# Public infrastructure investment and fiscal sustainability in Latin America

## Oxymoron or compatible goals?

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# Public infrastructure and fiscal sustainability

"In fast-growing Asia, public investment in infrastructure accounts for 5–7 percent of GDP or more. In China, Thailand, and Vietnam, **total infrastructure investment exceeds 7 percent of GDP**. History suggests this is the right order of magnitude for high and sustained growth, although it is difficult to be precise."

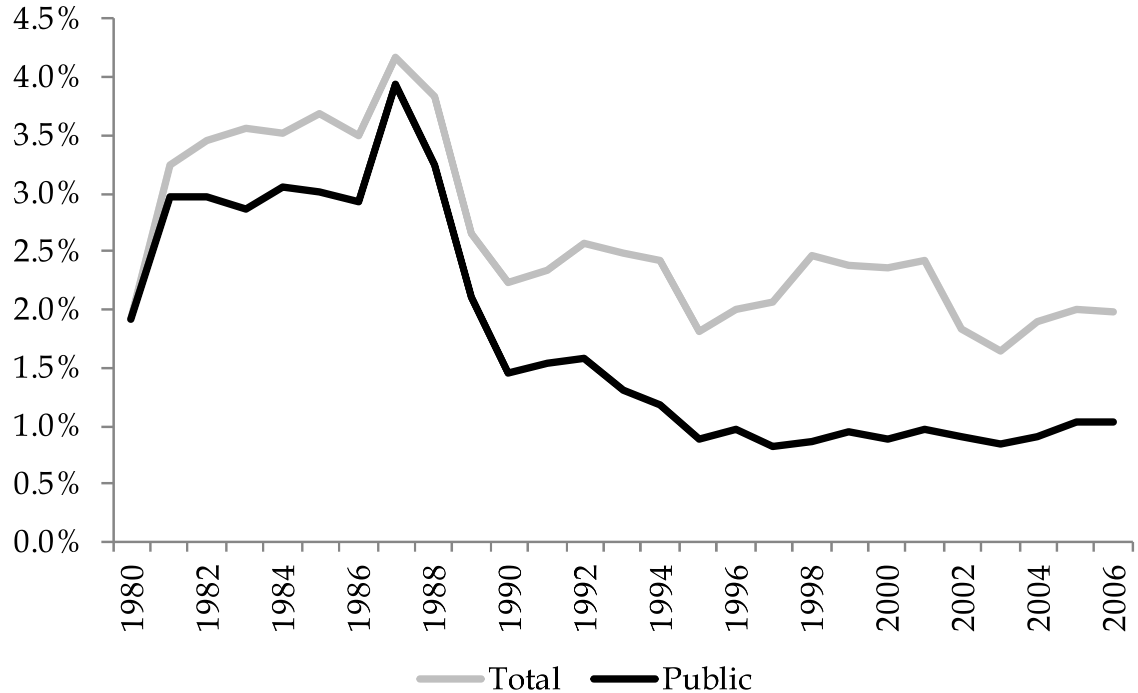
*Commission on Growth and Development (2008)*

# Outline

| | |
|---|---|
| **1** | **Infrastructure trends in Latin America** |
| 2 | Fiscal consolidation and public infrastructures |
| 3 | Fiscal frameworks and public infrastructures |
| 4 | Conclusions and policy recommendations |

# Infrastructure trends in Latin America

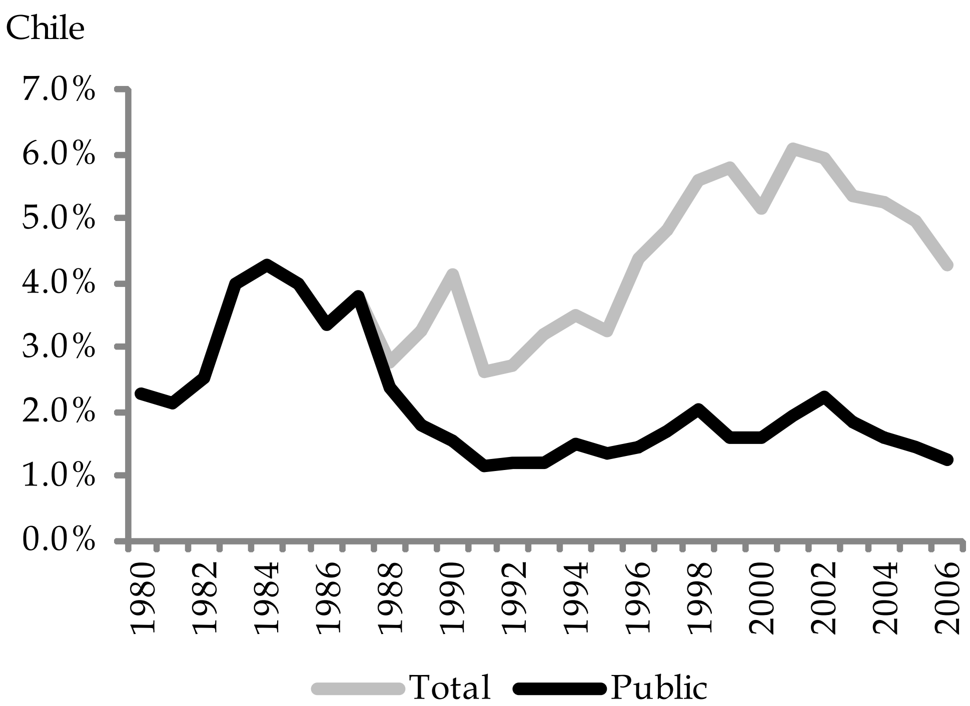
Figure 1. **Public and total investment in infrastructure in LAC-6 countries**
(Weighted average, % of nominal GDP)

