

Investment and the regulatory framework

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Background

□ Study undertaken for DG InfSo

- London Economics with PwC ISU
- Views expressed are those of London Economics, not the European Commission

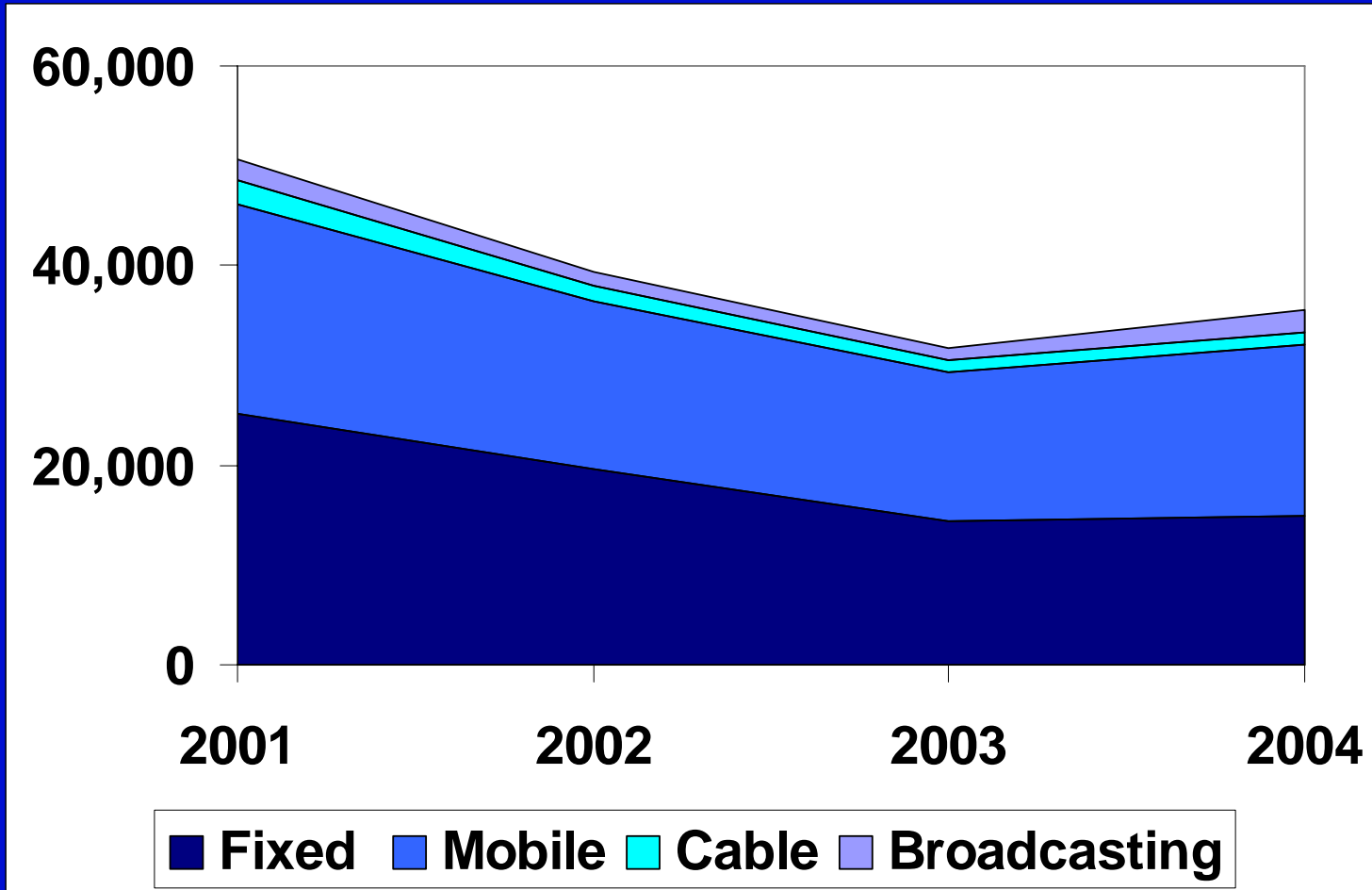
□ Study objectives

- Build a dataset relating to investment in physical infrastructure
- Review key drivers of investment
- Consider impact of regulatory framework on investment

