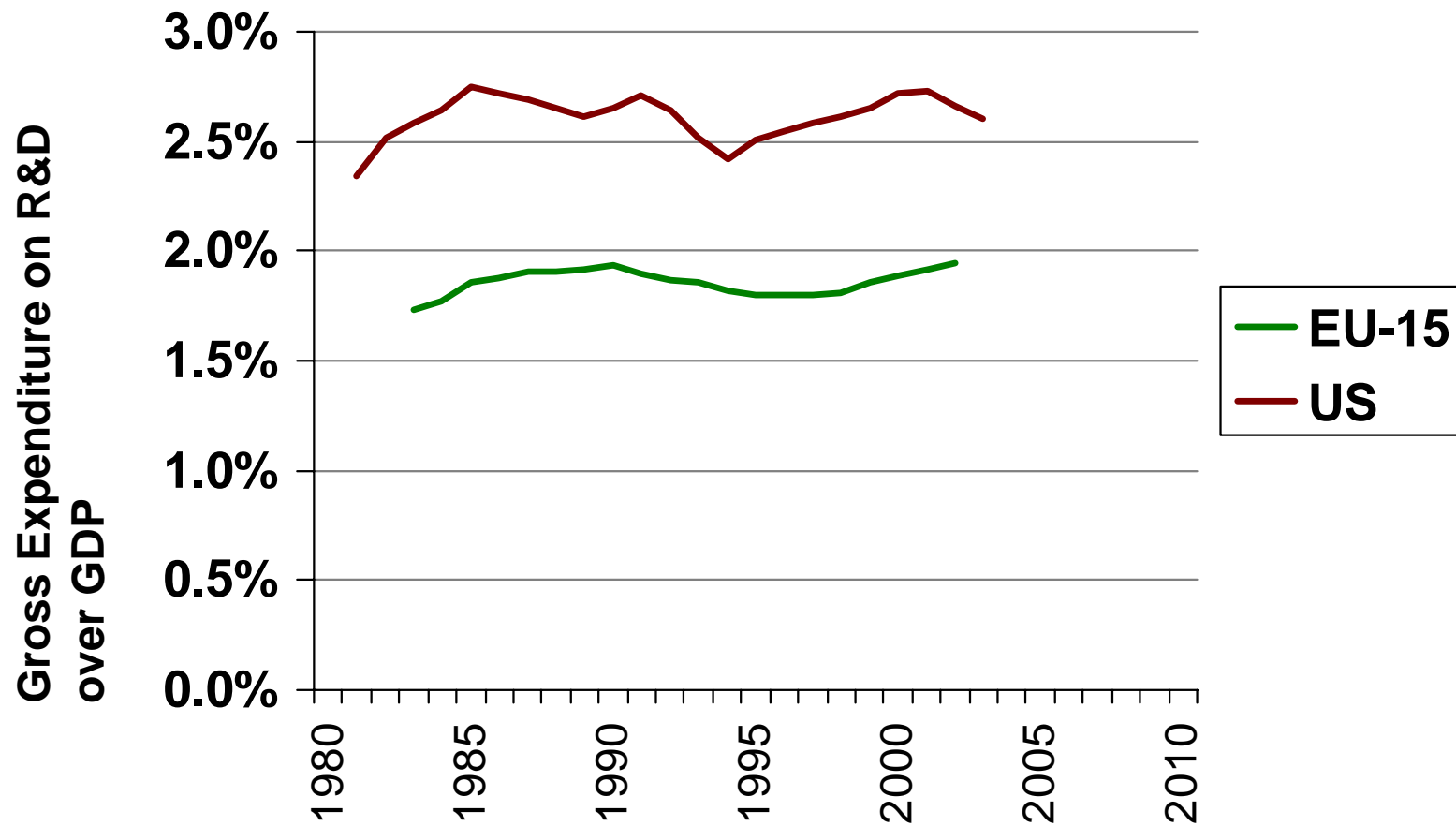


# Competition, Innovation and Growth

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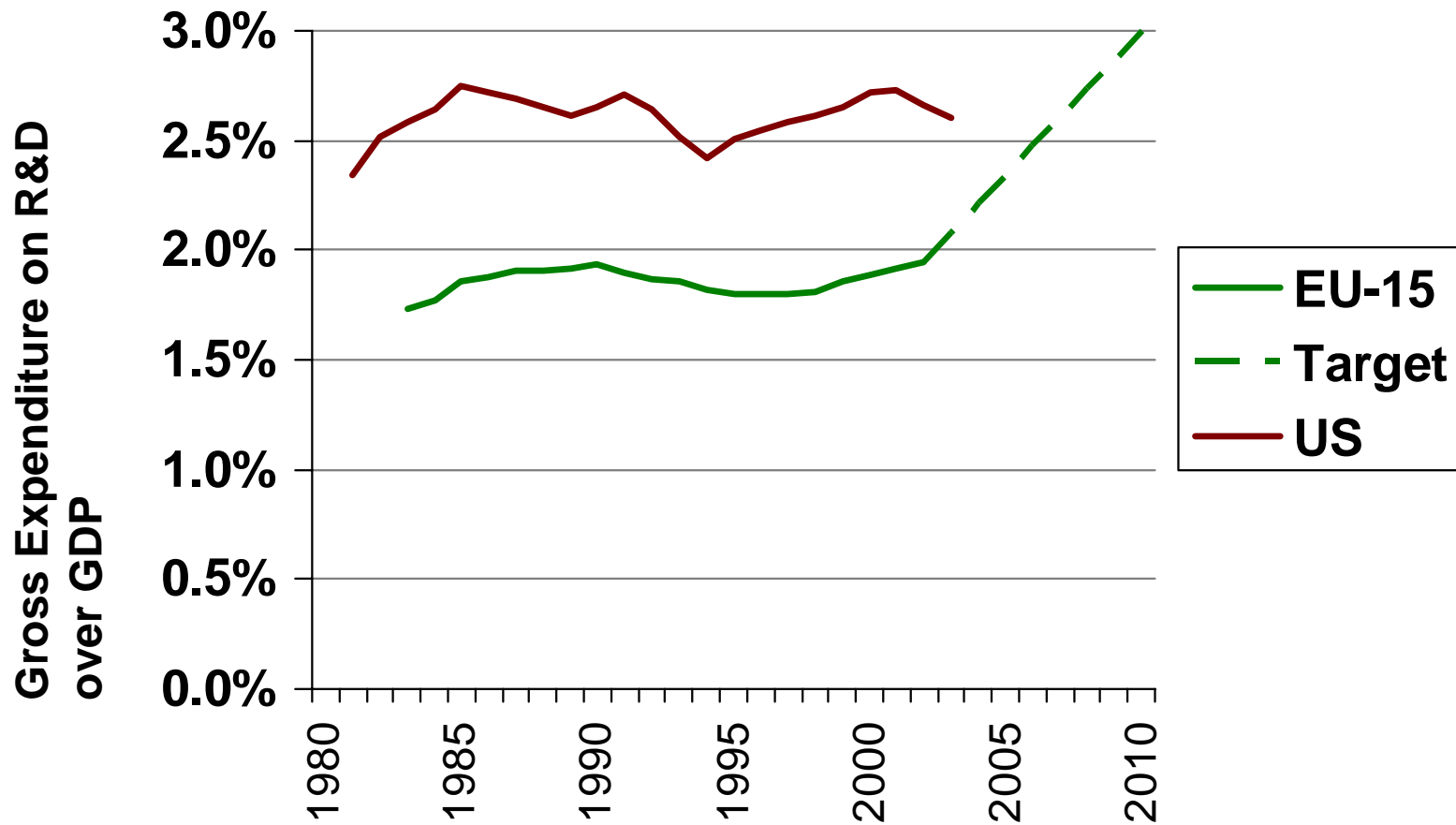
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# Innovation performance in the EU lags behind the US



Source: Authors' calculations using OECD MSTI.

# EU target: to increase R&D above US levels



Source: Authors' calculations using OECD MSTI.

## Very ambitious



- To meet these R&D in the EU has to grow at least 6 percentage points faster per annum than GDP
- Will not come entirely from new R&D activity
- Will require firms to relocate R&D to the EU from other countries
  - Is this good for growth?

