



**GROWTH PATTERNS IN THE OECD AREA:
EVIDENCE FROM THE AGGREGATE,
INDUSTRY AND FIRM LEVEL**

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**DIRK PILAT
ORGANISATION FOR ECONOMIC CO-OPERATION
AND DEVELOPMENT**

dirk.pilat@oecd.org

This presentation

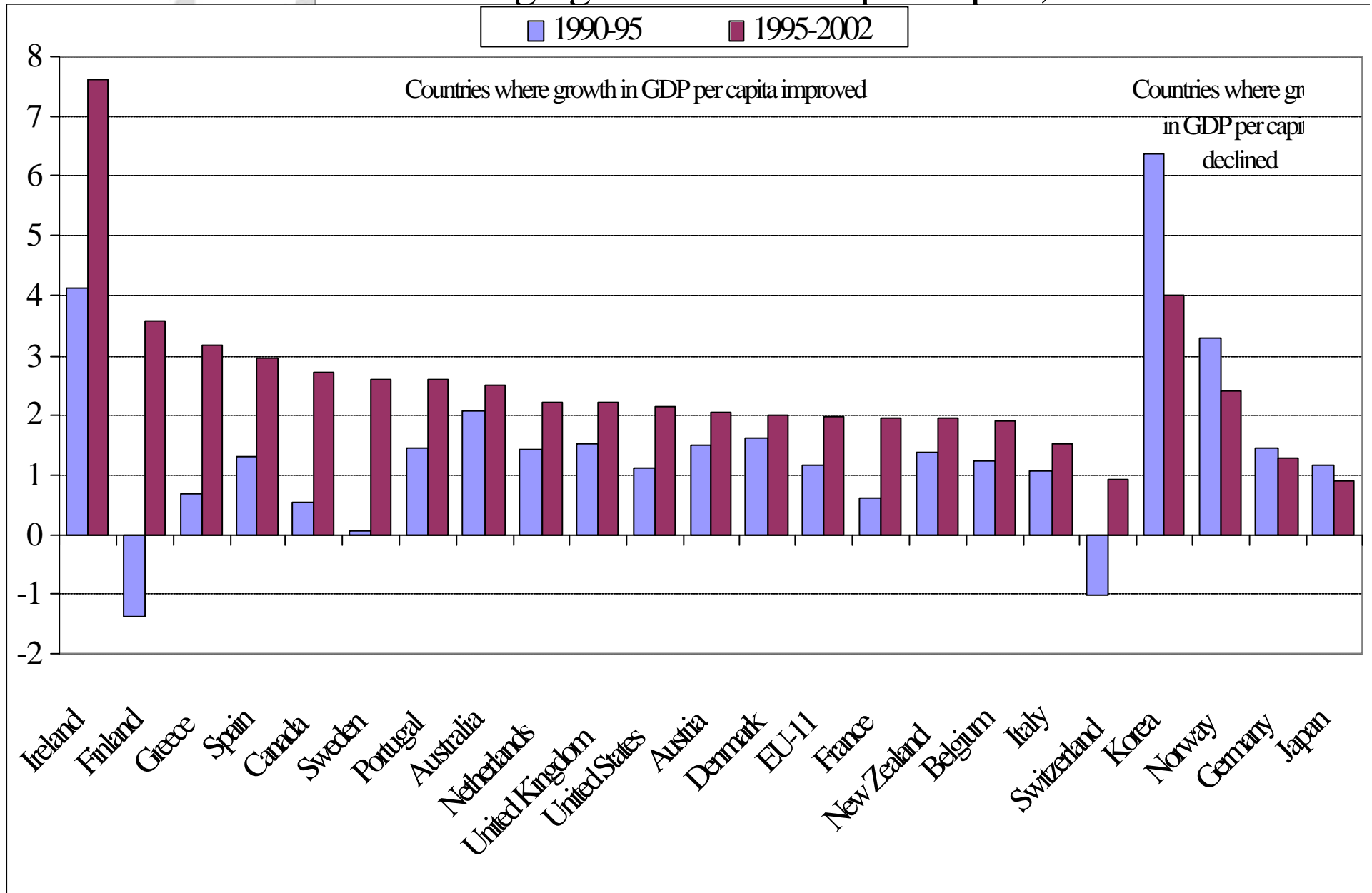
- Provides an overview of growth in the OECD area:
 - Growth in GDP per capita.
 - Role of labour productivity and labour utilisation.
 - Differences in levels of income and productivity.
 - Contributions of capital (including ICT) and MFP growth.
 - Differences in productivity growth at the industry level.
- Points to OECD-wide variation in performance for:
 - ICT investment, production and use.
 - Firm creation, firm growth and innovation.
- Points to some structural rigidities.
- Does not address the macro-economic picture.

Data: OECD Productivity Database

- GDP from Annual National Accounts.
- Labour input: consistent series of employment and hours worked for each country.
- Capital input: capital services based on 7 assets (3 ICT), applying hedonic prices and standardised method.
- MFP: Estimates for about 14 OECD countries.
- Database is available on-line through the OECD Statistics Portal as of 15 March and will be updated regularly, as new data become available, see www.oecd.org/home
- Industry data: OECD STAN database.
- Firm-level data: Several different projects (in co-operation with statistical offices and researchers).

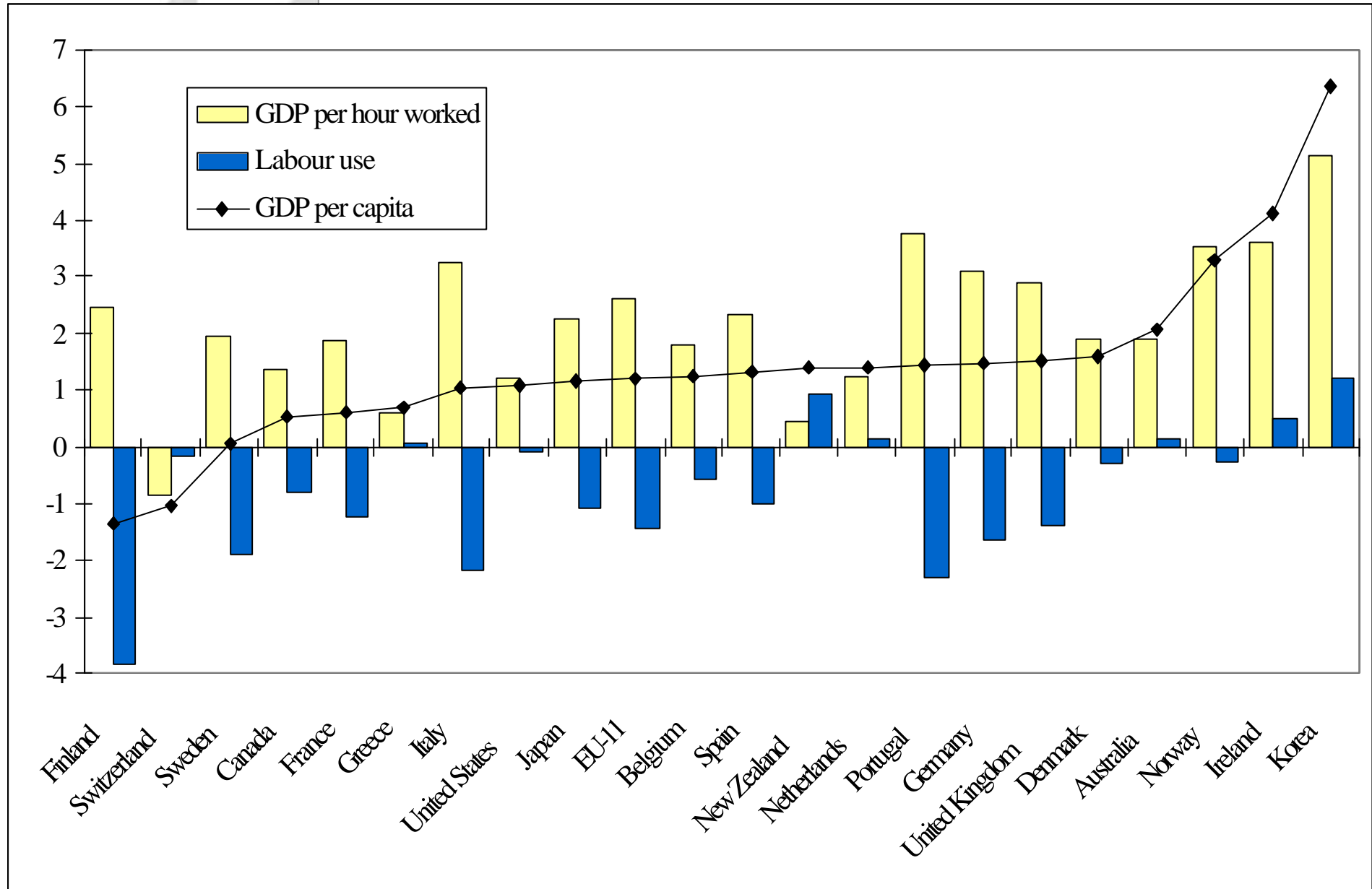
Growth improved during the 1990s, partly due to the cycle

