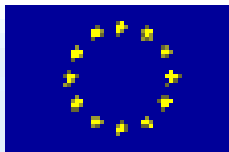


International Seminar on  
Strengthening Public Investment and Managing  
Fiscal Risks from Public-Private Partnerships

Budapest, Hungary  
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EUROPEAN COMMISSION  
DIRECTORATE GENERAL ECONOMIC AND FINANCIAL AFFAIRS  
Economies of the Member States

# Challenges for Public Investment in New EU Member States

**Filip Keereman\***

*Head of Unit – Czech Republic, Poland, Romania and  
Slovakia*

**International Seminar on Strengthening Public Investment  
and Managing Fiscal Risks from Public-Private Partnerships**

*Budapest, 7 March 2007*

*\* prepared with the help of Anton Jevcak*

# Outline

- **Relevant economic theory – main implications**
- The need to upgrade infrastructure and enhance catching-up
- Public investment in the EU budgetary surveillance framework
- Public investment in new MS and relation to private investment and EU transfers
- Conclusions

# Public investment – definition

## National Account Statistics

- investment (GFCG) - defined as expenditure on *fixed assets* –
  - *tangible or intangible assets to be used in production process for more than a year: roads, buildings, computer software...*
  - > excludes investment in human capital and knowledge creation – wages paid to teachers and researchers = current expenditure
- net investment - taking into account depreciation – more correct measure of public investment
  - > result of estimation methods –> limited reliability –> gross GFCF commonly used

# Public investment – definition

## National Account Statistics

- public = general government – includes central and local authorities
  - > *excludes investments by publicly-owned enterprises classified outside the GG sector*
  - > offers room for circumventing budgetary rules

# Growth theory

## Solow (exogenous) growth model

- declining marginal productivity of capital
  - > the capital/output ratio converges to some steady-state level -> *saving/investment rate has no impact on long-term growth*

## Endogenous growth models

- Investment in human capital and R&D -> potential for increasing/constant marginal productivity -> *higher investment rates can lead to higher long-term growth*

## **Rationale for public investment**

- 1. Public goods – partially non-rival and non-excludable goods → under-supplied by the private sector – basic research, transport infrastructure, legal system...**
- 2. Positive externalities - social rates of return exceed private ones**
- 3. Asymmetric information problems – missing markets for capital or insurance**
- 4. Presence of increasing returns/network externalities  
→ imperfect competition (natural monopolies)  
→ under-supply by the private sector**

## **Problems associated with public investment**

- 1. Lack of information by policy-makers**
- 2. Political economy considerations – disproportionate impact of small, clearly identifiable groups/corruption (higher in new MS)**
- 3. Expenditure competition – over-supply of public investment in an effort to attract private capital (Fuest, 1995 and Bayindir-Upmann, 1998 )**



## **Empirical evidence**

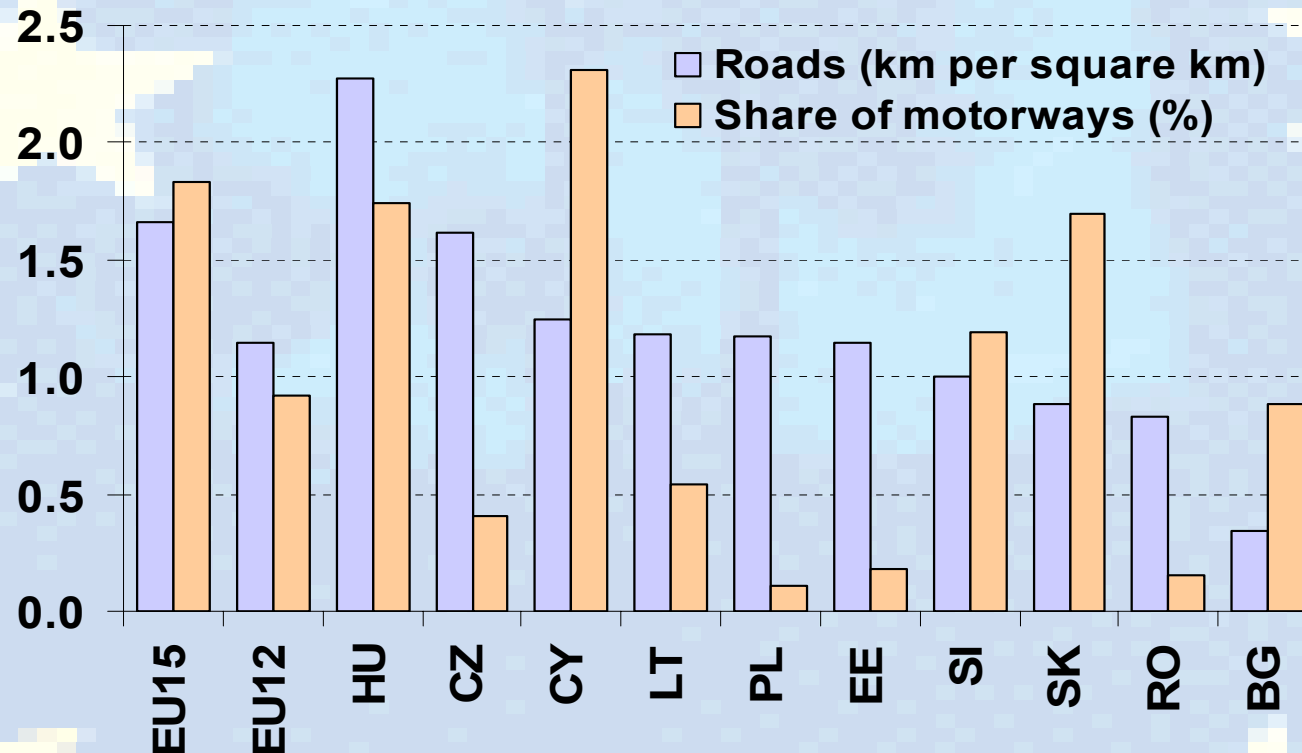
- **Seminal paper – Aschauer (1989) – strong positive impact of public investment on US aggregate output**
  - > **subsequent research – majority of studies find a positive impact of public investment on output, productivity or growth**
  - > **but, it is often not strong, sometimes it is insignificant and in some case negative**

