ENHANCING SERVICES SECTOR PERFORMANCE

*- Fostering Employment, Productivity and Innovation -*

# Main Messages from the OECD Services Project

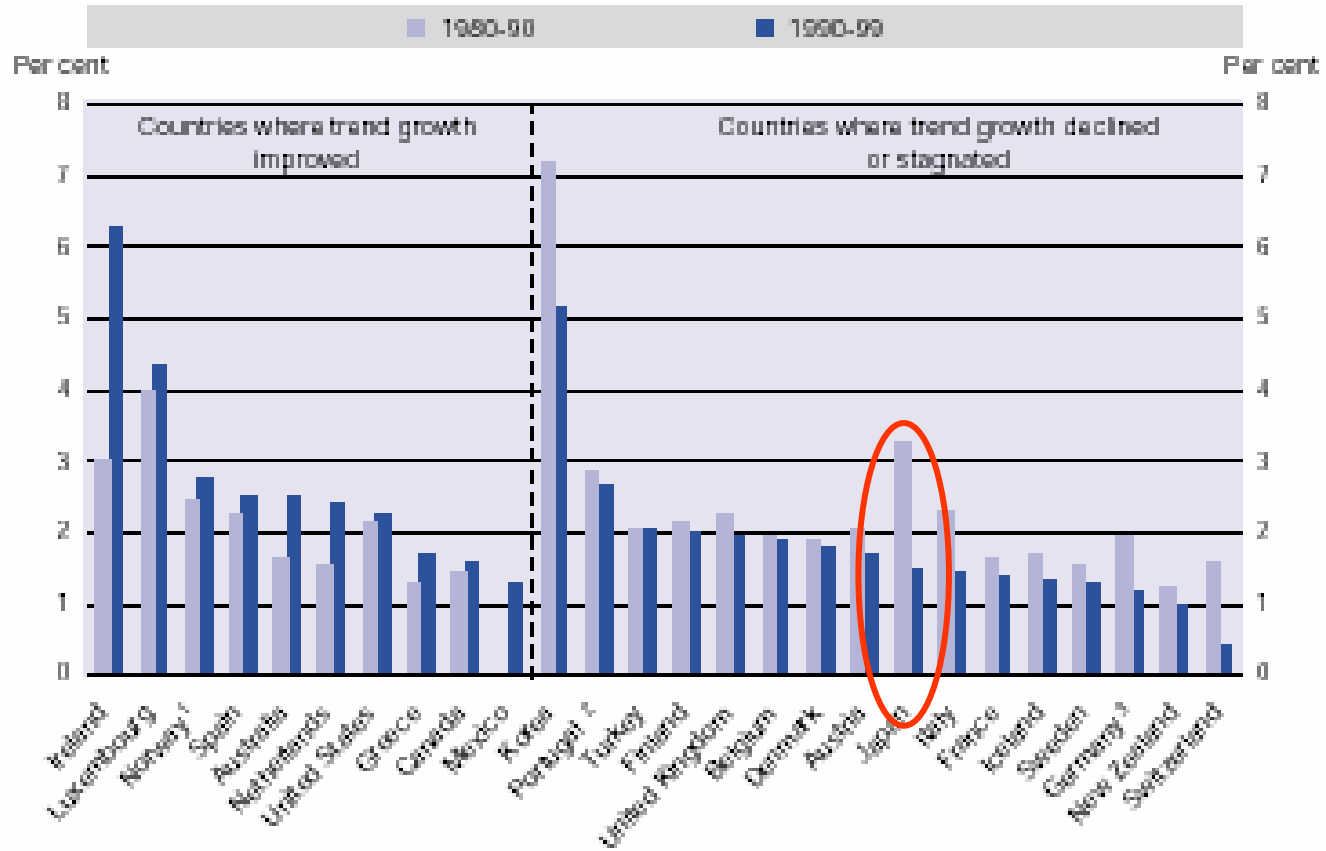
RIETI BBL Seminar,
Tokyo, April 4th 2005

**Director for Science, Technology and Industry**
**OECD**

**Nobuo TANAKA**
nobuo.tanaka@oecd.org

Figure I.2. Uneven trend growth of GDP per capita

Total economy, percentage change at annual rate



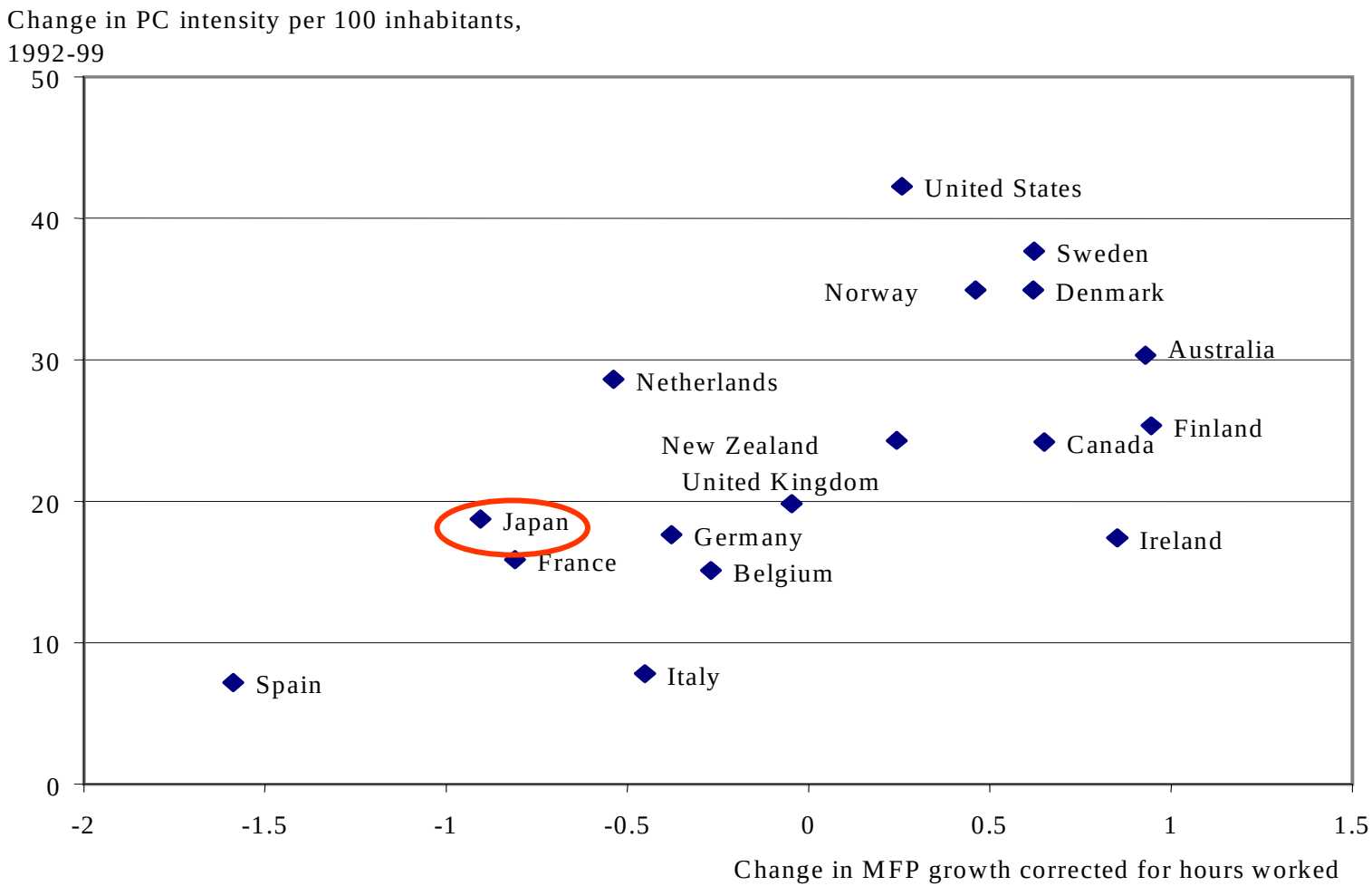

*Note:* *Trend growth in the 1990s was higher than in the 1980s in several countries: Australia, Canada, Greece, Ireland, Luxembourg, Mexico, the Netherlands, Norway, Spain and the United States. But trend growth declined substantially in Italy, Switzerland, Japan and Korea. The decline in trend growth in Germany is influenced by the unification process.*

1. Total Norway.
2. 1990-98.
3. West Germany for 1980-90; Germany for 1991-99.

*Source:* OECD, based on data for the OECD *Economic Outlook*, No. 68. See Scarpetta et al. (2000) for details.

Source: OECD's Growth Report, "The New Economy: Beyond the hype" 2001.

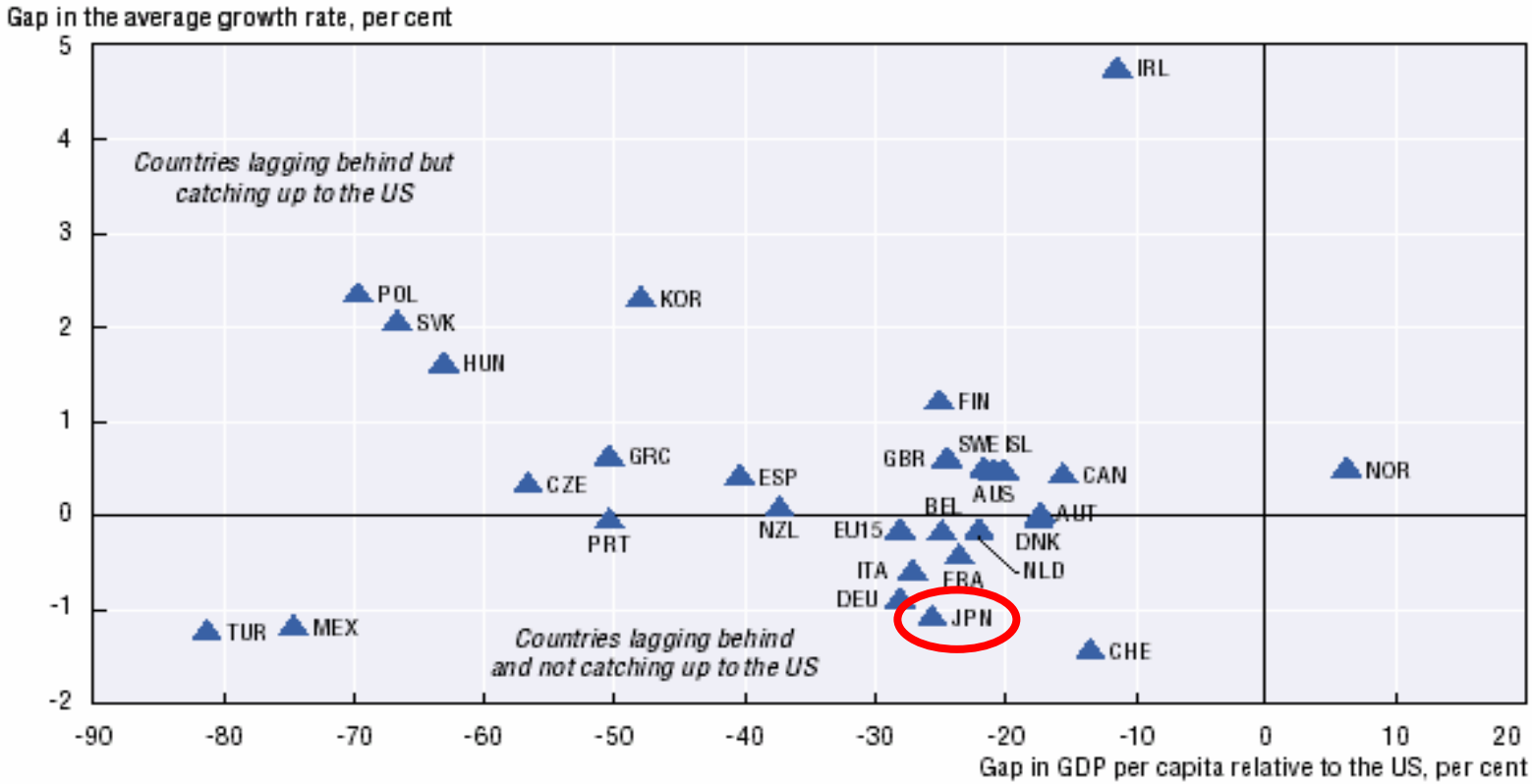
# Pick-up in MFP growth and increase in ICT use




Note: Change in multi-factor productivity growth corrected for hours worked, average 1990s minus average 1980s.

Source: OECD

# GDP per capita levels and growth rates: Gap *vis-à-vis* the United States




*Note*: EU15, excluding Luxembourg.

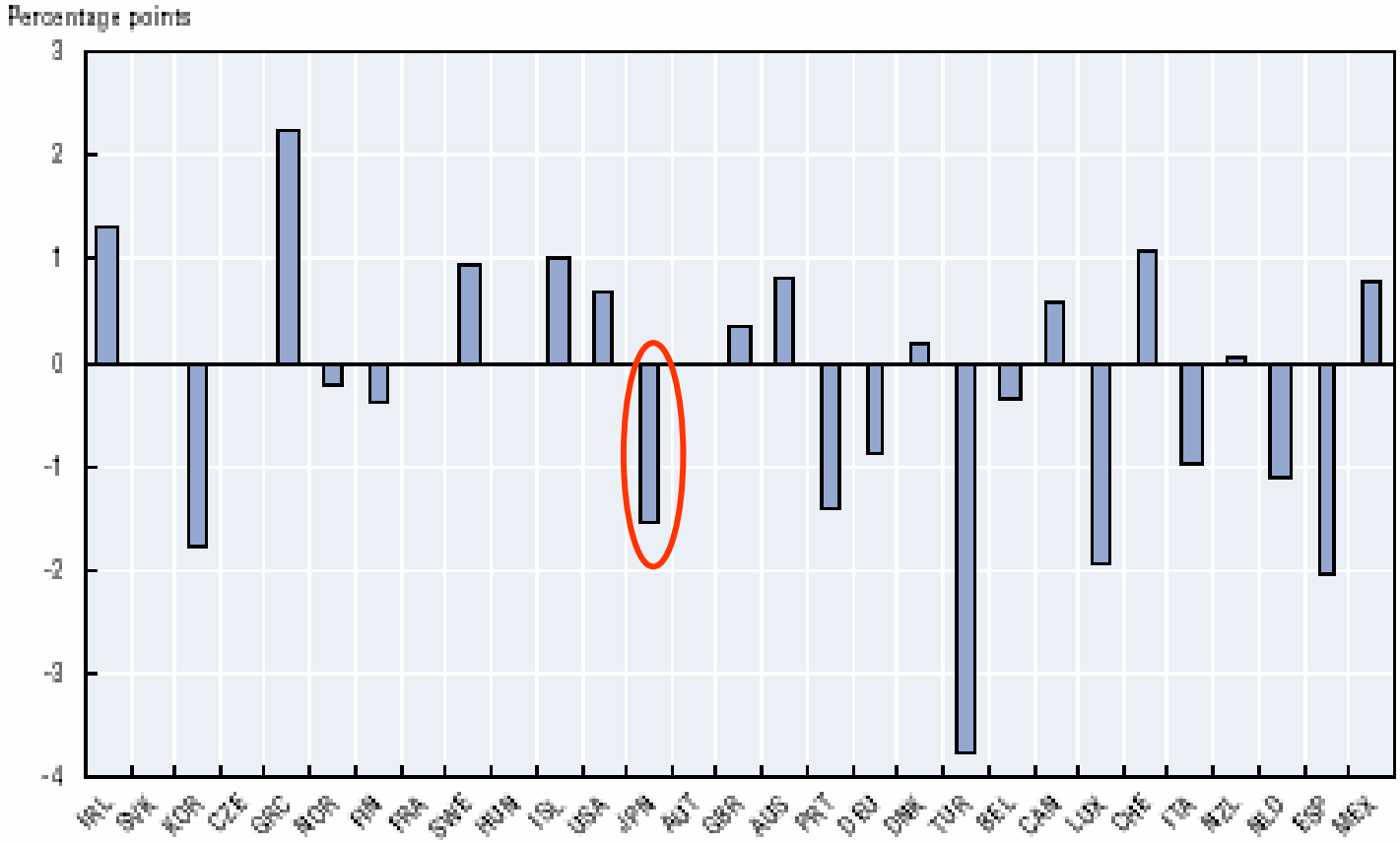
1. The average growth rate of GDP per capita is calculated over the period 1994-2003 on the basis of volumes data from national accounts sources. The level of GDP per capita is for 2002 on the basis of 2000 PPPs.

*Source*: OECD, *National Accounts of OECD Countries*, 2004 and *OECD Economic Outlook*, No. 76.

Going for Growth – Economic Policy Reforms (2005), OECD

# Labour Productivity growth

## Change in average growth rates between 1985-1993 and 1994-2003




1. Measured as GDP per hour worked.
2. Labour productivity is not reported for Poland due to missing hours data. Slovak Republic covers 1995-2003. For Luxembourg, labour productivity is derived by using domestic employment (including cross-border workers).
3. The change in labour productivity is not reported for Austria; Czech Republic, Hungary and Slovak Republic due to short hours data series.

Source: OECD, National Accounts of OECD Countries, 2004; OECD Labour Force Statistics, 2004 and OECD Economic Outlook, No. 76.

**Winners**
Ireland
Sweden
US
UK
Australia
Canada

**Losers**
Japan
Germany
Italy
NDL
Spain

# OECD Horizontal Project on Services
## *"Enhancing the Performance of the Service Economy"*

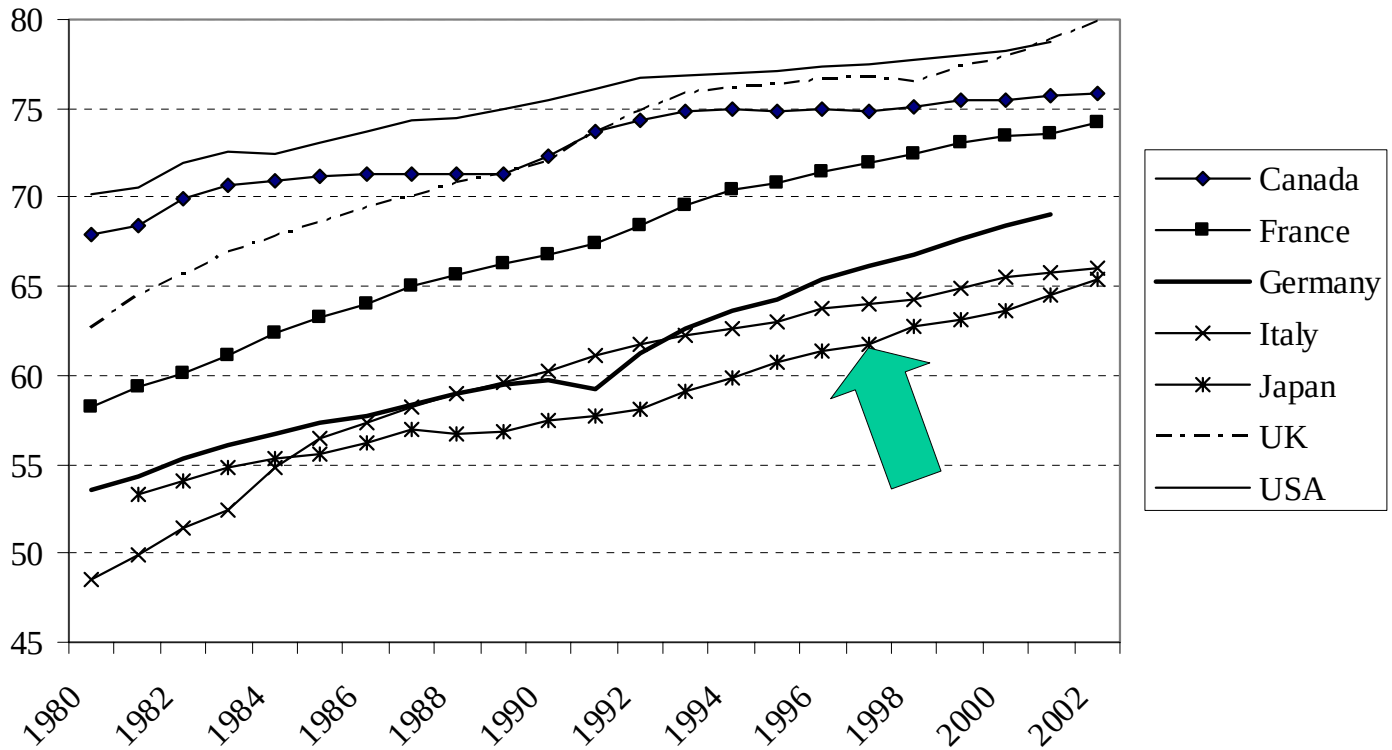
- Proposed by Japan (Hiranuma) at MCM 2003
- DSTI, ECO, TRADE work together
  - Section 1: *Analysis of recent and prospective trends*
  - Section 2: *Economy-wide factors that encourage services*
  - Section 3: *Role of S&T, innovation policies, ICTs, and IPRs*
- Will be reported to Ministers at MCM 2005
  - Short summary brochure
  - Compendium of background papers
- Tokyo seminar on 14-15 July

# Introduction: The Policy Challenge

- Services are of growing importance for economic growth, employment and productivity.
  - Accounting for over 70% of total employment and value added
- Some services sectors have experienced rapid growth, in particular in some OECD countries.
  - Such as Australia, Canada, Slovak Republic, US
- Almost all jobs created in OECD countries are in the services sector – many are for highly skilled workers.
- Some concern about offshoring of services.
- Not all countries are doing well in the services sector, which points to a potential for improvement.
- The policy challenge – enhancing employment and productivity in OECD countries – the contribution of services needs strengthening.