Annual average growth in GDP per capita, %



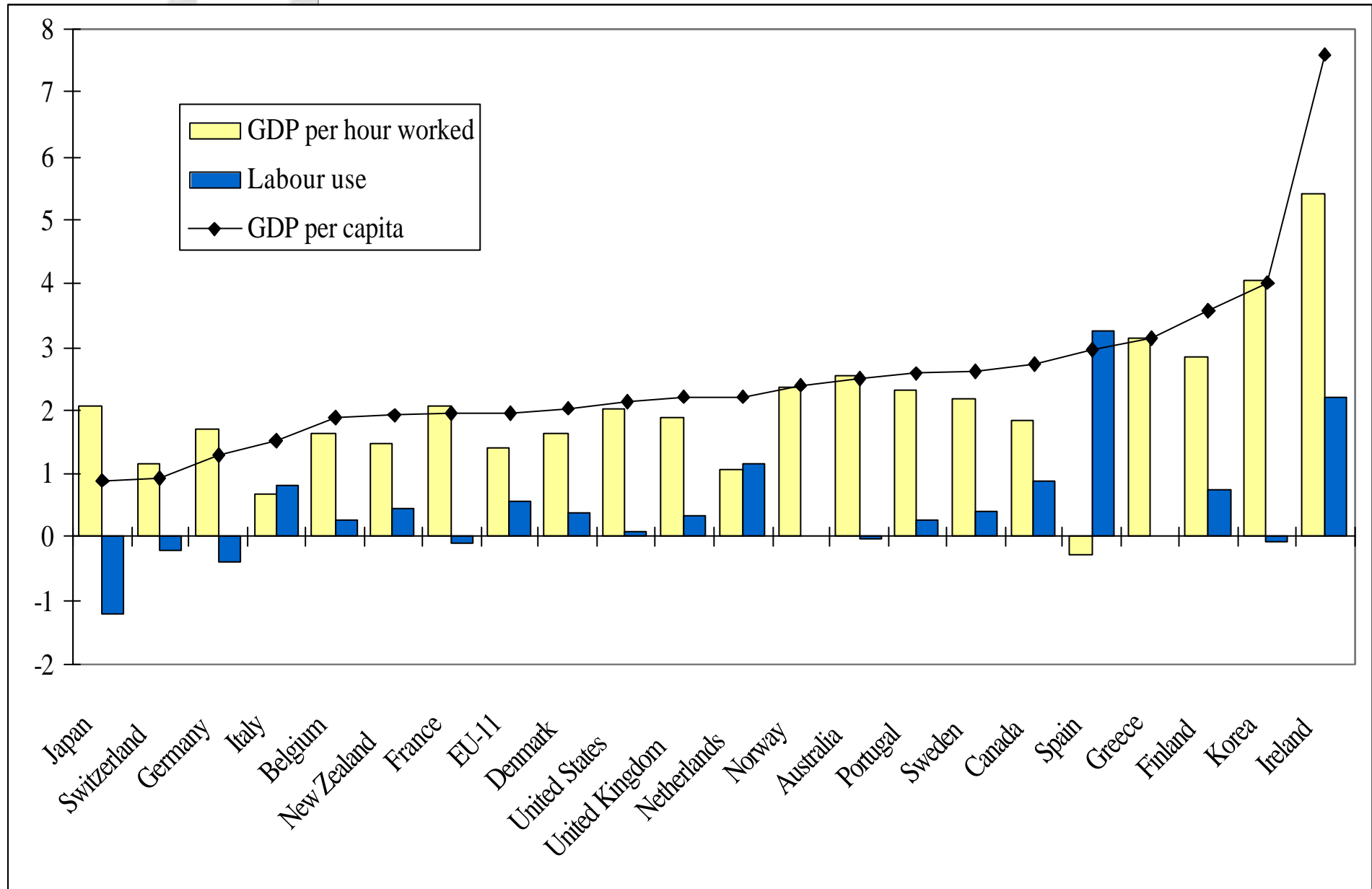
Labour use declined in the EU over 1990-1995 ..