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# Public capital stock lower in new MS

Road infrastructure in 2002



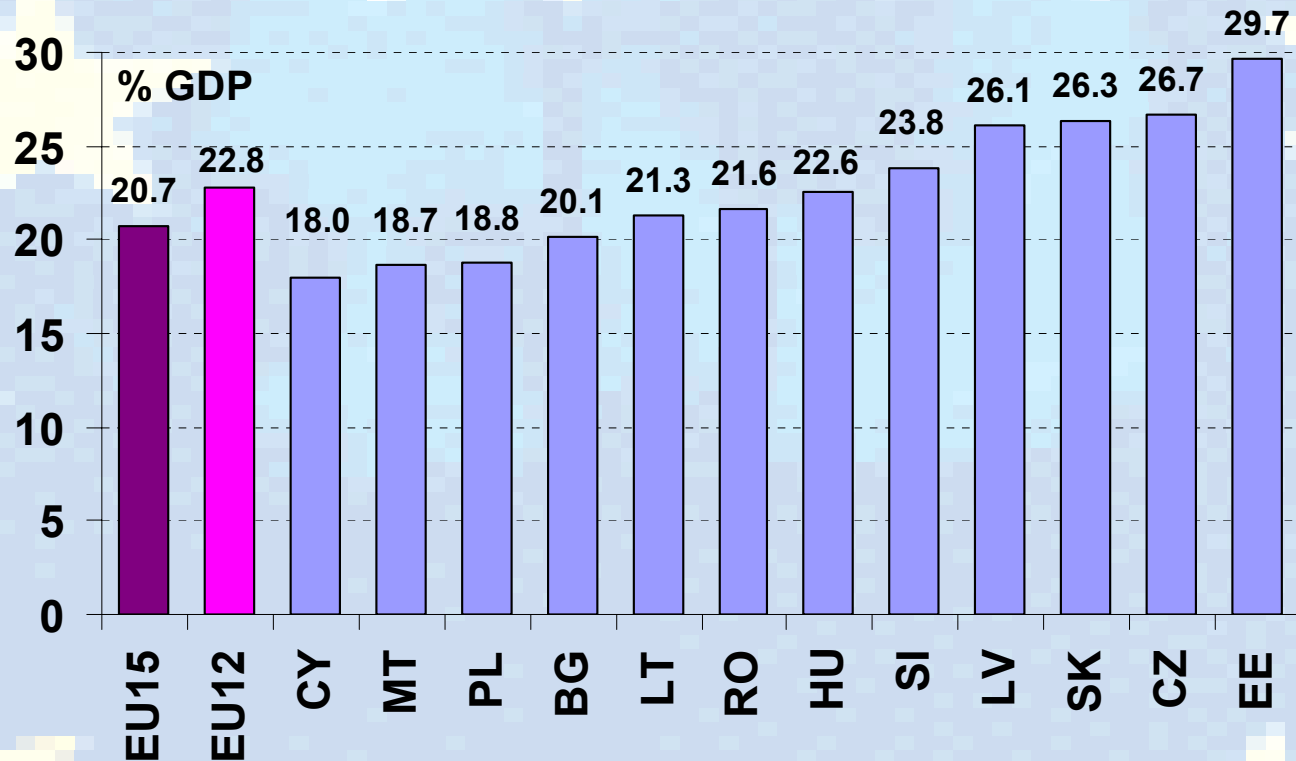
**New members states have less roads and of a lower quality, especially in Poland and Romania**

## **Costs of compliance with the EU acquis**

- **The costs of the environmental acquis estimated at around EUR 80 billion – 110 billion, or around 18 – 24% of 2003 GDP of the new Member States (European Commission, 2003).**
- **The costs of compliance with the transport acquis estimated at around EUR 100 billion, or around 22% of 2003 GDP (Van Miert, 2003).**
- **However, estimated benefits of the environment acquis far outweigh the costs (World Bank, 2002).**

# Total investment

Total GFCF (2001-05 average)



Total GFCF on average higher in new members states – but there is large dispersion