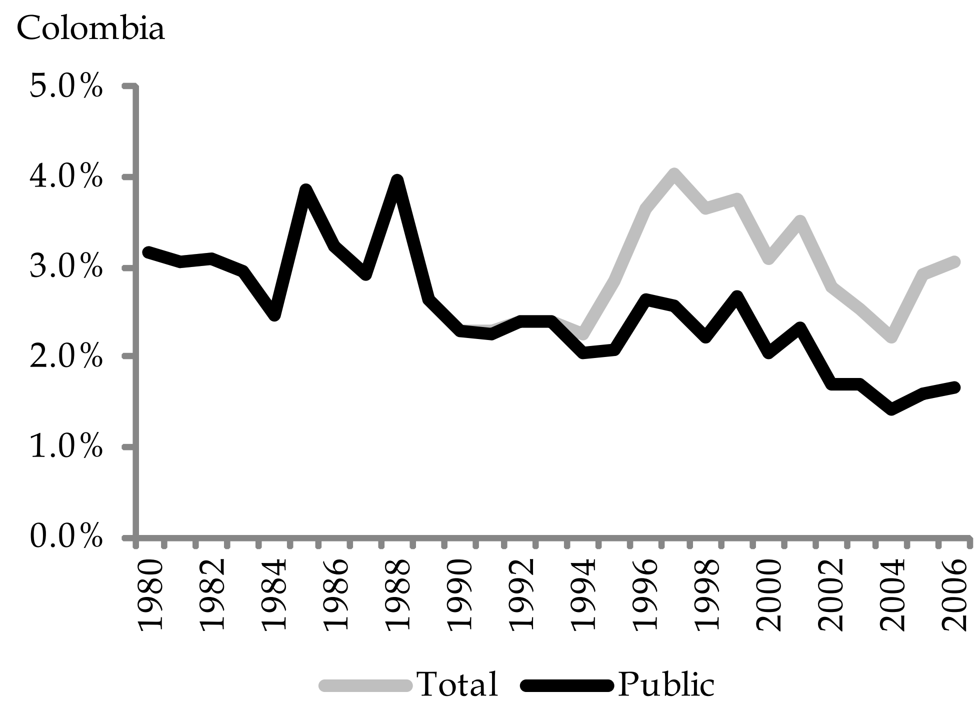



Private investment increased in the 1990s (privatisations, PPPs), but not enough to compensate public retrenchment. Total investment stabilised around 2% GDP on average.