Contribution of productivity and labour use to growth in GDP per capita, %



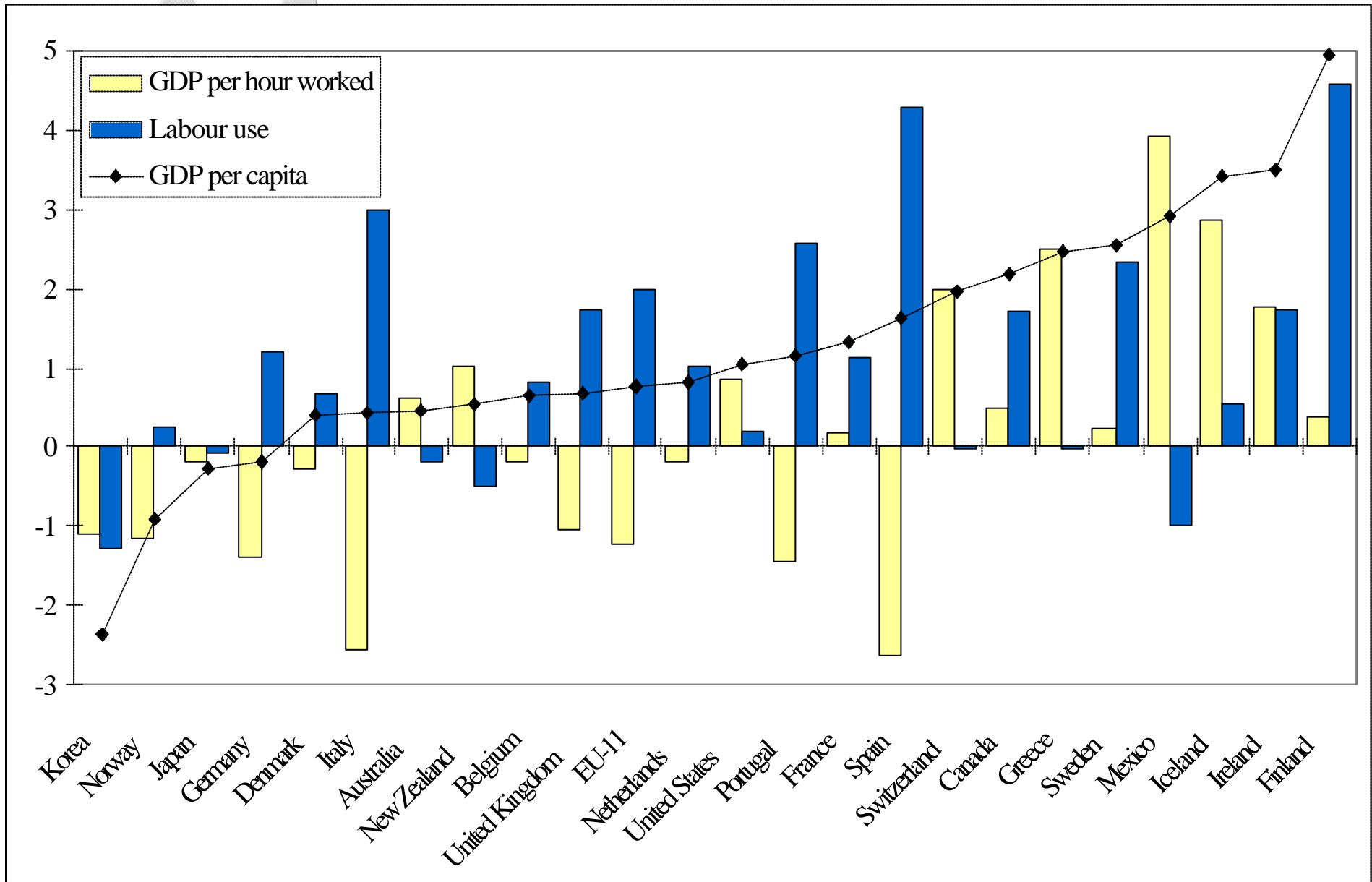
.. but improved in the 1995-2002 period

Contribution of productivity and labour use to growth in GDP per capita, %



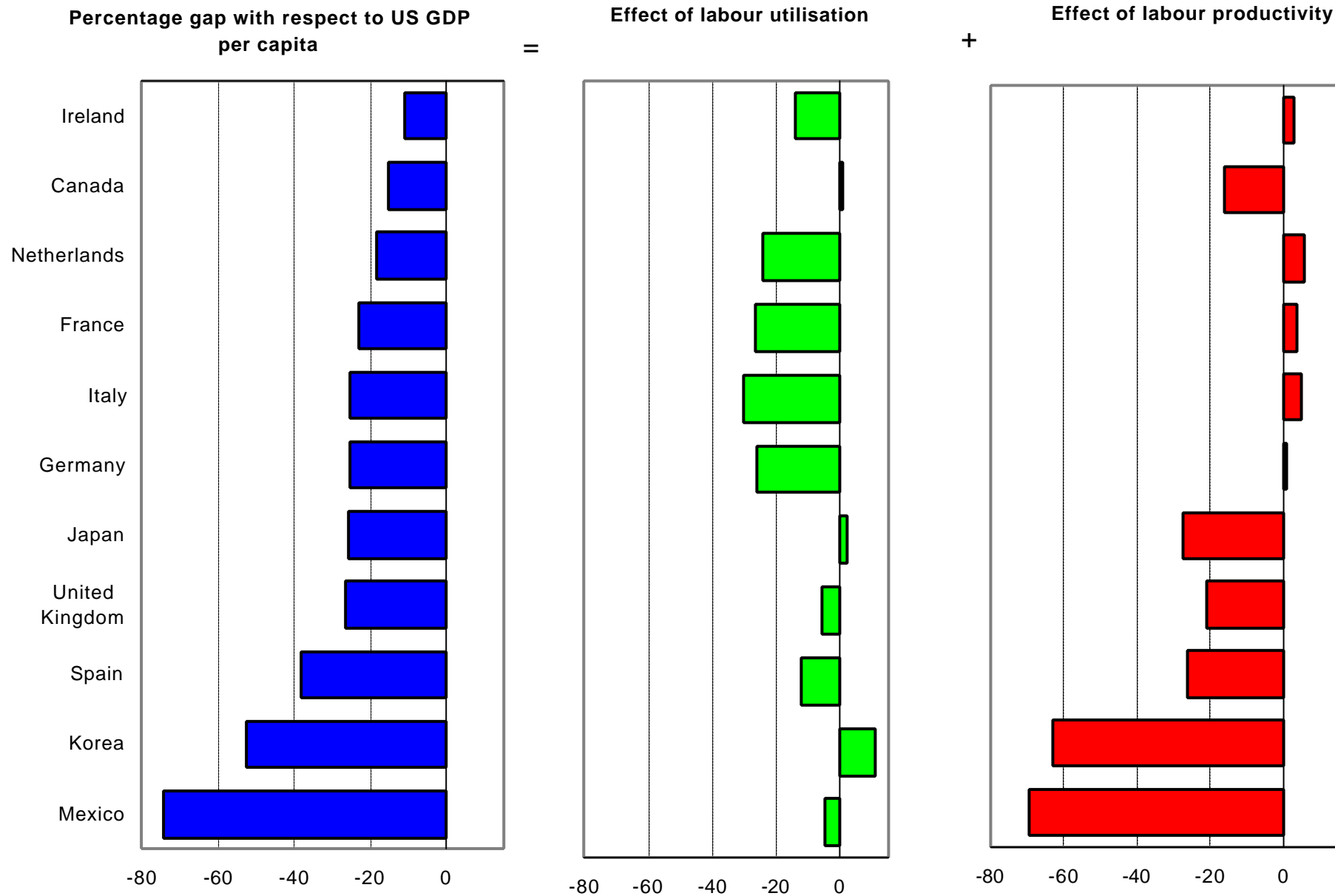
Increased EU labour use accompanied lower productivity growth

Change in contr. of product. & labour use to GDP growth, 1990-95 to 1995-2002, %



2002 differences in levels of income remain substantial

Contribution of productivity and labour use to level of GDP per capita, US=100, %

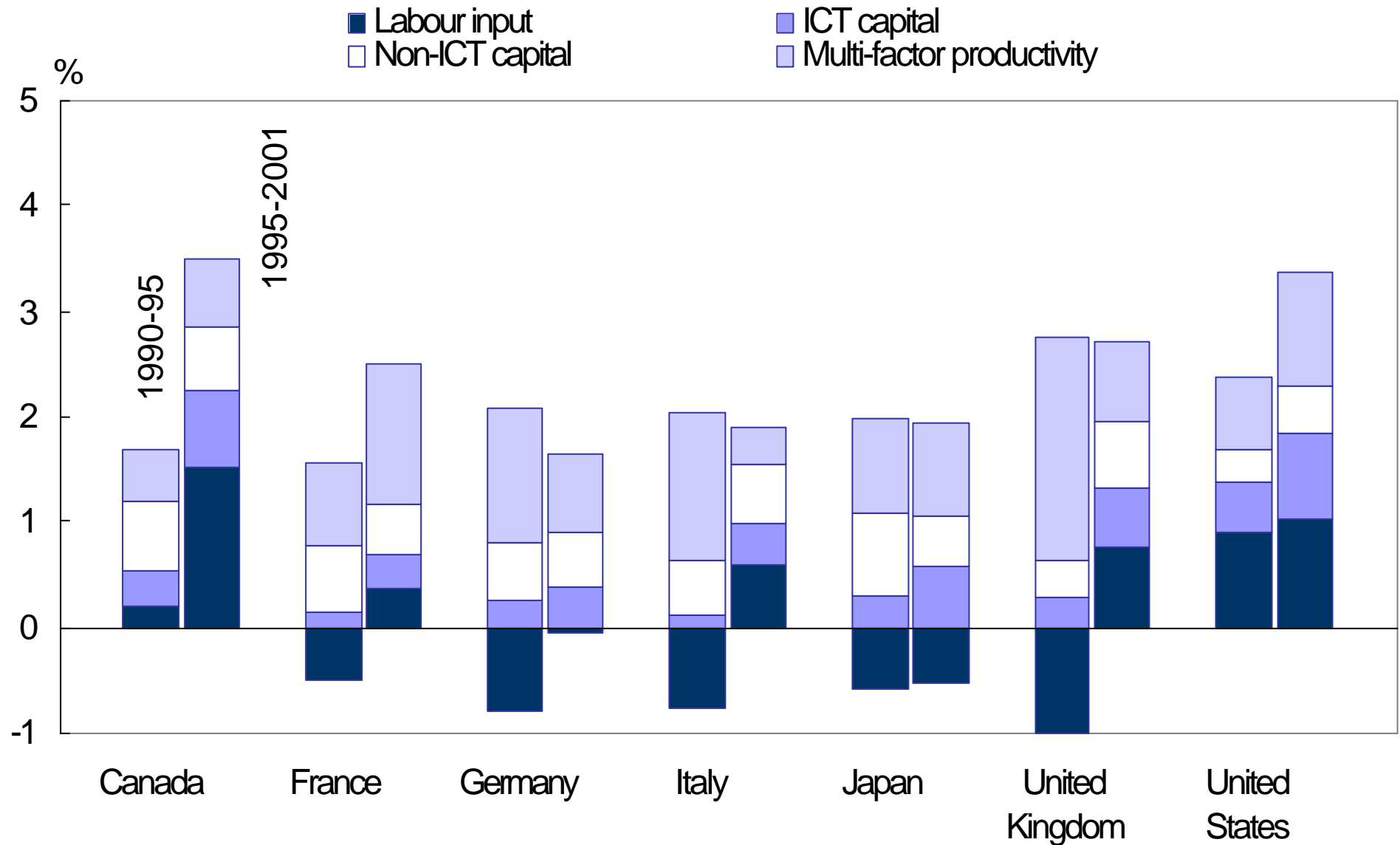


Cyclical differences play a role

- Trend-adjusted estimates prepared by the OECD Economics Department show that:
 - The US had slightly faster growth in GDP per capita than the EU over the 1990s.
 - Labour productivity growth fell in the EU over the 1990s and increased in the US – overall difference in labour productivity growth is small.
 - Faster growth in US labour utilisation explains the US/EU gap in growth of GDP per capita.
 - The pick-up in EU growth over the second half of the 1990s was due to increased labour utilisation.
 - Increased labour utilisation was accompanied by a decline in labour quality of the labour force.