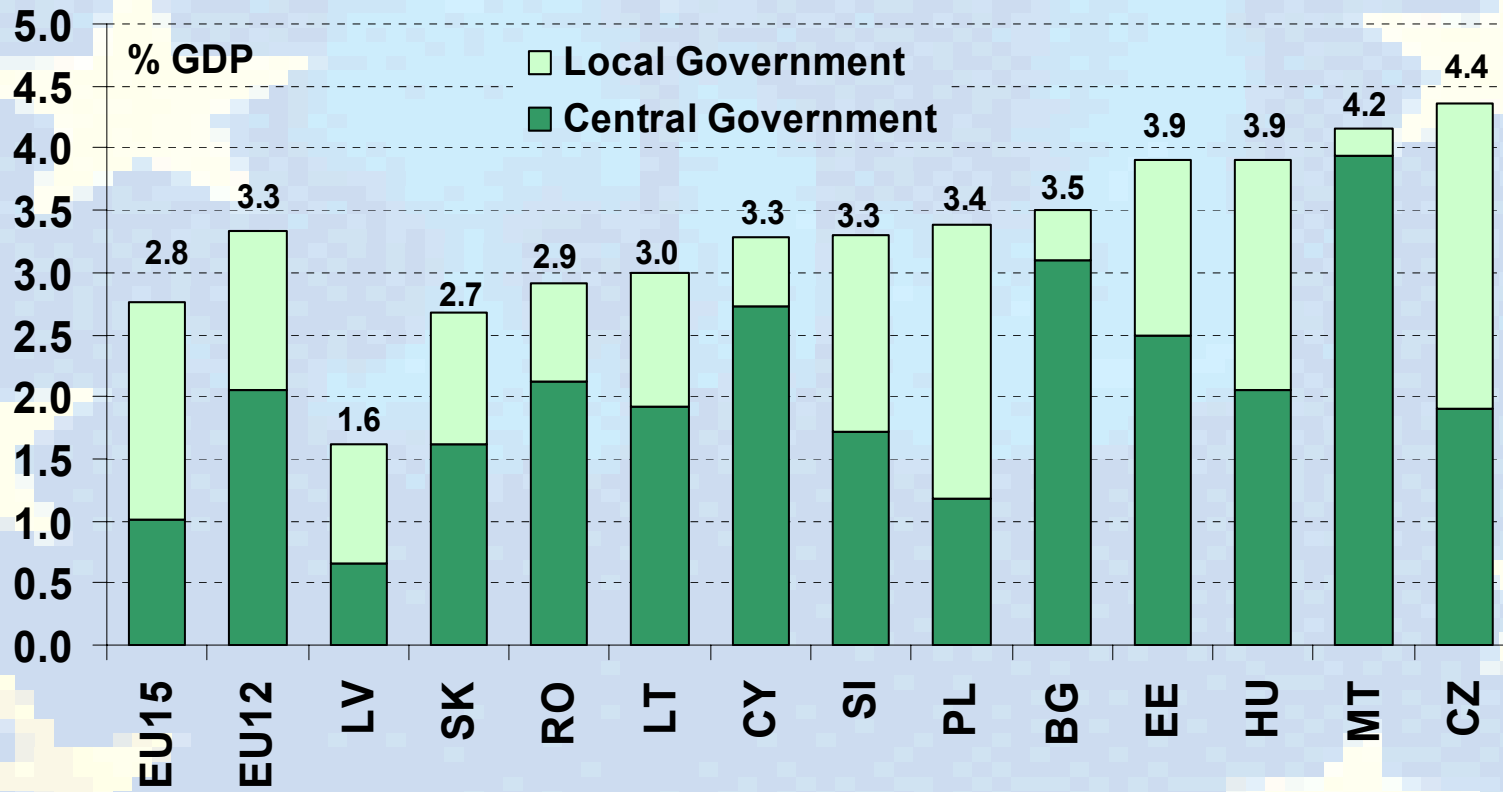
# Composition of total GFCF

GFCF by asset type	Total		Metal Products And Machinery		Construction Work: Housing		Construction Work: Other Constructions		Transport Equipment	
	96-05	01-05	96-05	01-05	96-05	01-05	96-05	01-05	96-05	01-05
AVERAGES	20.6	20.7	5.4	4.9	5.0	5.3	6.0	6.2	2.2	2.1
EU15	22.8	22.8	7.9	7.4	3.4	3.5	9.0	8.9	2.3	2.5
Bulgaria	16.9	20.1	NA	NA	NA	NA	NA	NA	NA	NA
Czech Republic	27.9	26.7	9.8	8.7	3.2	3.0	10.6	9.8	3.1	3.6
Estonia	28.3	29.7	9.3	9.0	2.9	3.4	12.1	12.4	3.5	4.3
Cyprus	18.2	18.0	4.7	4.5	6.4	6.5	5.8	5.7	1.2	1.2
Latvia	23.6	26.1	8.6	8.2	2.2	2.2	8.1	9.9	3.2	3.8
Lithuania	21.5	21.3	6.8	6.6	1.8	1.8	10.2	10.1	1.9	2.0
Hungary	22.7	22.6	8.3	7.4	4.4	4.8	7.3	7.1	1.9	2.0
Malta	20.8	18.7	7.3	6.5	3.8	3.9	7.1	6.8	1.2	0.3
Poland	20.8	18.8	6.7	5.6	2.7	2.8	9.0	8.0	2.0	1.8
Romania	20.4	21.6	6.9	6.9			9.1	9.6	2.5	3.2
Slovenia	24.0	23.8	8.2	8.0	3.5	3.3	9.1	9.3	2.1	2.2
Slovakia	28.7	26.3	10.5	9.6	3.0	3.2	10.3	8.6	3.1	3.2

**New member states seem to invest in more productive assets (distribution stable over time) but no stable pattern across all countries**