# The contribution of services to OECD economies is growing

**(share of services in total employment, 1970-2002, in %)**

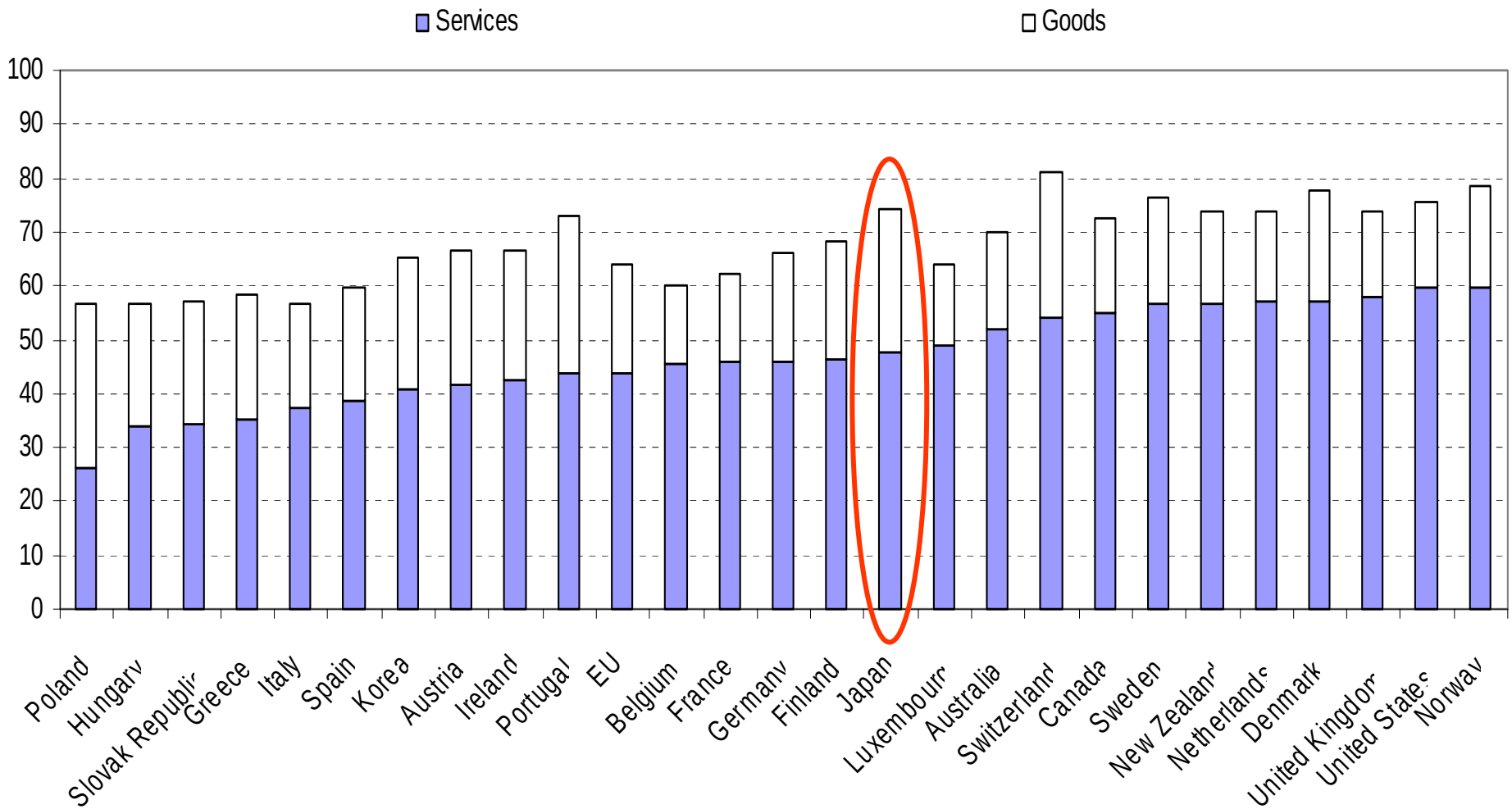



Source: OECD STAN Database, 2004

- Growing also in Japan
- But Japan is still more manufacturing oriented than others

# But the contribution of services to employment rates varies considerably across countries

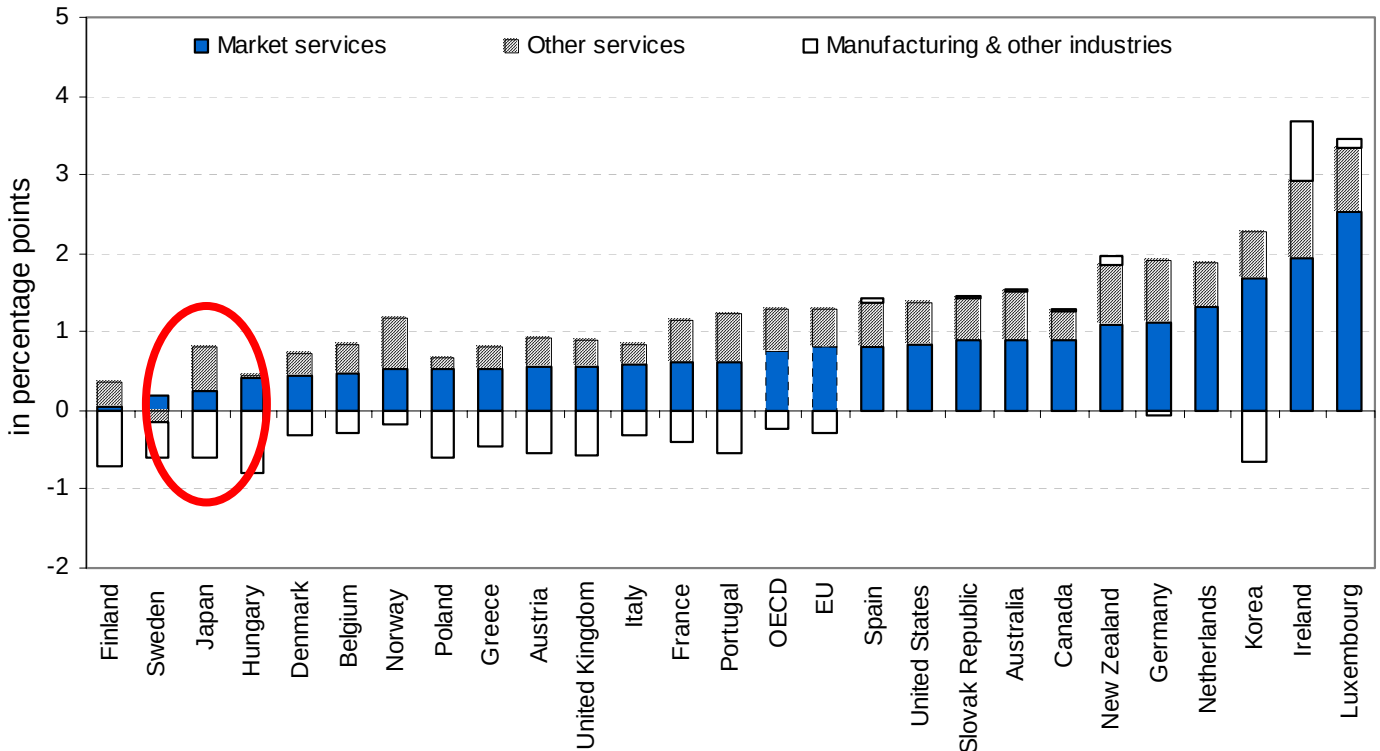
## (share of the working-age population employed in goods and services, 2002)




Source: OECD, Labour Force Statistics and STAN Database, 2004.

# Services now account for almost all employment growth …

## Contribution to aggregate employment growth, 1990-2002, percentage points

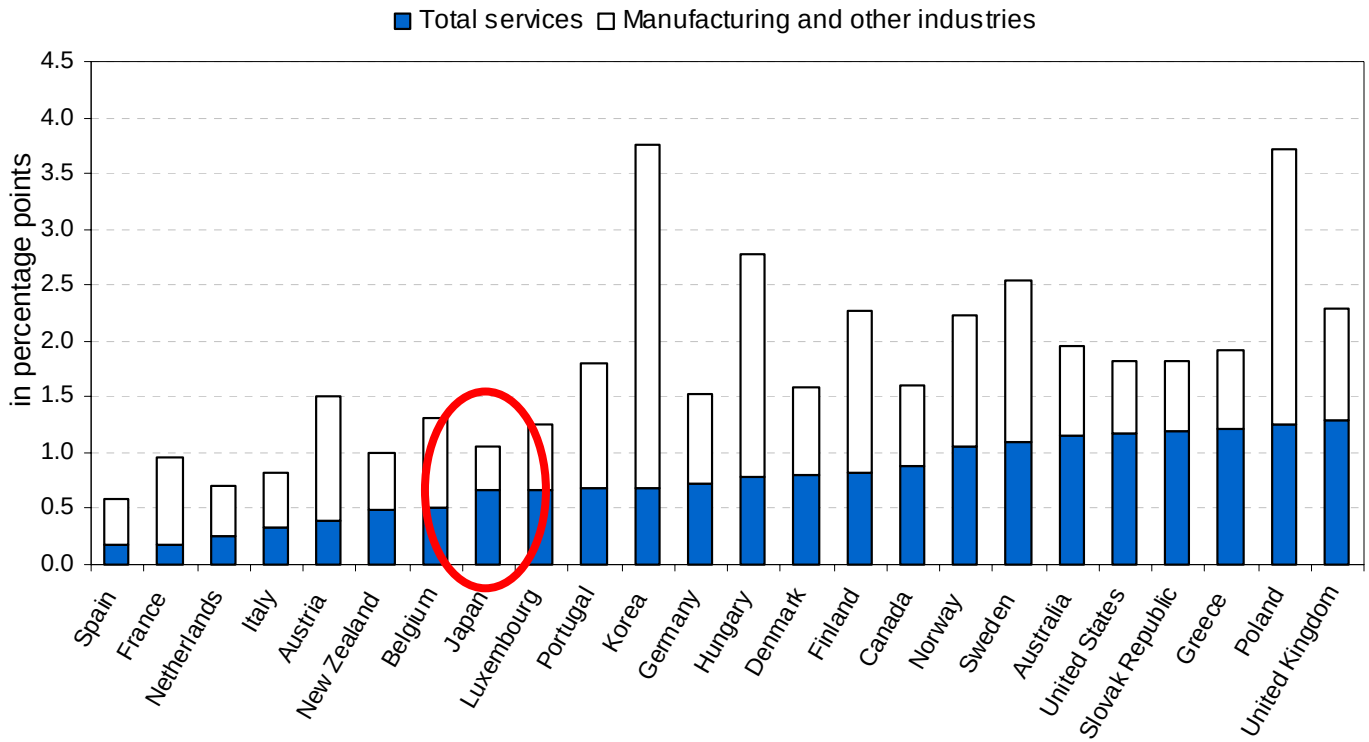



Source: OECD STAN Database, 2004

- Growing services offsets decreasing manufacturing in Japan
- BUT, contribution of market services is smaller than other countries

# … and for a considerable share of productivity growth

## Contribution to aggregate productivity growth, 1990-2002, percentage points

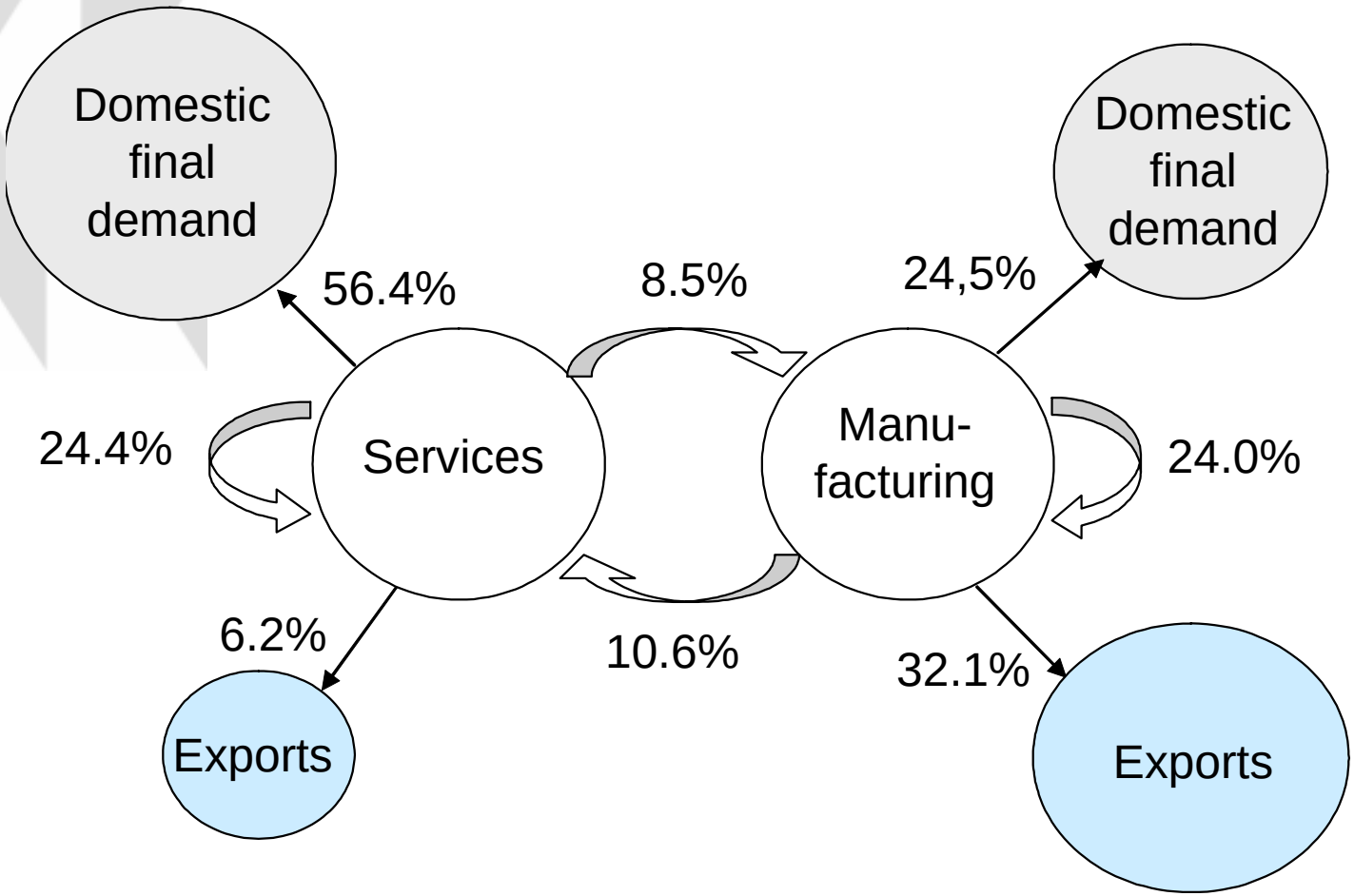



Source: OECD STAN Database, 2004

- Services productivity in Japan grows twice as fast as manufacturing
- Employment is also growing in contrast with manufacturing

# Services are closely integrated with the manufacturing sector

Input-output flows, in % of gross output




Source: OECD Input-Output-Tables, 1995, 1997

# With multinational firms playing an important role

**Table 6.2. Labour productivity growth in US non-financial corporations, by sector and industry**

Percentage points, annual rate

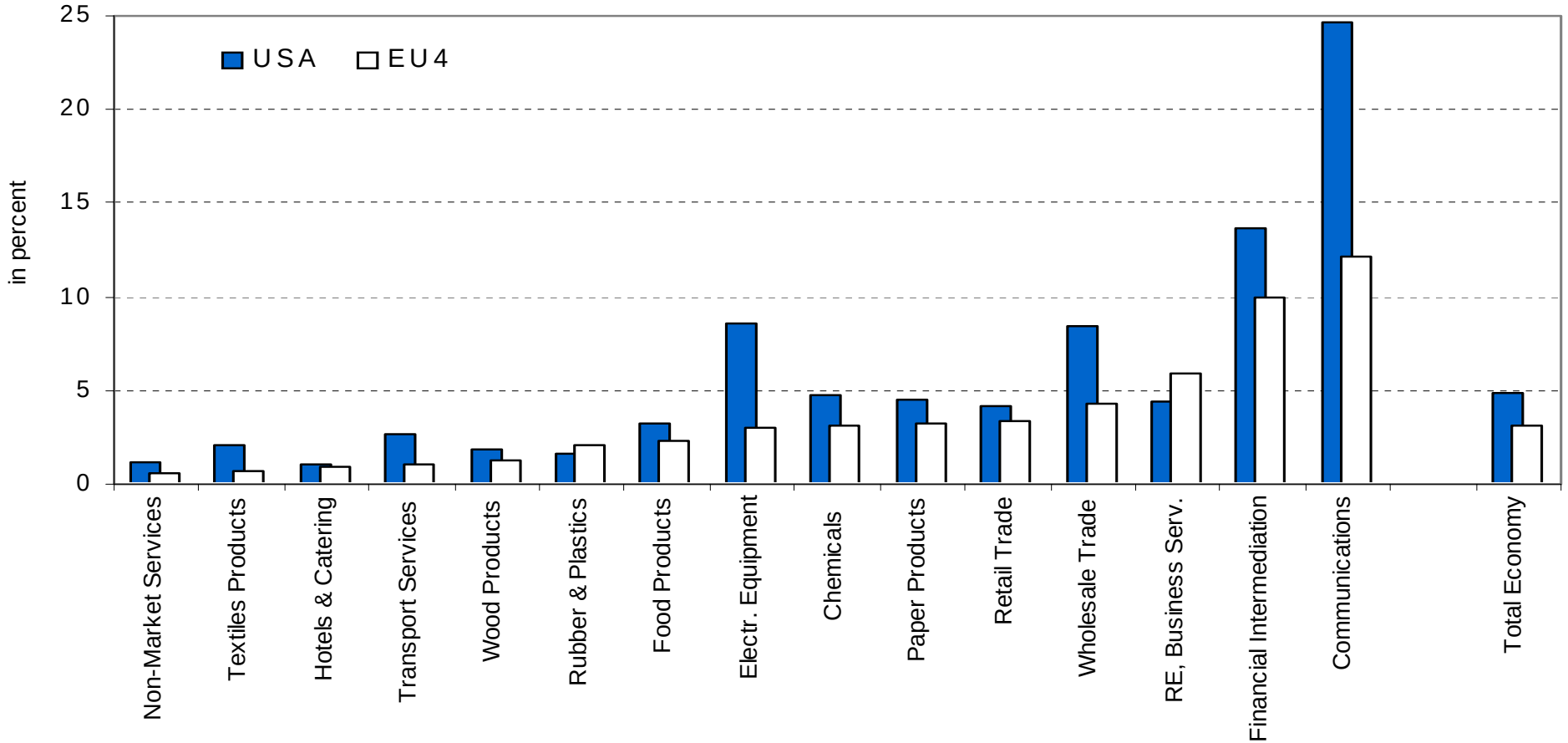
| | 1977-2000 | 1977-89 | 1989-95 | 1995-2000 |
|---|---|---|---|---|
| Non-financial corporations | 1.5 | 1.1 | 1.6 | 2.6 |
| | | *-- Contributions to growth --* | | |
| MNEs | 1.2 | 0.9 | 0.8 | 2.2 |
| Manufacturing | 0.8 | 0.6 | 0.7 | 1.3 |
| IT equipment | 0.5 | 0.4 | 0.4 | 0.9 |
| Other manufacturing | 0.4 | 0.3 | 0.3 | 0.5 |
| Non-manufacturing | 0.4 | 0.2 | 0.1 | 0.9 |
| Domestically oriented | 0.4 | 0.3 | 0.8 | 0.5 |

*Source*: Corrado *et al*. (2003).