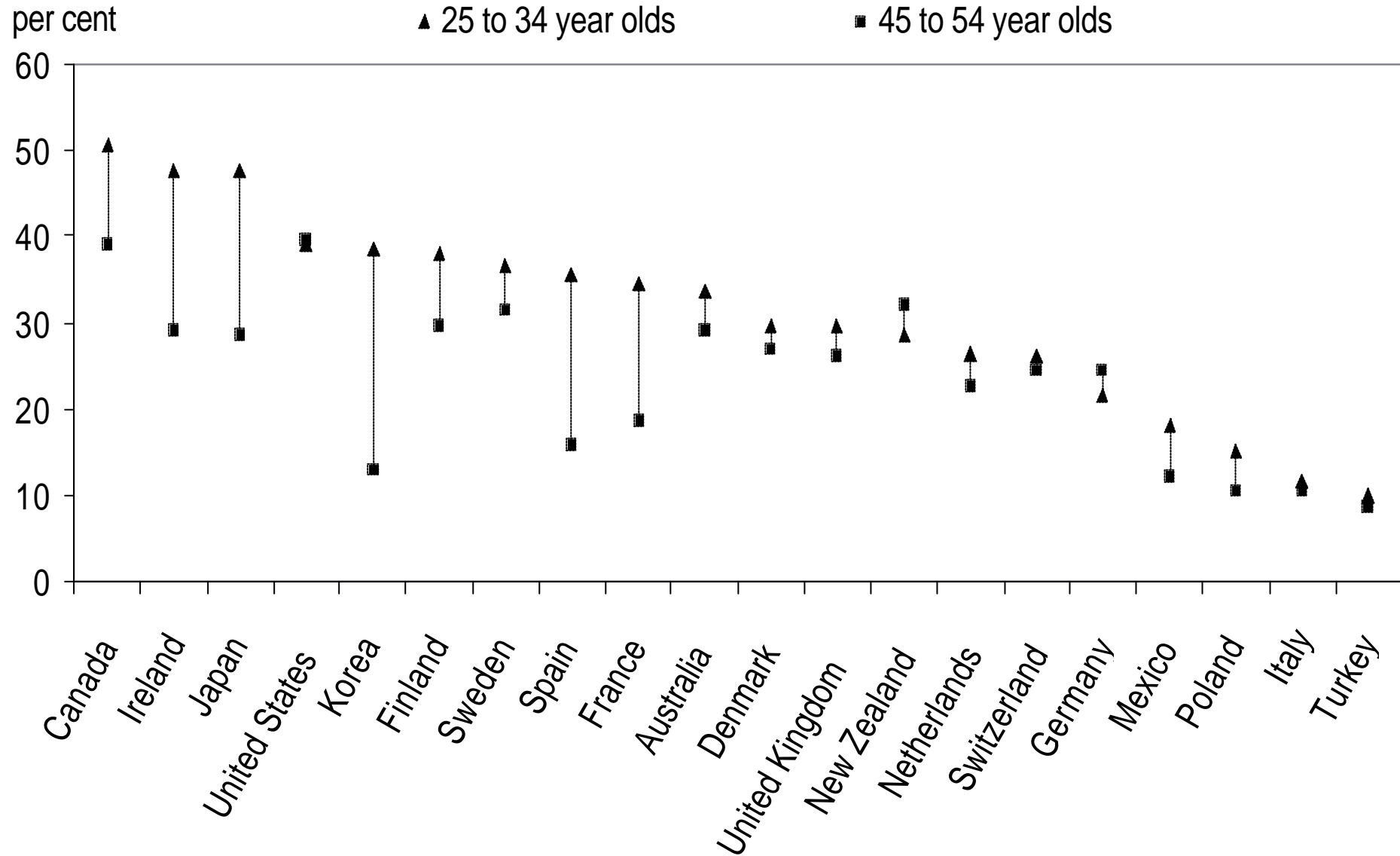
Strong growth is based on a combination of factors

(% contribution to GDP growth, 1990-95 and 1995-2001)



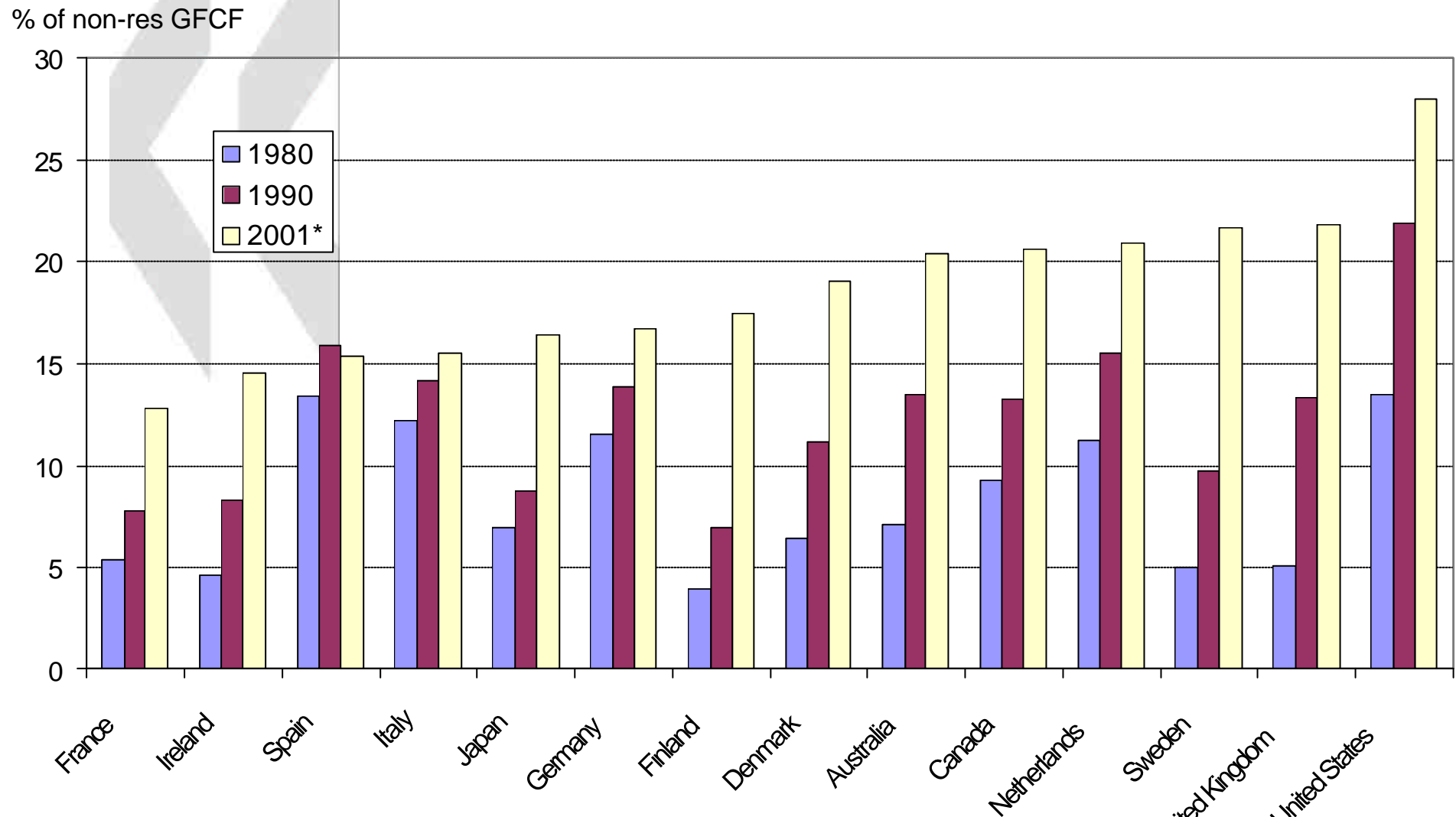
Human capital has improved over time

(% of population with tertiary level education, 2001)



Countries have not invested to the same extent in ICT

(ICT investment as % of non-residential investment)



Why the differences in ICT investment?

