

Master PPD M1

2008 / 2009

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# Lecture 11

## Fiscal policy in developing economies

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# Fiscal policy is a hot topic in developing countries

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- ❑ In the 60s and 70s : Taxes on imports as a device for Import substitution: product, inputs, equipment goods. Distortions and Effective protection ratio.
- ❑ Structural adjustment, balancing budgets and liberalization.
- ❑ Asian crisis 1997, Stiglitz's criticism.
- ❑ Debt relief, fiscal space
- ❑ Scaling up of Aid and MDGs: a problem of absorption (Uganda)?

# Because of the crisis, this issue is on the top of the agenda

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- IMF is advocating for fiscal stimulus in the OECD countries
- And emerging countries, LICs ?
  - Yes, if temporary and targeted
- World Bank: Zoellick proposal 2009, a part of OECD fiscal stimulus should be used to support fiscal stimulus in developing countries

# Outline of the lecture

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- ❑ **Stylized facts (emerging countries and LICs)**
- ❑ Impact of fiscal policy in developing countries
- ❑ Fiscal sustainability

# Stylized facts for developing countries: revenue

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- ❑ Low tax ratios (and difficult to increase, see Latin America), more or less stable in the medium run (a structural adjustment failure?)
- ❑ Tax ratios increase with GDP pc.
- ❑ Taxes are mainly indirect, a big share is on external trade (mainly imports, but also exports)

# Stylized facts for developing countries: revenue (contd)

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- ❑ Informal sector does not pay direct taxes, but indirect (and VAT on inputs). Tax holidays or exemptions in many cases (state enterprises, NGOs, foreign financed projects).
- ❑ As a result, taxes are highly concentrated, resulting in a possible Laffer curve, even if the global tax ratio is low.
- ❑ VAT is regressive in OCDE countries, not always in LICs (no VAT on necessities)
- ❑ Fiscal incentives are not very effective

# Stylized facts for developing countries: expenditure and financing

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- Expenditure as a ratio to GDP increases with GDP pc (Wagner's Law). Expenditures experience fast growth: transition (demographics), infrastructures, building of the Nation State.
- A big share of expenditure is on wages and salaries. In LICs, investment is mainly foreign financed.
- Financing:
  - External: original sin, credit rationing,
  - Domestic: small domestic financial markets, non independence of the Central Bank
- Corruption is relevant for tax evasion, but also creates distortions in the choice of expenditure (preference for capital intensive technologies). Corruption is difficult to fight (example: VAT in Lebanon)

# Comparative levels of Tax ratios (% GDP)

	1985-87	1995-97
OECD countries	36.6	37.9
America	30.6	32.6
Pacific	30.7	31.6
Europe	38.2	39.4
Developing countries	17.5	18.2
Africa	19.6	19.8
Asia	16.1	17.4
Middle East	16.5	18.1
Latin America	17.6	18.1

Source: Tanzi and Zee 2000:8 in Nafziger, 2006 p. 468

# Fiscal policy and inequality

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- Income inequality results in pressures for redistribution and higher tax ratios for on holders of capital and land, thus lower investment and growth (Alesina and Rodrik 1994)
- Political power of the richer few allow them to oppose progressive income tax, of sizable property tax

# Outline of the lecture

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- Stylized facts (emerging countries and LICs)
- **Impact of fiscal policy in developing countries**
- Fiscal sustainability

# Impact of fiscal policy in Developing countries

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- Crowding out effect (IMF) - or complementarity?
  - Foreign borrowing
  - Small domestic financial markets
- Ricardian equivalence?
  - Preference for present
  - Altruism
  - Perfect capital markets

# Impact of an increase in public expenditure

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- Idle capacities of production: a case for a Keynesian approach? Or for a case-by-case, sectoral approach?
- Current or Investment?
  - Current expenditure is not flexible (namely hiring civil servants)
  - Nevertheless, investment needs current expenditure to be effective
  - Investment goods are mainly imported

# Automatic de-stabilizers?

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- Pro-cyclical public expenditure
- A fragile relationship between revenue and economic activity
- Should public expenditure be kept constant during booms? Or limited to investment (HIPC)?