# Infrastructure trends in Latin America *(the good)*

**Public and total investment in infrastructure** (% of nominal GDP)

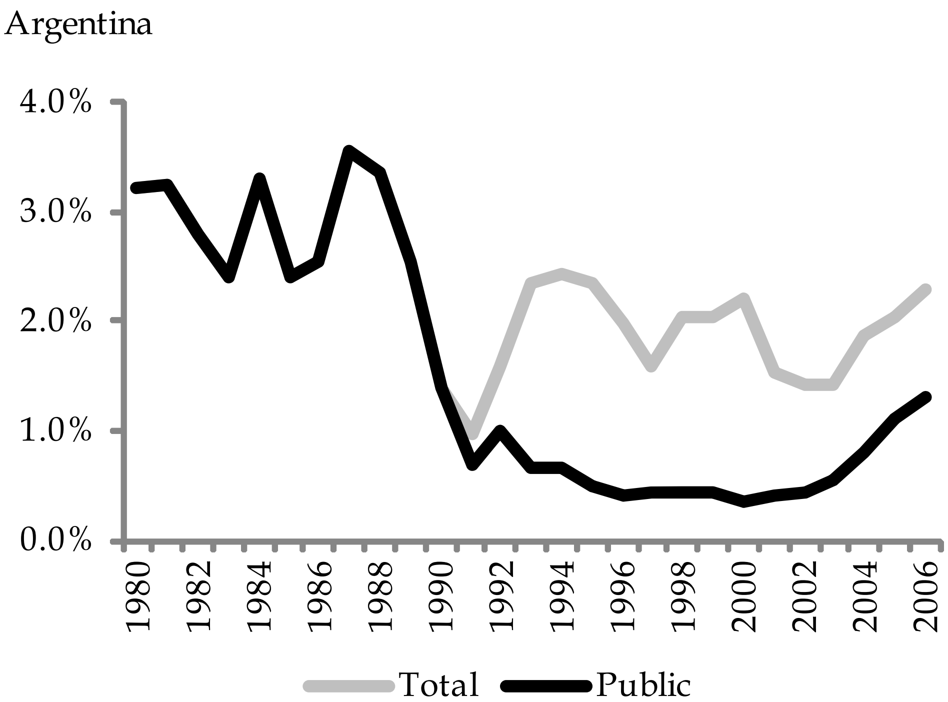


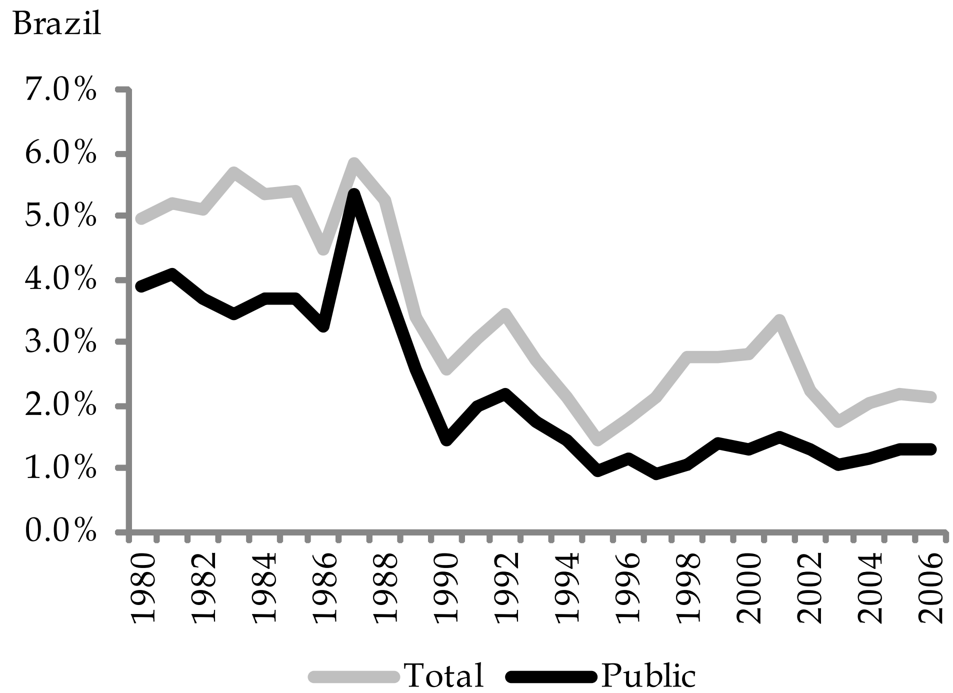




**In Colombia and especially Chile** the increase in private infrastructure investment has more than compensated the reduction in public investment.