- Measurement, notably as regards software.
- Structural factors and rigidities:
 - Regulatory barriers, lack of skills & innovation, difficulties in changing organisational set-ups, make it difficult for firms to use ICT to its full potential – this limits investment.
 - Competition is not equally strong in all countries – pressures to improve performance differ.
 - Costs of ICT (e.g. telecommunications) still differ.
 - ICT is not suited to all markets, sectors, or business models.
 - Greater hype about ICT in the US?
- Policies to enhance labour use in the EU may have reduced capital-labour substitution in the 1990s.

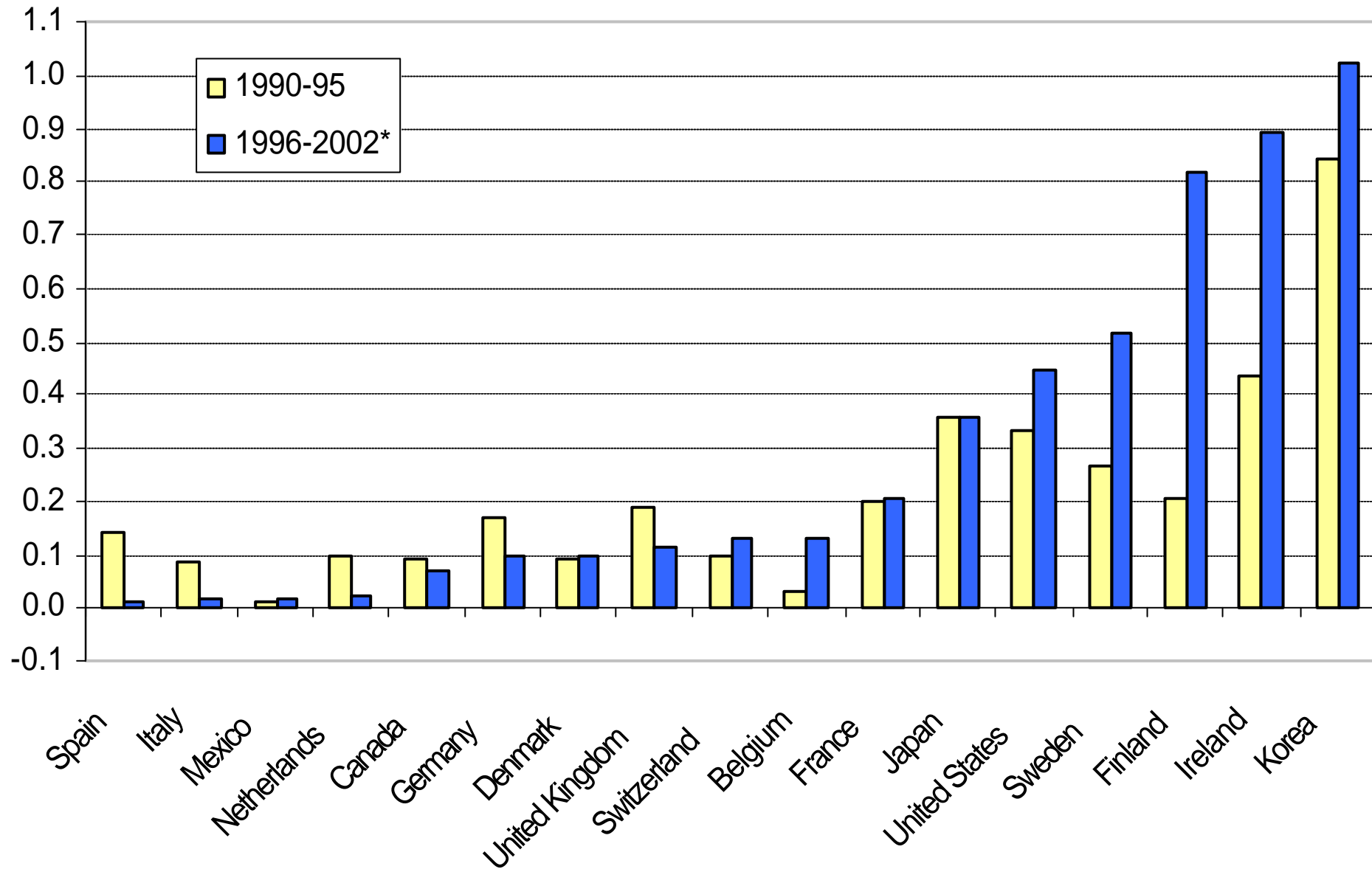
Countries with strict employment protection legislation have invested less in ICT



What drives the pick-up in MFP growth?

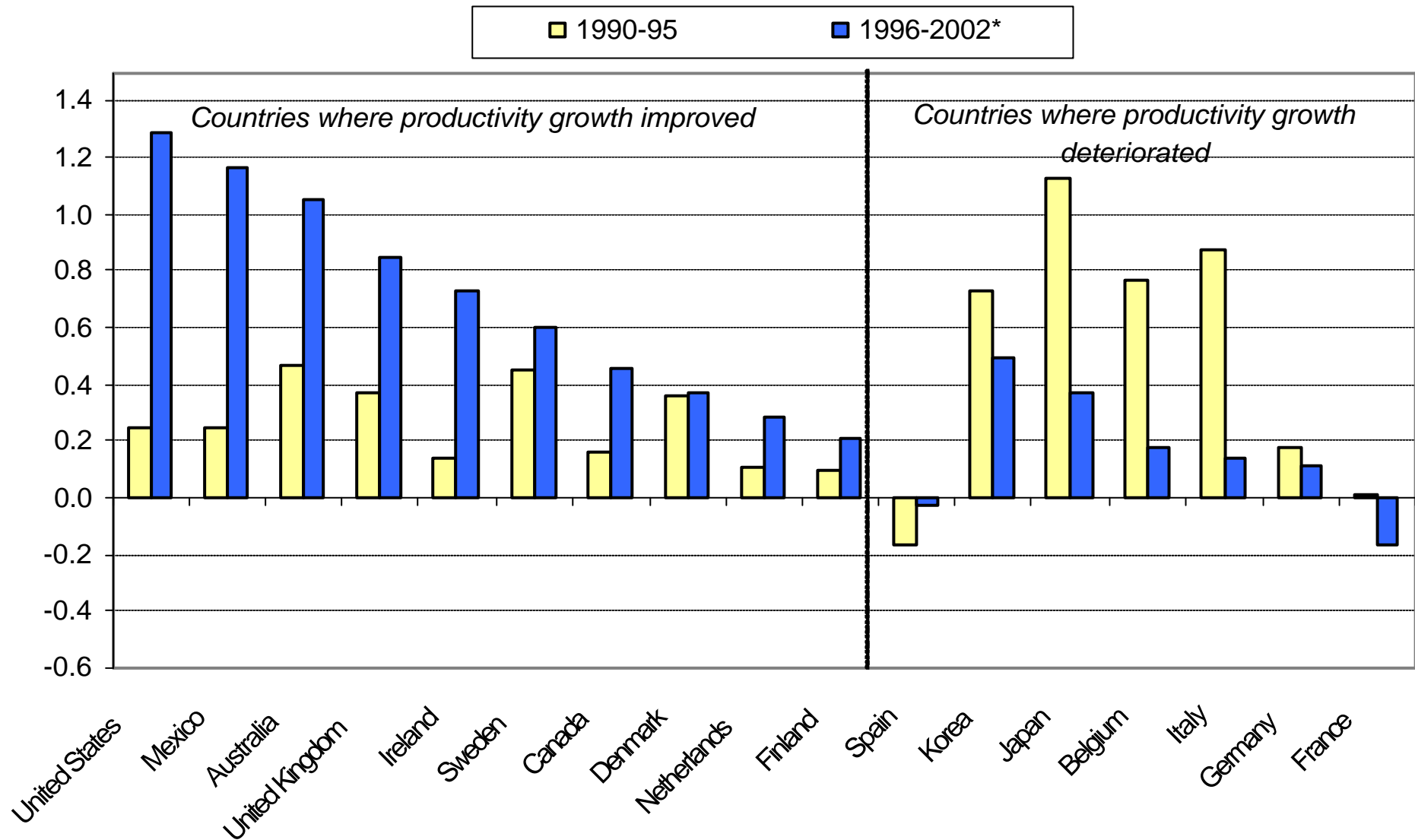
- Previous OECD work pointed to several factors that could play a role, including:
 - **ICT:** The extent to which countries have benefited from ICT production and use, including their scope for efficiency-enhancing organisational change.
 - **Firm dynamics:** Entry, exit and firm growth.
- These factors interact, but some cross-country evidence is available.

