode

- high and variable inflation
- low institutional independence of the CB
- persistent budgetary deficit

Some policy alternatives

- a budgetary adjustment is CRUCIAL
- capital markets must be opened
- utility of the implementation of an external anchor



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The impact of a financial crisis

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Conclusion

- GDP typically shrinks by 9% over 2 years
- unemployment increases by 7 pp over 4 years
- stock prices lose 55% over 3 years $\frac{1}{2}$
- property prices lose 35% over 6 years
- and the public debt doubles



The redistributive impact of a financial crisis

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- increase of unemployment, reduction of worked hours, development of informal work
- reduction of real wages in the non-tradable sector, increase of imported prices
- decrease of public spendings for social services
- variations (indeterminate) of the value of financial assets



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The biggest financial crises since the WW2

- Spain in 1977, Norway in 1987, Finland and Sweden in 1991, Japan in 1992
- The international crisis started in 2008

The most important episodes in developing countries

- The Asian crisis of 1997-98 (HK, Korea, Malaysia, Philippines, Thailand)
- the 1998 Colombian and Russian crises
- Argentina in 2001



Unsustainable policies

Domestic causes (the 1994 Mexican crisis)

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- 1982: debt crisis in Mexico
- 1980s: structural adjustment, structural reforms, the Brady Plan
- beginning of 1994: explicit approval of public policies by the IMF and by the US Treasury secretary
- end of 1994: financial crisis



1st generation of financial crisis models

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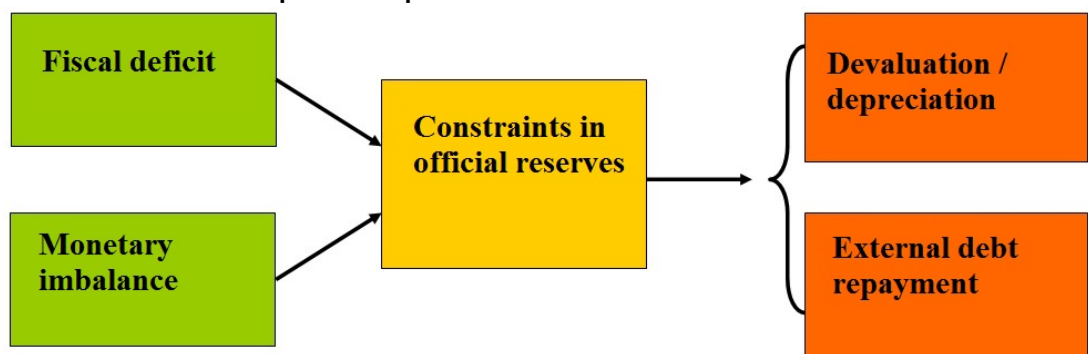
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Unsustainable public policies





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- fiscal deficit
- reserves in months of imports
- reserves in % of short term debt (macro mismatches)
- reserves in % of foreign currency bank deposits (run risk)



Financial domestic vulnerabilities

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Vulnerability indicators of the banking sector

- capital requirements
- asset quality
- profitability
- liquidity in local and foreign currencies

Vulnerability indicators of the stock market

- depth and diversity of markets
- turnover and liquidity

A few policy alternatives

- prudential regulation, transparency, monitoring of off-balance-sheet operations

Twin crisis: the Asian crisis

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A framework now well-understood

- Important capital inflows
- Rushed financial liberalization
- External anchoring of dollar

But some unusual elements

- increasing leverage
- excessive risk-taking
- liability dollarization and currency mismatches
- potentially, a bank crisis