Source: STI Outlook 2004

# Services are intensive users of ICT capital

IT capital as a percentage of value added per industry, 1990-2001, United States and EU4, annual average shares

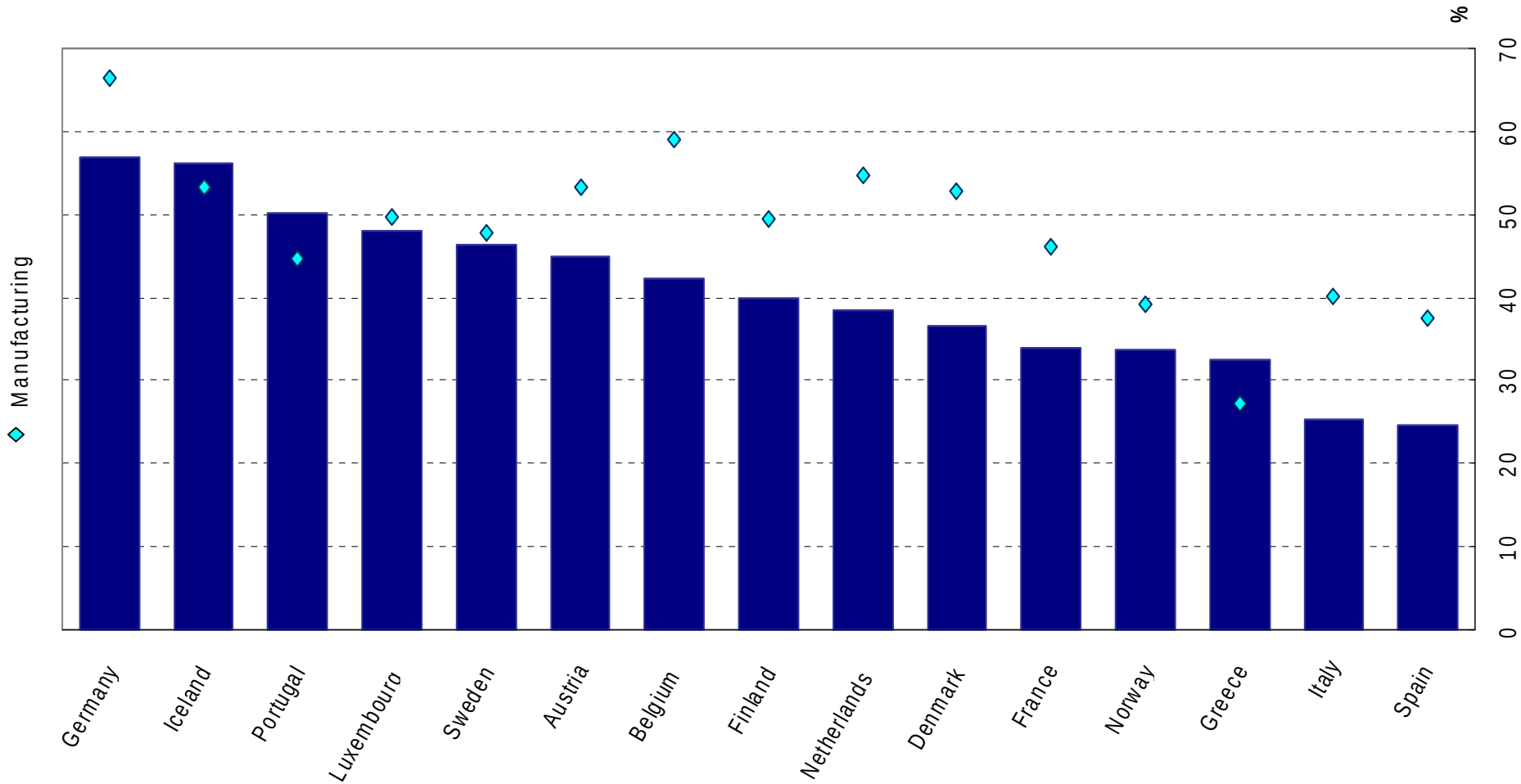



EU4: France, Germany, Netherlands, United Kingdom

Source: O'Mahony and Van Ark, 2003

# Services are highly innovative

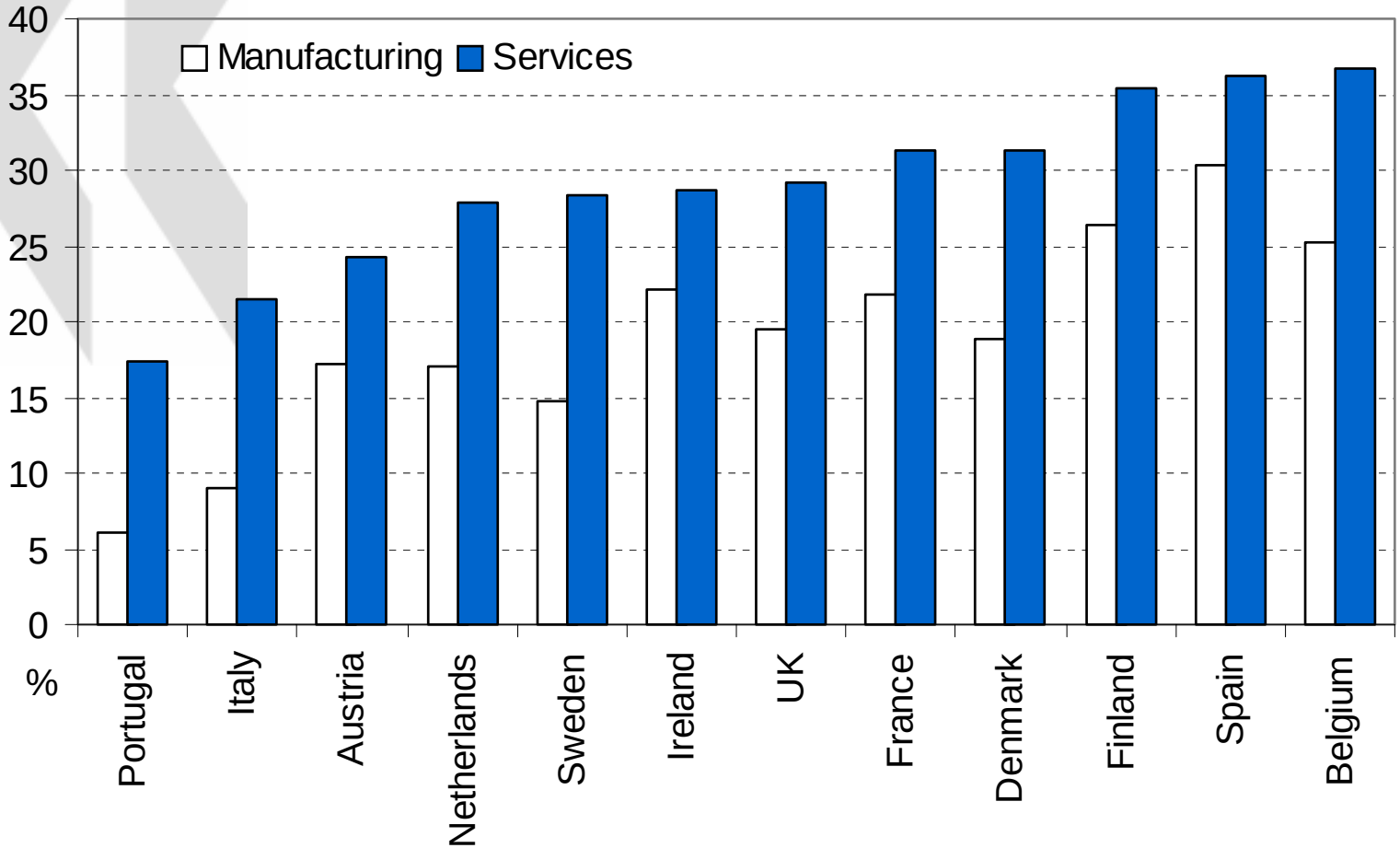
## Share of innovative firms in each sector, in %




Source: OECD, based on Eurostat CIS survey data

# Services are more skill-intensive than manufacturing

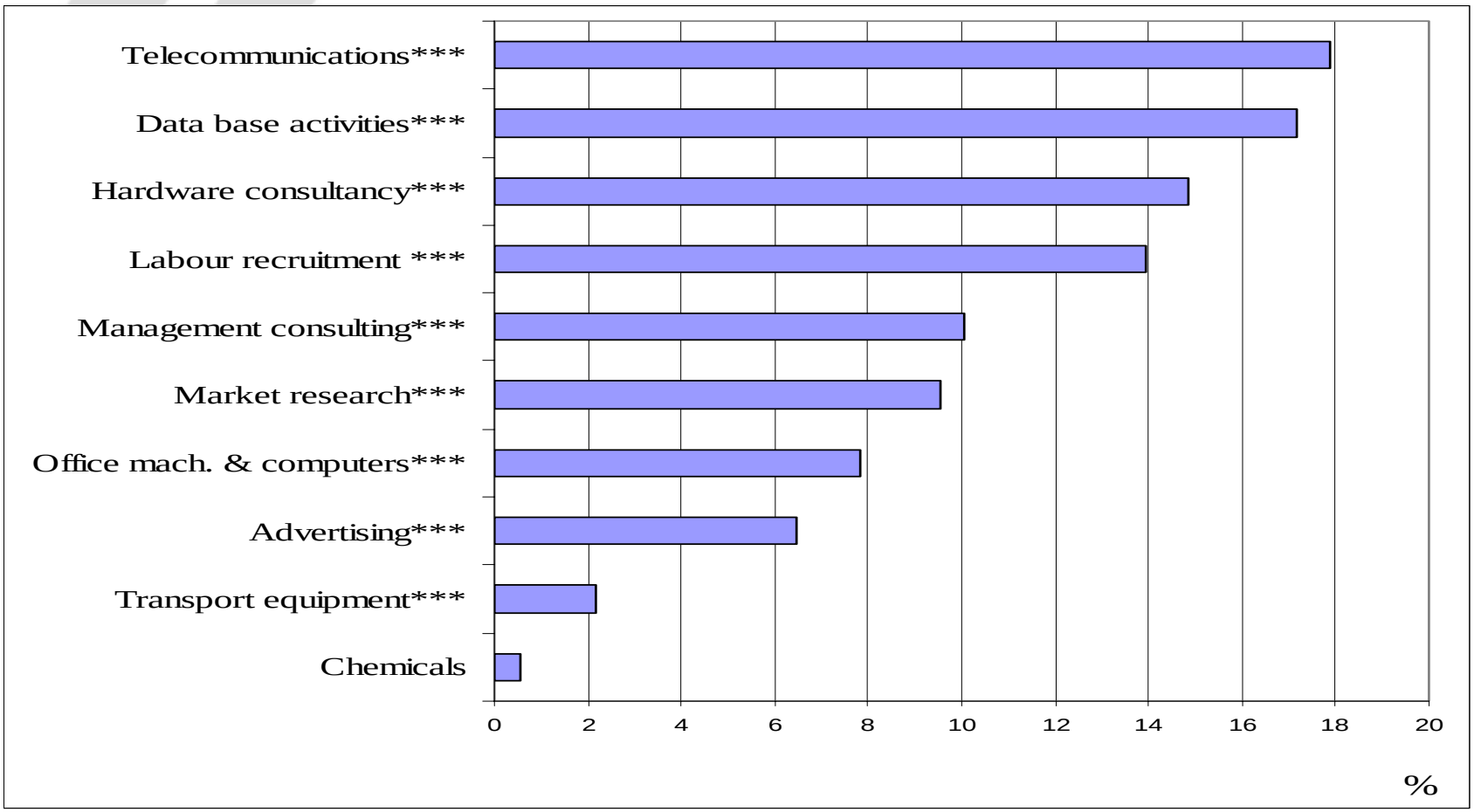
Percentage share of high-skilled employment in total employment




Source: OECD Labour Force Survey, 2003

# And have greater entry of new firms

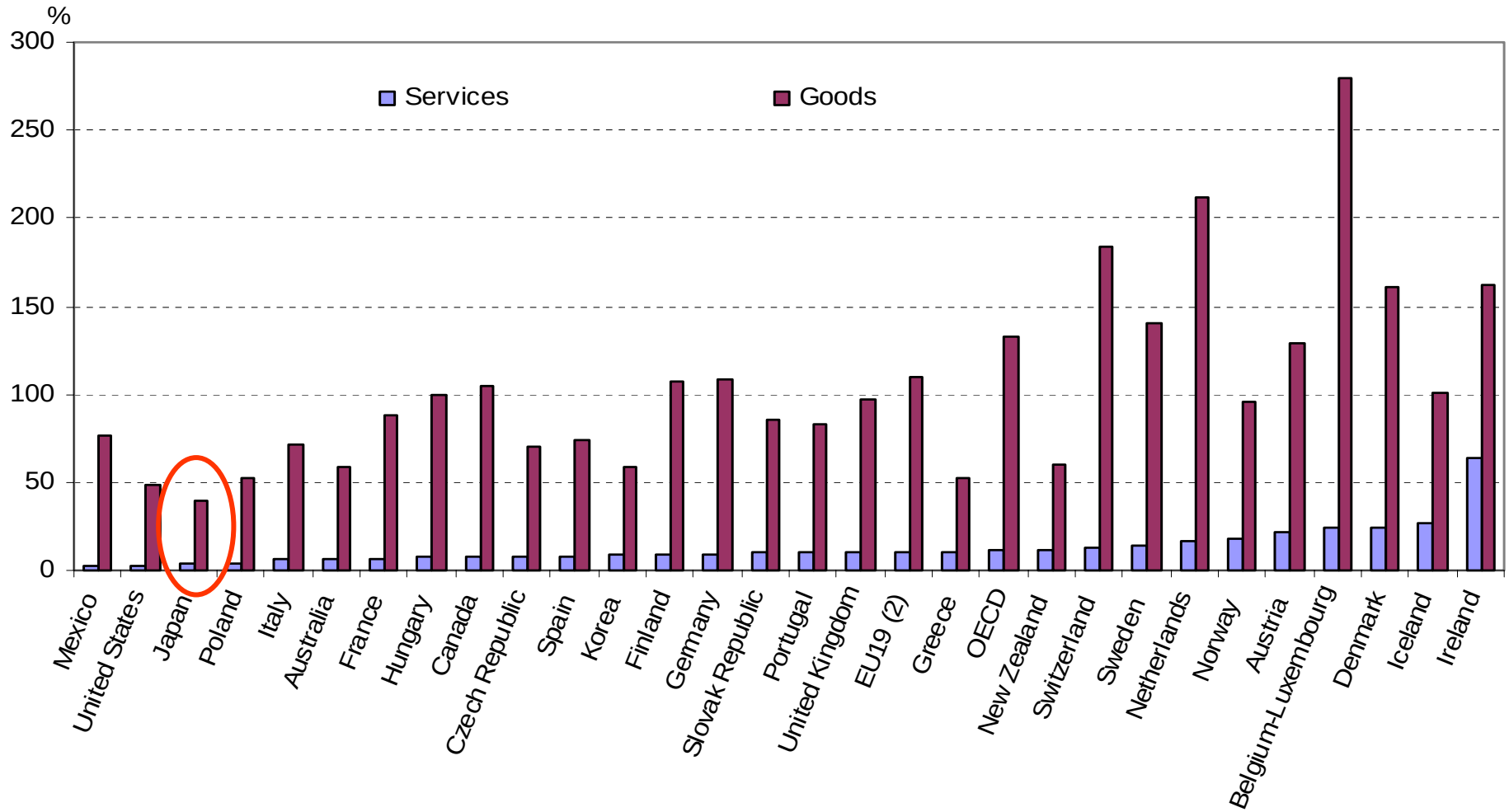
(fixed effects of entry regression for 10 EU countries, 1997-2000)




Indicates significance at the ***1 %, ** 5 %, * 10 % level
Manufacture of food & beverages is the reference
Source: Brandt, STI Working Paper 2004/1, OECD.