ICT manufacturing is only important for some countries (contribution to average labour productivity growth, in per cent)

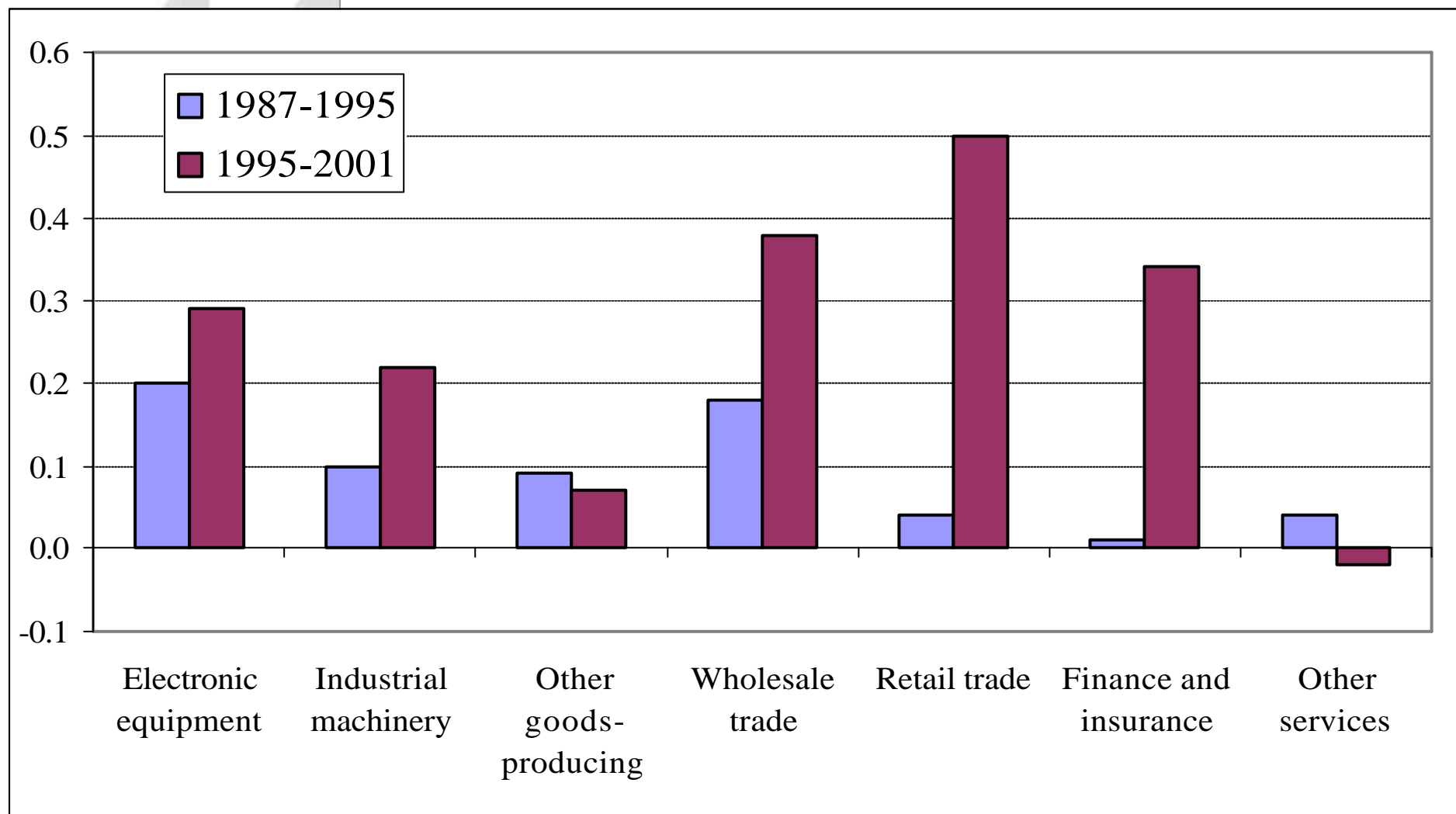


ICT-using services show more rapid productivity growth in a few OECD countries

(contribution to average labour productivity growth, in per cent)