# Public investment

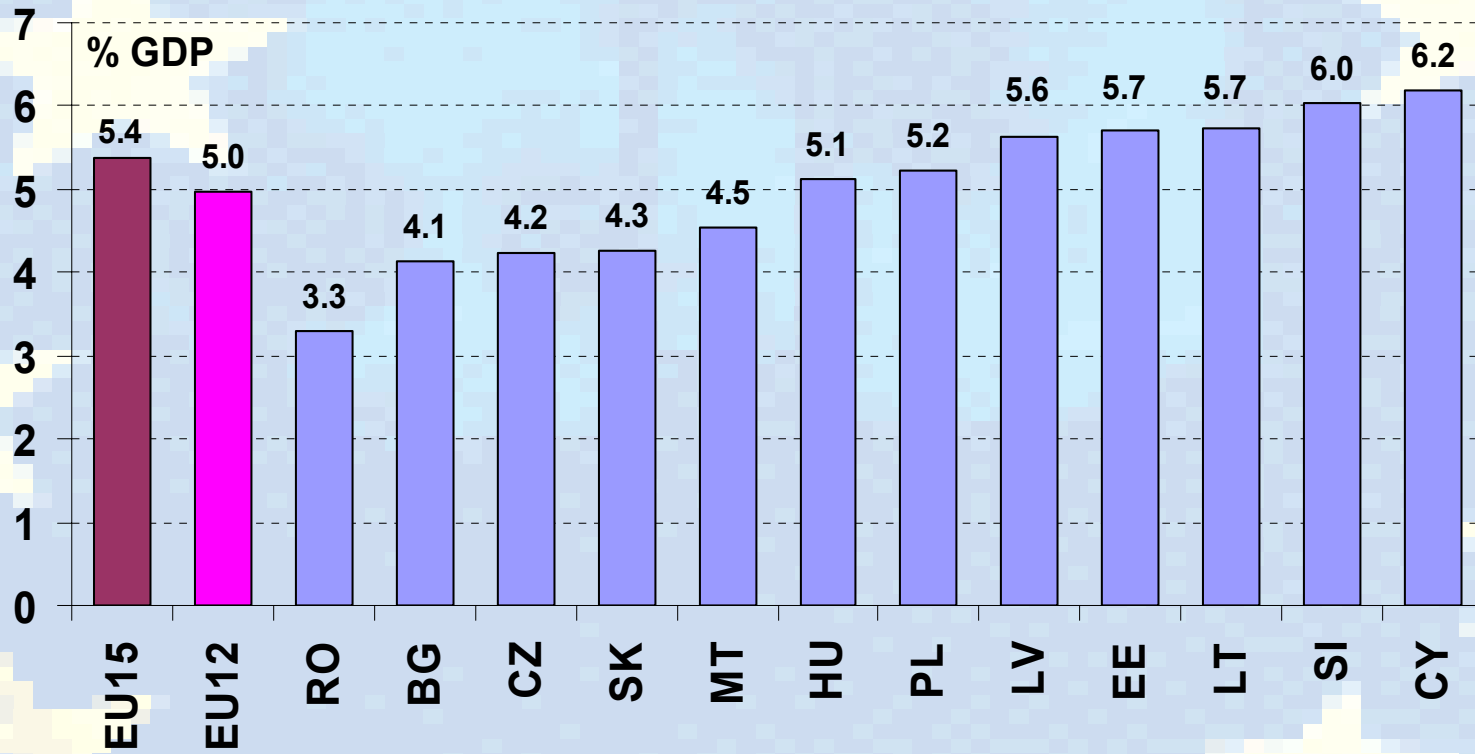
GFCF by General Government (2001-05 average)



**Public GFCF also on average higher in new members states but there is again large dispersion**

# Public expenditure on education

Public expenditure on education (1999-2003 average)

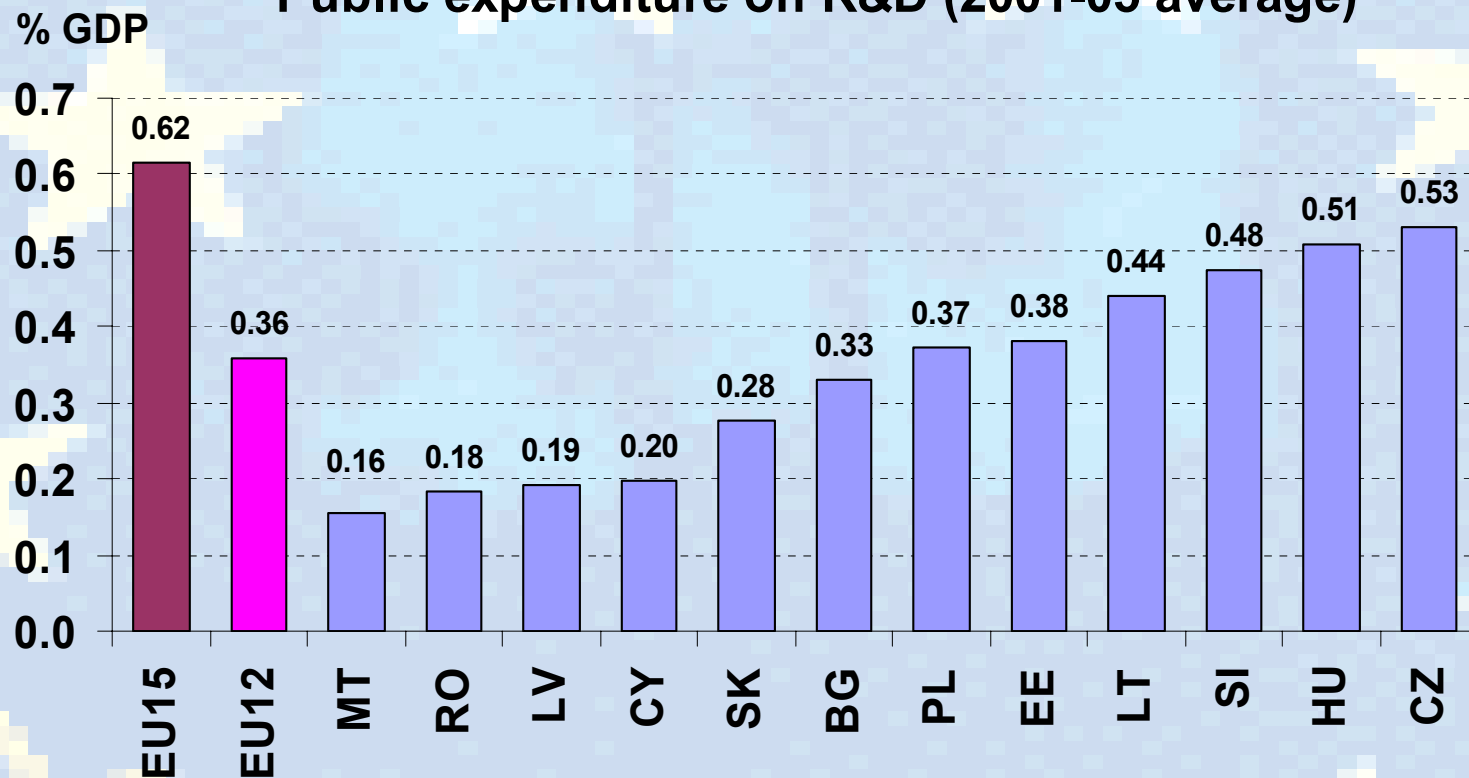


Public expenditure on education on average higher in old member states



# Public expenditure on R&D

Public expenditure on R&D (2001-05 average)



Public expenditure on R&D also on average higher in old member states: all new MS below EU15 average; variation between 0.2% (MT) and 0.5% (CZ)