# Infrastructure trends in Latin America *(the bad)*

**Public and total investment in infrastructure** (% of nominal GDP)

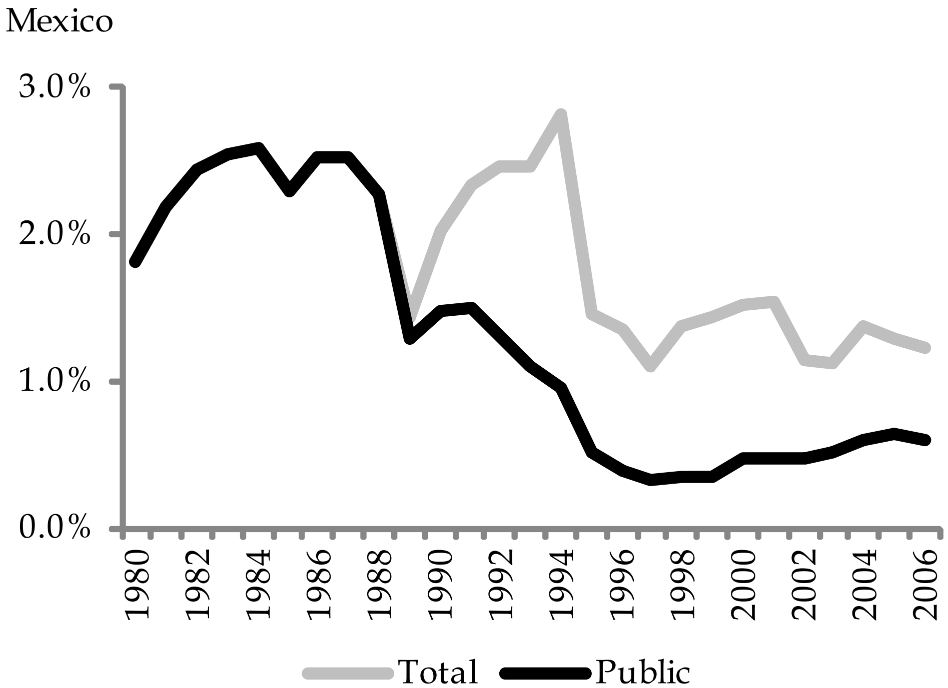


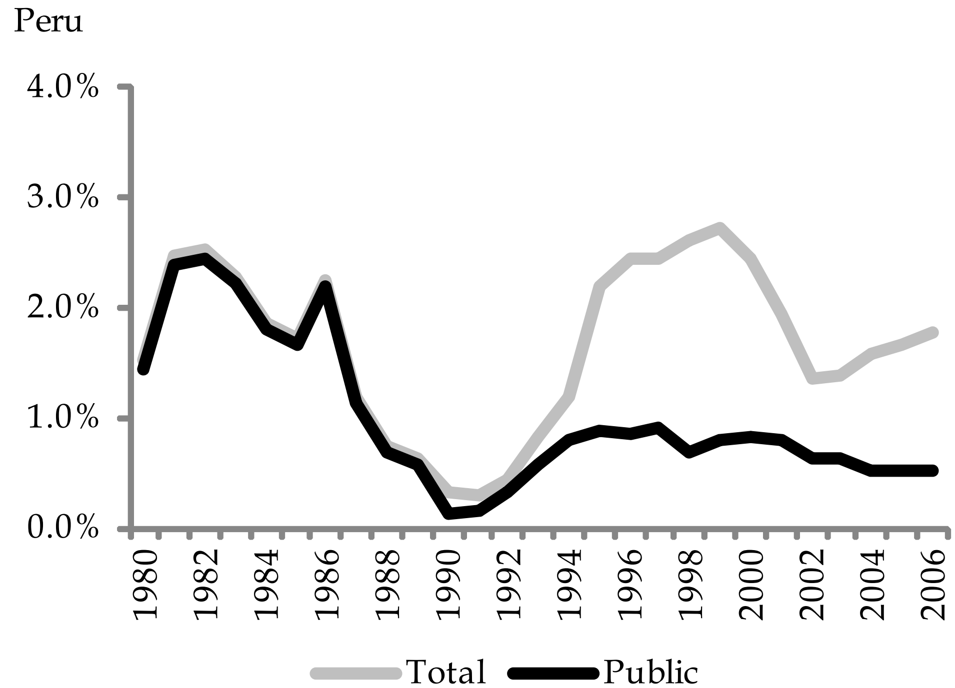




**Argentina, Brazil and Mexico** drive the regional trend.

# Infrastructure trends in Latin America *(and the ugly)*

**Public and total investment in infrastructure** (% of nominal GDP)



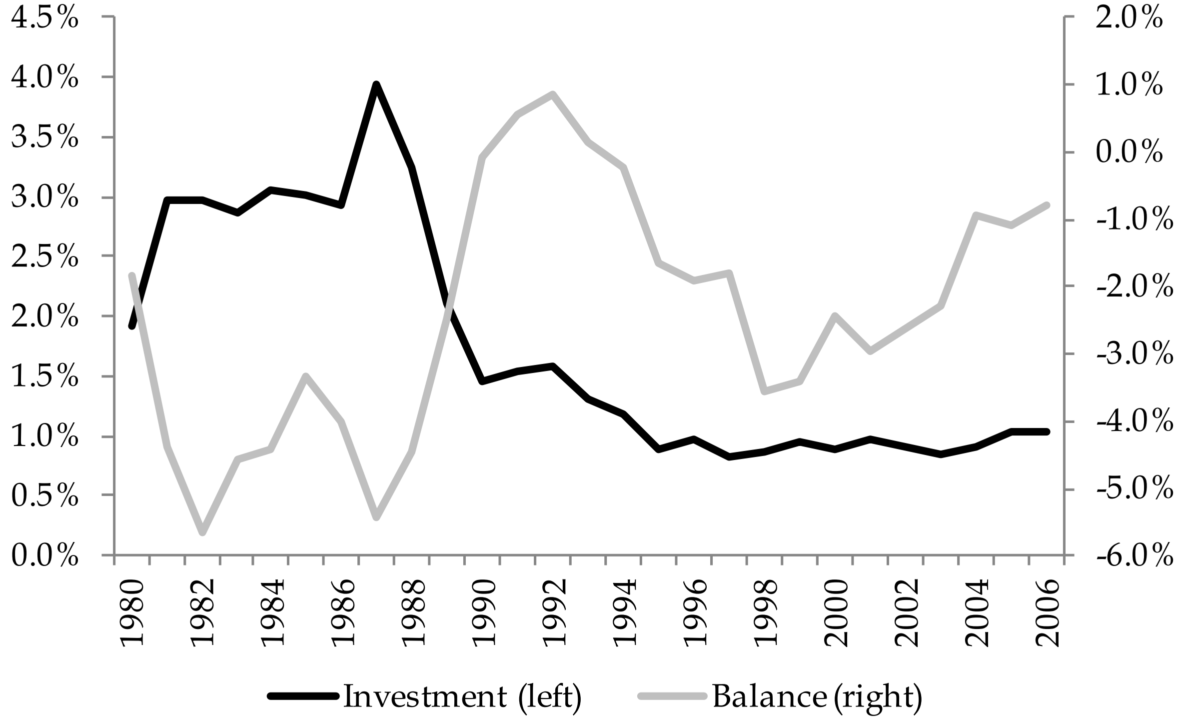




**Peru** is an extreme case: for its low level at the start of the period of analysis and also the collapse in total investment flows in the late 1980s.

# Outline

# Fiscal consolidation and public infrastructures

Figure 3. **Public investment in infrastructure and budget balance in LAC-6 countries**
(Weighted average, % of nominal GDP)



