

Note: This presentation reflects my personal views and not necessarily those of the OECD or its member countries.

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**The Globalisation of Value Chains and the Changing
Nature of Manufacturing – Evidence, Implications
and Policies**

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This presentation

- Briefly describes the policy context.
- Describes some broad trends in manufacturing
- Examines the globalisation of value chains.
- Explores the potential impacts of globalisation.
- Examines the key policy issues.
- This work is still in progress and will only be finalised by the end of 2006.

Context

- Project for 2005-2006, mainly in context of OECD's Committee on Industry and Business Environment.
- Several areas of work currently underway:
 - Work on the changing nature of manufacturing.
 - Work on global interactions, using input-output tables and trade data
 - which industries are most affected by globalisation?
 - Work on the employment impacts of offshoring.
 - Work with micro data, to study firm-level impacts on productivity.
 - Work on manufacturing work – is it becoming more like services?
 - Related work in other OECD groups, including Economics Department.
- OECD is planning a synthesis of this work late 2006, to feed into the 2007 Ministerial meeting, that will focus on globalisation.

The 2 key policy challenges and questions

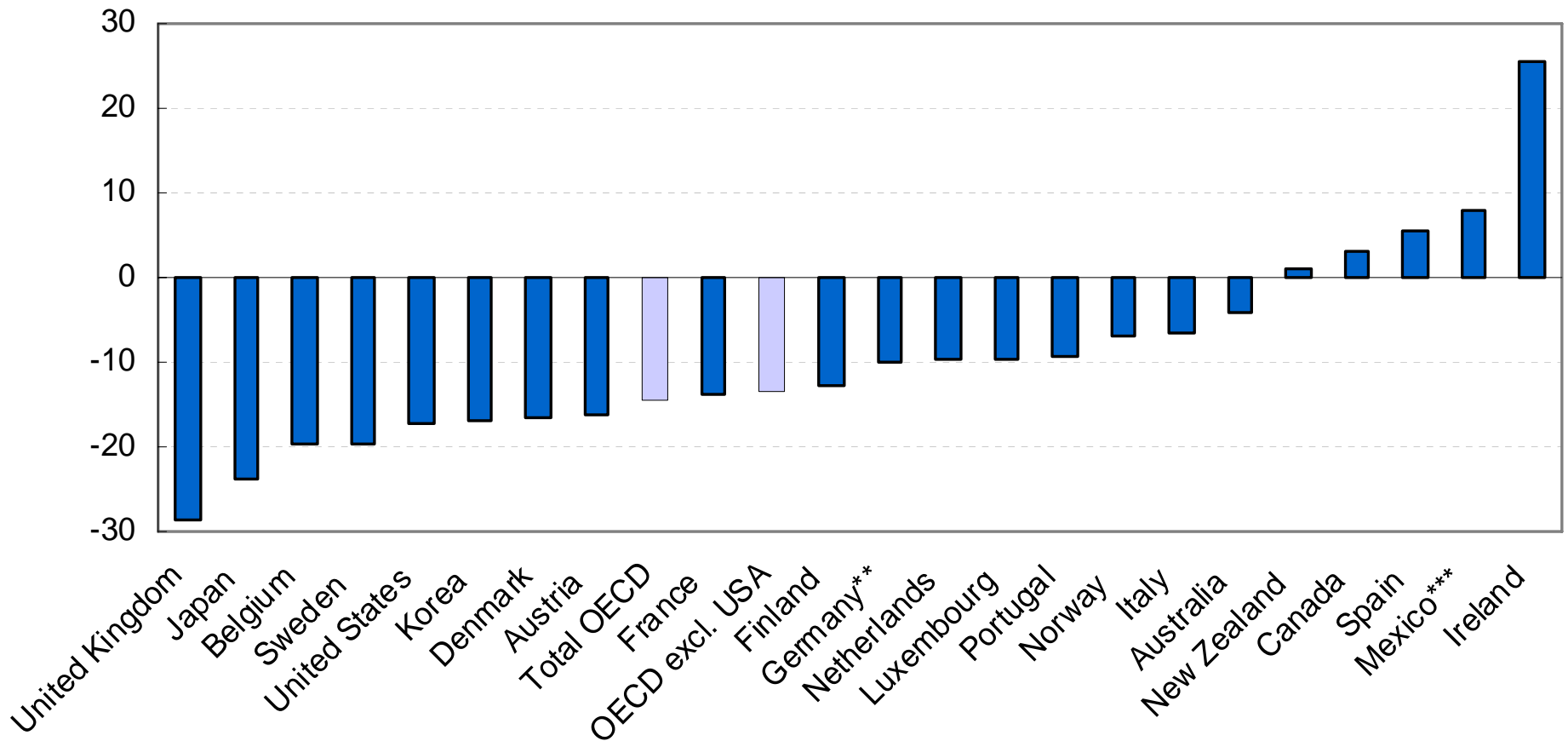
1. De-industrialisation:

- What does the loss of manufacturing jobs imply?
- Is this primarily a loss of production capacity and a growing focus of firms on high-value added activities?
- Can OECD countries do without a manufacturing sector?
- Which factors are responsible for the decline?

2. Globalisation:

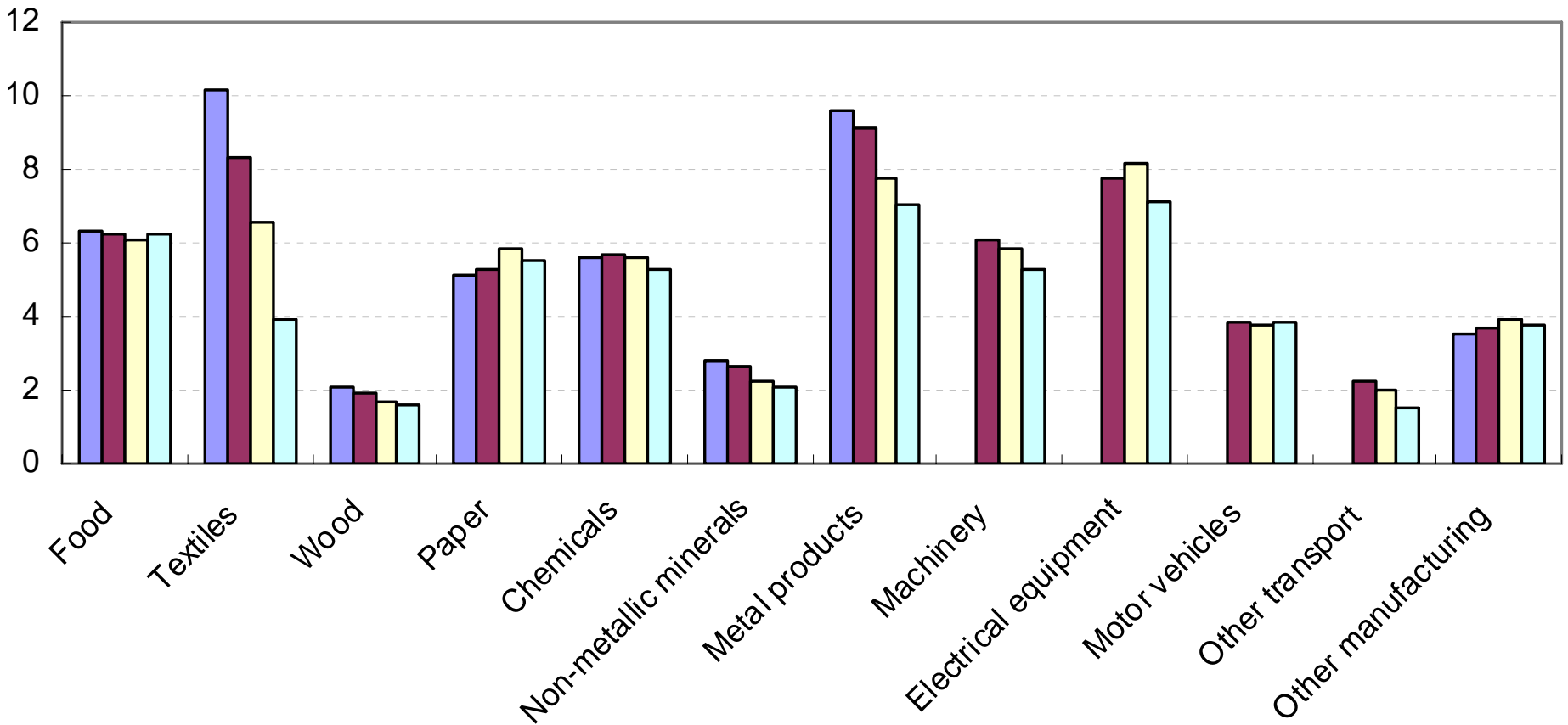
- What does globalisation add to these issues?
- Can OECD economies adjust to the rise of China and India?
- What are the implications for policy?