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## Public investment in the EU budgetary surveillance framework

**S&G pact - no special treatment of public investment as regards the definition of the budget balance**

**- *but* - in the context of the EDP – when preparing a report if the actual or planned deficit goes above 3% of GDP according to Article 104(3) the Commission “...*shall also take into account whether the government deficit exceeds government investment expenditure...*”.**

**Currently, none of the new members states has a golden rule at the central or general government level.**

## **A rational for the golden rule**

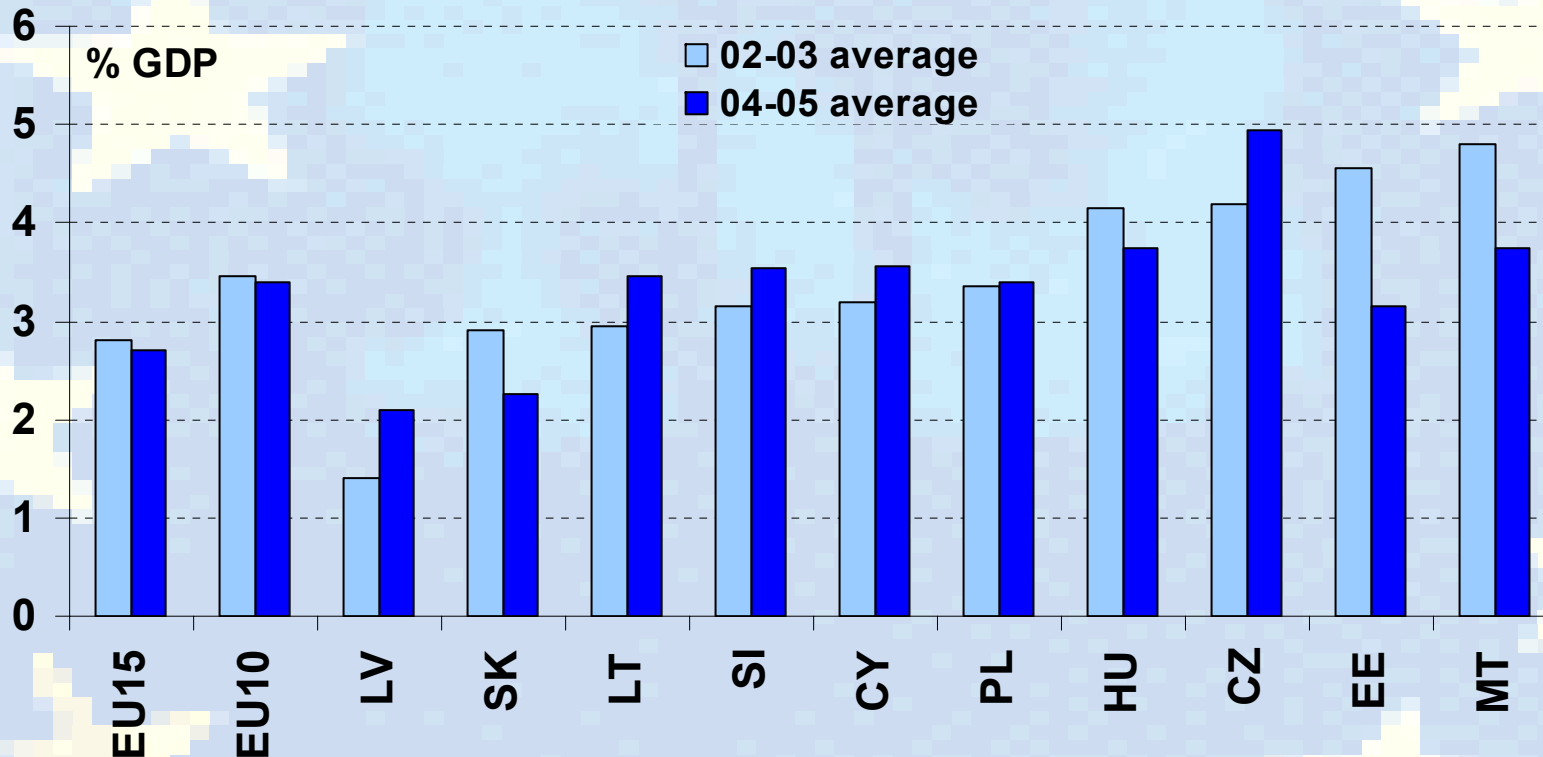
- 1. Financing investment from current revenues may clash with consumption-smoothing objectives of governments**
- 2. Productive public investment can pay for itself over the longer term**
- 3. Institutional/political constraints – cutting public investment often politically easier than reducing current expenditure or rising taxes**
- 4. Inter-generational equity – current generation should not carry the whole burden of public investment when enjoying only part of the long-term benefits**

## **Arguments against the golden rule**

- 1. No strong empirical evidence that governments undertake too few public investments**
- 2. In case of constrained financing/excess demand pressures – overall balances matter**
- 3. Public investment may not be sustainable or may yield inadequate returns**
- 4. Negative expenditure composition bias: financial constraints softened on investment in fixed assets, while investment in human capital or R&D constrained by deficit ceiling**