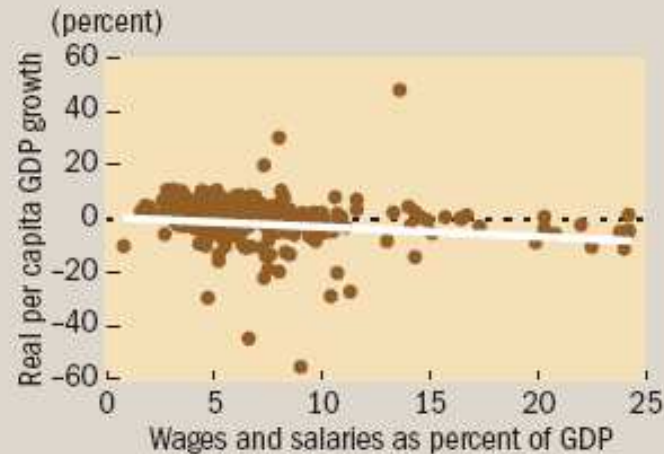
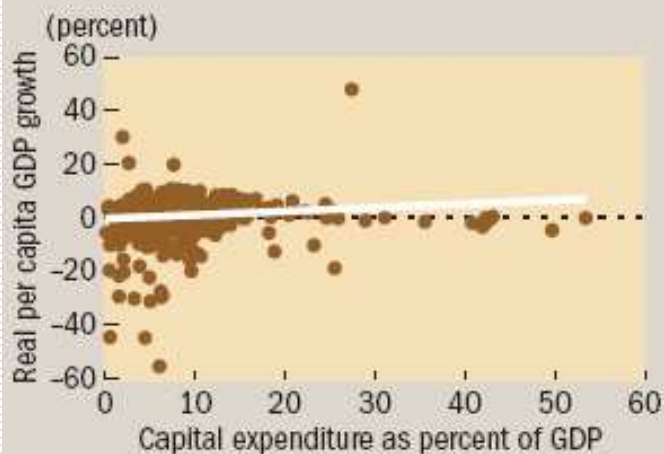
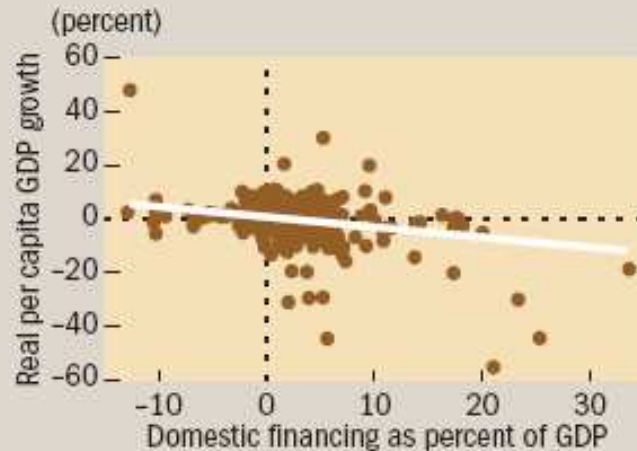
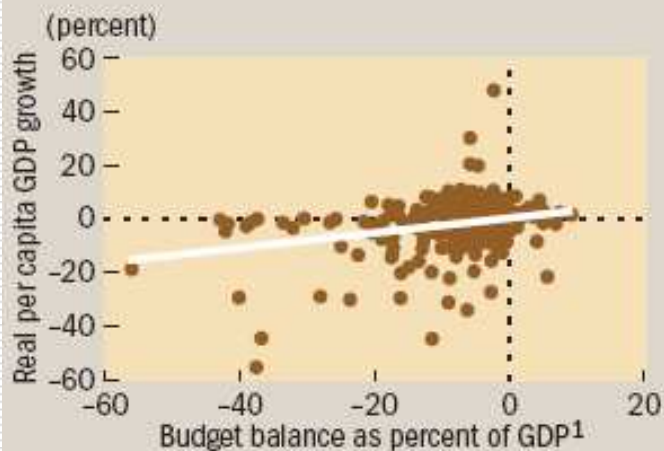
# Long term impacts

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- ❑ On growth: are public expenditures productive? (Aschauer 1989 "Is public expenditure productive?")? Public investment? Infrastructure? Public capital stock?
- ❑ Budget balance and growth: the IMF argument (see next slide)
- ❑ On debt: how to assess the likely outcome of debt dynamics?

## Growth increases as the budget moves into surplus

Capital spending increases also boost growth, but increases in domestic deficit financing and in the government wage bill depress growth.



Source: Authors' calculations.

Note: Data are for 39 countries with IMF-supported programs, 1990–2000.