Manufacturing employment is falling steadily in most OECD countries (% change over 1990-2003)



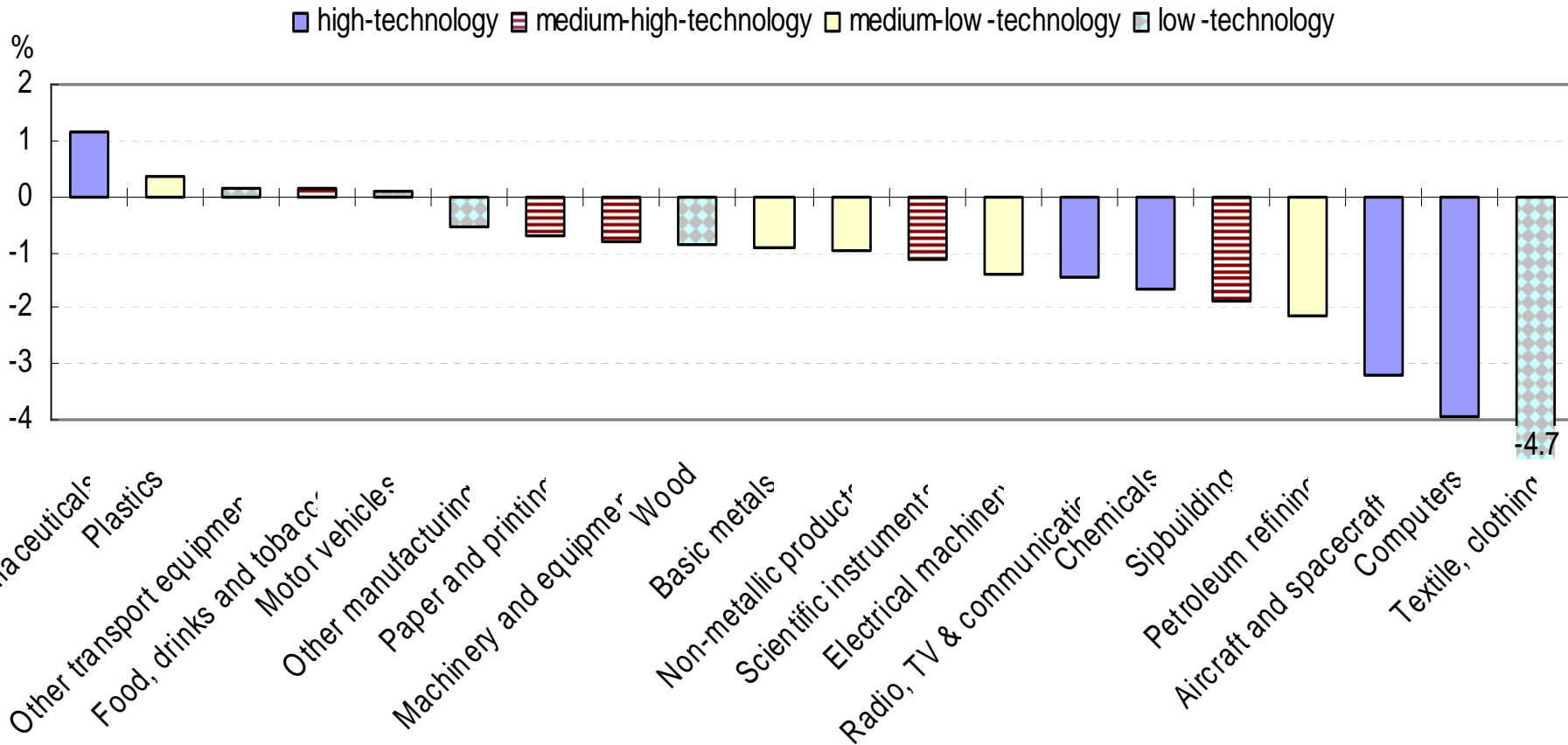
Not all activities have declined equally - manufacturing employment by key activity, G7 countries, 1990-2001, million workers