# Impact of EU accession on GFCF by GGs

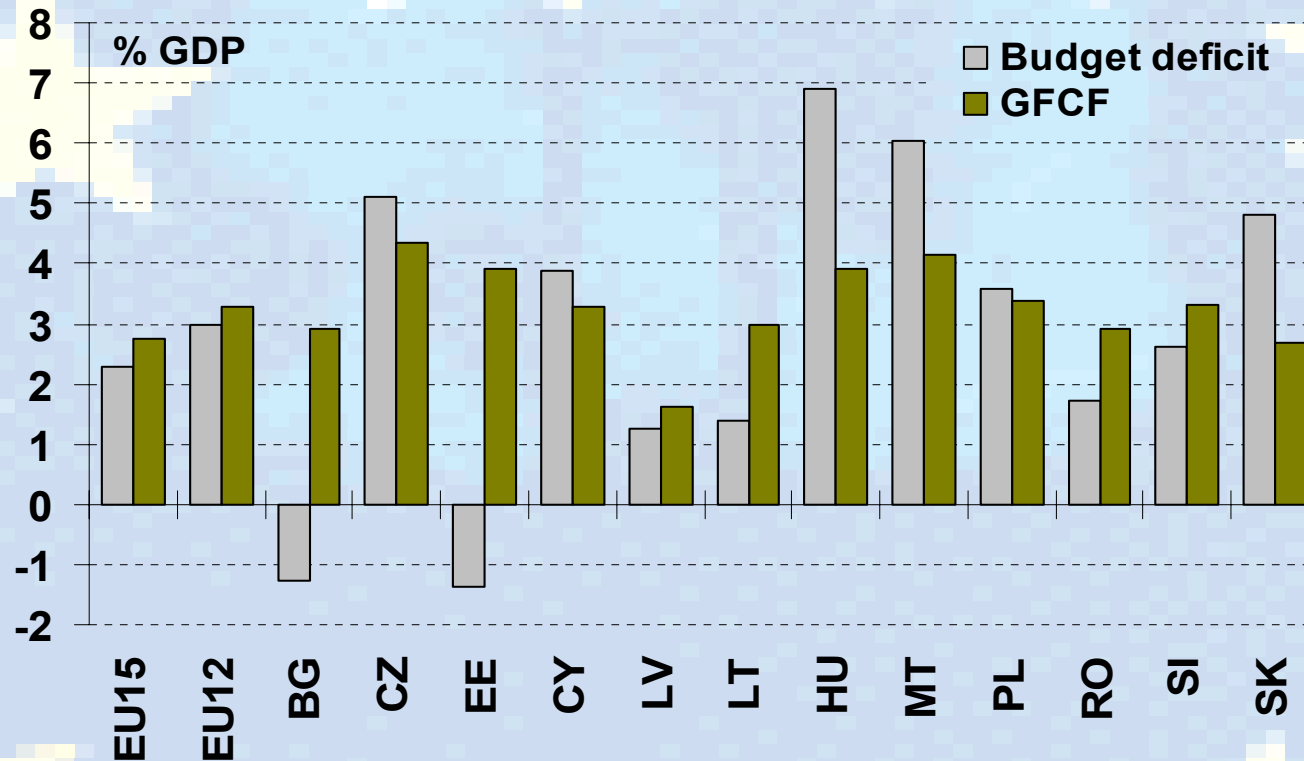
Public investment in new MS between 2002 and 2005



Average public investment decreased slightly,  
but there is no clear pattern (decline in SK, RO, HU, EE, MT)

# Public investment and borrowing in the EU

GG deficit and GFCF (2001-05 averages)



Public investment on average exceeds public deficits both in EU15 and in EU12, but not in the EDP countries (CZ,CY,HU,MT,PL,SK)

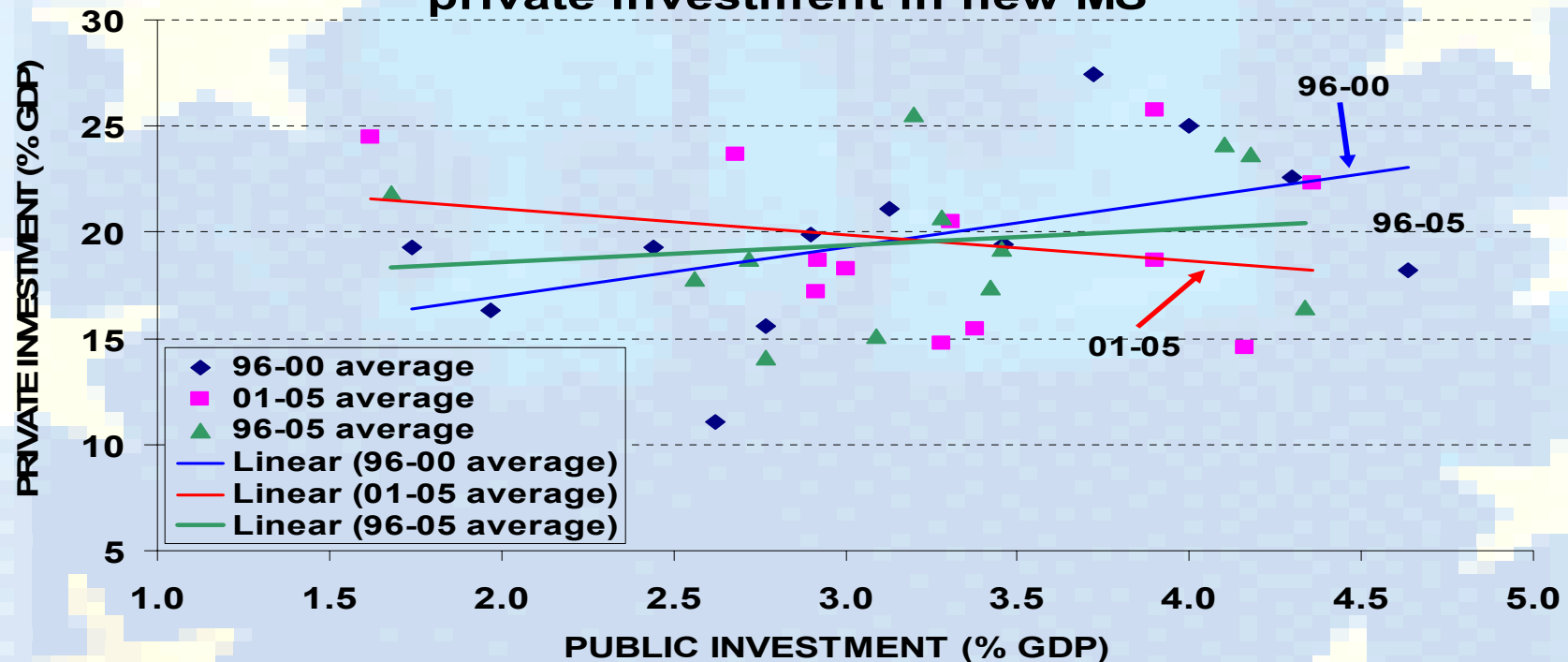
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# Complementarity or substitution between public and private investment?