<sup>1</sup>Budget balance equals revenues minus expenditures; negative balance is a deficit, positive balance a surplus.

*Baldacci,  
Clements, and  
Gupta, Using  
Fiscal  
Policy to  
Spur Growth,  
When reducing  
fiscal deficits  
makes sense  
for  
low-income  
countries  
Finance &  
Development  
December 2003*

# Outline of the lecture

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- Stylized facts (emerging countries and LICs)
- Impact of fiscal policy in developing countries
- **Fiscal sustainability**

# Sustainability of public deficits

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- ❑ Assuming only domestic currency (or no change in Xrates, and no change in the value of Tbonds):
- ❑ Deficit = Net financing = change in the (public) debt stock
- ❑ Net financing = Domestic borrowing (non banking sector) + Foreign borrowing + change in NCGov - Amortization
- ❑ Government or public sector?

# Government Financial Operations

Uses		Resources	
Expenditures	180	Revenue	120
		Borrowing (drawings)	85
Amortization (capital repayment)	35	Change in Net Credit to the Gov	10

# Government Financial Operations

Uses		Resources	
Expenditures: Goods and services Transfers Interests	180	Revenue (and Grants)	120
Amortization (capital repayment) Or purchase of assets	35	Borrowing (drawings) or Sale of asset	85
		Change in Net Credit to the Gov	10

# Dynamics: an example of a projection of the GFO

## **GFO (flows)**

## **Base year**

revenue	120
expenditures	180
primary	165
interests	15
Net borrowing	60

## **Debt Stock**

(end of base year)

900

# Dynamics: projection of the CGFO

Assumptions:	<b>GFO</b>	<b>Base</b>	<b>Year 1</b>
Rate of growth of revenue: 5%	revenue	120	→ 126.0
	expenditures	180	
Of primary expenditures: 6%	primary	165	→ 174.9
	interests	15	
	Net borrowing	60	

## **Debt Stock**

(end of year) 900

# Dynamics: projection of the CGFO

Assumption:  
Interest rate:  
4.5%

<b>GFO</b>	<b>Base</b>	<b>Year 1</b>	
revenue	120	126.0	
expenditures	180	215.4	
primary	165	174.9	
interests	15	40.5	
Net borrowing	60		

## **Debt Stock**

(end of year)

900



# Dynamics: projection of the CGFO

<b>GFO</b>	<b>Base</b>	<b>Year 1</b>	
revenue	120	126.0	
expenditures	180	215.4	
primary	165	174.9	
interests	15	40.5	
Net borrowing	60	89.4	

## **Debt Stock**

(end of year)