Data

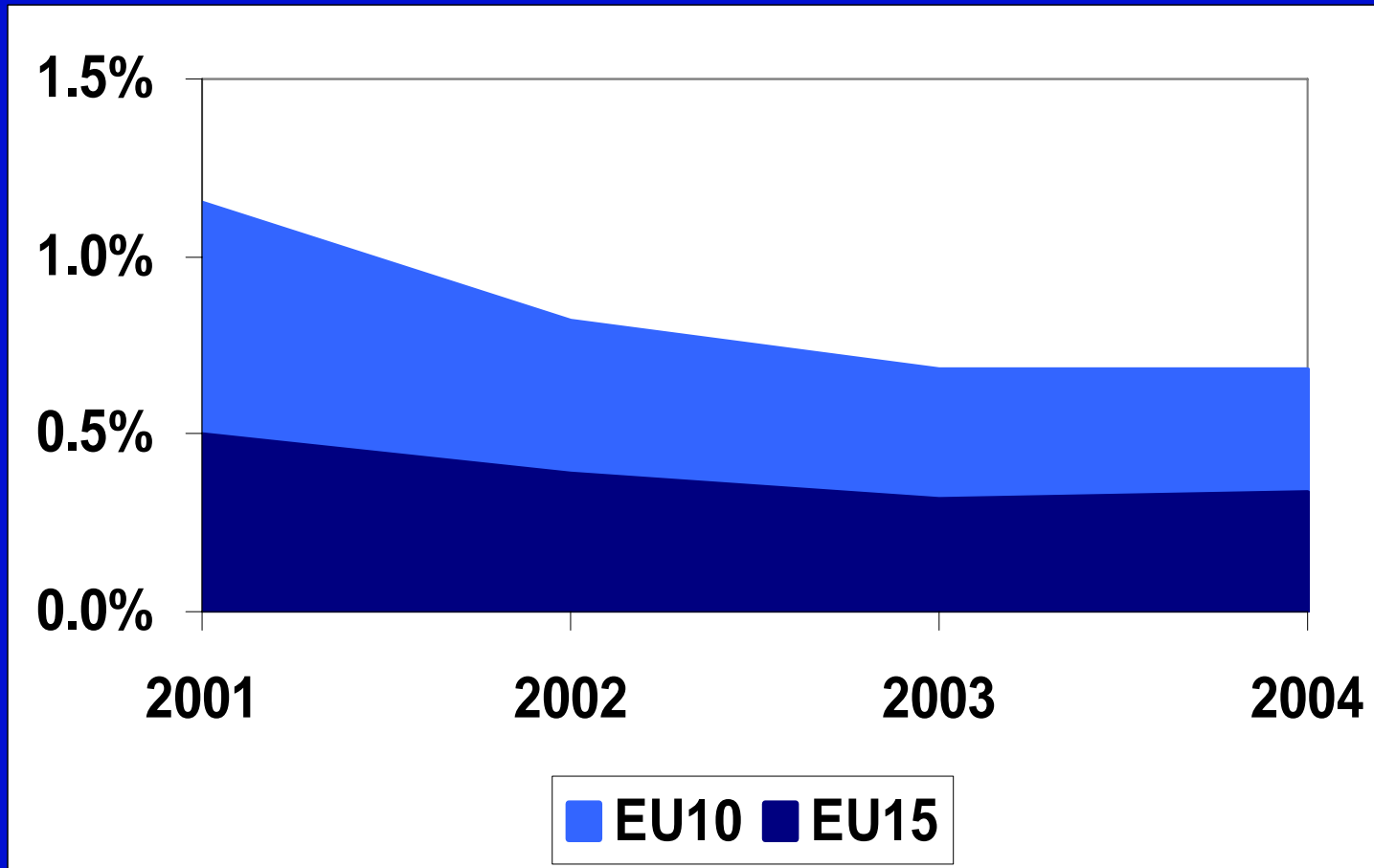
- Capital expenditure in physical infrastructure
- Company annual reports
- Data collected, by Member State, for four “sub-sectors”
 - Fixed telecoms
 - Mobile telecoms
 - Cable
 - Broadcasting (inc. satellite)
- Need to disaggregate data for some multi-sector or multi-national operators

Investment by sub-sector, €m



Source: London Economics

Total gross investment as % GDP



Source: London Economics

Proposed Model

$$\ln(I_{ijt}) = \alpha + \beta Z1_{jt} + \delta Z2_{jt} + \theta Z3_{ijt} + \varepsilon_{ijt}$$

$\ln(I_{ijt})$ is gross investment in tangible assets for each firm

$Z1_{jt}$ are country-specific characteristics that change over time

$Z2_{jt}$ are market-specific characteristics that change over time

$Z3_{ijt}$ are firm specific characteristics that may or may not change over time

α , β , δ and θ are the model parameters to be estimated and ε is the error term.