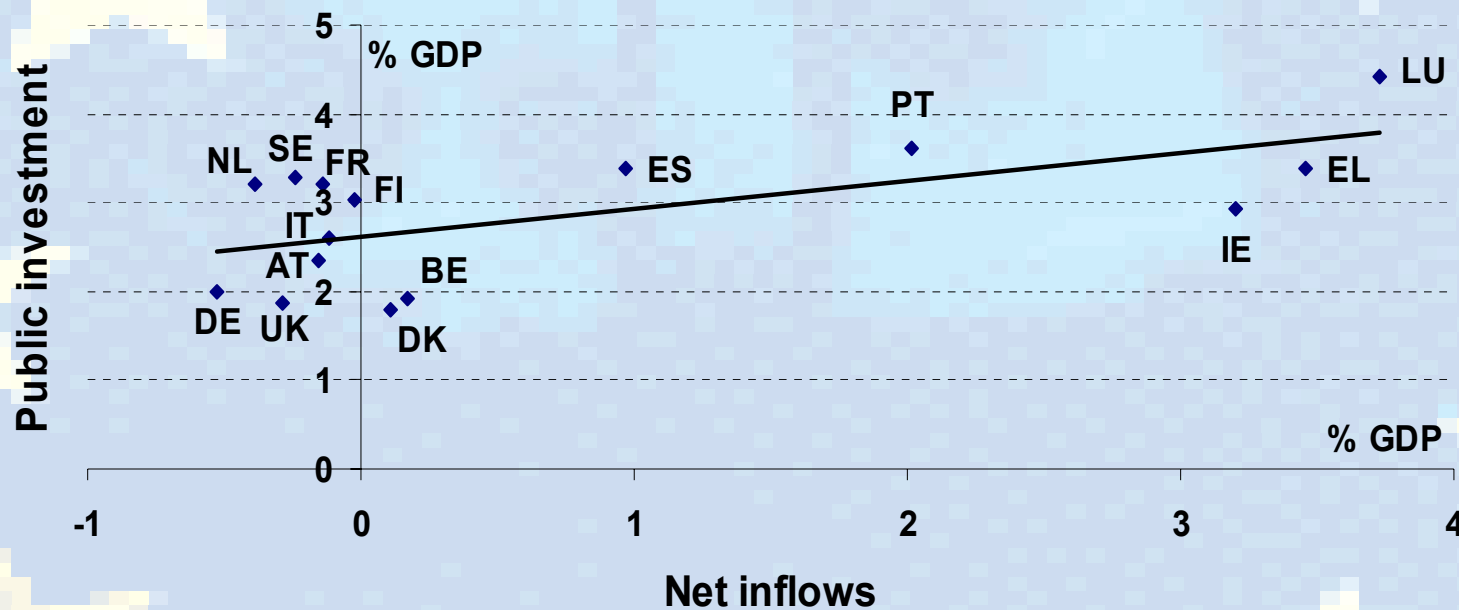
Cross-country relationship between public and private investment in new MS



Positive relationship between public and private investment in the new MS seems to have faded out in the last 5 years

# EU funds and public investment

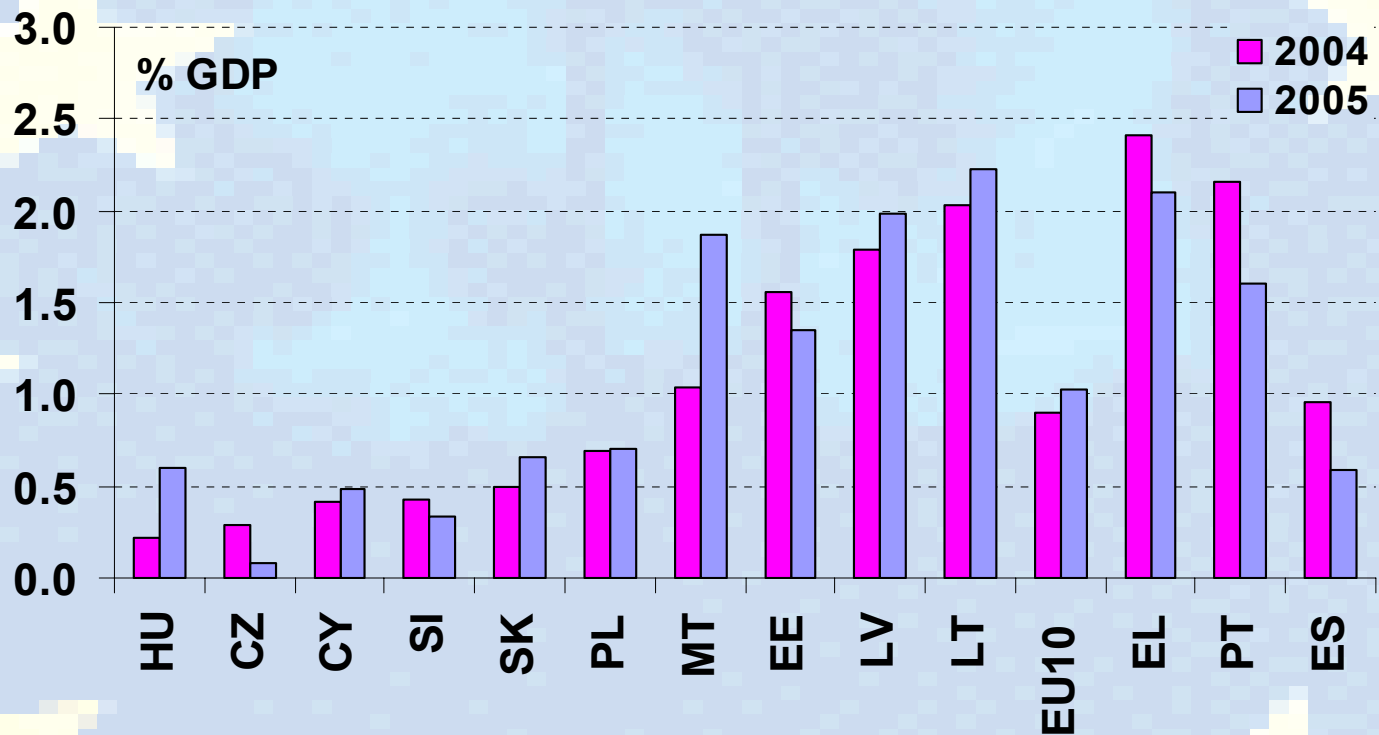
Cross-country relationship between net inflows of EU funds and public investment in the EU15 between 1986 and 2005