■ 1970 ■ 1980 ■ 1990 ■ 2001

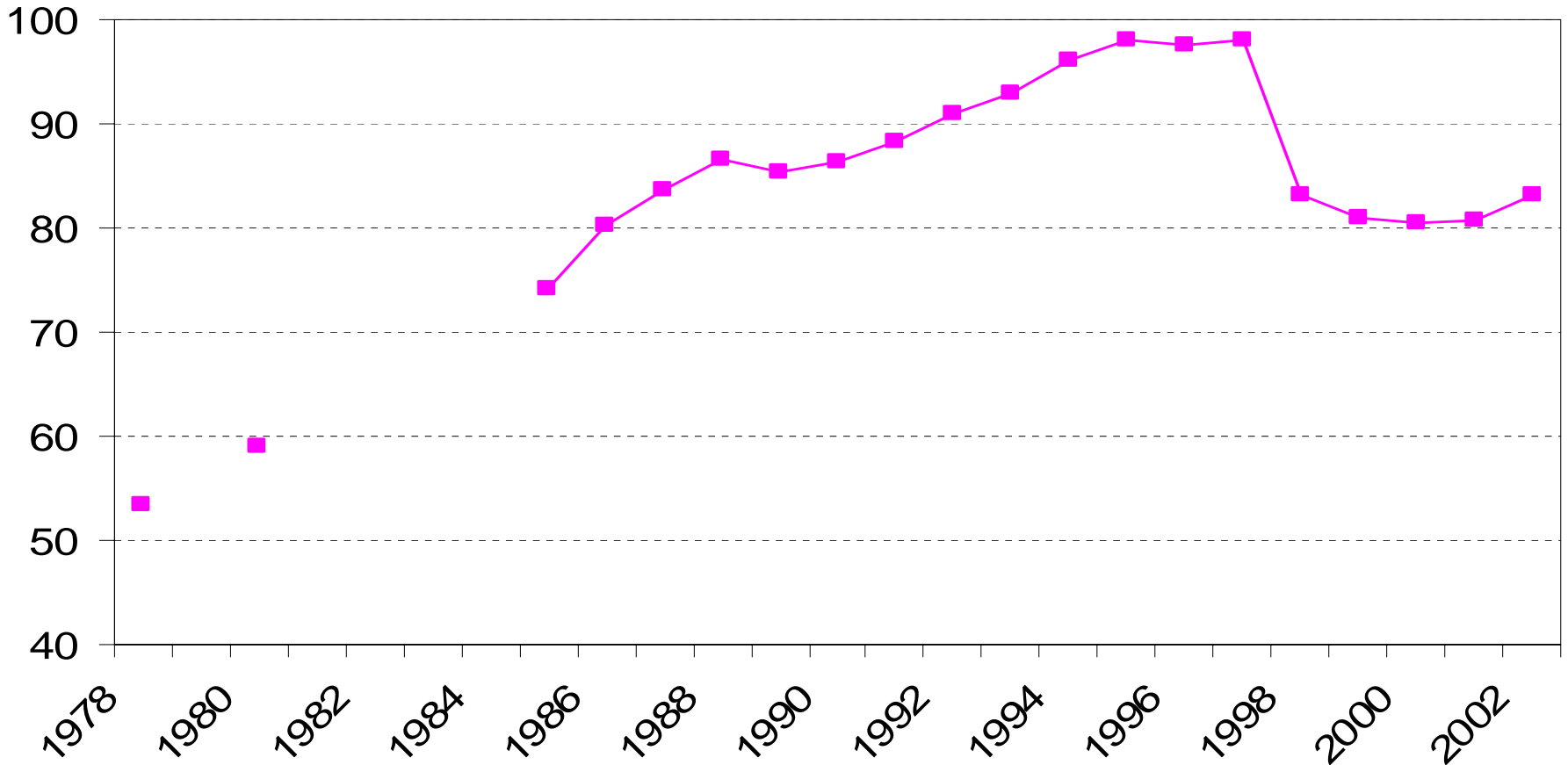


High-technology manufacturing is declining too

growth of manufacturing employment by technology intensity, 1990-2003

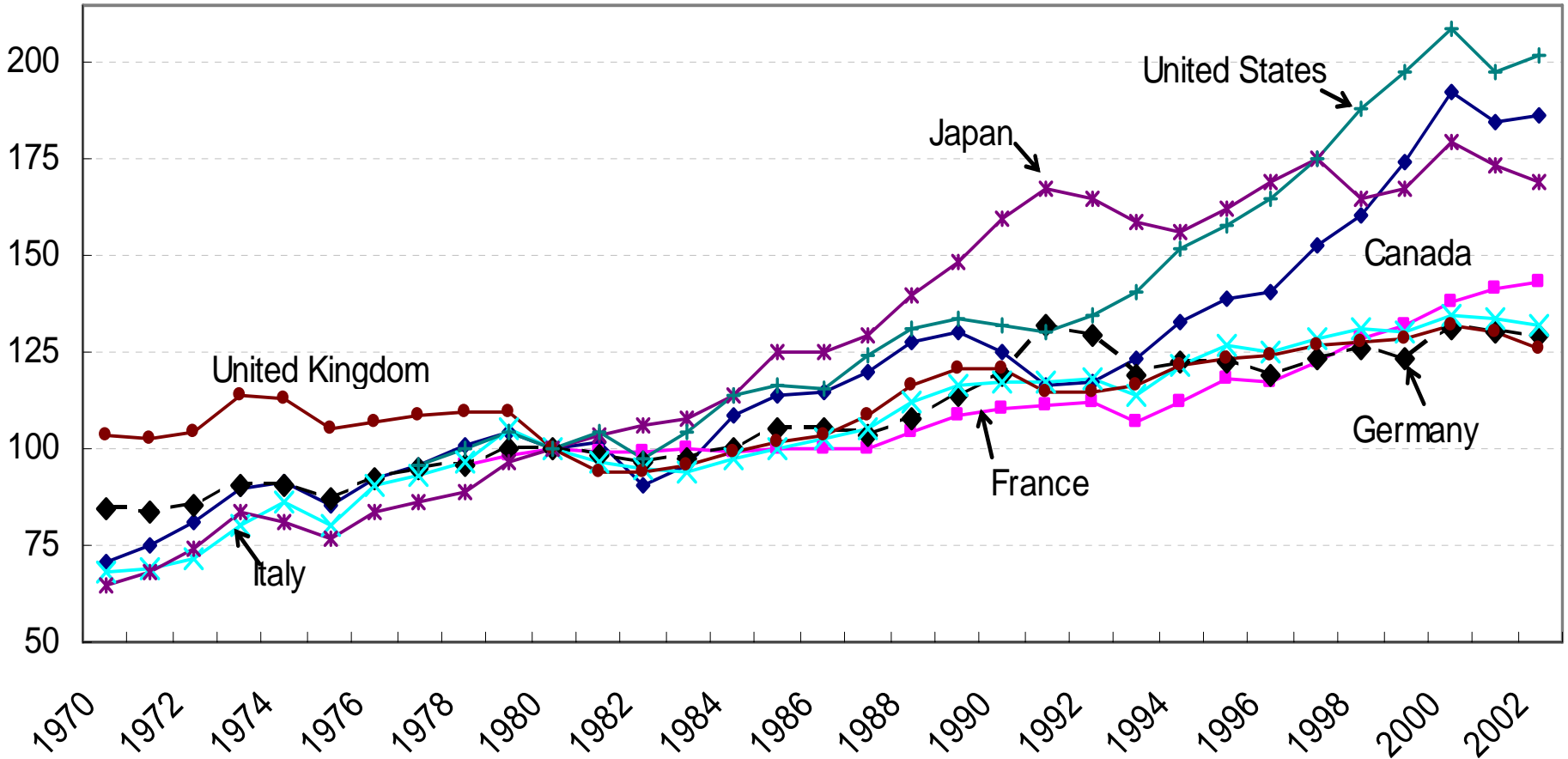


Manufacturing employment in China has not risen markedly in recent years (million workers)