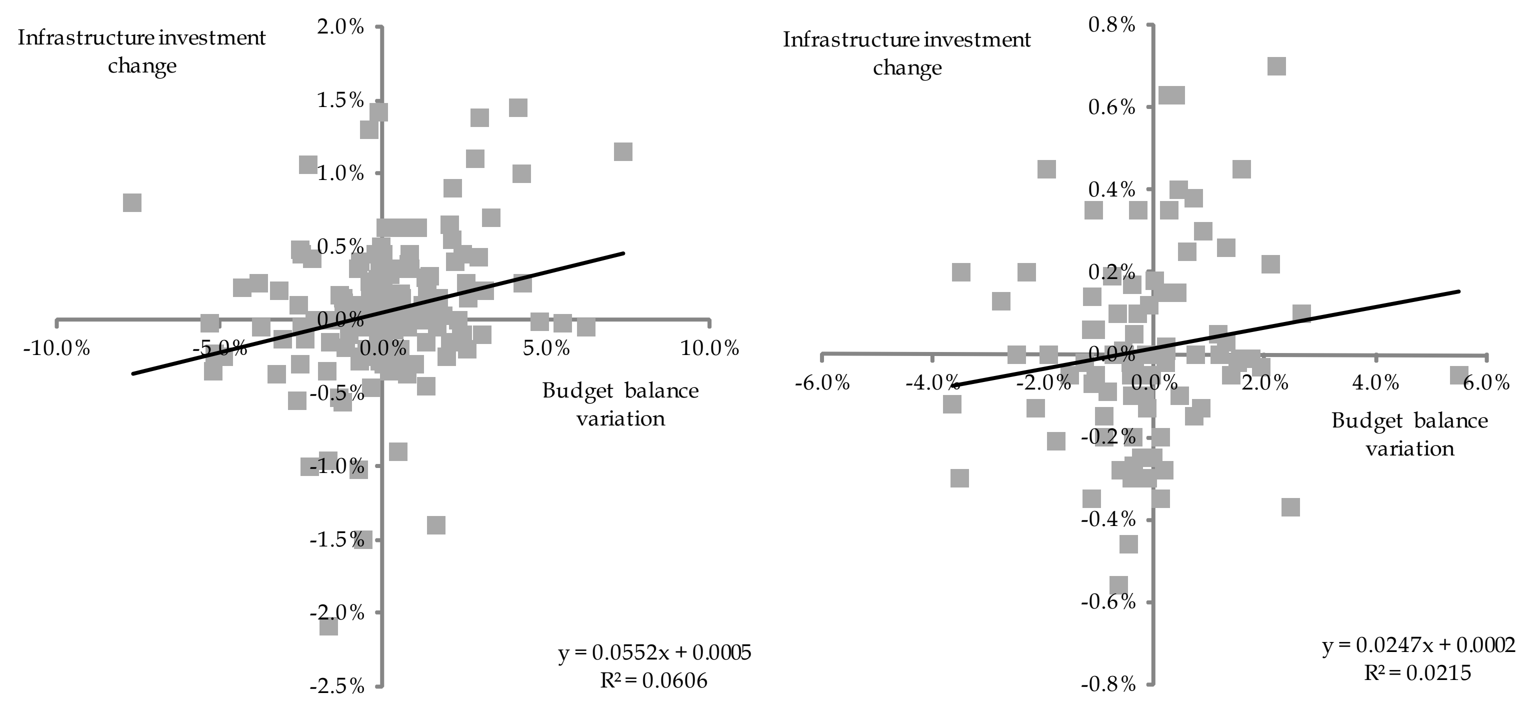

During 1987-1992, one third of the improvement in the budget balance is due to a reduction in public investment (Martner and Tromben, 2005, de Mello and Mulder, 2006).

# Fiscal consolidation and public infrastructures

Figure 5. **Public investment in infrastructure vs. budget balance variations**
(Surplus increase vs. investment reduction, % of nominal GDP)

Budget balance, 1980-2006

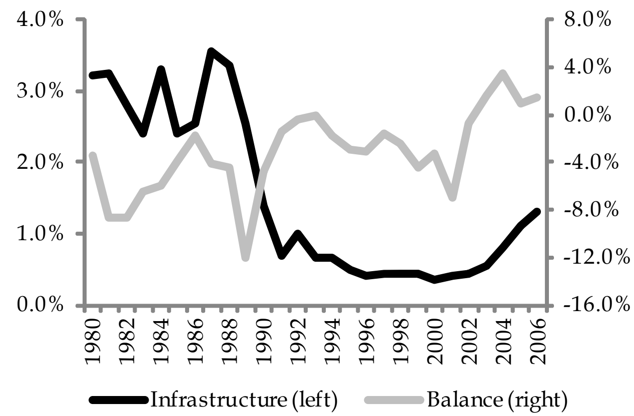
Cyclically-adjusted primary balance, 1990-2006



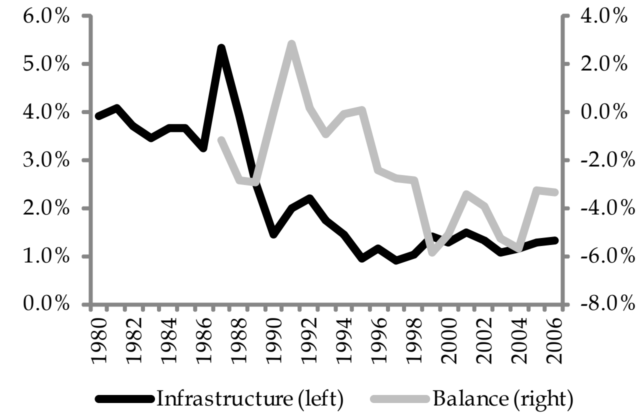

But over the whole period 1980-2006, fiscal consolidations during crisis do not seem to be the key driver of lower public investment rates.