# But there are also factors that may constrain productivity growth
# Services are less exposed to international trade …

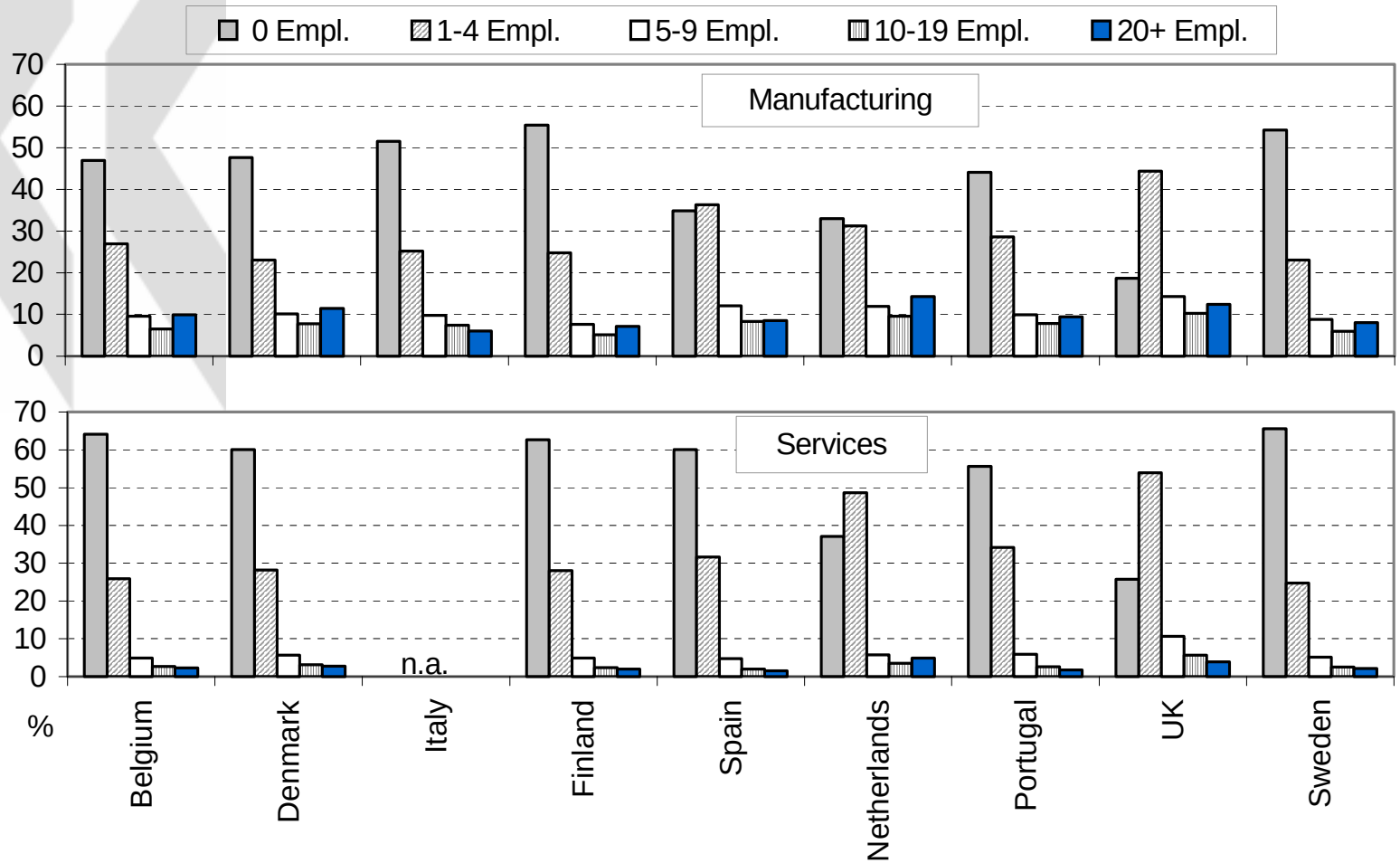
(trade to value added ratio of services and goods, 2002, in %)






Source: OECD, Science, Technology and Industry Scoreboard 2003.

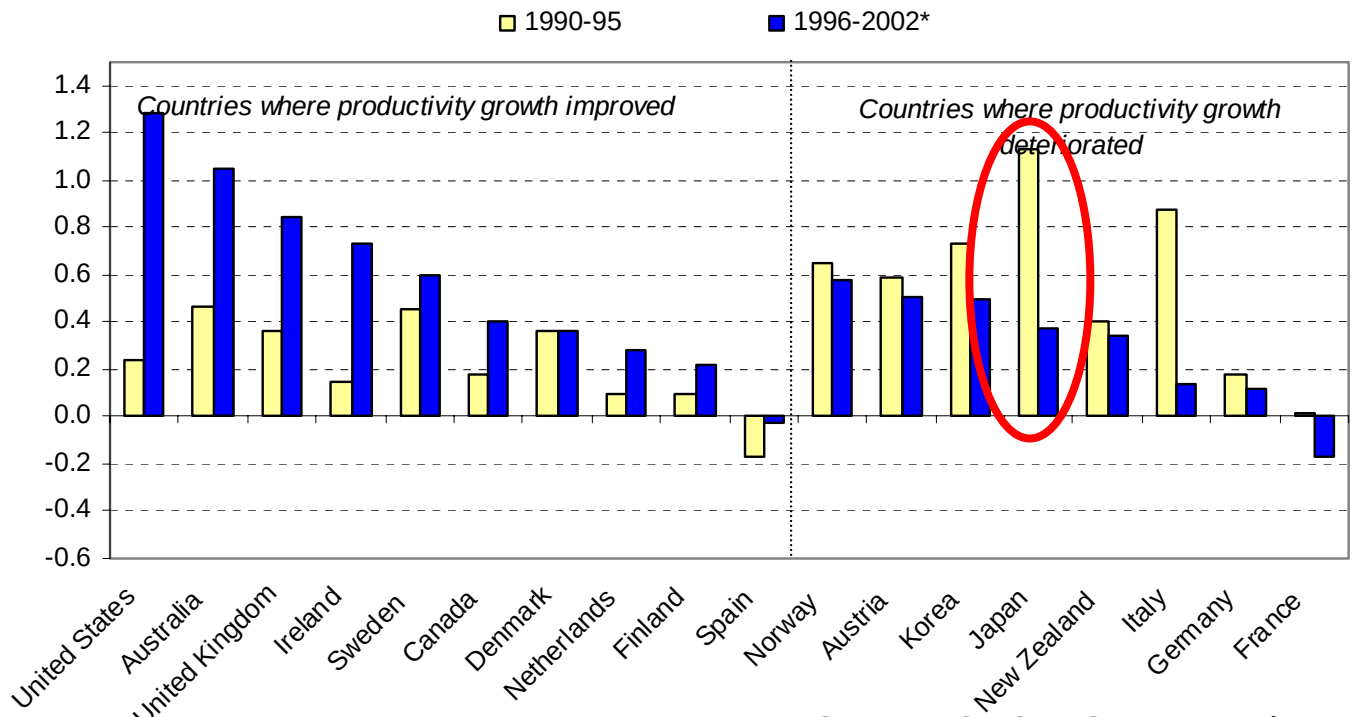
# … and are characterised by a small firm size
(share of firms by size group in % of all firms)




Source: Brandt (2004)

# ICT-using services has shown more rapid productivity growth in some OECD countries, but NOT in Japan

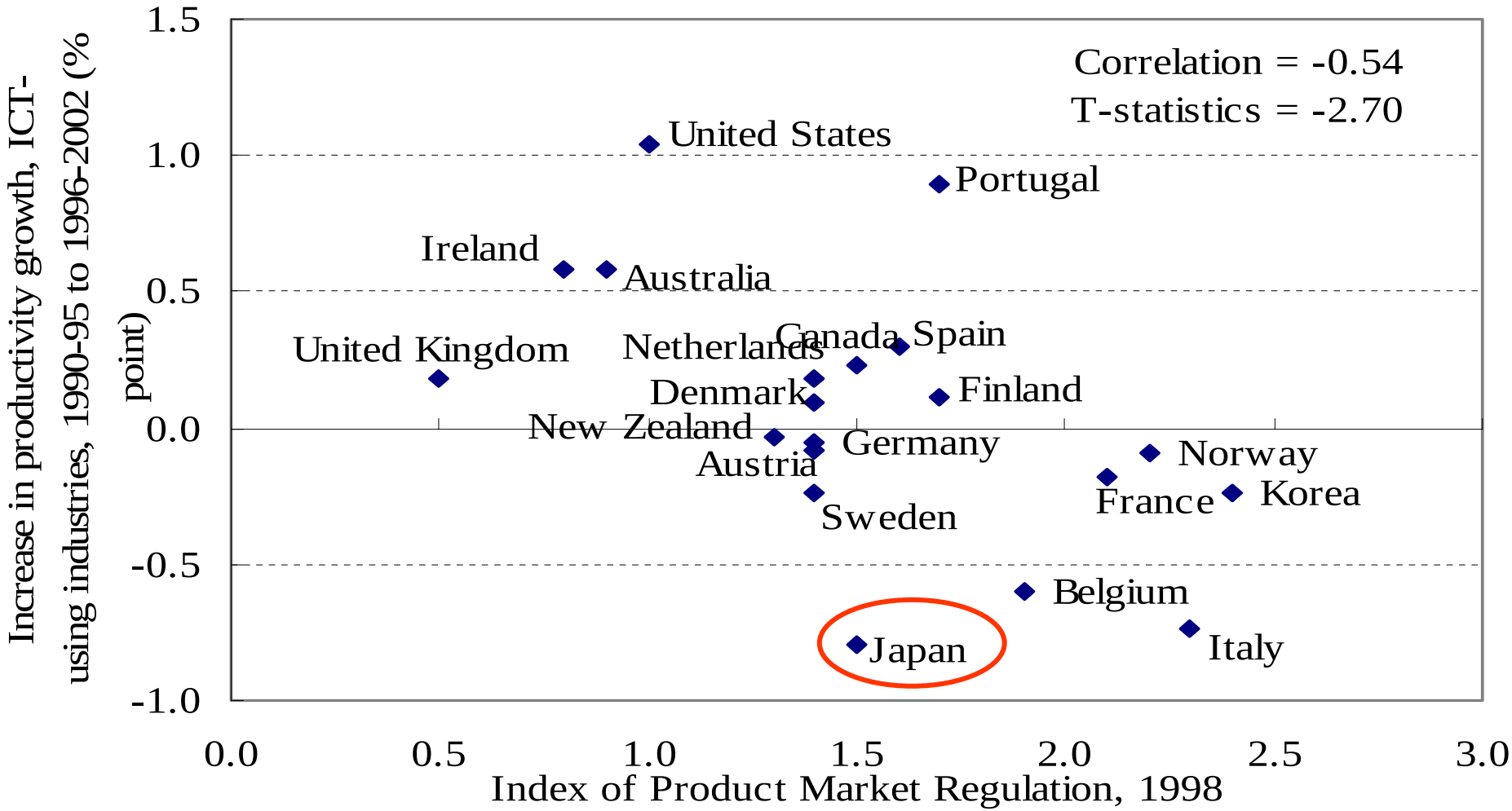
## (contribution to average labour productivity growth, in per cent)




Source: OECD, STAN Database, September 2004.

- Japan is categorised in “countries where productivity growth deteriorated”
- Productivity growth of ICT-using services decreased to 1/3!!!

# Which may be linked to high levels of product market regulation



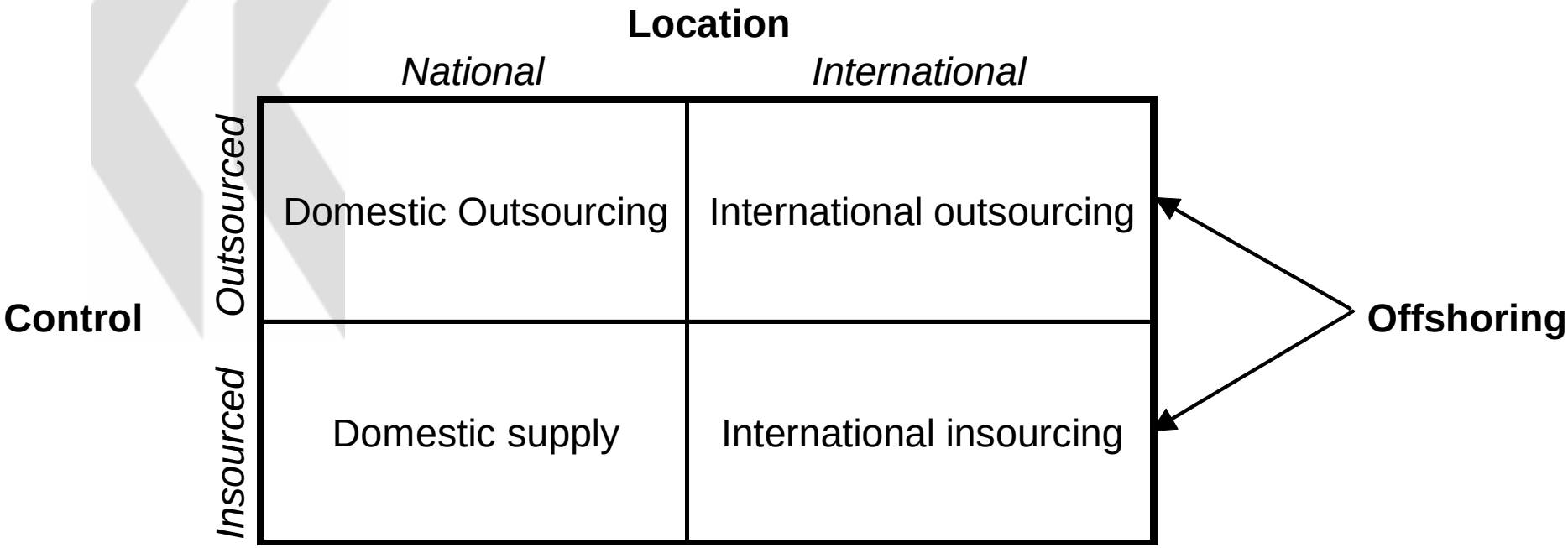
# International services sourcing

- Offshoring not new, but it is increasingly taking place in the services sector (enabled by ICTs) and affects white collar jobs (both high and low skill) previously considered 'untouchable'
- Occurs in response to:
  - Increased competition, resulting from trade and investment liberalisation and reinforced pressures to cut costs, combined with rapid technological change, making services increasingly tradable
  - Skills shortages ⇨ ensuring a skills base is in place increasingly becomes a locational determinant of economic activity

**Source: DSTI/ICCP/IE/2004-19 final**

# Offshoring/outsourcing/insourcing

2x2 matrix based on location and control

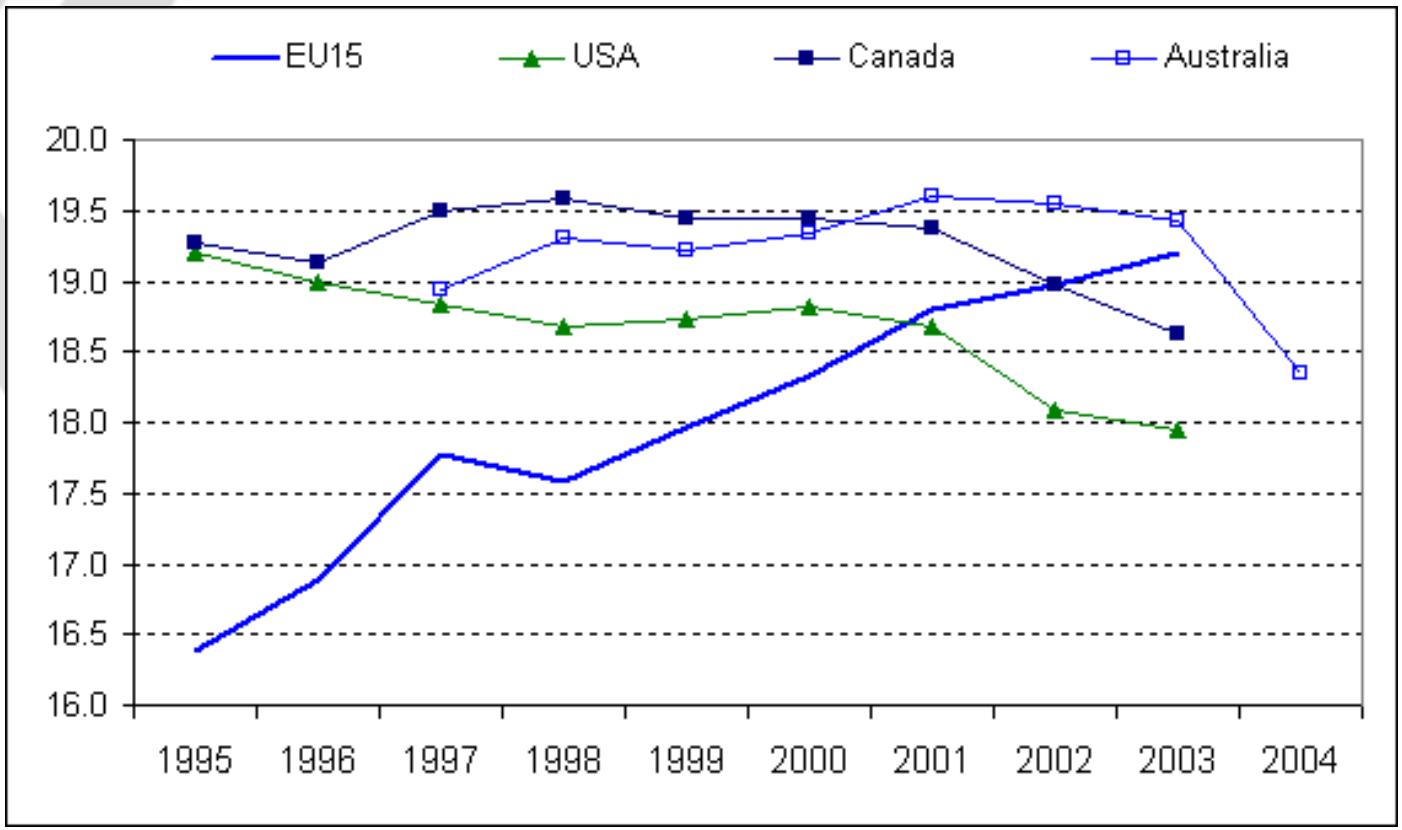



Anecdotal evidence suggests following breakdown:

**Outsourcing**: 2/3 domestic, 1/3 international

**Offshoring**: 2/3 insourcing, 1/3 outsourcing

## Aggregate illustration: the share of employment potentially affected by offshoring in total employment, EU15, USA, Canada and Australia, 1995-2003*/4




The differences in the levels are difficult to interpret because the classifications have not been harmonised, but the trends are revealing!