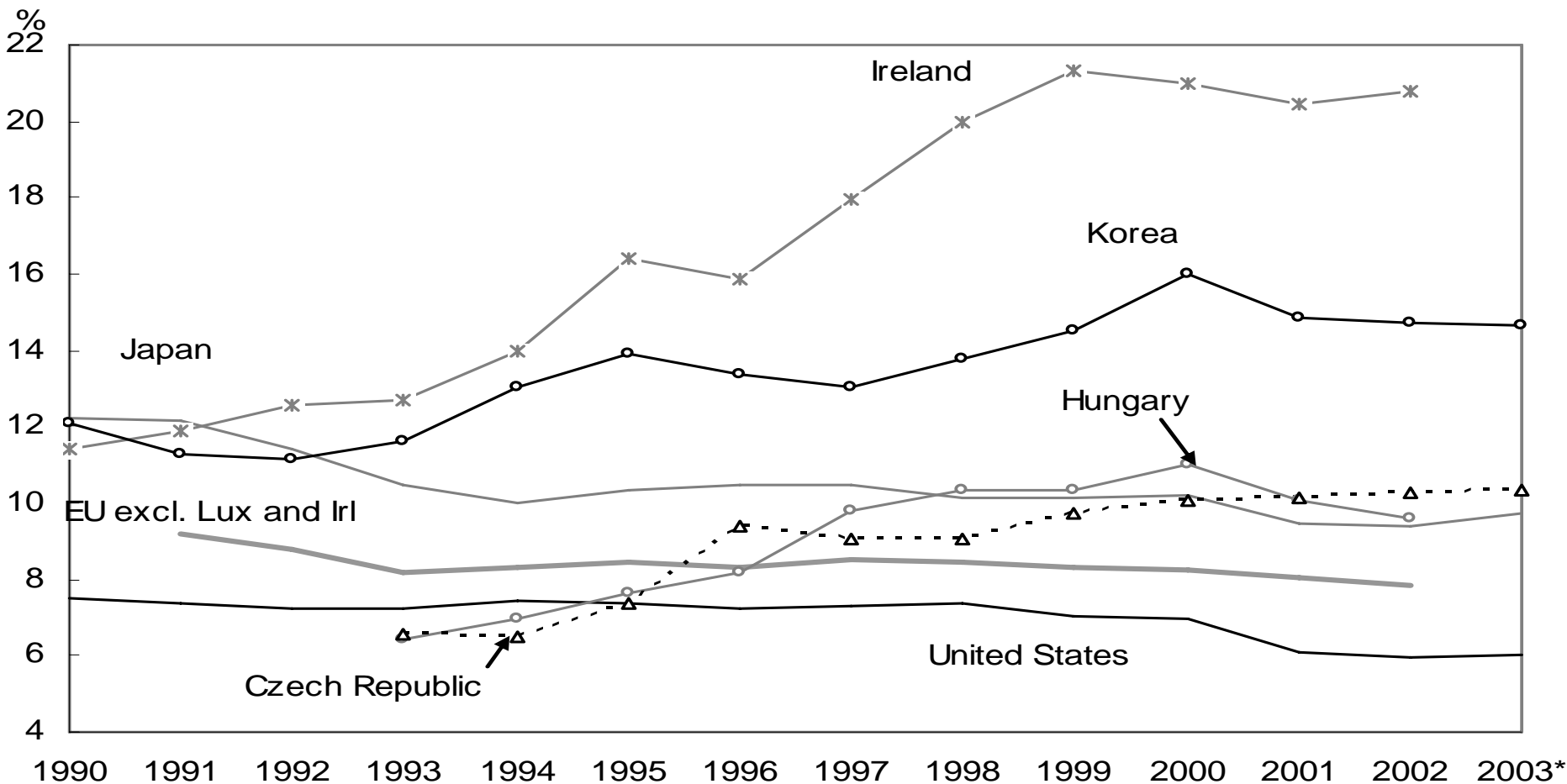


Value added continues to rise, G7 countries, 1990-2002

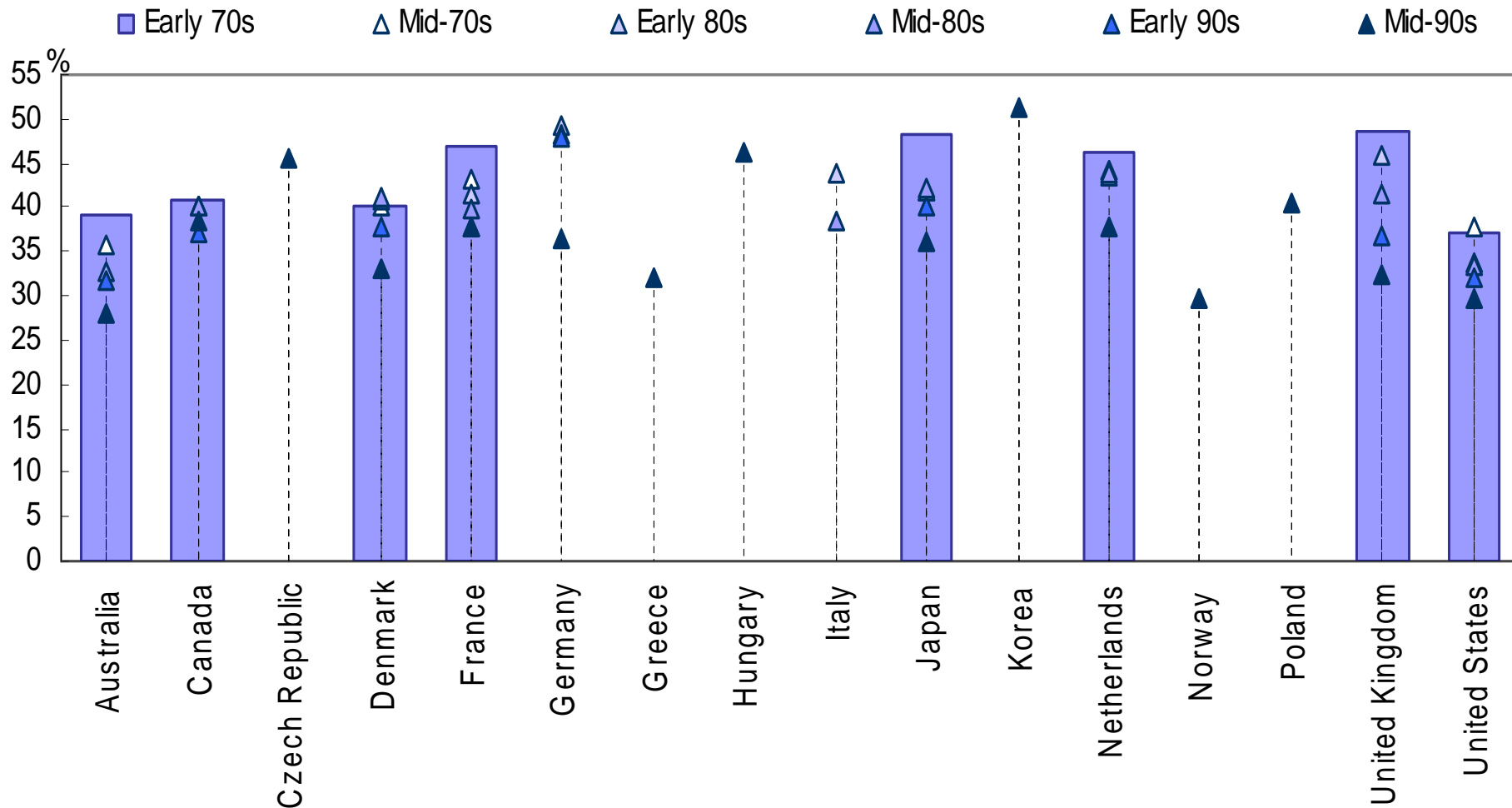
Volume index, 1980=100



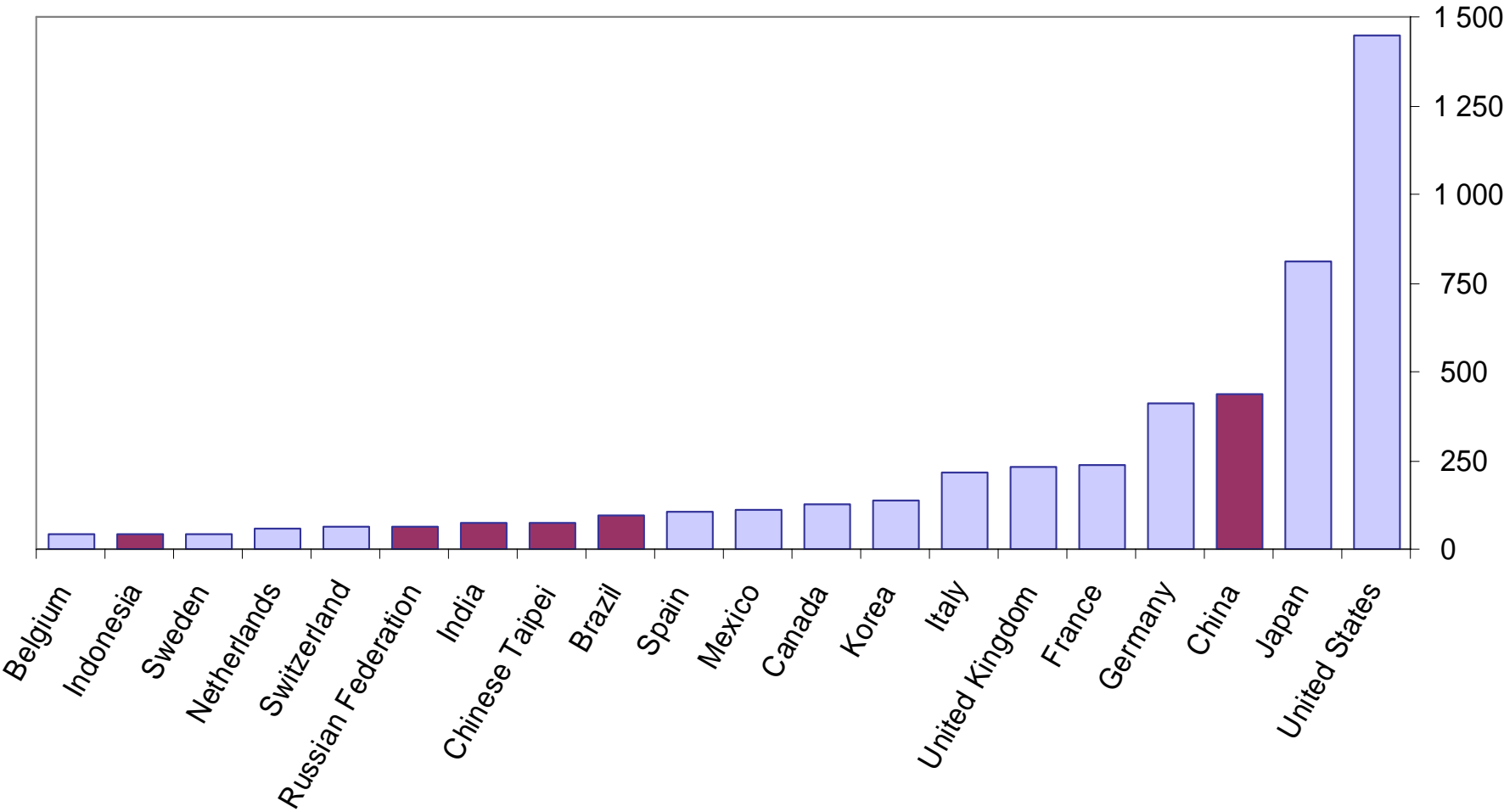
The share of high- and medium-high technology manufacturing in value added is declining in most countries, 1990-2003



But manufacturing still accounts for a large share of total demand (final + intermediate)