# Fiscal consolidation and public infrastructures

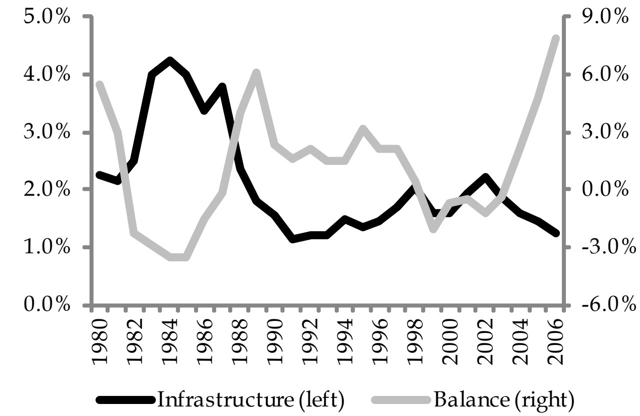
Argentina



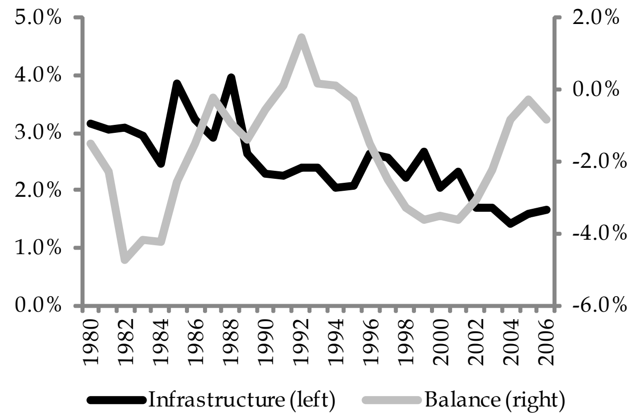

Brazil



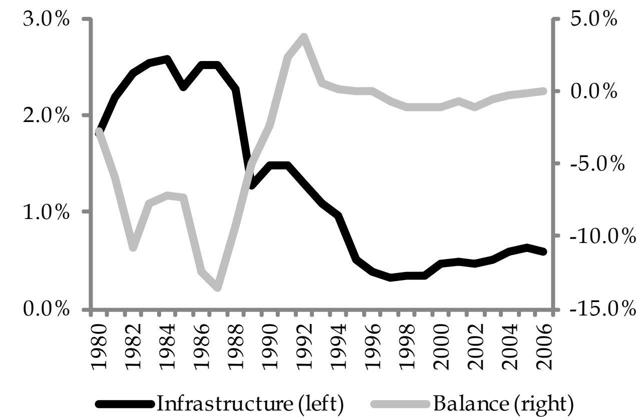

Chile



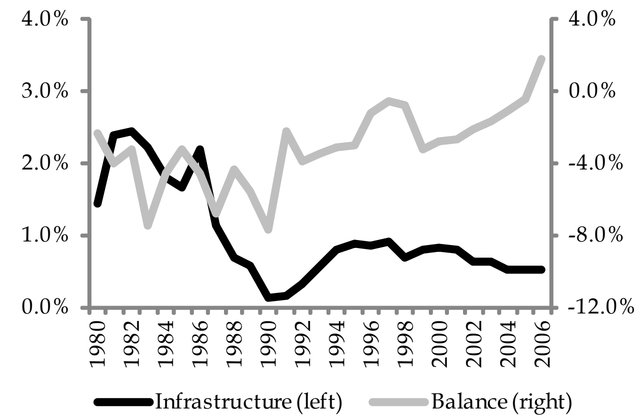

Colombia




Mexico



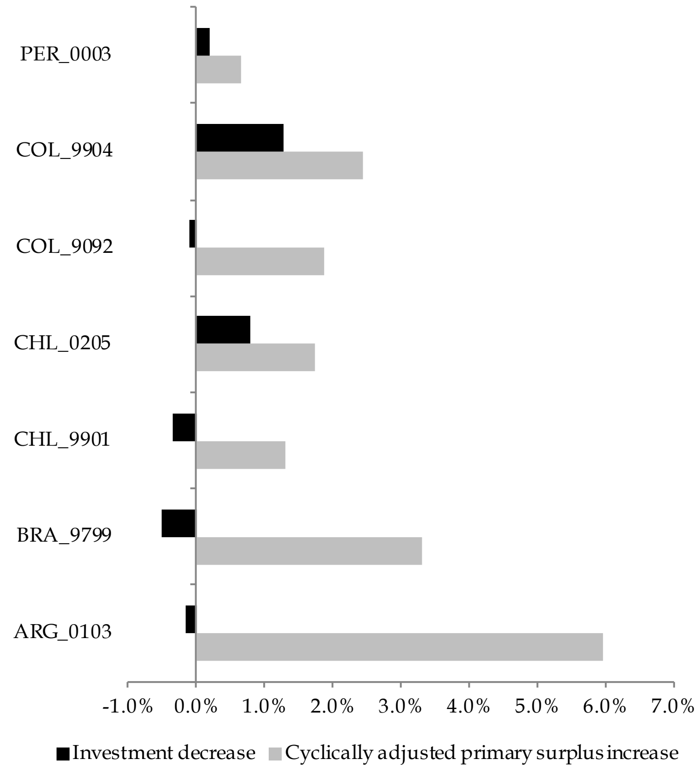

Peru




And developments in the region are quite **heterogeneous** (e.g. Mexico vs. Peru)

# Fiscal consolidation and public infrastructures

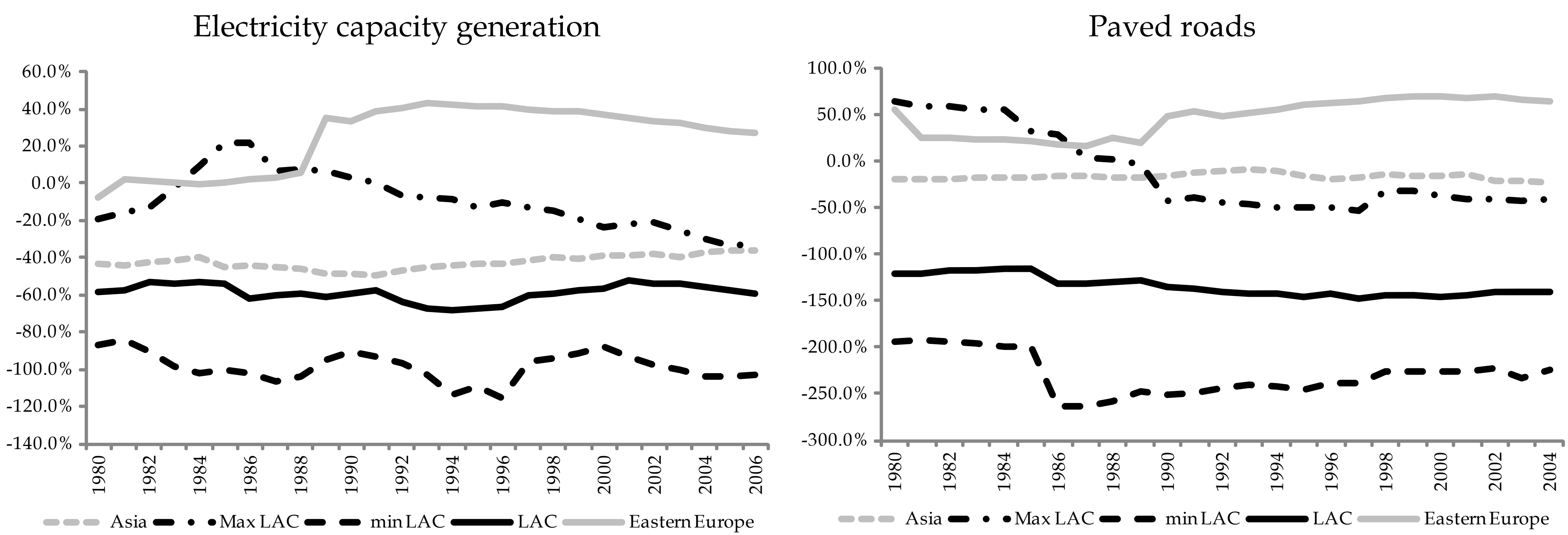
**Fiscal balance improvement and investment reduction** (% of nominal GDP**)**




Discretionary fiscal adjustments are not driven by infrastructure investment cuts, but it is still a fiscal issue (**from fiscal consolidation to fiscal sustainability**)

# Fiscal consolidation and public infrastructures

Figure 7. **Comparative degree of achievement in transport and energy infrastructure**




Latin America exhibits **huge infrastructure gaps** (up to 45% of regional GDP), especially in the transport and energy sectors (CAF, 2009; Balmaseda et al., 2011).