(*USA 2003 is an estimate)

# Potential offshoring of ICT-intensive users

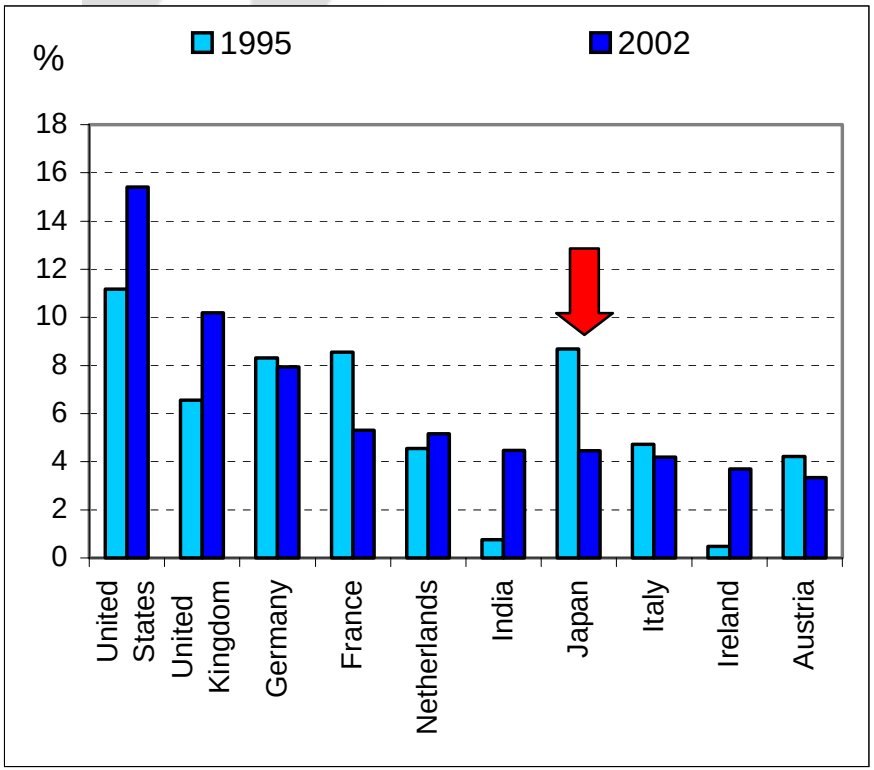
- Many business services sectors have a very high share of employment potentially affected by offshoring, as do some manufacturing sectors
- Illustration for EU15, sectors with a share >30%:

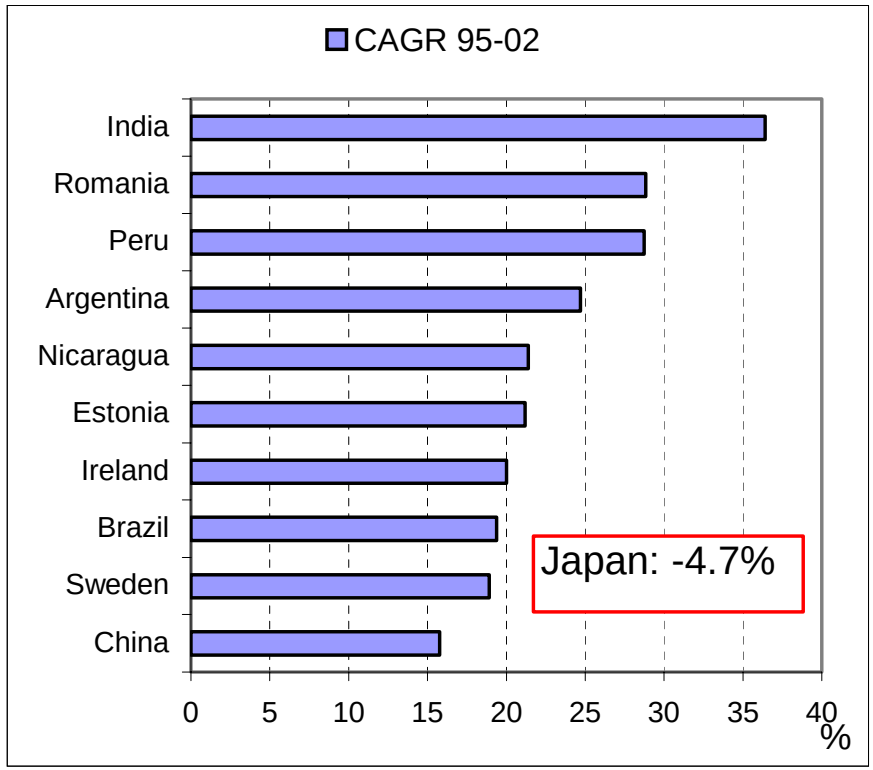
| NACE 2-digit | Industry | Share (%) 2003 |
|---|---|---|
| | **>30%** | |
| 72 | Computer and related activities | 79.5 |
| 66 | Insurance and pension funding, except compulsary social security | 71.6 |
| 67 | Activities auxiliary to financial intermediation | 68.1 |
| 65 | Financial intermediation, except insurance and pension funding | 62.9 |
| 30 | Manufacture of office machinery and computers | 51.4 |
| 74 | Other business activities | 47.7 |
| 70 | Real estate activities | 44.4 |
| 73 | Research and development | 41.4 |
| 51 | Wholesale trade and commission trade, except of motor vehicles and motorcycles | 37.5 |
| 23 | Manufacture of coke, refined petroleum products and nuclear fuel | 35.3 |
| 40 | Electricity, gas, steam and hot water supply | 33.0 |
| 32 | Manufacture of radio, television and communication equipment and apparatus | 32.7 |
| 24 | Manufacture of chemicals and chemical products | 30.9 |

**Discussion on Globalisation and Structural Adjustment**

- New work will be launched at the MCM 2005
- Follow-up study under the GSA

# Exports of other business services and computer and information services: (reported dollar value shares and average annual growth rates)

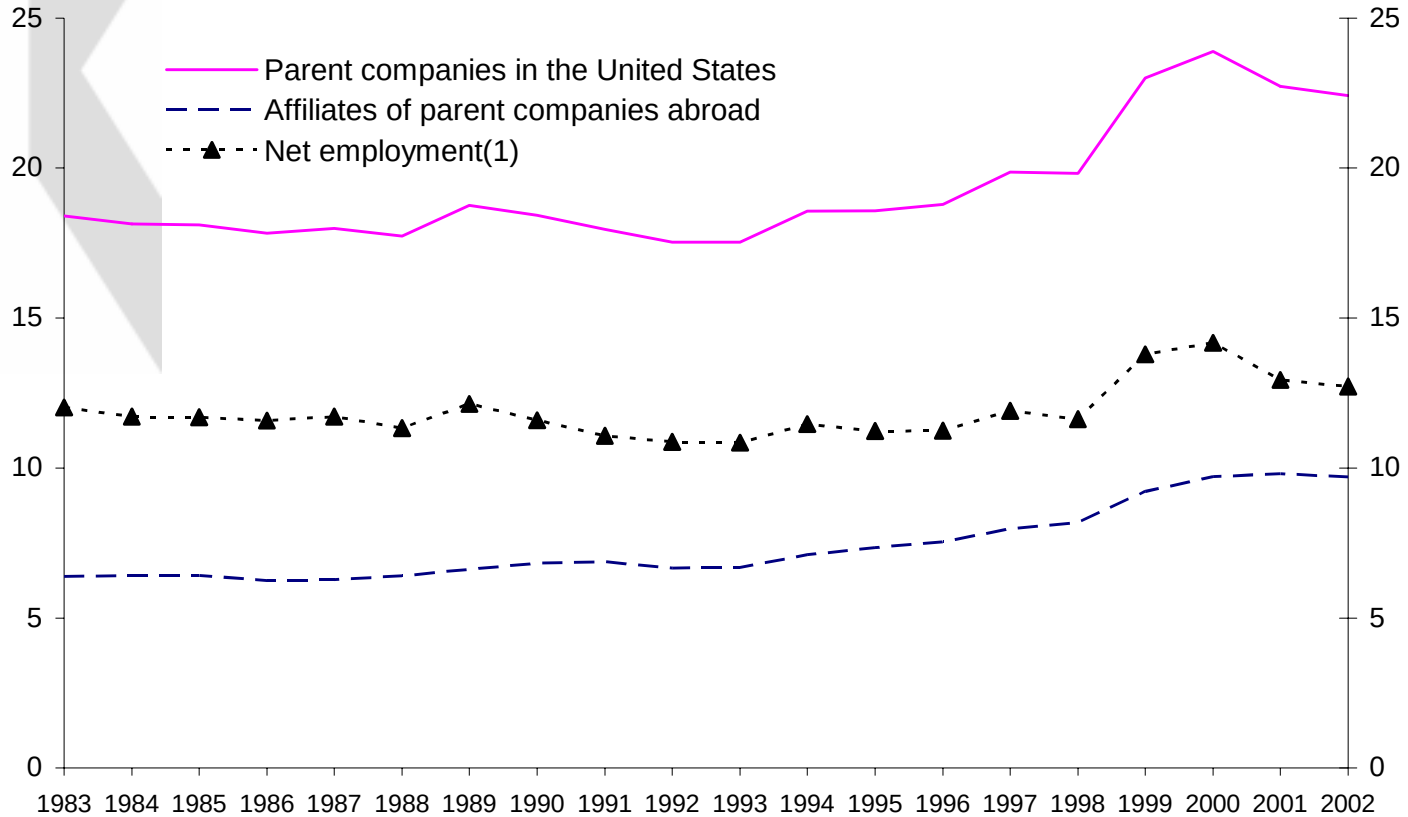



*Source: Adapted from the 2004 OECD Information Technology Outlook, Chapter 2.*

# Employment of U.S. parent companies and of their affiliates abroad

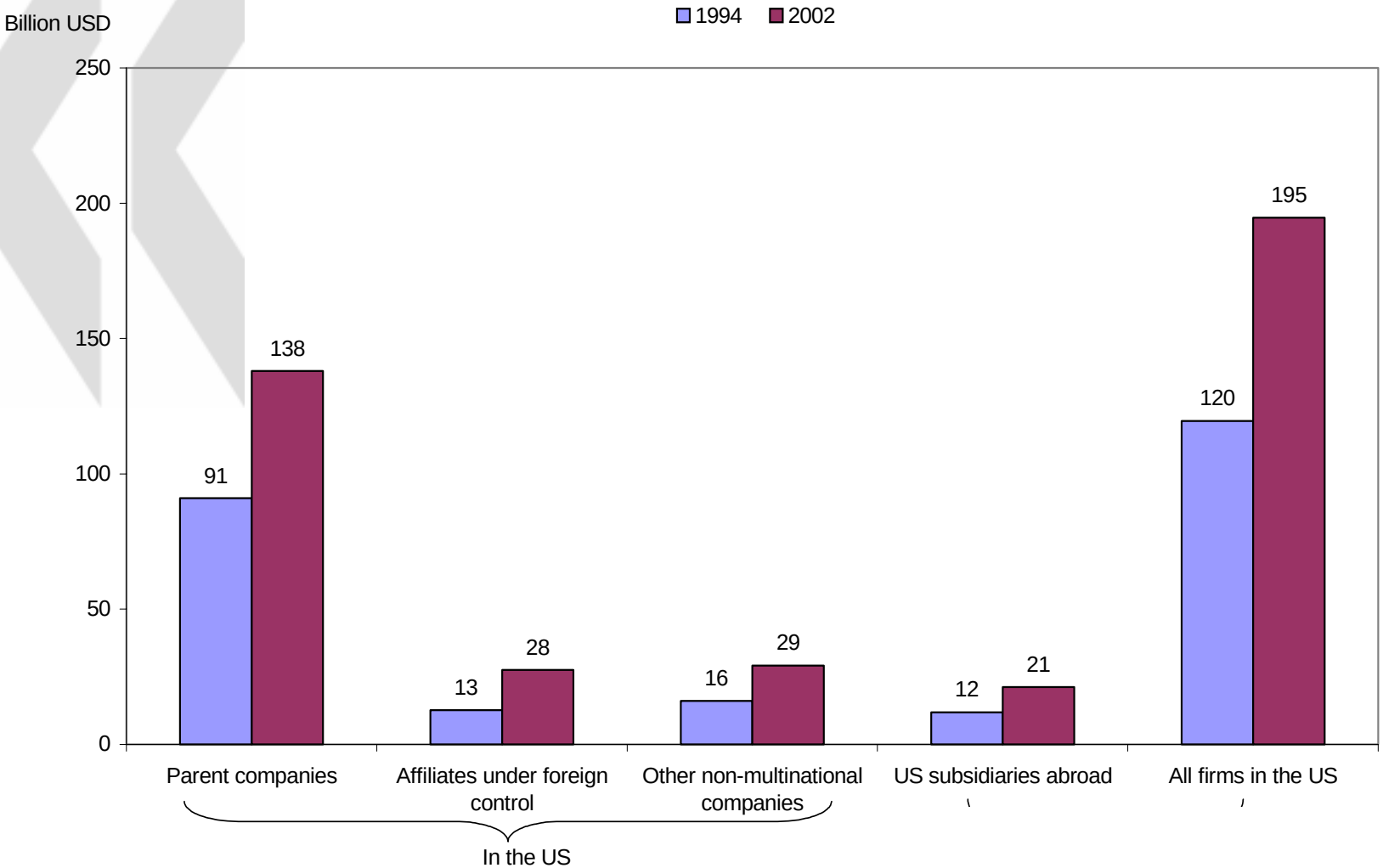
Millions of employees




1. Employment of parent companies in the United States minus Employment of their affiliates abroad.

*Source:* OECD, FATS database.

# R&D expenditures by US parent companies and their subsidiaries abroad, 1994 and 2002




*Source:* OECD, Activities of Foreign Affiliates database.

# Why Does Policy Matter?
## Some of the variation in performance is due to exogenous factors

- The demand for services in OECD countries is linked to income levels, demographic factors, as well as to the comparative advantage of certain countries.
- The potential for improved performance in the services sector also differs by sector, depending on market structure, the role of regulation and the public sector, as well as the potential for technological change.
- At the same time, policy plays a role in two key ways:
  - In fostering a business environment that can create incentives for employment creation and productivity growth.
  - In complementing this environment with effective policies that can overcome barriers to innovation and technology diffusion.

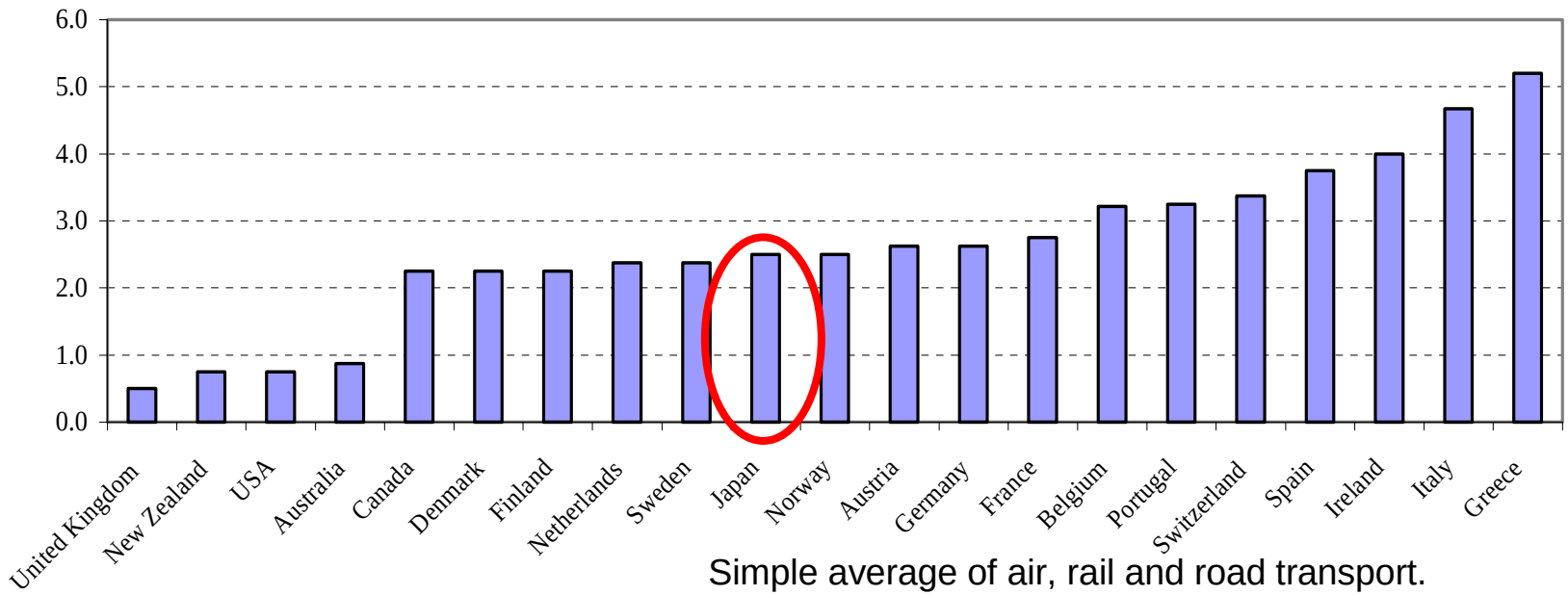
# Policy action can help enhance the performance of services

- Some of the strong performance in the services of certain OECD countries (e.g. Australia, United States) seems clearly associated with policy action, notably regulatory reform.
- Case studies evidence suggests that successful and innovative new firms often emerged from policy action to open markets to competition.
- The opening of markets also allowed new firms to innovate and offer new services.
- 7 key areas for policy action can be pointed out.

# 1: Opening domestic services markets

## For example, high levels of regulation in transport in several countries, 2003

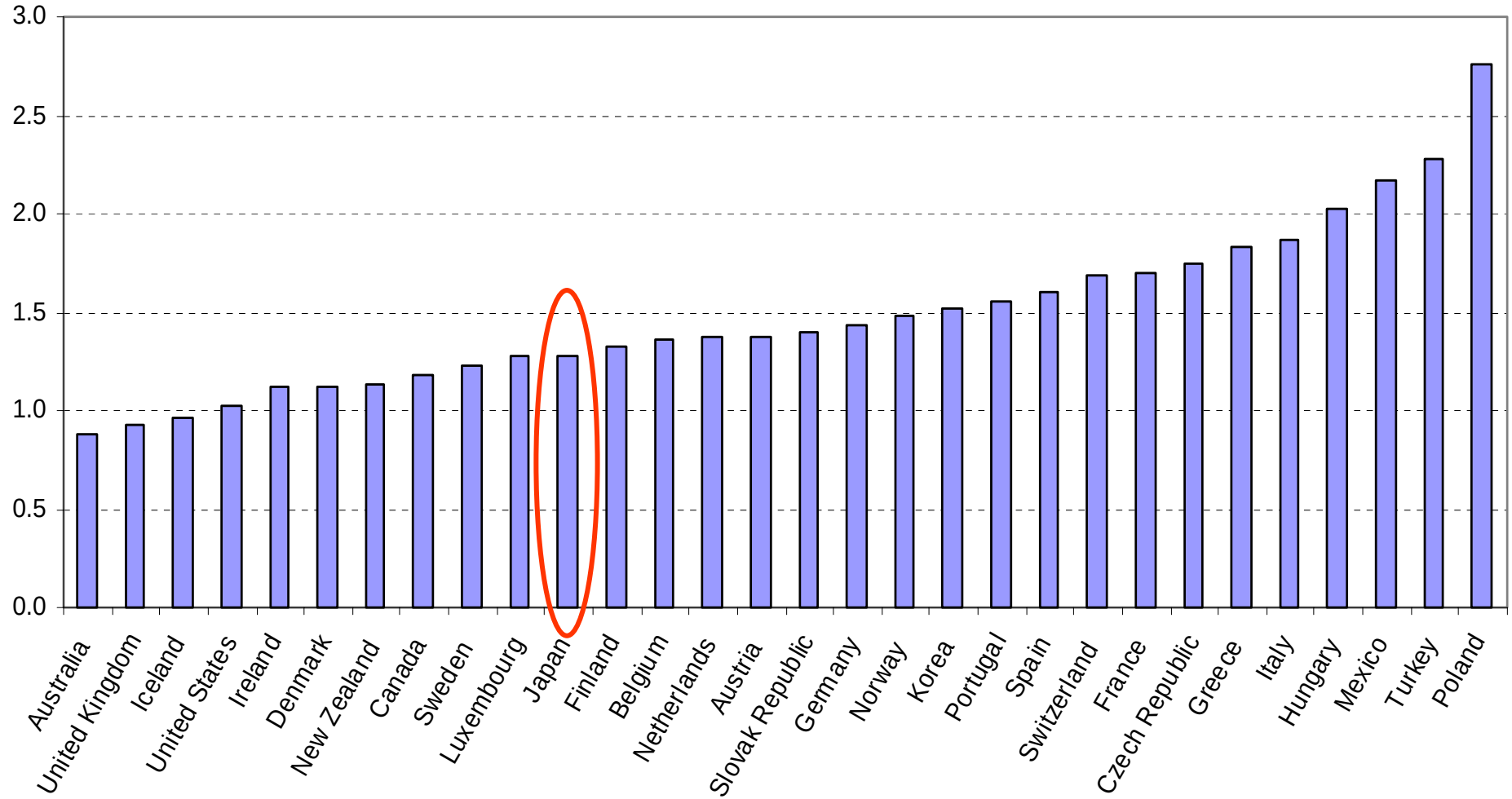
**B. Transport**[3]




Simple average of air, rail and road transport.
Source: OECD, Product Market Regulation Database, 2004.