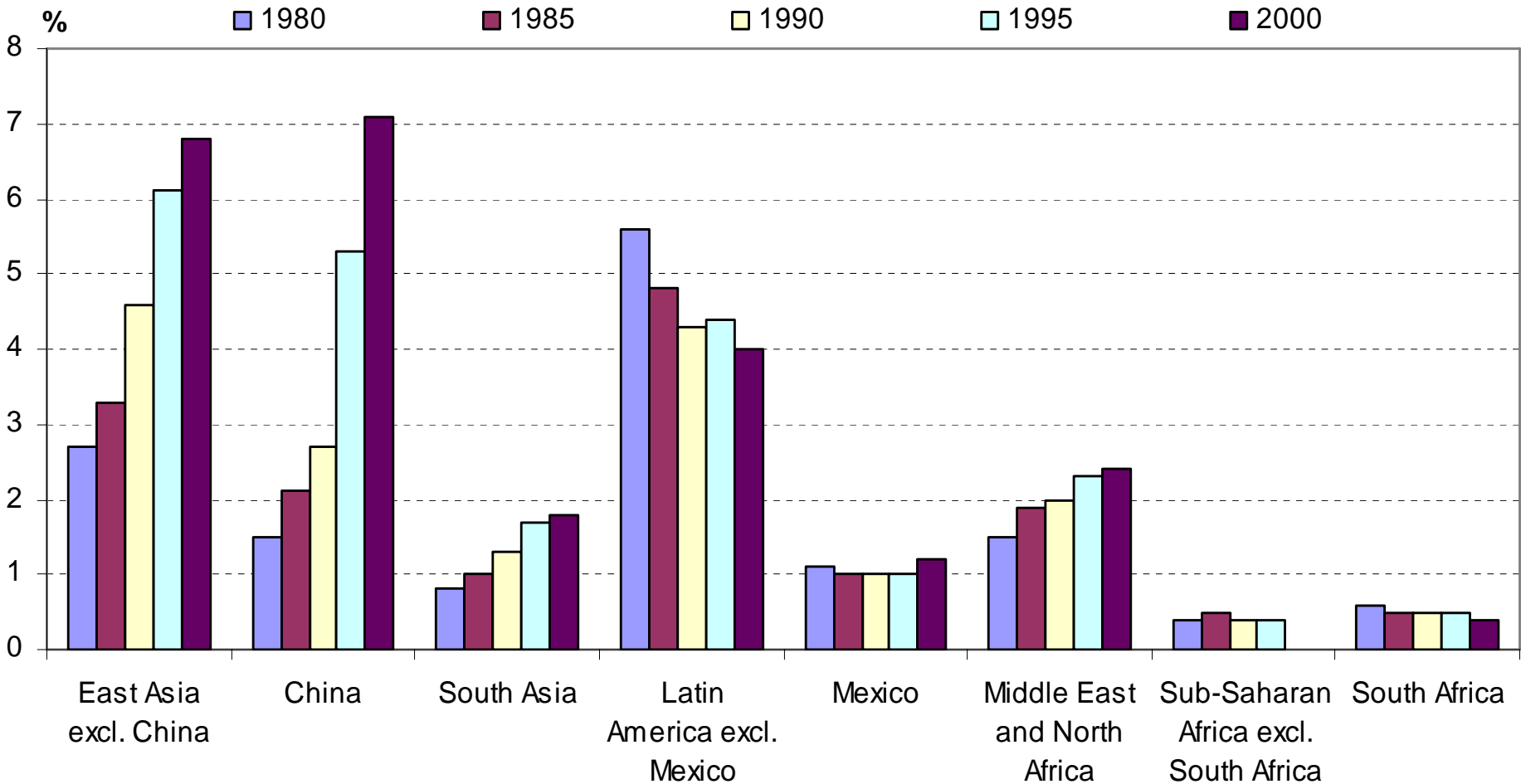


OECD countries still account for the bulk of global manufacturing value added, 2002, billion USD



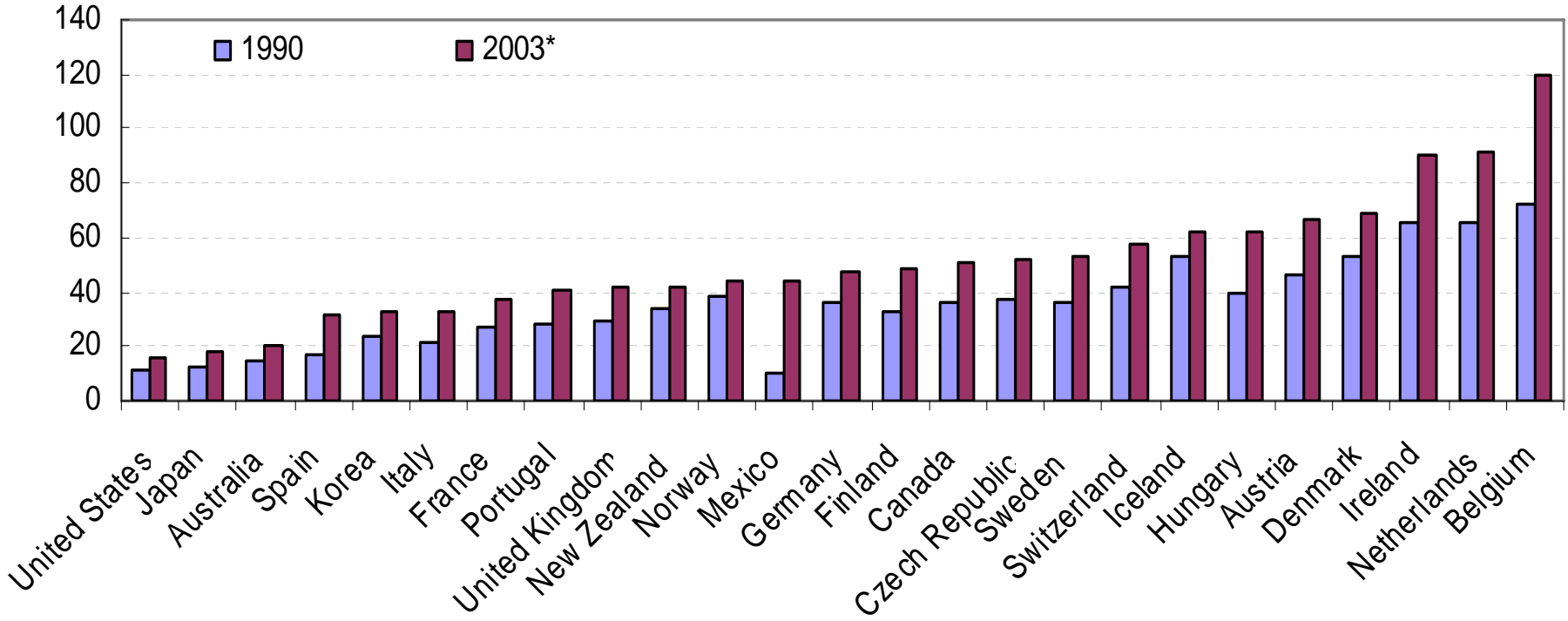
Although some non-OECD regions have grown