Higher net inflows of EU funds might enable governments to undertake more investments

# Net inflows of EU funds into new MS

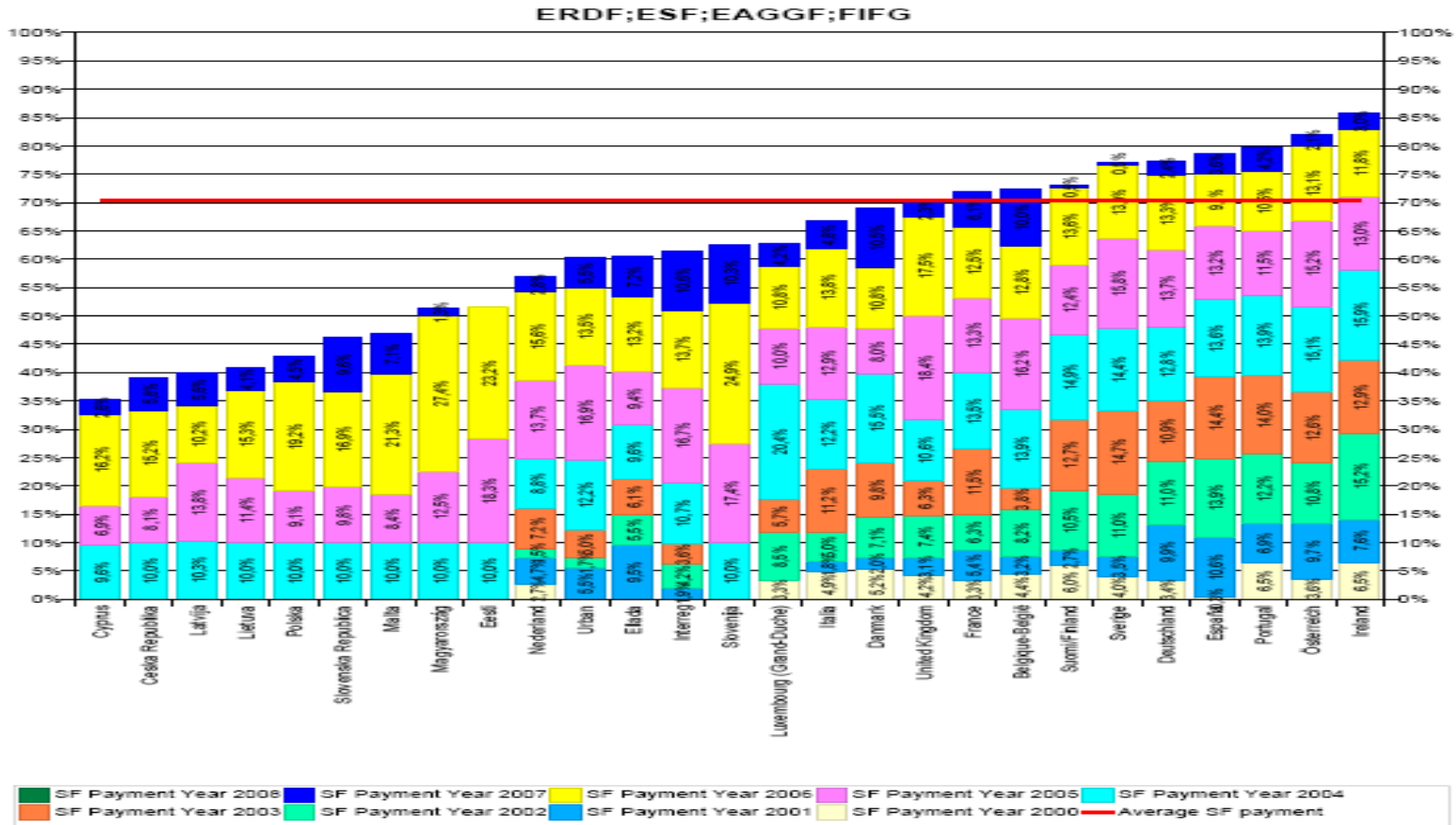
Net inflows of EU funds in 2004 and 2005



Absorption of EU funds in new MS in the first years of membership lower than in some old MS

# Absorption of structural funds

Programming period 2000-2006  
Rate (Paid / Decided)



Absorption has been relatively low so far,  
but time frame was also relatively short

# Conclusions

- **There appears a role for public investment in catching-up. The composition of investment is important.**
- **New member states have on average higher total and public capital expenditure and lower expenditure on education and R&D**
- **Given lower stock of capital, capital investment should generate higher returns and thus growth until a steady-state level of capital/output ratio is reached (Solow model)**
- **Moreover, new (especially foreign) capital usually embodies up-to-date technology (free-riding on global technological progress) → higher productivity growth**
- **Nevertheless, the right time to switch to more “knowledge” based growth should not be missed**

# Conclusions

- **No clear impact of EU accession on public investment levels;**
- **Positive relationship between public and private investment in new MS seems to have faded out in the last 5 years**
- **EU funds can support public investment, but sufficient absorption capacities need to be established**