The Regulatory Index

Entry Regulation (1/3):

legal entry conditions (trunk, int., mobile)

Public Ownership (1/3):

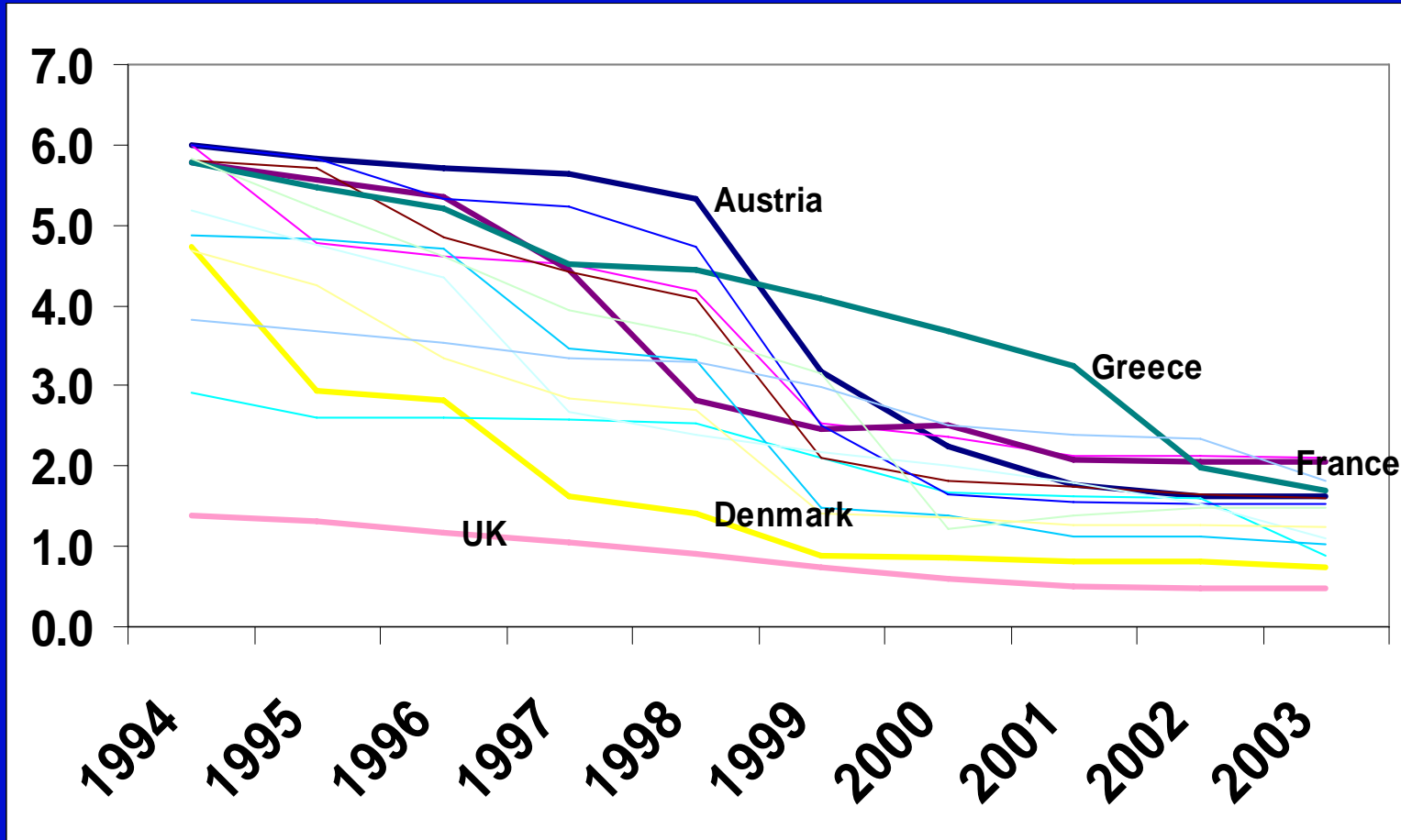
% shares government owned (Fixed incumbent/
largest mobile operator)

Market Structure (1/3):

Market share new entrants (trunk, int., mobile)

Source: OECD

The Regulatory Index



Source: OECD

Results

- **Results from several versions of the model suggest:**
 - There is a positive relationship between the regulatory index and investment
 - i.e. as the index “improves”, investment rises

- **Other company-specific factors related to investment**
 - “Incumbent” status
 - Multi-country status
 - Multi-sector status
 - Operation in the mobile sector
 - Company size (total assets)

Discussions with operators

- Suggest strongly that regulation influences investment (+ve and -ve)
- Regulatory uncertainty consistently raised as a key issue
- Approaches to reducing uncertainty
 - Clarity (legislation and NRA actions)
 - Timeliness (implementation)
 - Guidance (key regulatory principles)
 - Harmonisation (across Member States)
 - Processes (appeals and enforcement)

Some Issues for discussion

1. Does regulation influence investment? Is there feedback?
2. How does regulation influence investment?
3. What is the role of competition in relation to investment and how does it interact with regulation?
4. What changes to the regulatory framework could improve the conditions for investment?

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