Third generation of financial crisis models

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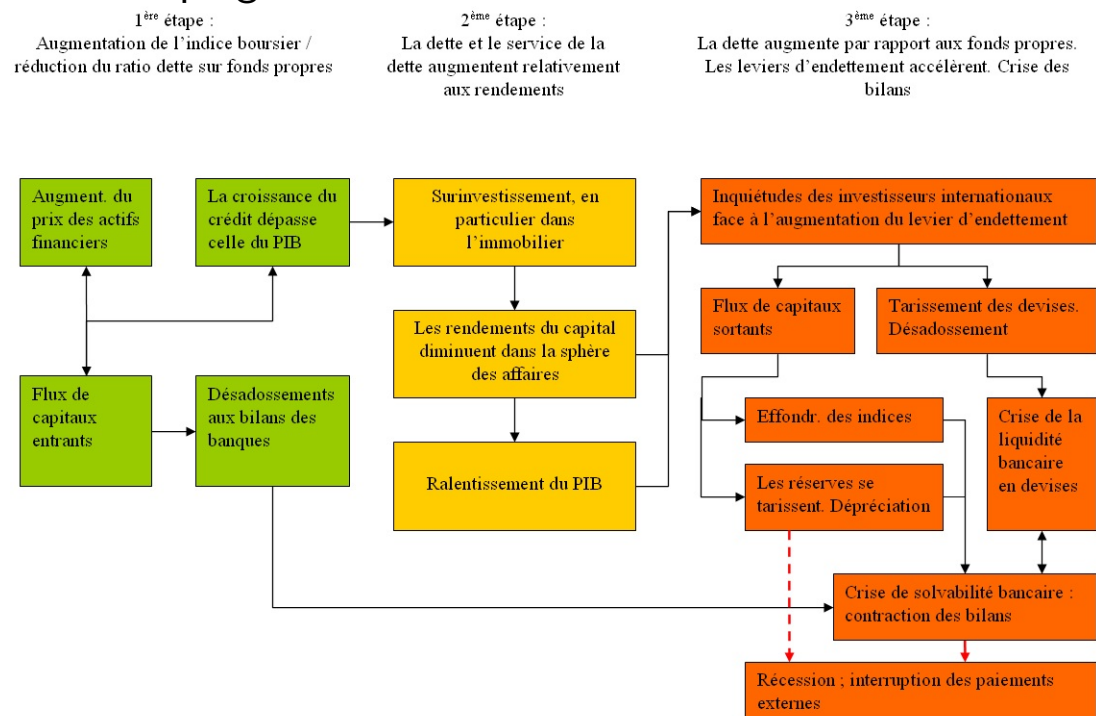
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The Minsky financial instability hypothesis in the context of developing countries





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Indicator

- inflation of asset prices
- increasing leverage (weak CAR, equity to debt ratio, etc.)
- currency and maturity mismatches
- persisting current account deficit / volatile capital flows
- growth slowdown

Some policy alternatives

- financial regulation
- investment in the State institutional capacity, in particular communication
- progressive opening of balance of payments



Contagion: after the Asian crisis

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- Russian crisis in August 1998
- LTCM
- Latin American countries (Argentina)



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The impact of a debt crisis

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The cost of defaulting on sovereign debt

- exclusion from financial markets
 - as retaliation / sanction
 - as a reflection of a lesser quality of credit

- limit trade and finance

... Advantages

- reduction of the debt service
- offers room for maneuver to reallocate public expenditures
- redistributive policy ??



A few historical examples

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- 1970s: Latin America, Spain, Eastern Europe, Turkey, Egypt, Indonesia, etc.
- 1990s: Latin America (in particular Mexico) and Eastern Europe countries
- Finland and Sweden in 1991, Japan in 1992



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Solvency and liquidity indicators

- fiscal deficit, financial conditions, inflation and growth
- public debt to GDP and revenues, CPIA
- ST public debt / debt service charges

Debt intolerance

- default history (debt intolerance)

Some public policy alternatives

- fiscal austerity and spending priorities
- donor lending policy
- debt cancellation / restructuring



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- exports: local production costs, foreign markets
- imports: competition with foreign products
- External value of the currency and price competitiveness
- Potential asymmetry between imports and exports



The Dutch disease

An obstacle rather than a crisis

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- Abundance of an exported commodity
- Aid dependency
- or even an inadequate exchange rate policy

have all three the same effect:

- desindustrialization or industrialization failure
- high unemployment



The curse of raw materials

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- 1977: the Dutch disease
- 1991: Barro's African dummy
- 1997: Easterly and Levine's African growth tragedy
- 2001: Sachs and Warner's resource curse
- 2004: Collier and Hoeffler, Fearon