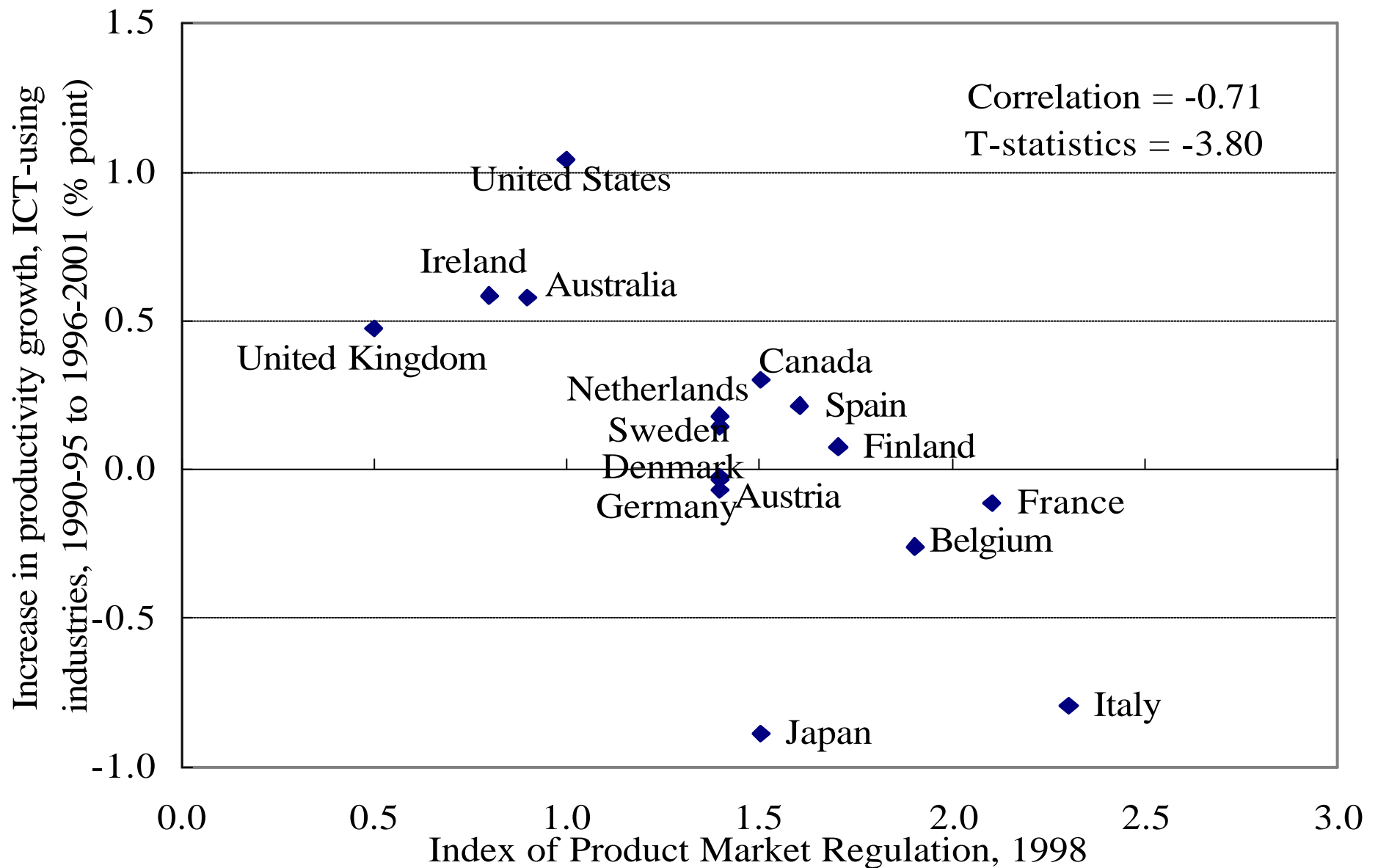


Stronger US MFP growth seems primarily due to ICT-using services (contributions to trend MFP growth, in % points, Domar weights)



Source: Bosworth and Triplett, 2003.

Countries with less product market regulation have seen a stronger pick-up in productivity in ICT-using industries, 1990-95 to 1996-2001



A firm-level perspective on ICT and productivity – project with 13 countries

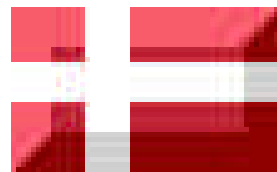
Australia



Canada



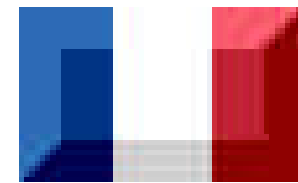
Denmark



Finland



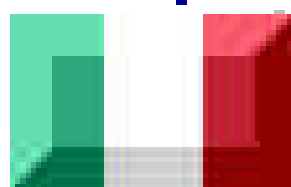
France



Germany



Italy



Japan



Netherlands



Sweden



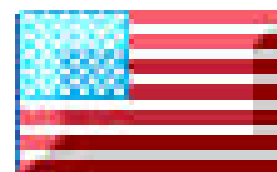
Switzerland



U.K.



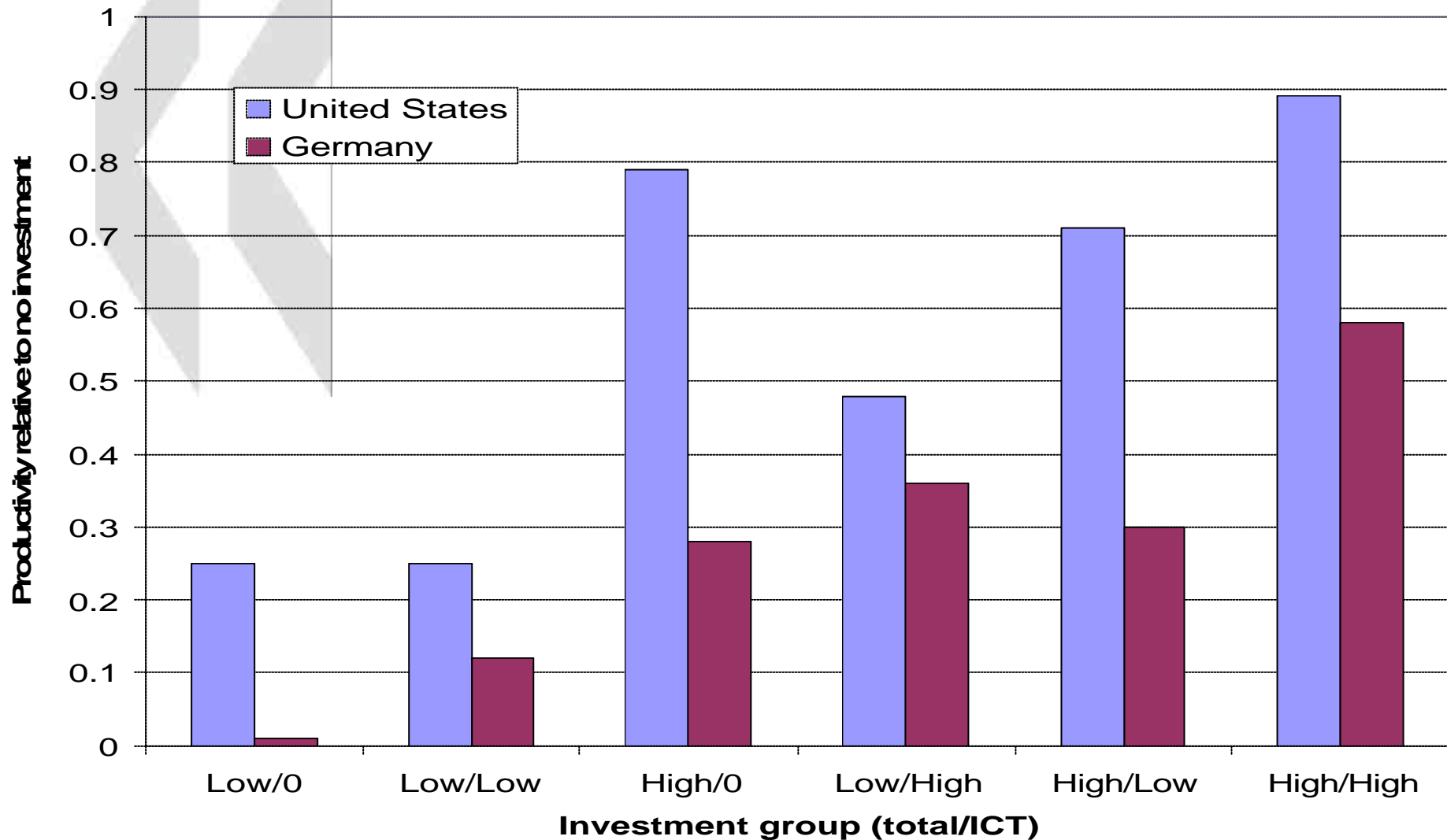
U.S.



Firm-level data show that ICT use can help improve MFP growth

- Positive impacts of ICT in all countries, but conditional on other factors and firm characteristics (skills, innovation, organisational change, experimentation).
- ICT can help improve productivity and help efficient firms gain market share.
- Networking technologies are important.
- The impacts of ICT can also be found in the service sector.