# Fiscal consolidation and public infrastructures

Table 1. **Determinants of infrastructure patterns**

| | Paved roads | | | | Electricity capacity generation | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| **Debt/GDP (log)** | 0.140*** | | | -0.041 | -0.153*** | | | -0.235*** |
| | (0.038) | | | (0.033) | (0.030) | | | (0.034) |
| **Budget balance/GDP** | | -2.301*** | | -3.702*** | | 2.794*** | | 0.646*** |
| | | (0.632) | | (0.589) | | (0.710) | | (0.757) |
| **Burocratic quality** | | | 0.417*** | 0.441*** | | | 0.326*** | 0.356*** |
| | | | (0.027) | (0.029) | | | (0.023) | (0.023) |
| **R-squared** | 0.013 | 0.013 | 0.224 | 0.253 | 0.022 | 0.026 | 0.189 | 0.246 |
| **Observations** | 823 | 823 | 823 | 823 | 943 | 943 | 943 | 943 |

Institutions, but also fiscal positions matter (Balmaseda et al., 2011).

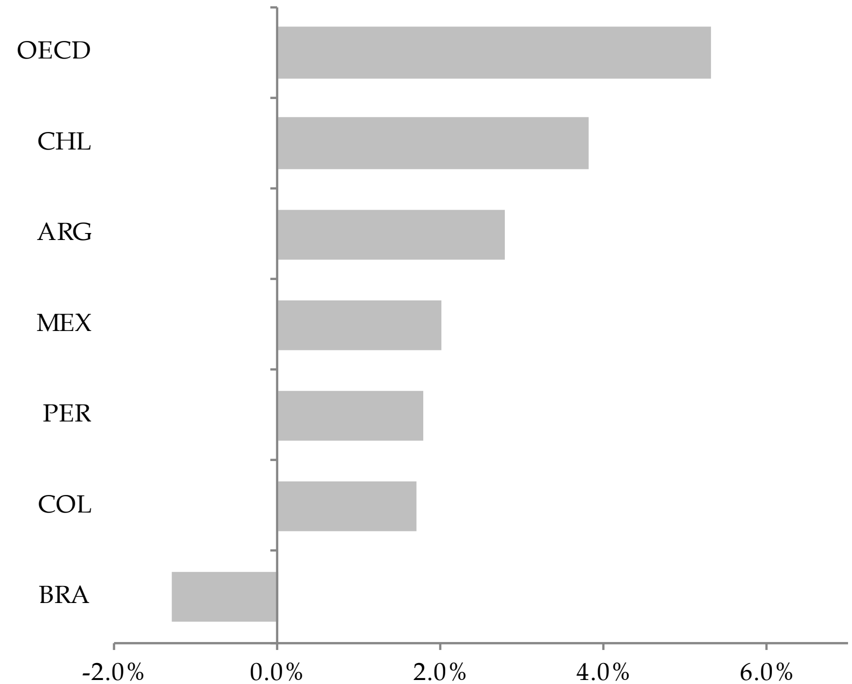
It is crucial to generate **fiscal space over the long term** (not necessarily during crises).

# Outline

# Fiscal frameworks and public infrastructures

Figure 8. **Required change in structural primary balances to stabilise debt-to-GDP ratios**

(% of nominal GDP)




**Fiscal frameworks** should address **fiscal consolidation, fiscal stabilisation and long-term goals** (assets, commodities, and liabilities – social spending and **infrastructures**).

# Fiscal frameworks and public infrastructures *(options)*

**Trade offs between sustainability - public investment**: solvency and liquidity risks, interest rates, potential growth (van der Ploeg and Venables, 2011)

Main **fiscal policy options** on fiscal frameworks (budgets, rules and institutions) and infrastructure investment:

- <u>Golden rule</u>: targets on the current balance excluding capital expenditures
- <u>Accounting</u>: exclude from the fiscal targets the operations of commercially-run public enterprises
- <u>Macro-fiscal rule</u>: legislation forcing the accumulation of savings during the good times, in order to generate the fiscal space to maintain public investment during economic downturns

# Fiscal frameworks and public infrastructures

Ingredients for a **post-crisis fiscal framework** which favours public infrastructure investment:

- Better budgeting (transparent accounting)
- Numerical fiscal rules
- Fiscal Councils

Institutional pre-conditions in defining and implementing fiscal rules (Ter-Minassian, 2010)

# Fiscal frameworks and public infrastructures *(LAC)*

Infrastructure and fiscal frameworks in selected countries in Latin America:

- **Chile**: No specific treatment in the 2001 fiscal rule, neither in the current revision of the rule.
- **Colombia**: Possibility to earmark royalties to finance high-productive local infrastructures in the new fiscal rule.
- **Argentina**: 1999 Fiscal Responsibility Law allows excluding social programs, public investment and projects financed by multilaterals from budget requirements.
- **Brazil**: 2000 Fiscal Responsibility Law allows investment to be excluded from targets for the states. And imposes certain minimum spending (as % of total revenues and transfers from the federal government) on heath or education.
- **Mexico**: 2006 Fiscal Responsibility Law sets the target is set on a cash basis. Since 2009, targets exclude investment from PEMEX, the state-owned oil company. Excess resource revenues can partially be allocated to certain state-level investment projects.