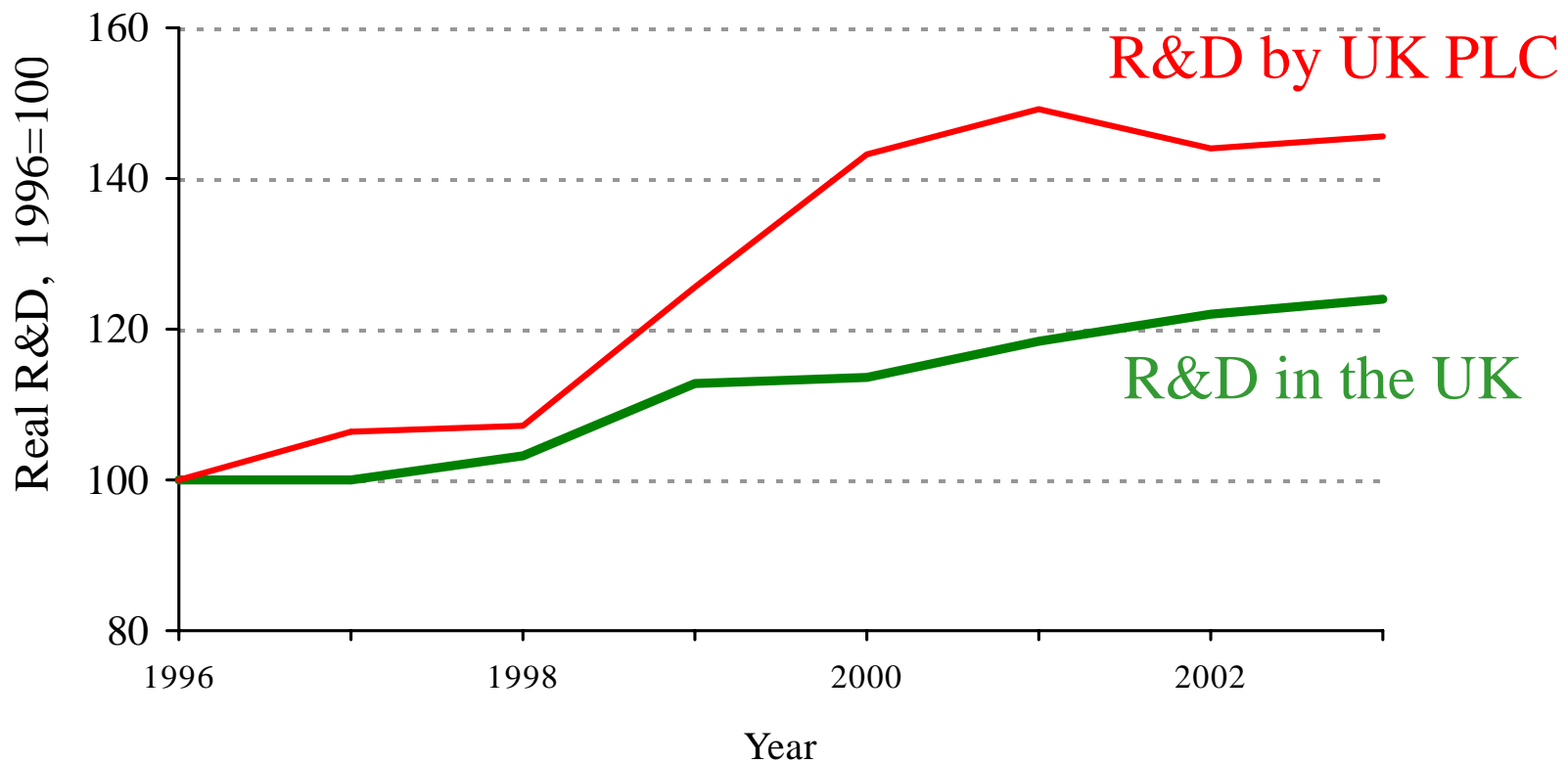
# Competition for the location of R&D



- Innovation activity is becoming increasingly mobile
- For policy it is important to distinguish
  - R&D done in the EU
  - R&D done by EU firms
- Both feed into growth

# For example, R&D based in the UK compare to R&D conducted by UK PLC

IFS



Source: Abramovsky, Griffith and Harrison (2005)

## Foreign R&D by EU firms goes largely to the US



- UK firms did \$5bn R&D in the US in 2000
- Equivalent to 28% of all R&D performed in the UK
- For French firms was 10%
- For German was 16%

# Competition for the location of R&D



- Survey evidence suggests that one key factor in location of R&D is access to cutting edge technologies
- EU firms go to the US to access latest technologies



# Should we encourage EU firms to relocate R&D back home?



- Evidence from UK firms suggests this comes with a cost
- UK firms engaged in R&D in the US benefited from the rapid growth in US R&D
- They experienced 5% higher productivity in ***their UK activities*** than UK firms that were not active in the US

## Relocation comes at a cost



- Increasing EU R&D by encouraging firms to relocate R&D from the US to the EU may be partly counter productive if it isolates EU firms from leading edge technologies

# Is competition important for promoting R&D?



- Yes, it has been for large incumbent firms,
  - though not in all circumstances
- But not clear for smaller firms and entrants
  - less empirical evidence on this,
  - if anything it seems that the impact of EU reforms in the 1990s has been negative for entrants