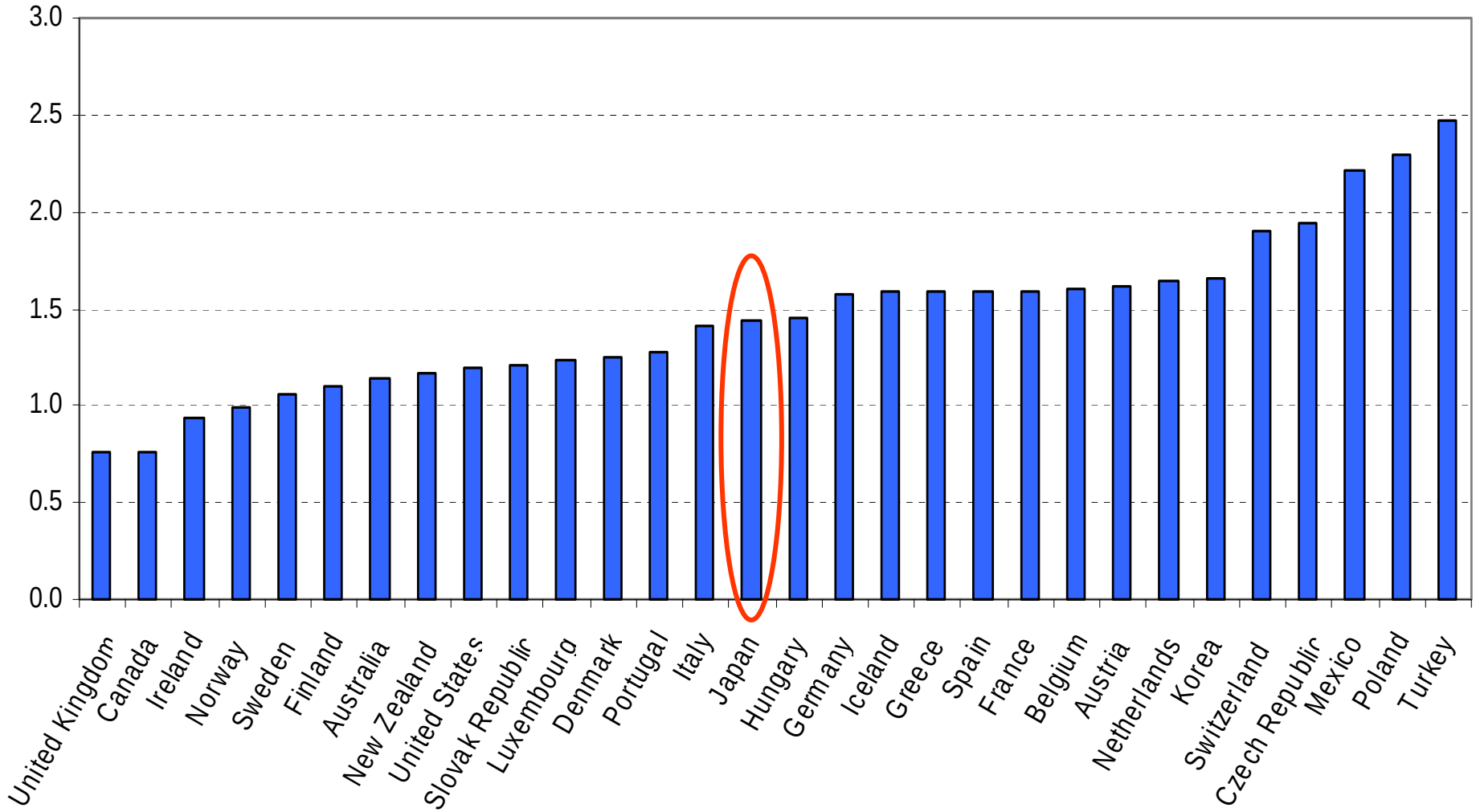
- Japan's level is not so high
- But Japan can follow UK, USA and Australia

# High levels of product market regulation still remain an issue ..




The scale of indicators is 0-6 from least to most restrictive.
Source: OECD, Product Market Regulation Database, 2005.

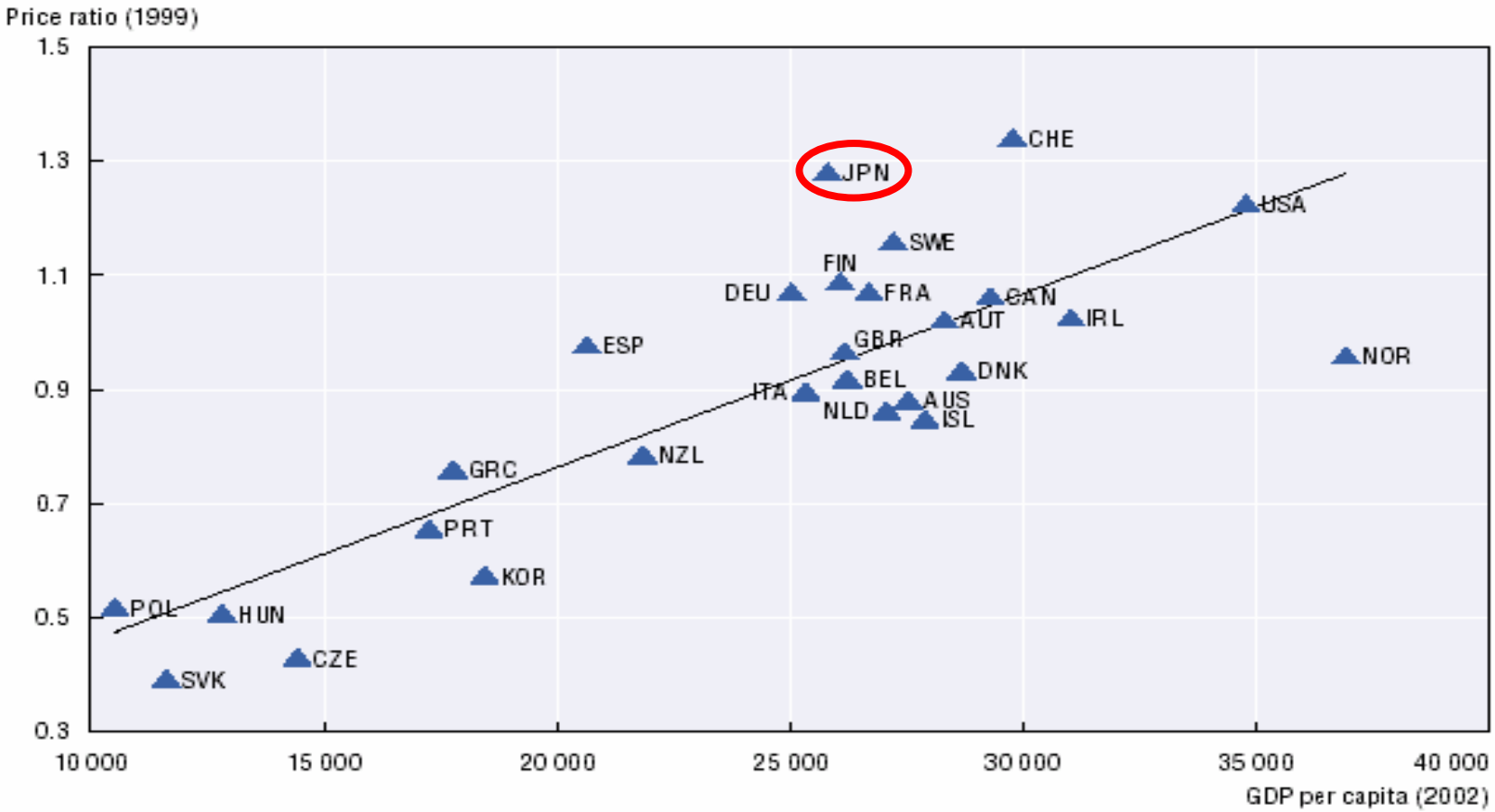
# … as do barriers to entrepreneurship




The scale of indicators is 0-6 from least to most restrictive.
Source: OECD, Product Market Regulation Database, 2005.

# Relative price of services and GDP per capita

Ratio of the price level of consumer services to that of consumer goods and the level of GDP per capita



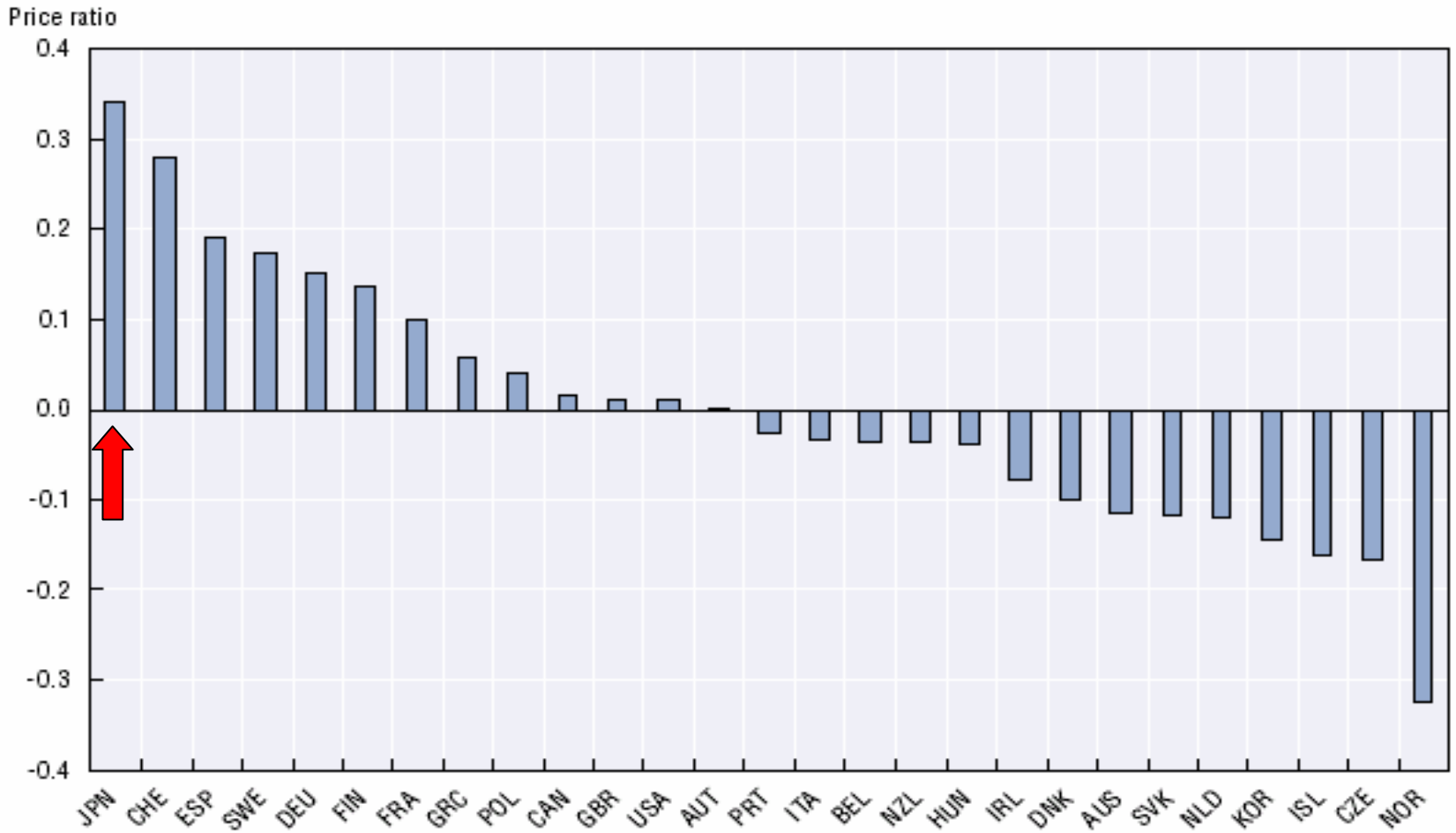

Consumer services are a proxy for non-tradable products and goods (semi-durables and durables) are a proxy for tradable products. The level of GDP per capita in 2002 is measured in US dollars on the basis of 2000 PPPs.



Going for Growth – Economic Policy Reforms (2005), OECD

# Relative price of services and GDP per capita

The relative price ratio adjusted for differences in the level of GDP per capita




Measured as the difference between the actual and the fitted value of the price ratio appearing in previous slide.

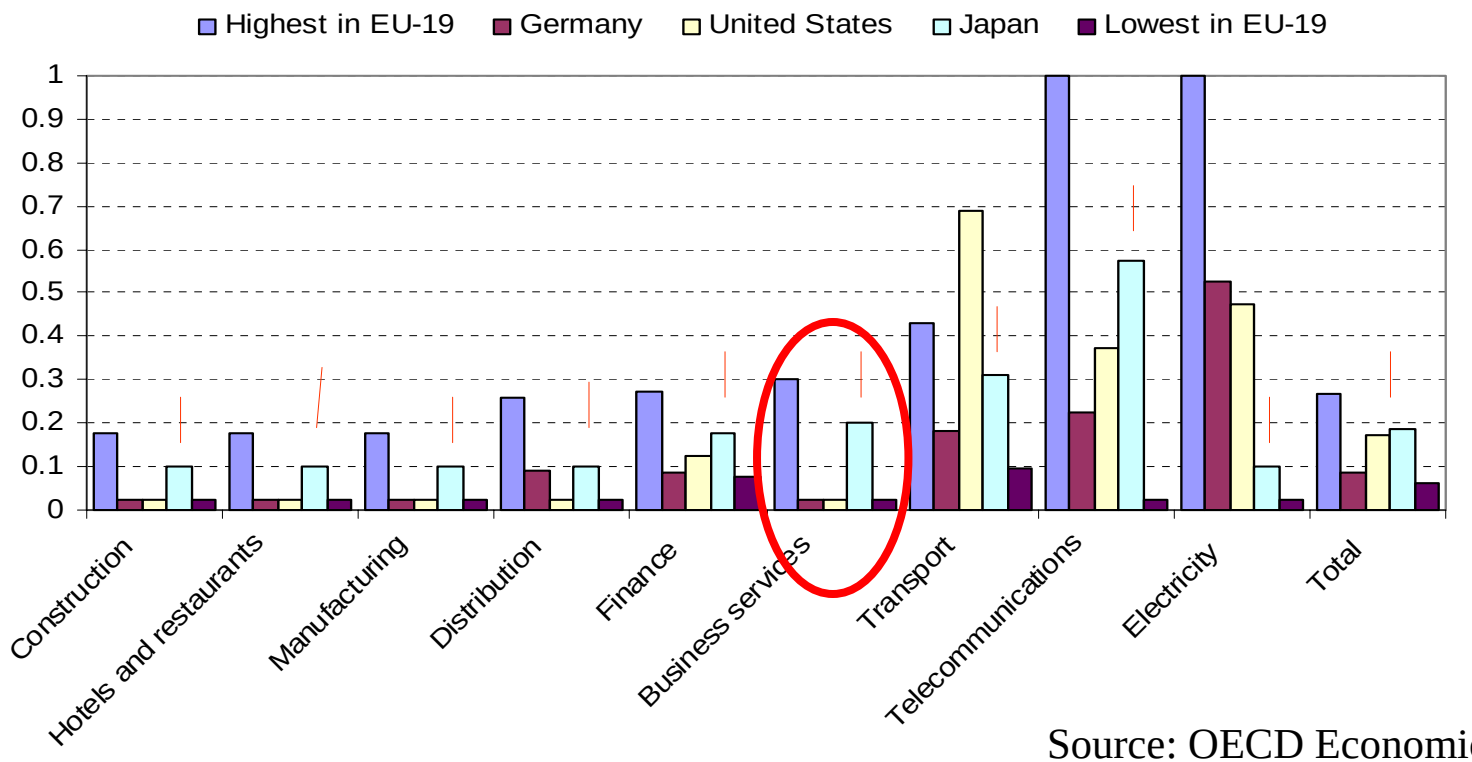


Going for Growth – Economic Policy Reforms (2005), OECD

# 2. Open international markets for trade in services

## More can be done to open services markets to foreign direct investment

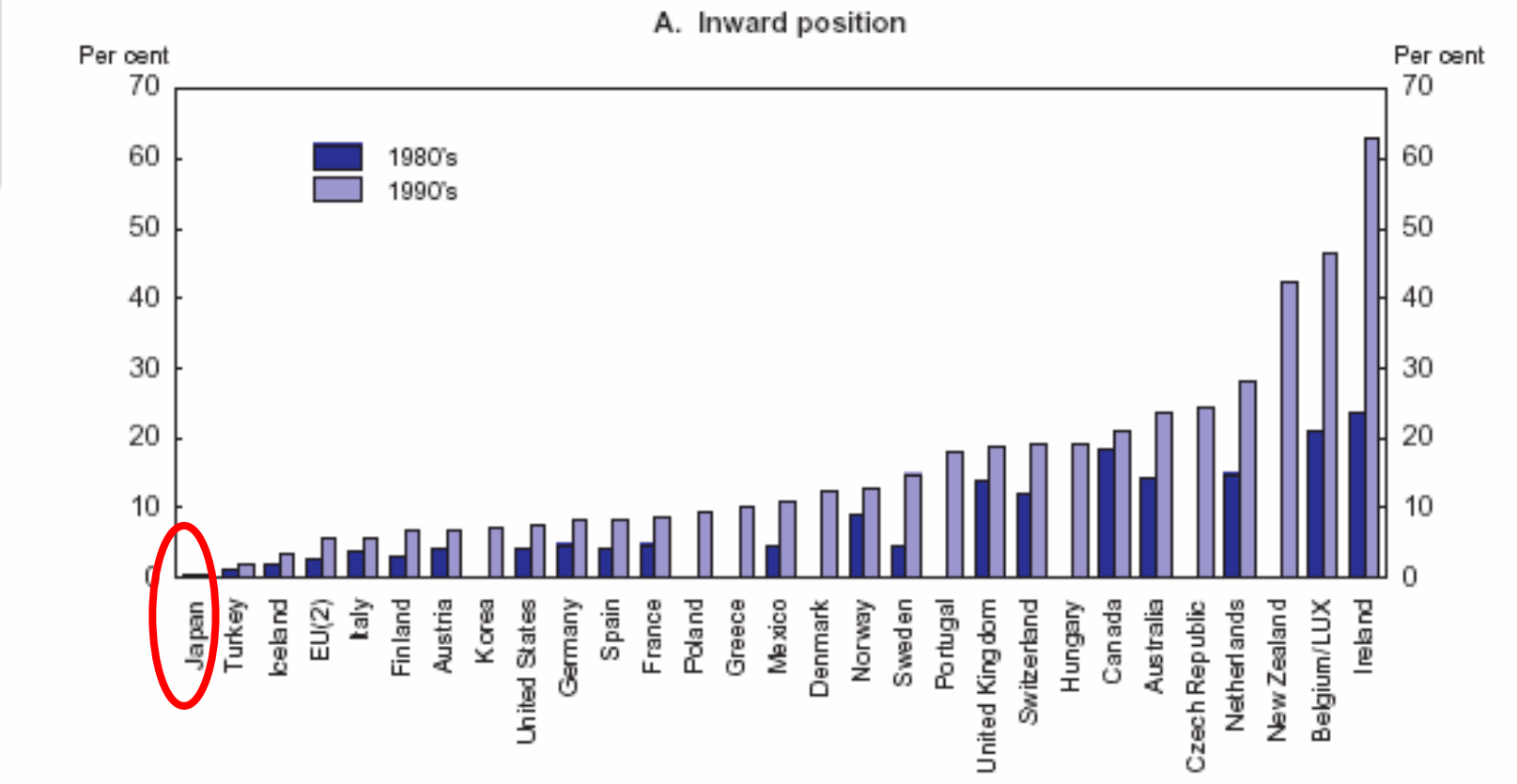
(indices of FDI restrictions, 1998)