*Source:* Own recompilation based on IMF and National Committees.

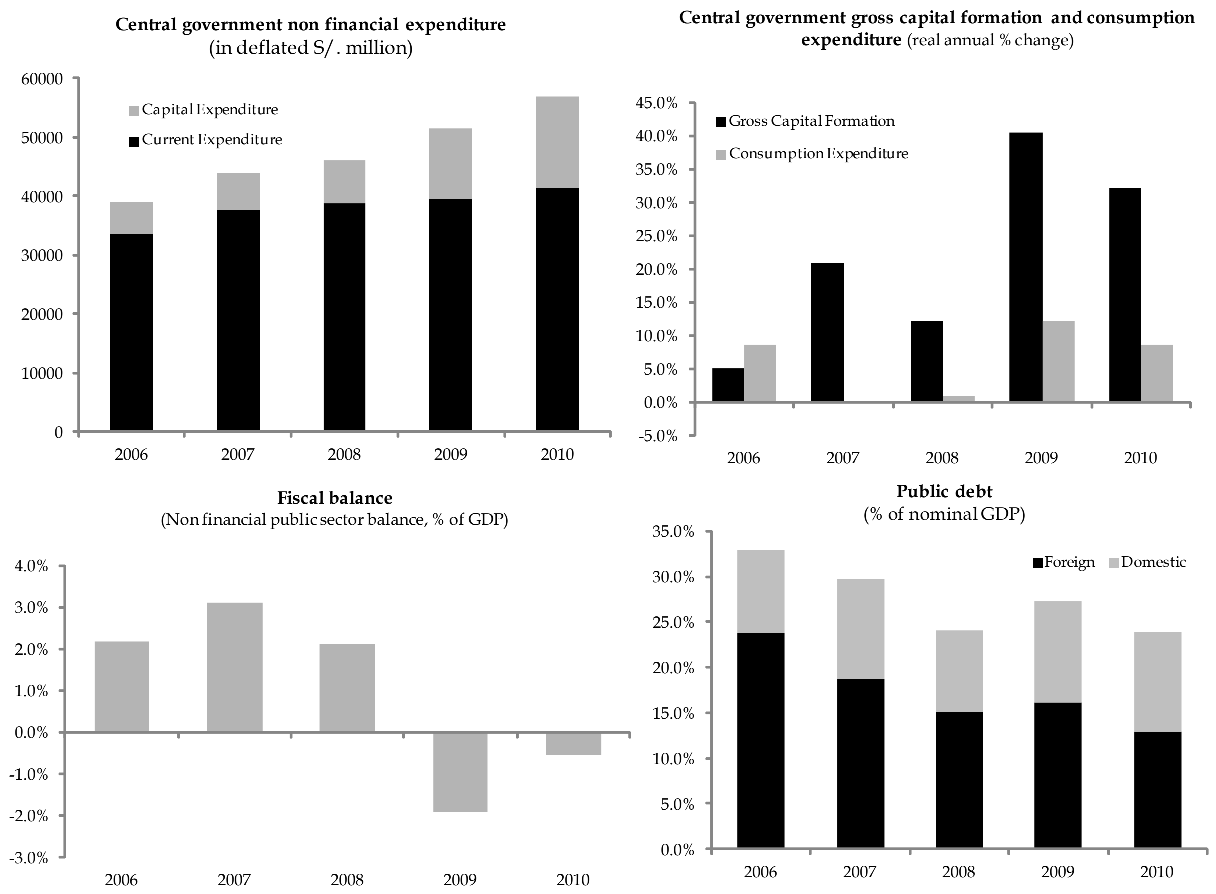
# Fiscal frameworks and public infrastructures *(Peru)*

A focus on **Peru**, main developments since 1999:

- 1999: Fiscal Prudency and Transparency Law:
  - **Numeric restrictions**: 1% deficit consolidated public sector (i.e. including Central Bank), non-financial expenditures GG < inflation plus 2%.
  - **Escape clauses**: GDP contraction or national emergency (up to 2% deficit).
  - **Fiscal Stabilisation Fund**: from excess revenues and privatisations.
- 2003: Fiscal Responsibility and Transparency Law:
  - 1% deficit non-financial public sector, non-financial expenditures GG < 3%.
  - Additional restrictions: election years, and fiscal rules for regional and local governments.
  - Escape clauses : up to 2.5 % deficit, with tighter numerical convergence to 1%.
- 2006-2008: Modifications to Fiscal Responsibility and Transparency Law:
  - non-financial expenditures Central Gov. < 3%, excluding maintenance expenses .
  - < 3% only **on consumption expenditure** (wages and expenditure in goods and services).
  - < 4% including pensions.

# Fiscal frameworks and public infrastructures *(Peru)*

Figure 9. **Main macroeconomic and fiscal indicators in Peru, 2006-2010**




**A good practice for the region?**

# Outline

# Conclusions and policy recommendations

- The debate on the **fiscal exit strategy should not be limited to fiscal sustainability**. It should include stabilisation and long term goals.

- The effectiveness of fiscal consolidation would be eased by a combination of **numerical rules, institutions** (from fiscal councils to independent fiscal agencies), and **better budgetary procedures.**

- In particular, in Latin America (and other emerging economies) fiscal consolidation should be compatible with **closing infrastructure gaps**. The case of Peru might be an interesting example to draw lessons.

- Many questions remain open (e.g. not all infrastructures are alike).

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