Illustration of the curse

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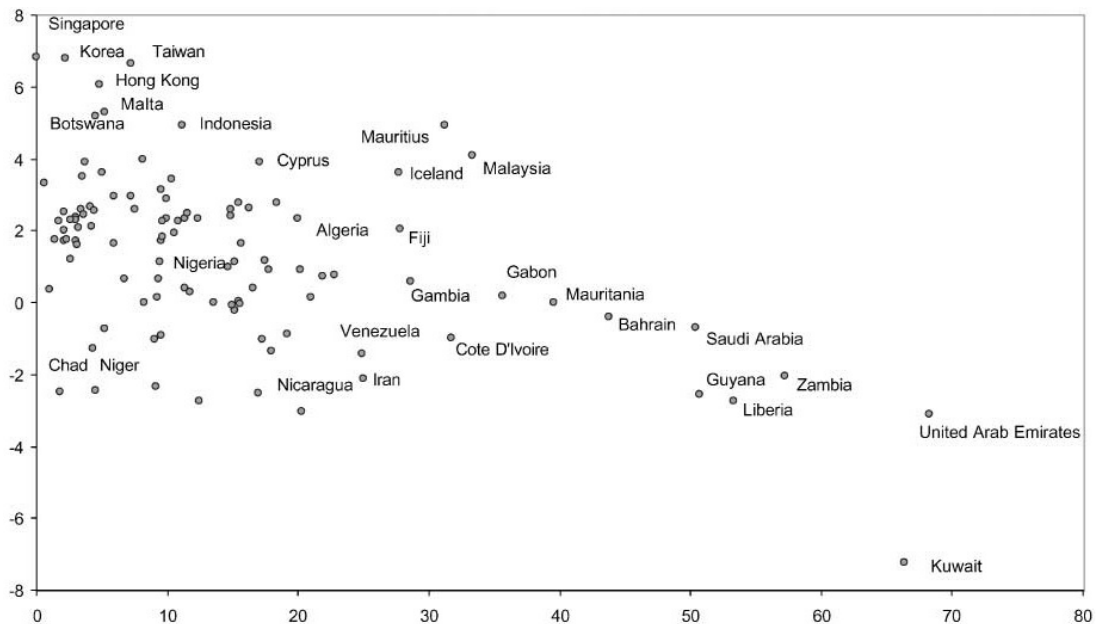
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x: revenues as share of exports. y: average growth 70-89

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Indicators

- unemployment
- price competitiveness:
 - terms of trade
 - temporal evolution of the REER according to diverse specifications

Some policy alternatives

- implement a competitive exchange rate



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Indicators

- Worldwide governance indicators (World Bank)
- Global competitiveness index (World Economic Forum)
- Doing business (World Bank)

Some policy alternatives

- institutional reform
- development of the State regulatory capacity

Global Competitiveness Index 2009

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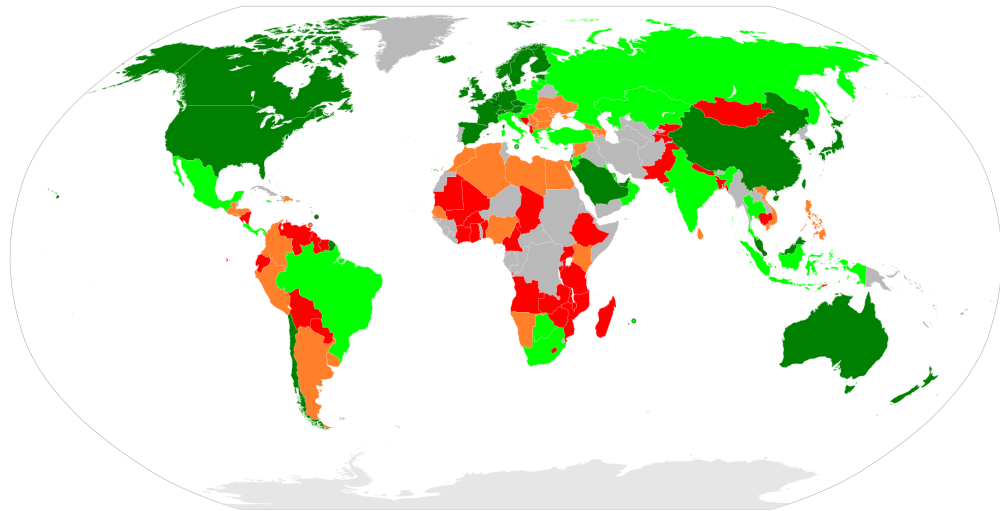
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Source: World Economic Forum

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Civil wars as “backwards development”

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What's a civil war? typically

- a civil war lasts 10 years
- it affects mainly civilians
- its effects last long after the end of the conflict
- and half of its cost is born by neighboring countries