However, the firm-level impacts of ICT seem to differ across OECD countries

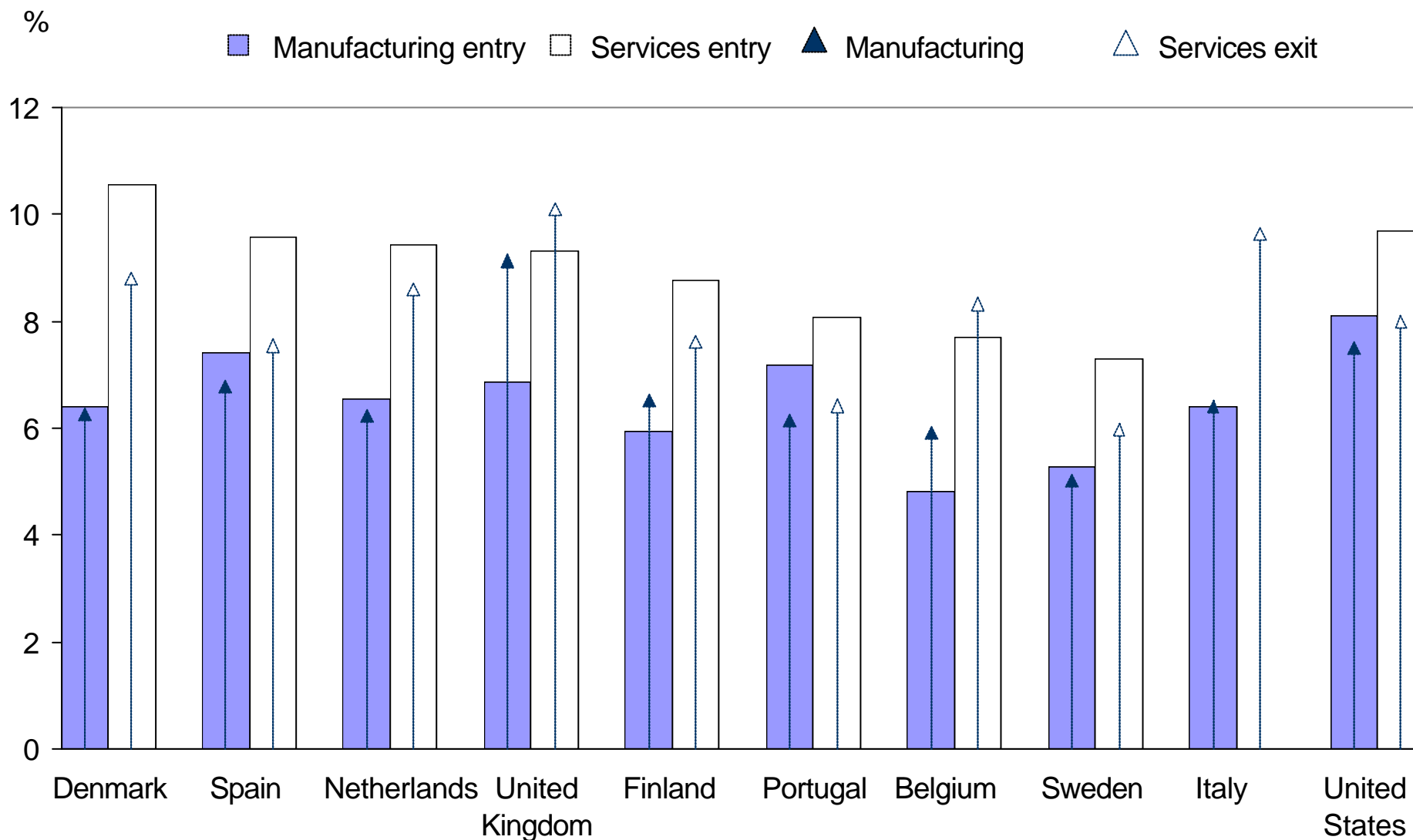


Why the difference between firm-level and industry/aggregate findings?

- Lags – US invested earlier and more – aggregate impacts in other countries might still emerge over time.
- The firm-level impacts of ICT may be smaller in the EU – perhaps because firms are not able to reorganise.
- Successful firms may not gain sufficient market share – the variation in impacts in the US seems larger than in the EU.
- Measurement – US output measures for certain sectors (e.g. financial services) might pick up more output growth.
- Spill-overs – Perhaps some spill-over effects in the US, not much in the EU.

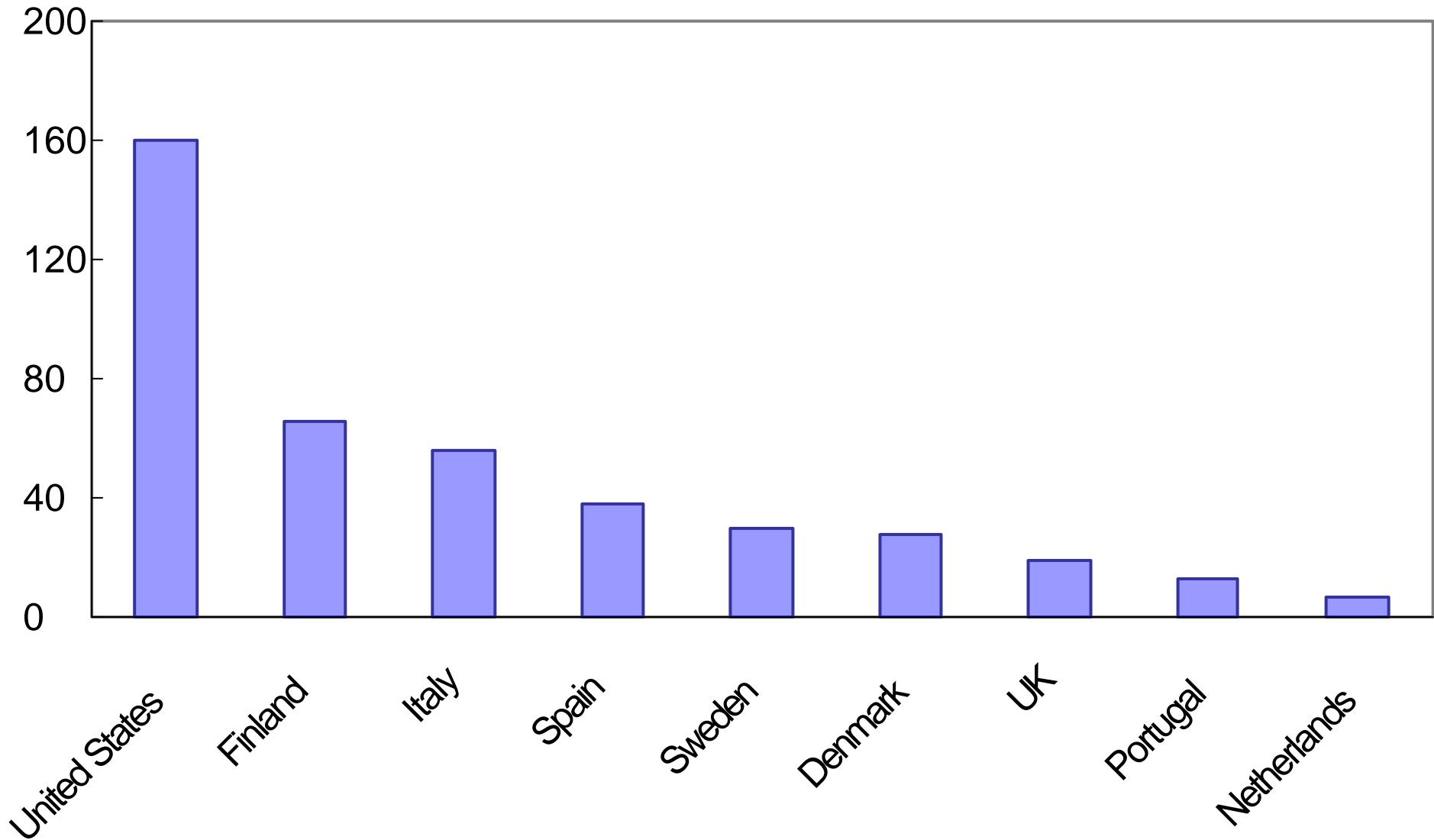
Entry and exit: EU-US differences seem small

(entry and exit rates, as % of all firms)



But differences in firm growth are substantial

(Employment gains of surviving firms after 2 years, % growth from initial employment)



Why the differences? Scope for learning?

- Firms in the United States start smaller than firms in Europe, but grow more quickly once they survive.
- There is a greater variation in performance in the United States – more high-growth firms, but also more failure.
- US firms may have greater scope to learn and experiment – to find out whether a technology/business model works.
- The scope for learning enables rapid growth when successful; if not, exit is not excessively difficult.
- The US business environment may be more suited for times of rapid technological change – when there is much uncertainty.

Conclusions

- The US has had stronger growth performance than the EU or Japan over the past years.
- Structural rigidities in labour and product markets appear to affect several drivers of growth in the EU:
 - The ability of economies to combine increased productivity growth and increased labour use.
 - The degree to which firms have invested and benefited from ICT.
 - The creation and growth of new (and innovative) firms.
 - The degree of experimentation and innovation in the economy.

Concluding remarks on methods

- Comparative research at aggregate and industry level is straightforward, though faced with measurement problems.
- Comparative analysis with micro-data is relatively new, also faced with measurement problems, but offers a great potential for the future:
 - Points to interactions.
 - Points to dynamics, e.g. competition, market shares.
 - Cross-country differences seem large and raise new questions.
- OECD will continue to work towards more comparative studies with firm-level data.

THANK YOU.