Share in global manufacturing value added, in %



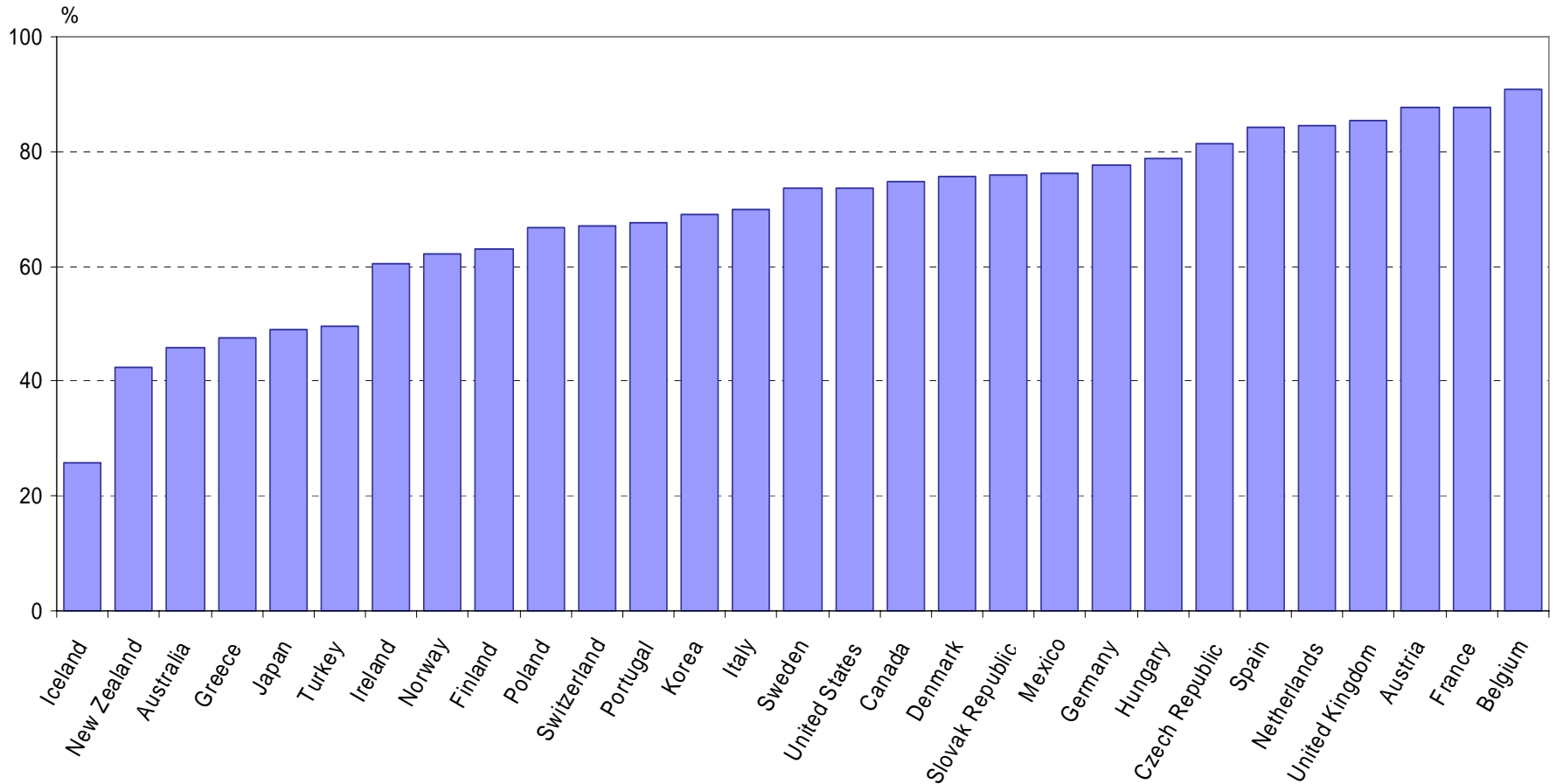
Exports are growing more quickly than production

Export to production ratio for manufacturing



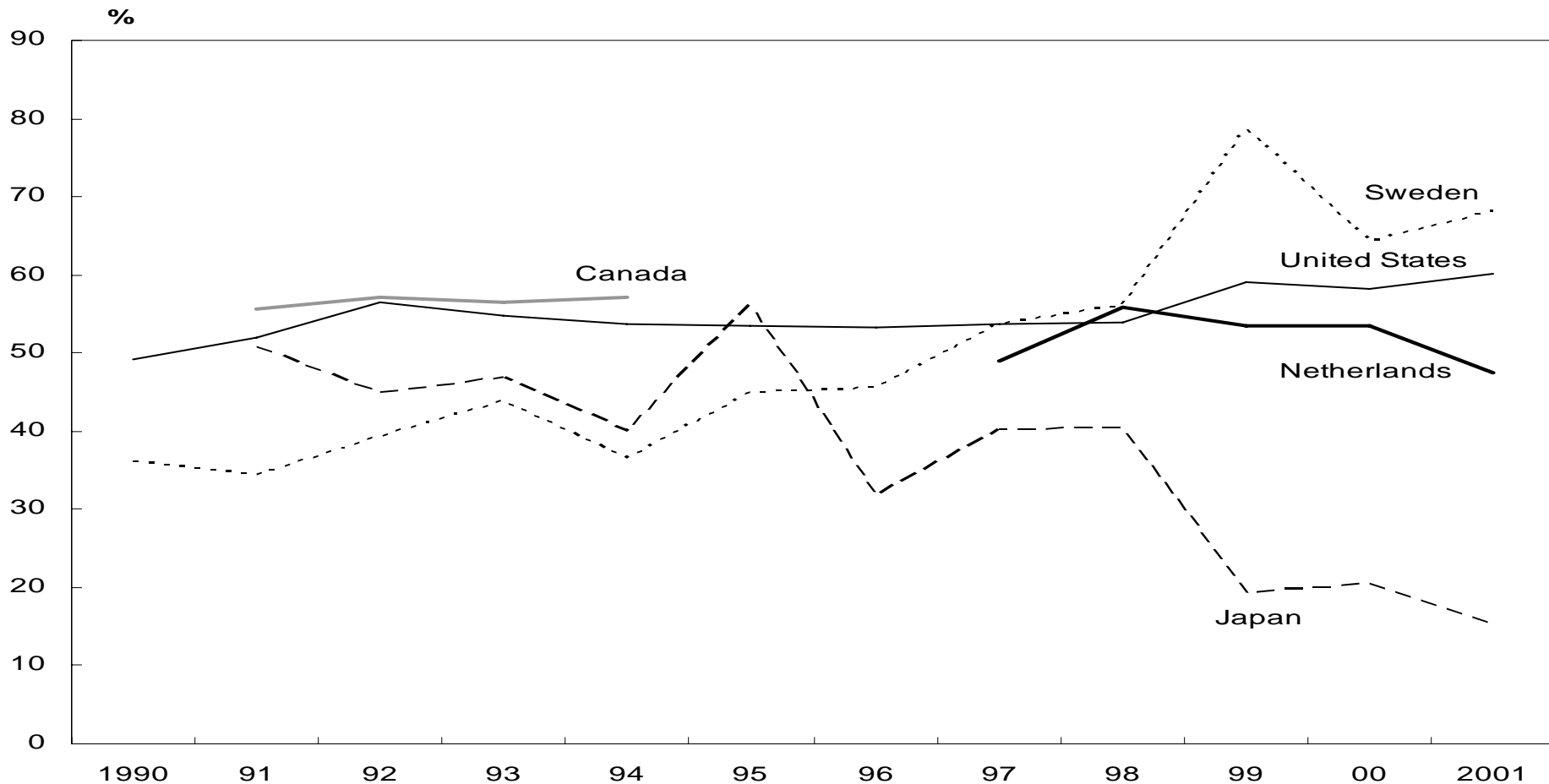
Intra-industry trade is of growing importance