900

989.4



## Dynamics: projection of the CGFO

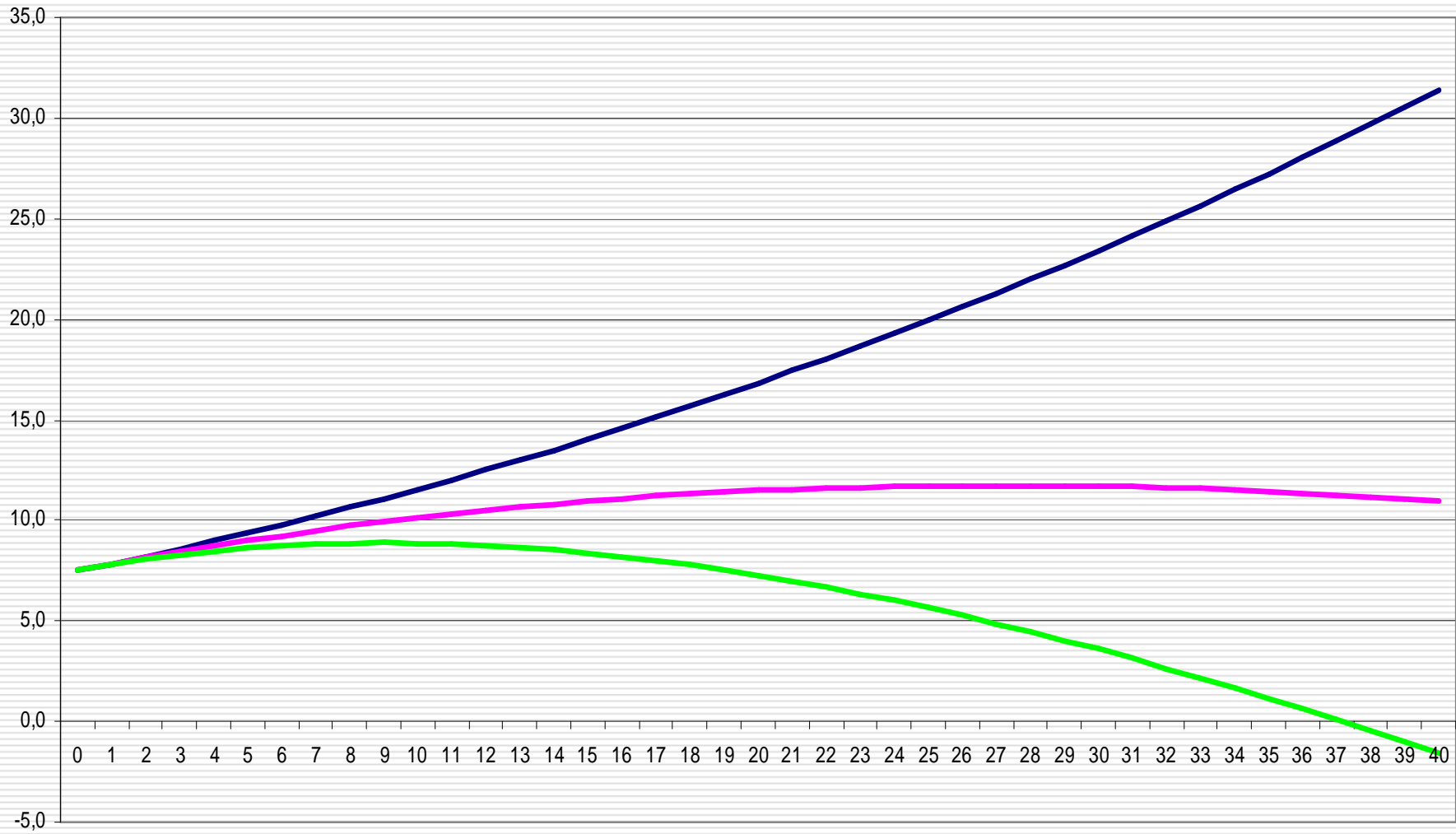
	0	1	2	3	4	5	20	40
Revenue	120	126	132	139	146	153	318	845
Expenditures	180	215	230	245	262	280	751	2802
Primary	165	175	185	197	208	221	529	1697
Interests	15	41	45	49	54	59	222	1105
Net borrowing	60	89	98	107	116	127	432	1957
	0	0	0	0	0	0		
Debt stock	900	989	1087	1194	1310	1436	5 357	26 512
debt to revenue ratio	7,5	7,9	8,2	8,6	9,0	9,4	16,8	31,4

# Scenarios

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	S1	S2	S3
Interest rate	4,50%	4,50%	4,50%
Rate of growth of revenue	5,00%	5,00%	5,00%
Rate of growth of primary exp	6,00%	4,00%	2,00%

Debt to revenue ratio



S1 S2 S3

# Dynamics of the public debt

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□ CGFO:

□  $T + F = G + r B + A \quad (1)$

- T is the amount of taxes and duties
- G is the amount of primary public expenditures (excluding interest)
- B is the outstanding debt
- A is the amortisation
- F represents the drawings (new borrowings)
- r is the apparent rate of interest on the national debt

# Dynamics of indebtedness 2

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- The debt stock changes because of new borrowings (F) and decreases because of amortization (A)
- $F_t - A_t = \Delta B$  (fixed rates of exchange)
- By replacing F-A with its value in (1)
- $\Delta B = B_{t+1} - B_t = G_t + r B_t - T_t$
- N.B.:  $B_t$  is the debt at the beginning of the period t

# Dynamics of indebtedness 3

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□  $b = B/Y$

□  $\partial b / \partial t = (G - T)/Y + b (r - g)$

■  $(G - T)$ : primary budget deficit

■  $b(r-g)$ : “snowball” effect

# Dynamics of indebtedness 5

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What can be done so that  $db = 0$ ?