Multiplication of civil wars

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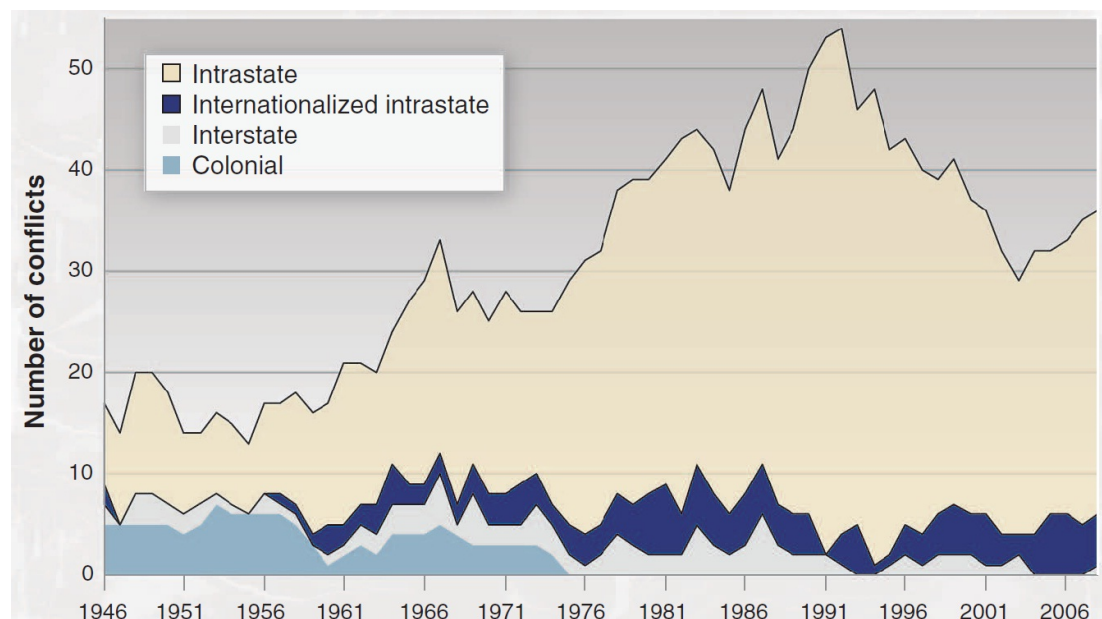
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Source: Collier 2004

The cost of civil wars

Costs in terms of GDP and infrastructures

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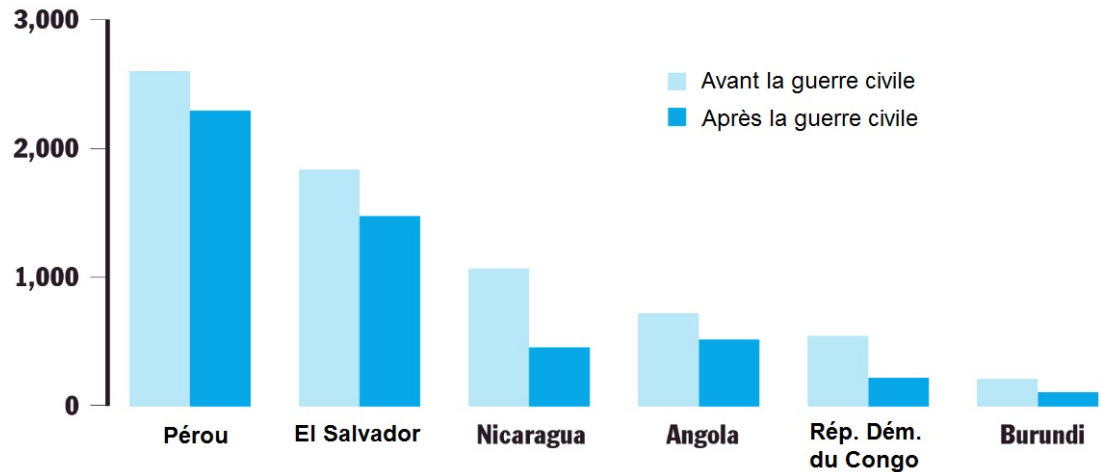
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U.S. dollars



Source: Collier 2004

The cost of civil wars

Civil war legacy

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- persistence of “superfluous” military expenditures
- capital flight
- social capital destruction
- public policy deterioration
- deterioration of social and psychological indicators, etc.



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Some empirically inconclusive explanations

- ancestral ethnic and religious hatred
- lack of democracy
- economic inequalities and colonial legacy

Factors suitable for conflicts

- level of GDP and growth
- dependence to raw materials
- ethnic fractionalization
- “greed” vs. “grievance”
- and a former civil war



Operational conclusion

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- real volatility: policy mix
- nominal volatility: monetary and exchange rate policies
- domestic financial volatility: prudential supervision
- external financial volatility: BoP monitoring, management of reserves and of the ER
- public debt sustainability: fiscal and monetary policy, debt management
- price competitiveness: ER policy and redistribution
- cost competitiveness: institutional reform
- civil conflict: institutional reform and redistribution



Theoretical conclusion

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Several factors make developing countries particularly vulnerable to shocks

- productive bases relatively narrow, and dependence to raw materials
- more vulnerable populations, less protected
- definition / implementation of inefficient economic policies
- corruption, low culture of social and democratic dialogue, rent extraction

Without an active policy to fight against shocks, developing countries are condemned to a succession of stop & go

- by definition, unsustainable growth
- important cost on LT GDP
- these shocks touch first the most vulnerable