# Is R&D the most important factor for growth?

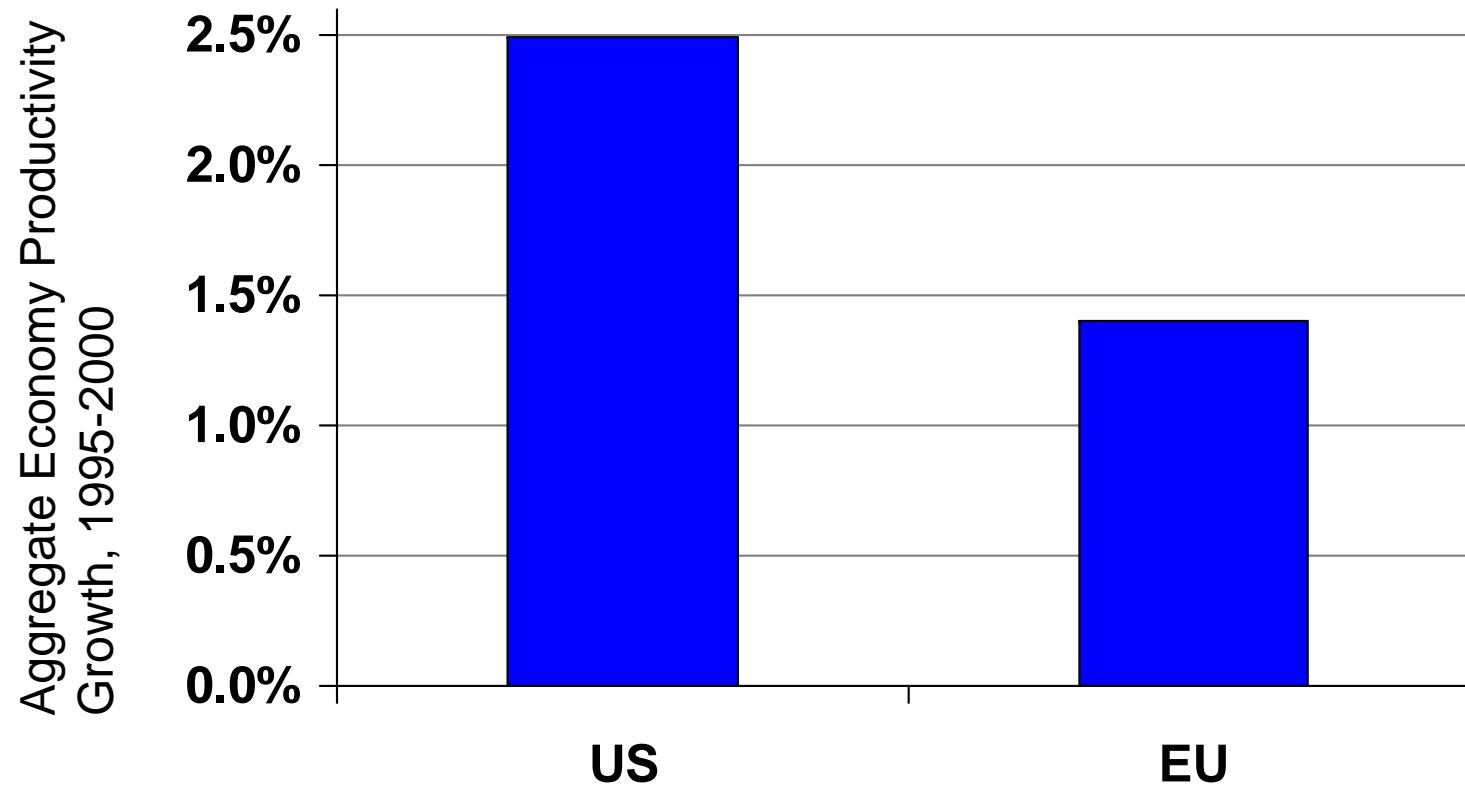


- Probably not
- For example, activities that are not well reflected in R&D
  - Entry, exit and experimentation
  - Service sector activity

- Service sectors account for most economic activity, and most growth
- Innovation in services difficult to measure, not captured in traditional R&D measures
- Service sectors make up the largest part of the productivity gap between the EU and the US