Source: OECD Economic Outlook No. 73, June 2003

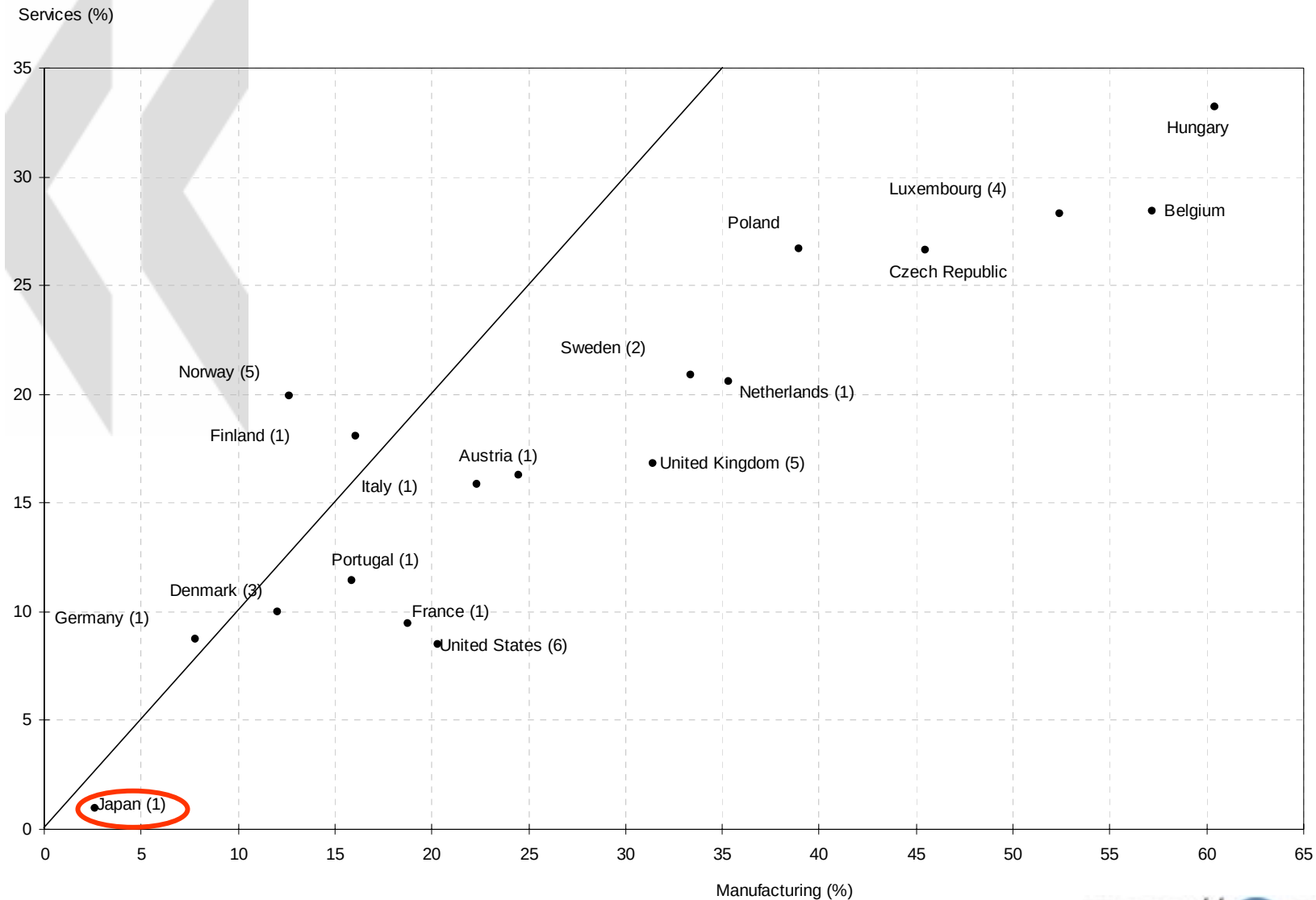
- FDI restrictions is much higher in Japan
- Business services is outstandingly restricted

# Inward FDI positions of Japan
per cent of GDP




Source: OECD Economic Surveys – Japan (2004)

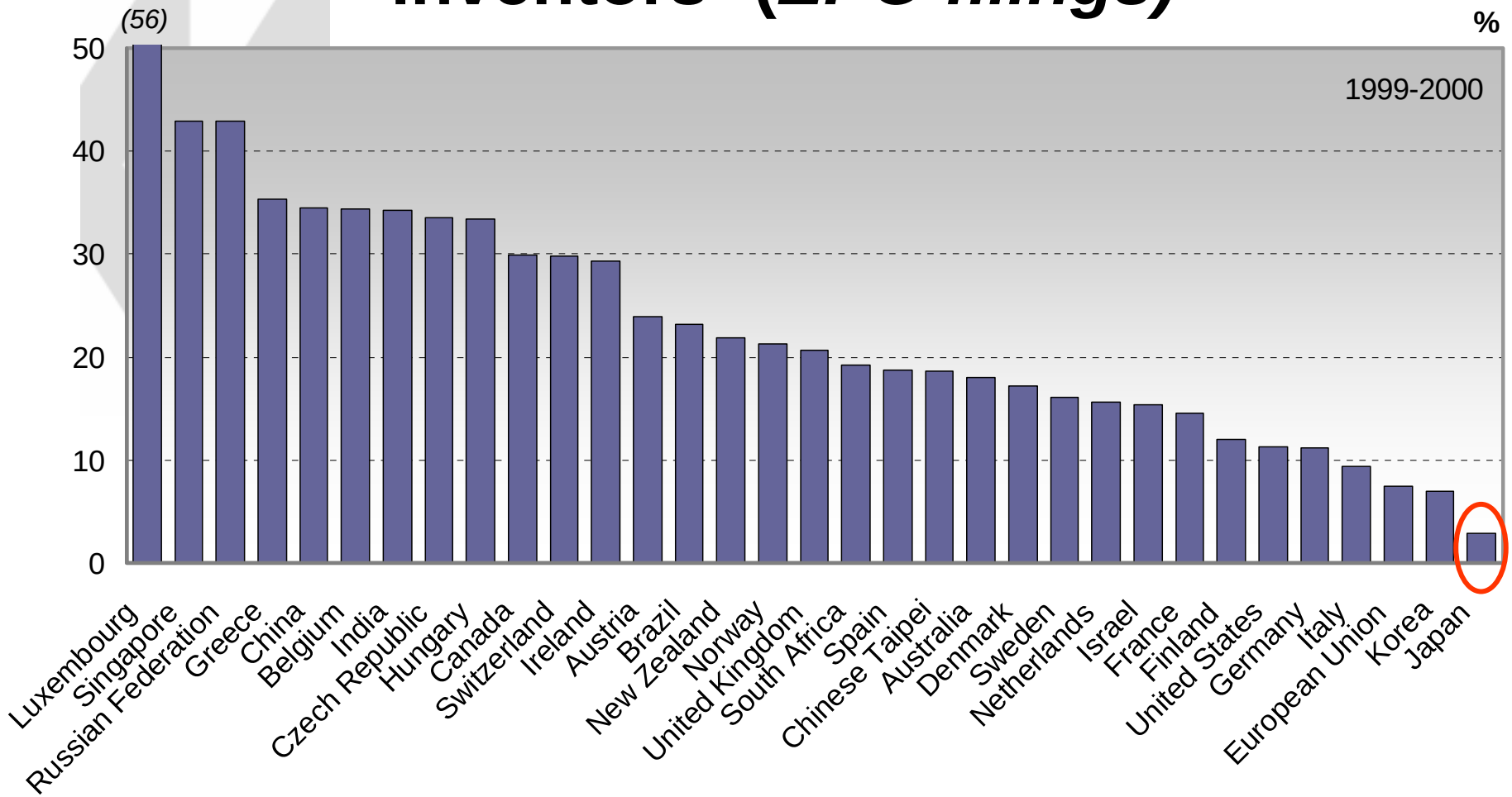
**Foreign-controlled turnover as a share of total services and manufacturing turnover, 2002**




1. 2001.
2. 2000.
3. 1999.
4. 1998.
5. 1997
6. The data used for foreign affiliates are broken down by industry of sales to be compatible with national total data.

Source : OECD, FATS database, November 2004, Eurostat New Cronos and US Census Bureau.

# Percentage of patents with foreign co-inventors[1] (*EPO filings*)




*Share of patent applications to the EPO with at least one foreign co-inventor in total patent invented domestically.*

*Source:* OECD, Patent database, September 2004.

# *THE CONTRIBUTION OF R&D TO PRODUCTIVITY GROWTH*

- **1% more in business R&D generates 0.13% in productivity** (The effect has increased since 1980
  The effect is larger in R&D intensive countries)
- **1% more in public R&D generates 0. 17% in productivity** (The effect is larger in countries where business R&D intensity is higher) (higher education is important)
- **1% more in foreign R&D generates 0.45% in productivity** (The effect is larger is smaller countries

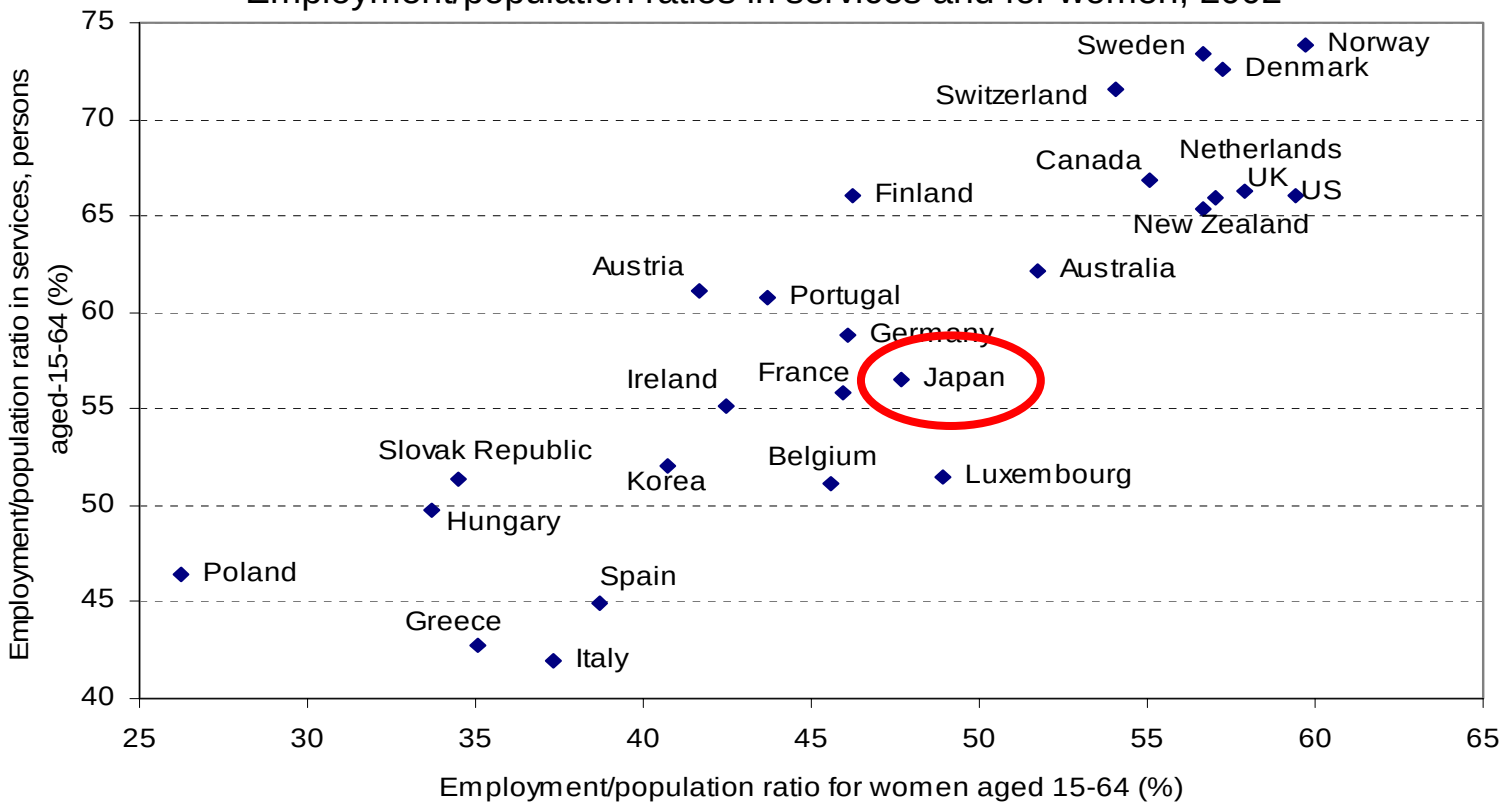
The effect is larger in R&D intensive countries: only own efforts allow any country to learn from others.)

Source: STI working paper 2001/3 by D. Guellec DSTI/DOC(2001)3

# 3: Reforming labour markets

## Labour market reform creates new employment opportunities in services

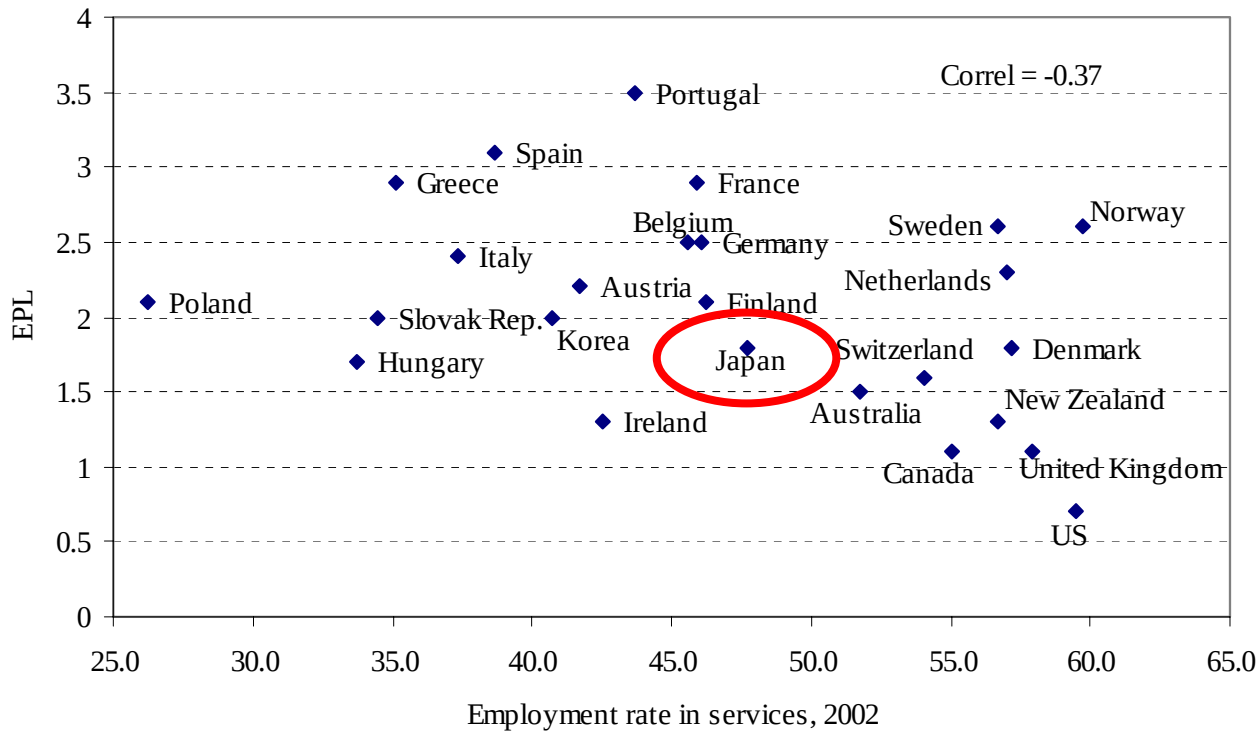
Employment/population ratios in services and for women, 2002




- Labour force participation by providing jobs that are needed to attract new worker groups
- For example, high employment in services goes hand-in-hand with high employment for women

# Countries with high EPL may have lower employment in services

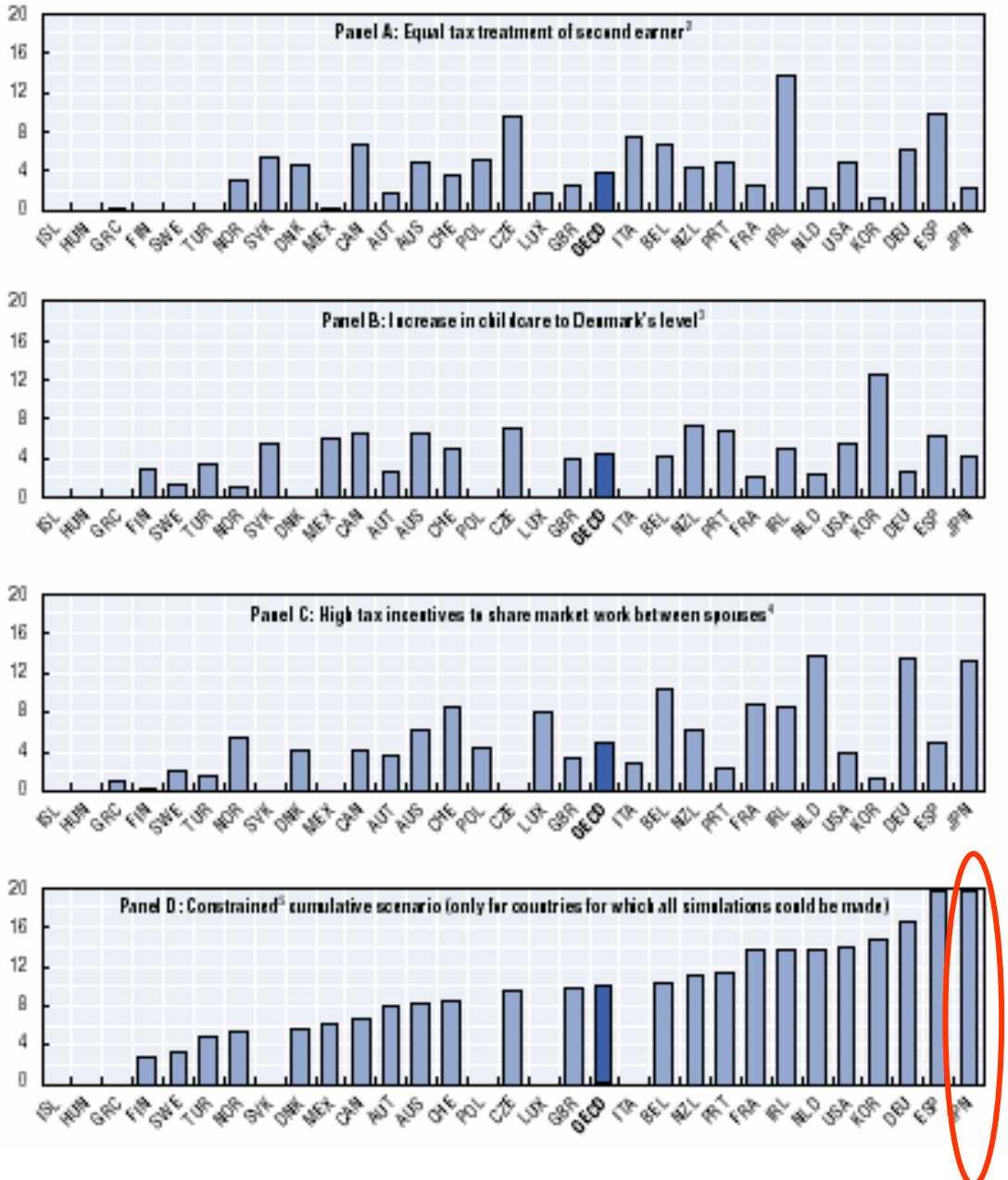
(EPL: Employment Protection Legislation)




- Japan does not in a bad position
- But can learn more from US, UK and Canada

Figure 6.4. Policy reforms could increase female participation[1]

Increase in the participation rate of prime-age women (percentage points)