- If  $G-T = 0$ ,  $r = g$
- If  $r > g$ ,  $(T-G)/Y = (r-g) b$  is the primary budget surplus that stabilizes the indebtedness ratio

# Limits of the model

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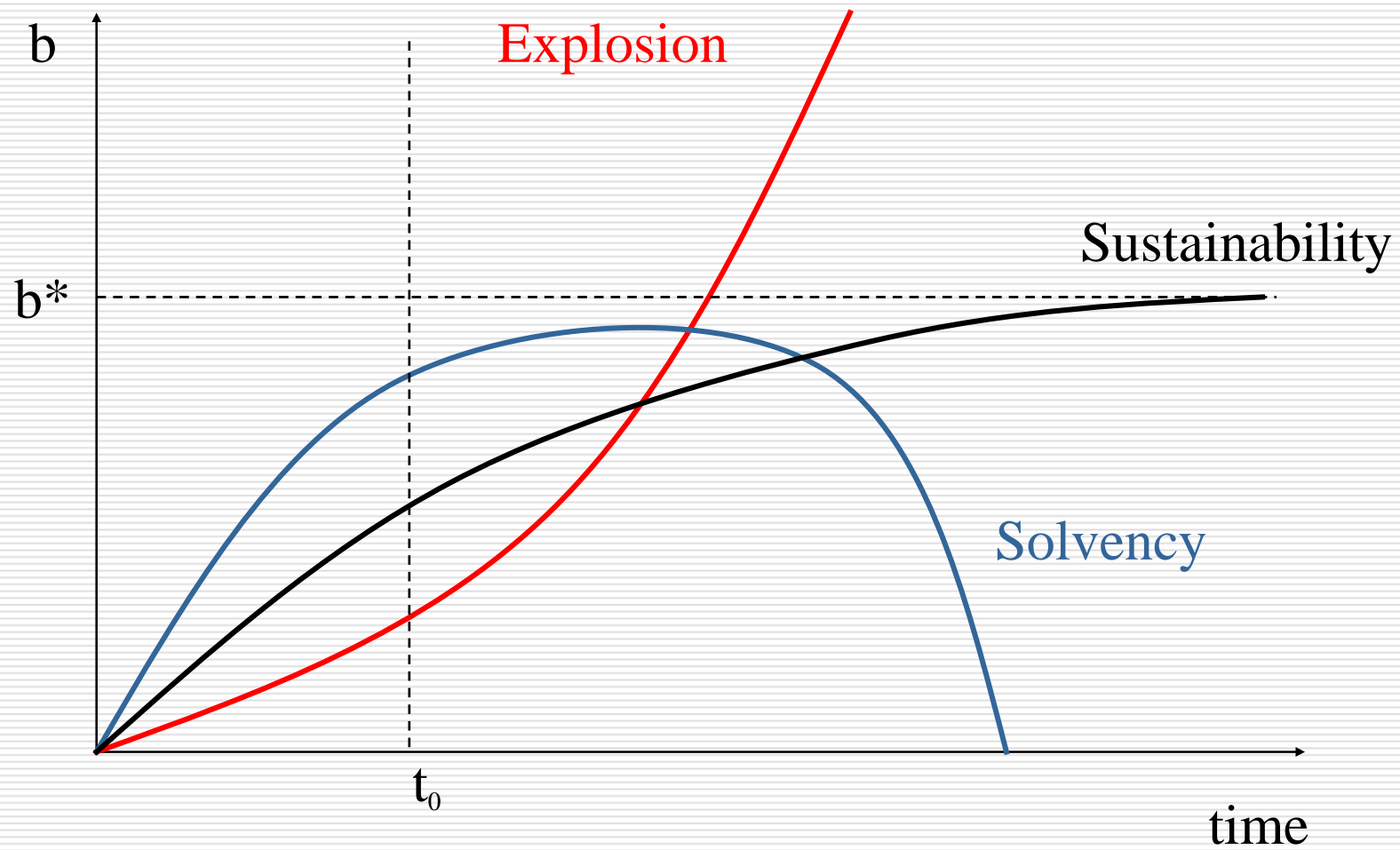
- ❑ The preceding exercise is arithmetic, necessary (namely for MTEFs ) but not sufficient.
- ❑ Are the basic hypotheses realistic? How can we evaluate the long-term growth rate, the evolution of the tax ratio, etc.
- ❑ How can we take into account the instabilities (stochastics) and shocks?

# Sustainable debt? The use of ratios

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- Ratios are often used to characterize a sustainable debt. E.g. (outstanding or service):
  - UE: Public debt /GDP < 60%
  - HIPC: NPV debt / exports < 150%
- This method can lead to dubious interpretations. The dynamics matters!

# Dynamics of the debt ratio



# Example : Brazil (Garcia M. & R.Rigobon 2004)

Figure 4  
Debt sustainability with risk.