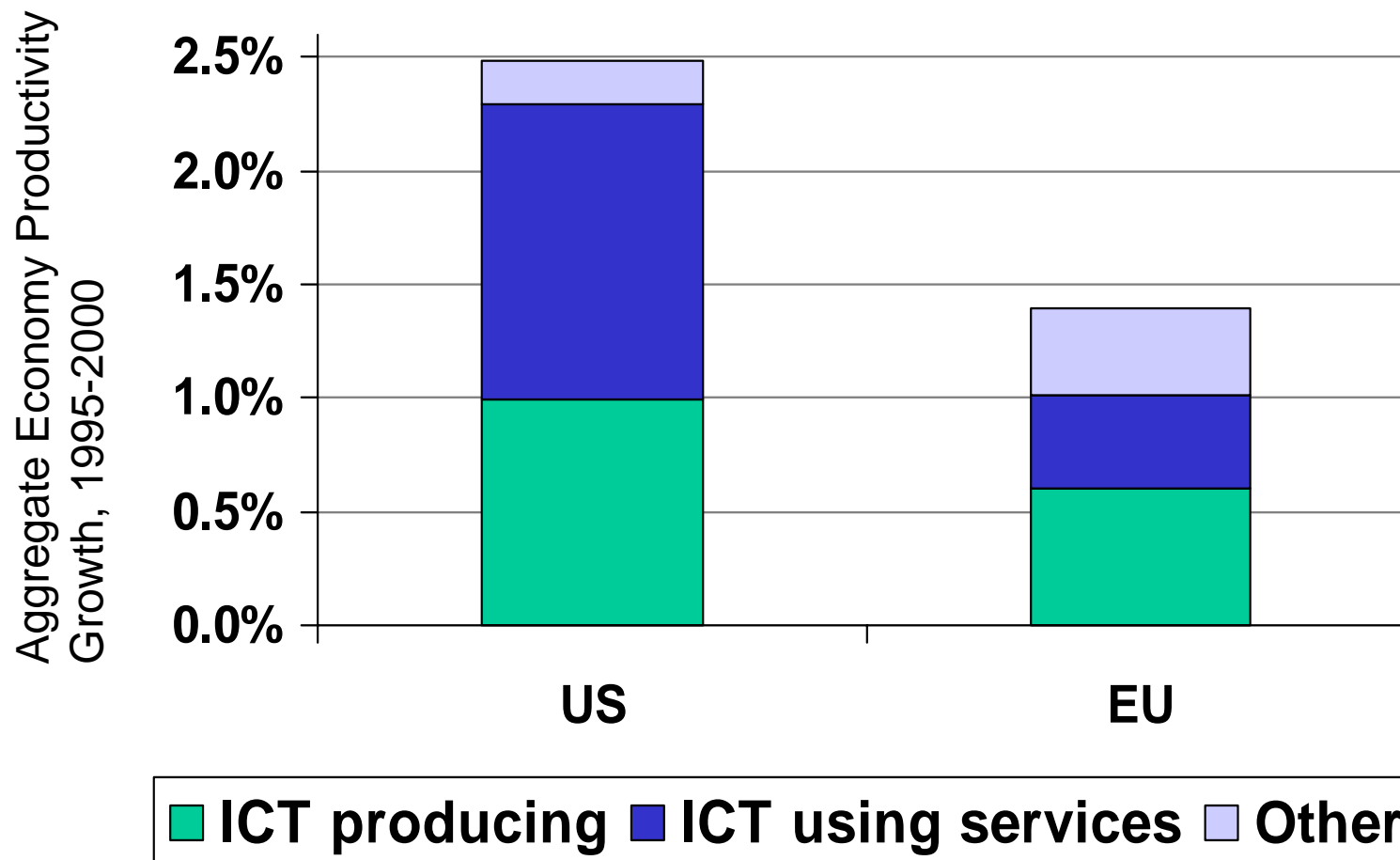
# Aggregate productivity growth, 1995-2000

IFS



Source: Ark, Inklaar and McGuckin (2003), Table 4

# Services are where the EU falls behind



Source: Ark, Inklaar and McGuckin (2003), Table 4

- Policies that aim to promote growth in Europe must address the service sectors
- Are product market reforms and competition important here?
- Probably, we have little evidence on what policies drive growth in service sectors



# What does matter?

- Flexibility
  - the changing nature of technology and more competitive markets favour smaller and leaner firms and economies that are flexible and can adjust quickly
  
- Entry, exit and experimentation are important sources of growth
  - but evidence suggests that small firms in the EU fall to grow
  - why?

## What else matters?

- Workers with general skills
  
- Links between science base and private sector, well functioning higher education sector
  
- Complementary policies
  - Flexible labour markets
  - Well functioning financial markets

- Barcelona targets to increase R&D unrealistic
- To meet them would not necessarily lead to stronger growth
  - relocation of R&D would come at a cost
  - R&D only part of the story
- Reforms should focus on
  - entry, exit and experimentation
  - promoting flexibility
  - service sector innovation
  - developing the science base/higher education