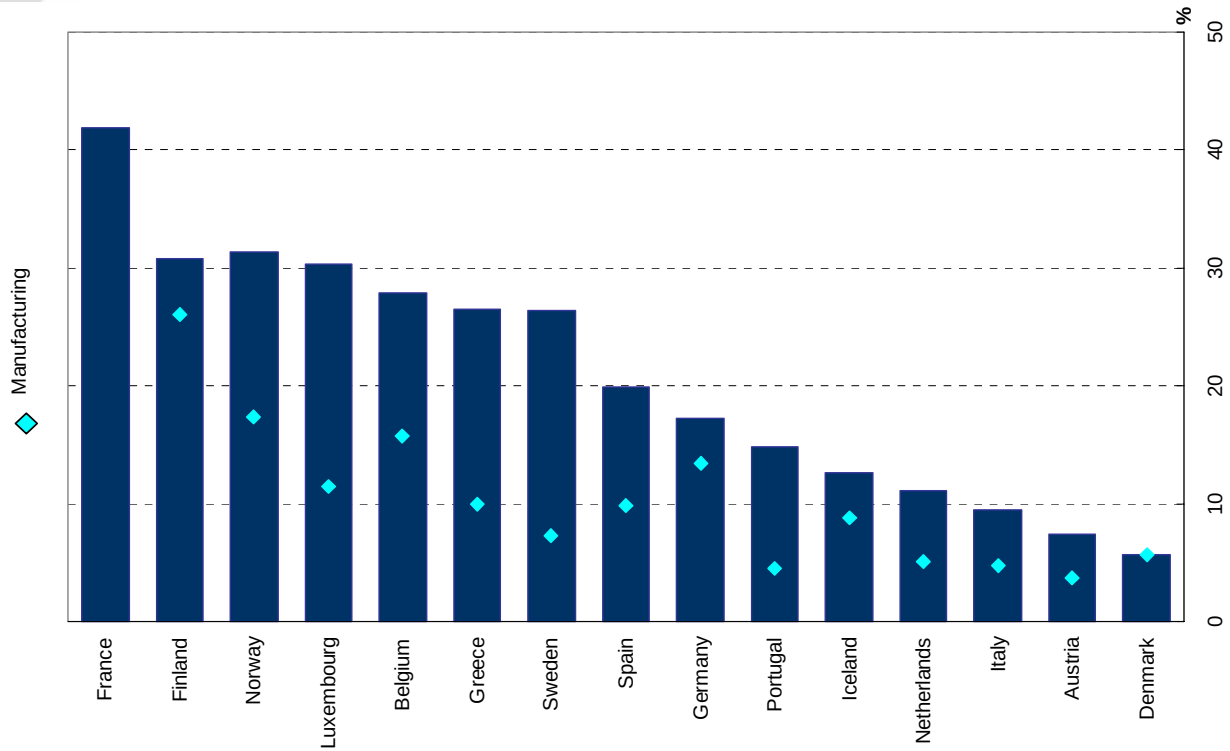

**Reform may raise woman participation rate by 20% in Japan**

**( Going for Growth : Economic Policy Reform OECD 2005)**

# 4: Adapting education and training policies

For example, human capital remains a cornerstone of services innovation

(Share of employees with higher education, 2000)

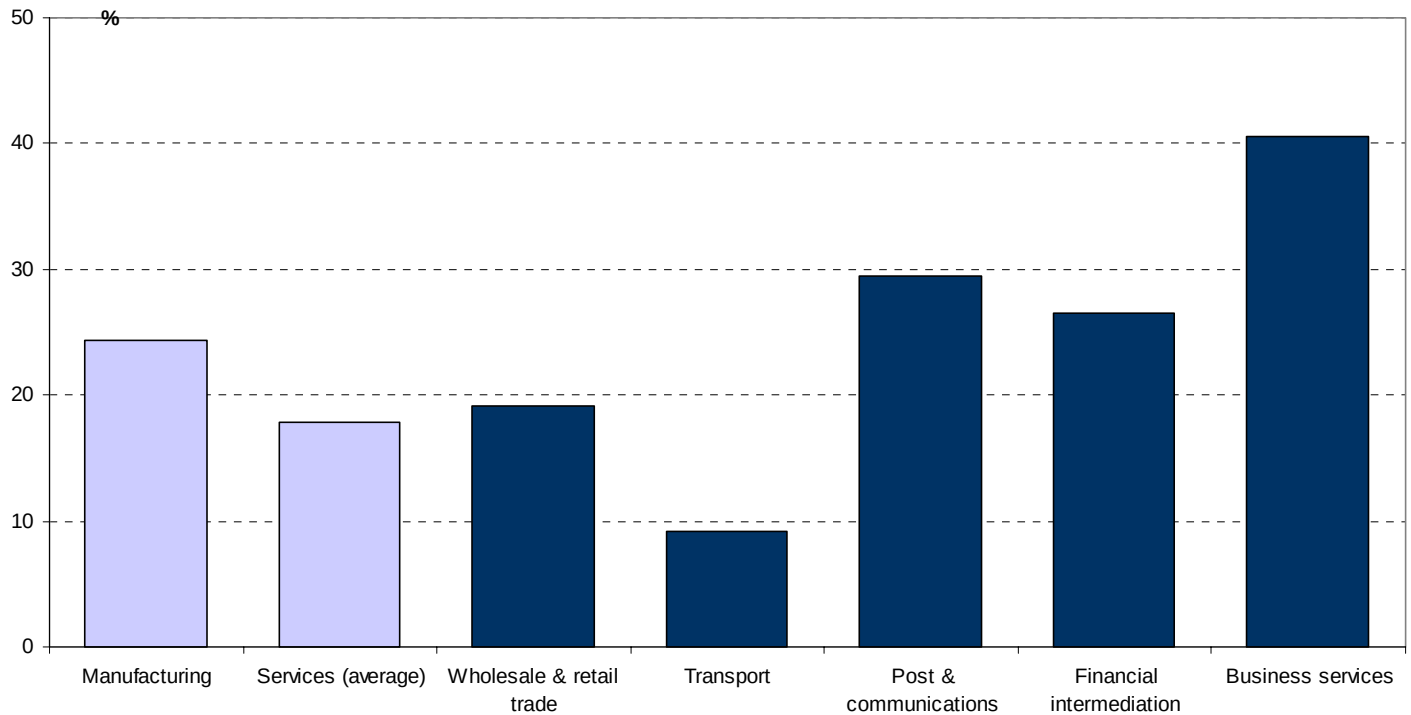



- Share of highly educated employees is much higher in services
- Lack of suitably trained HR is frequently reported services

# 5: Adapting innovation policies to the growing importance of services

## Some service sectors are more innovative than manufacturing

Innovative firms as a % of firms of each sector in **JAPAN**

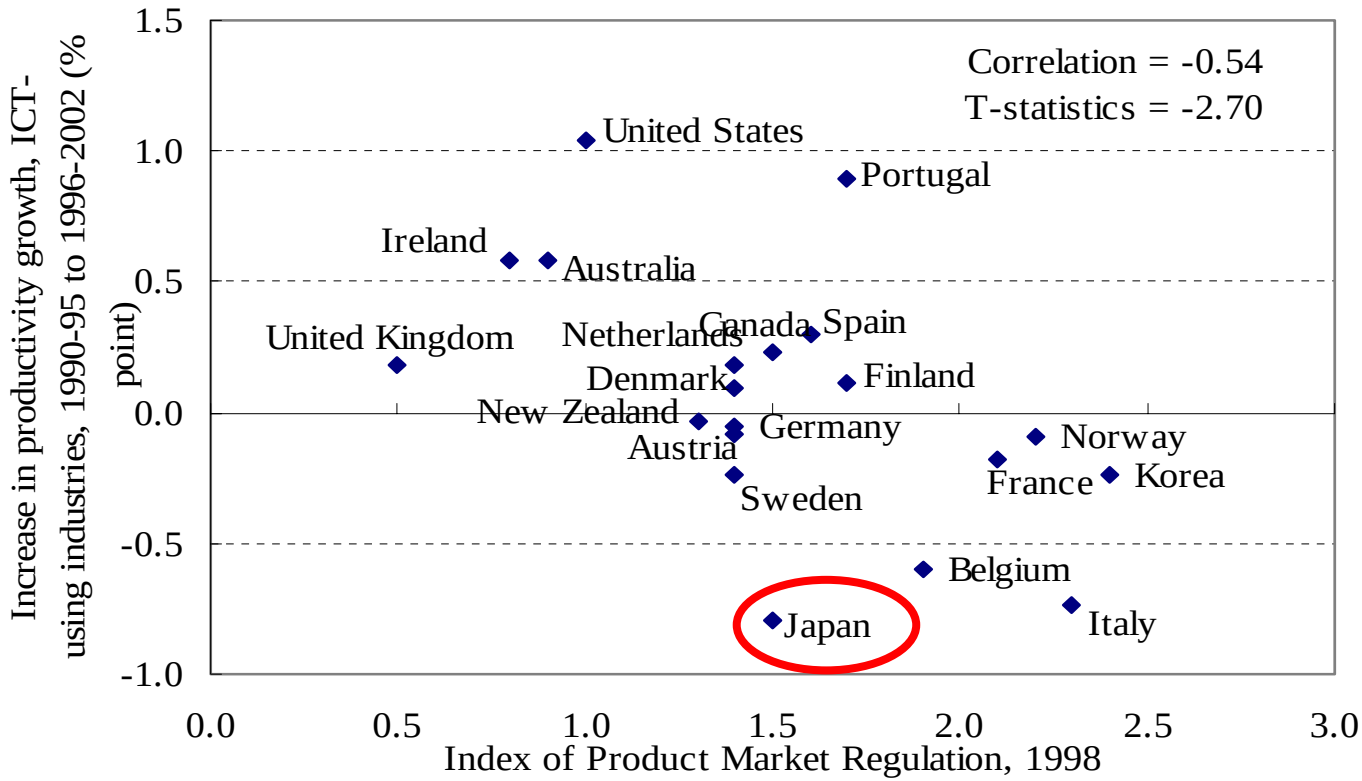



Source: OECD, based on Japanese innovation survey

- Service firms are in general less innovative than manufacturing
- BUT, some services are more innovative than manufacturing average (*e.g.* post & communications, finance, business services)

# 6: Remove impediments to the effective use of ICT

## ICT-using productivity growth may be linked to the levels of product market regulation

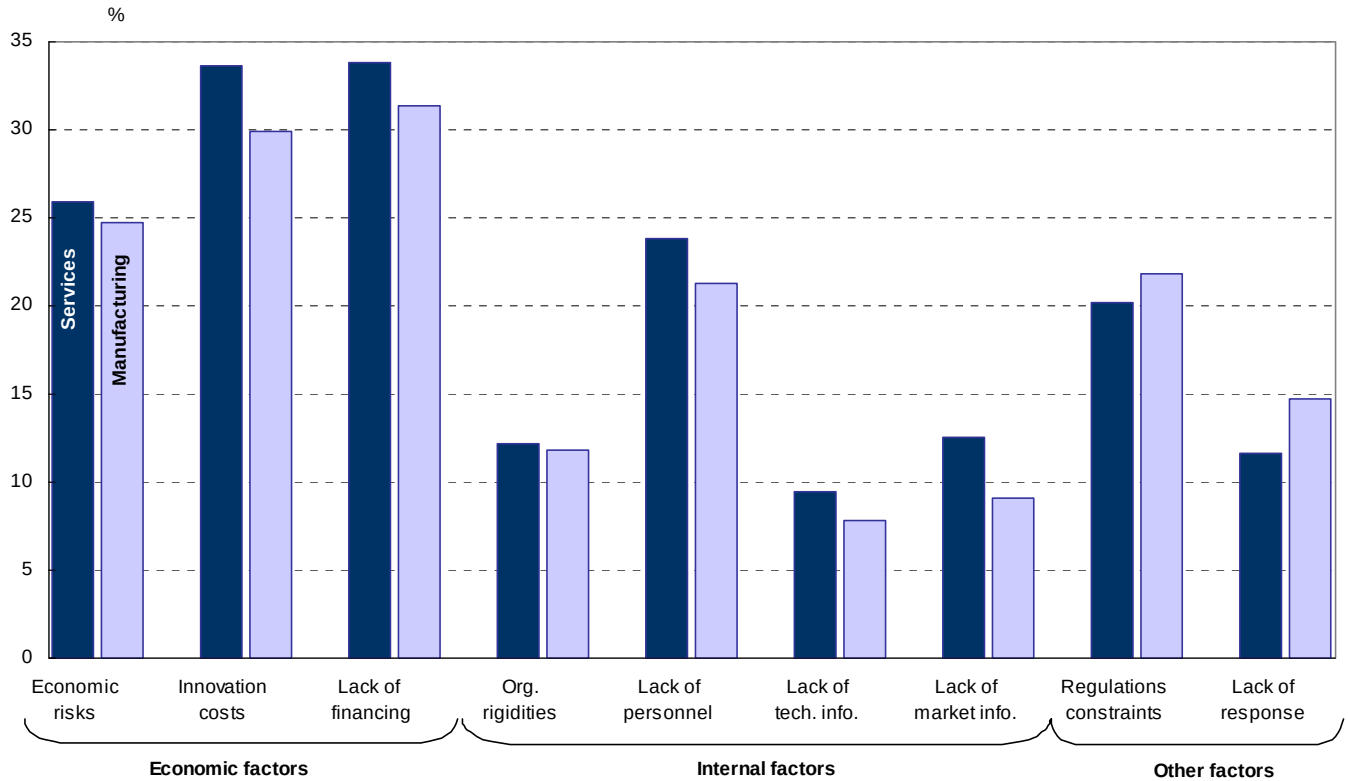



- Countries with high level product market regulation show low productivity growth of ICT-using industries (such as **JAPAN**)

# 7: Provide a financial environment that is conducive to services

## Services firms more often face financial barriers: European example

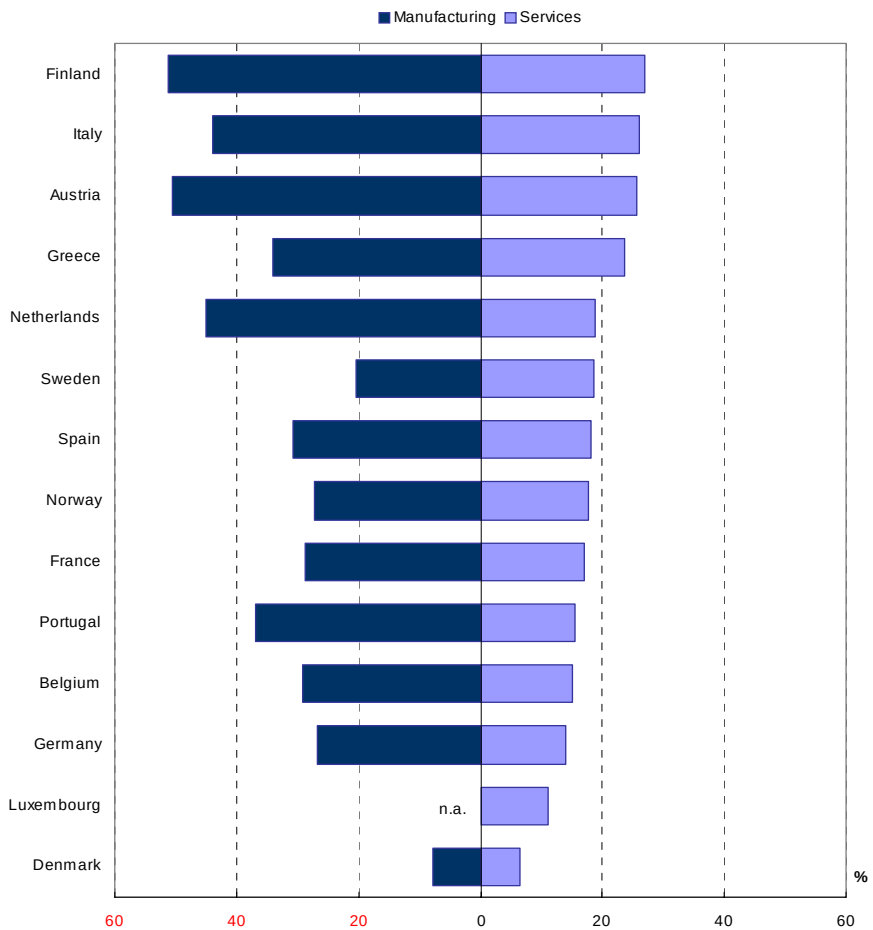
% of firms identifying a factor as highly relevant, as a share of all firms expressing relevance




- Economic factors are ranked higher than any other factors
- Service sectors more frequently mention economic factors than manufacturing

# European firms survey shows weak participation of services firms in government programme

Share of innovative firms benefiting of public support programmes




- Firms receiving public funding was considerably fewer in services than in manufacturing.
- It is important to design or adapt support programmes to be more relevant and useful to the service sector.

# The main messages

1. Improve the broader business environment for services to increase incentives for innovation and foster demand:
   - Continue with regulatory reform.
   - Open international markets.
   - Provide an appropriate financial climate.
2. Help workers adjust to structural change:
   - Reform labour markets.
   - Help workers acquire new skills and competencies.
3. Foster innovation and technological change:
   - Consider how innovation policies need adjustment.
   - Remove barriers to the effective use of ICT.

- Policy messages are closely aligned to those of a parallel OECD project on Trade and Structural Adjustment.

# In conclusion

- Policy makers have an opportunity to strengthen services sector performance:
  - This is key to strengthening productivity and employment growth.
  - And will help in addressing the globalisation of services.
- Improved performance of the services sector will also benefit other industries, such as manufacturing.
- Reform will have different effects on sectors:
  - In some, they may enhance employment and productivity.
  - In others, they may reduce employment.
  - The overall effects of reform tend to be positive, however.
- Structural adjustment policies can help facilitate the adjustment to a services economy. → **TASAP**

# Trade and Structural Adjustment (TASAP)

another OECD horizontal project reported to MCM 2005

**Comprehensive and consistent policy strategy is needed.**

- Macroeconomic policy for promoting stability and growth
- Labour market policies for developing worker's skills and facilitating resources transfer
- Efficient regulatory framework fostering competition and market openness
- Institutional/governance framework with public understanding and acceptance of reform measures
- Liberal trade and investment policies supporting structural adjustment

# Ireland: Success of Comprehensive Strategy for Growth

- Education reform to create skilled workers ( English speaking and relatively low-cost )
- Trade Liberalization to enter EU in 1973
- Attract Foreign Direct Investment in manufacturing ( tax incentives )
- Regulatory reform
- Invest in R&D by Higher Education as well as Foreign Business
- National = Regional Strategy in the expanding EU

Conclusion

# Restructuring or Boneyard

## : the Need for Speed

While restructuring our Company in the 1980s, we spent much of our time talking about the accelerating pace of change: in world politics, in technology, in product introduction and in the increasing demands of customers. We don't have to do that anymore. Change is in the air. Newspapers and networks hammer it home daily. XX people today understand that pace of change, the need for speed, and the absolute necessity of moving more quickly in everything we do, from inventory turnover, to product development cycles, to a faster response to customer needs. They understand that slow-and-steady is a ticket to the boneyard in the 1990s.

# Some references to STI work on services

- **Productivity and employment patterns:**
  - Anita Wölfl (2005), "The Service Economy", STI Working Paper 2005/3
- **Firm creation:**
  - Nicola Brandt (2004a), "Business Dynamics", STI Working Paper 2004/1
- **The role of ICT:**
  - OECD (2004), The Economic Impact of ICT
  - Information Technology Outlook 2004
- **Multinationals and productivity:**
  - "Multinationals Enterprises and Productivity Growth – Insights at the Firm Level", Chapter 6, STI Outlook 2004
  - Criscuolo and Martin, "Multinationals and US Productivity Leadership", STI Working Paper 2004/5
- **Innovation and ICT:**
  - Science, Technology and Industry Outlook 2004
- **Offshoring** **DSTI/ICCP/IE/2004-19 final**
- **And work by the Economics Department and the Trade Directorate.**