Intra-industry trade as % of total manufacturing trade, average 1996-2003



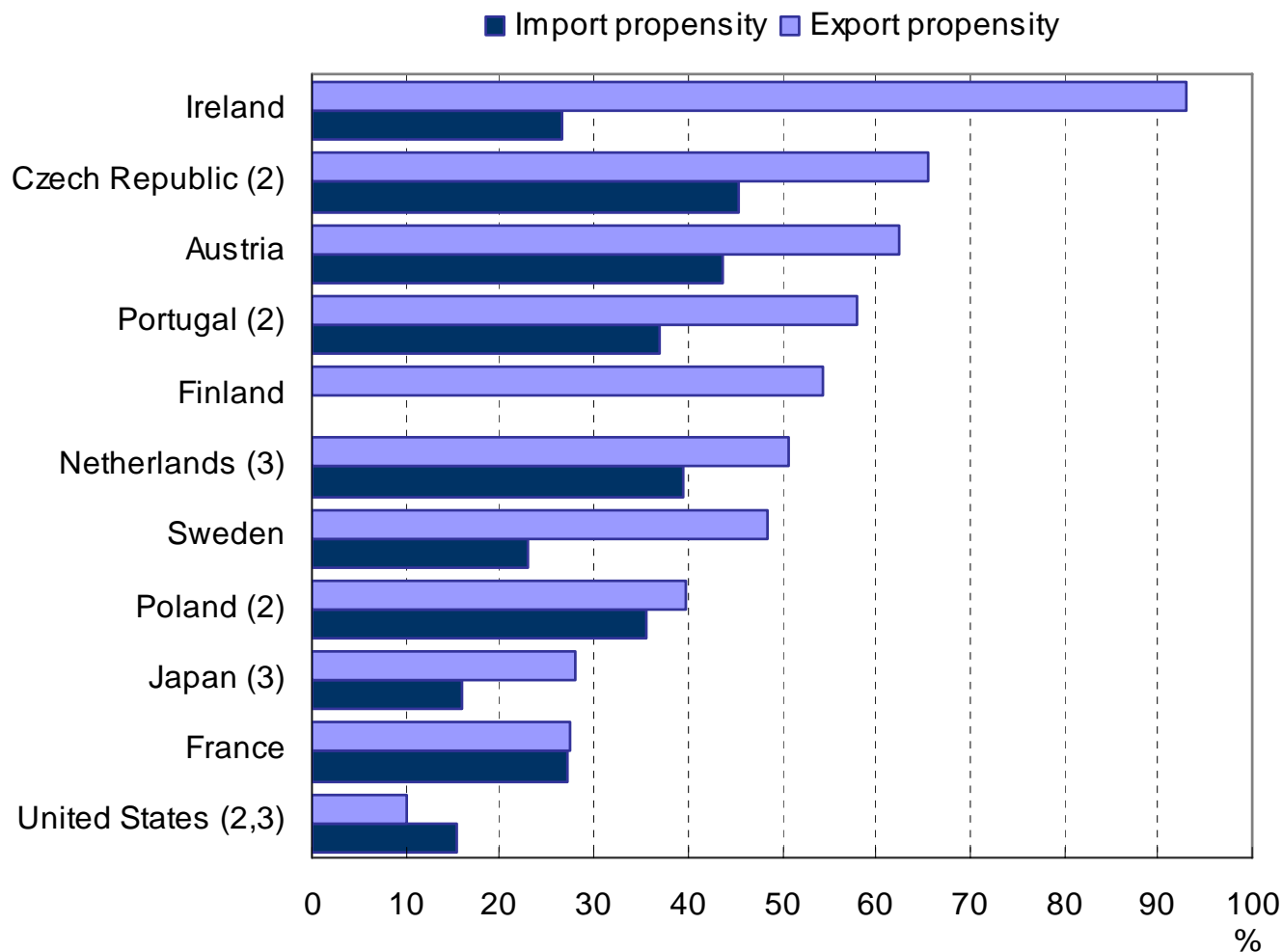
Intra-firm trade is important

Share of intra-firm exports in total exports of foreign affiliates



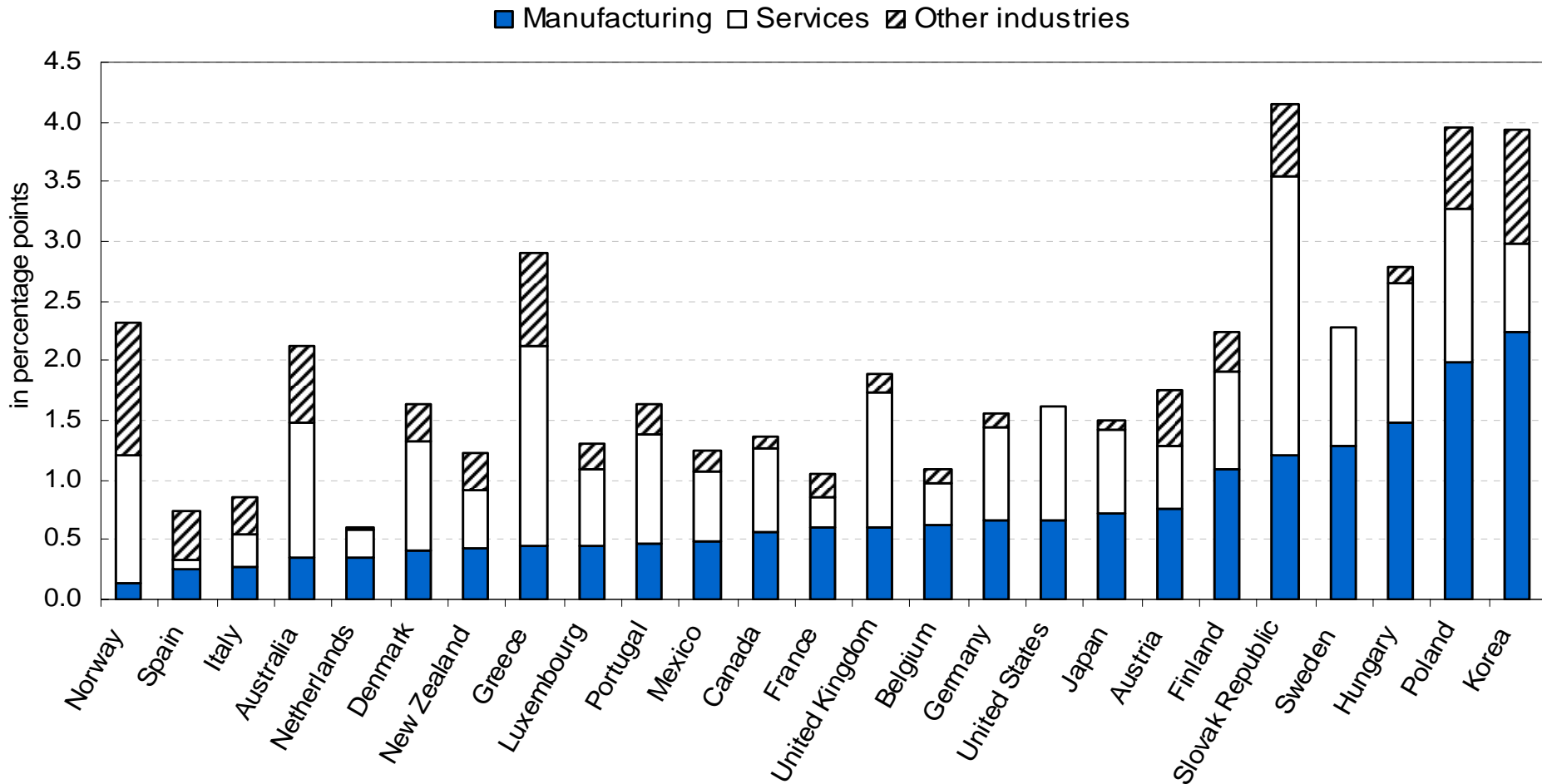
Some foreign affiliates mainly produce for export

Export and import propensity of foreign affiliates

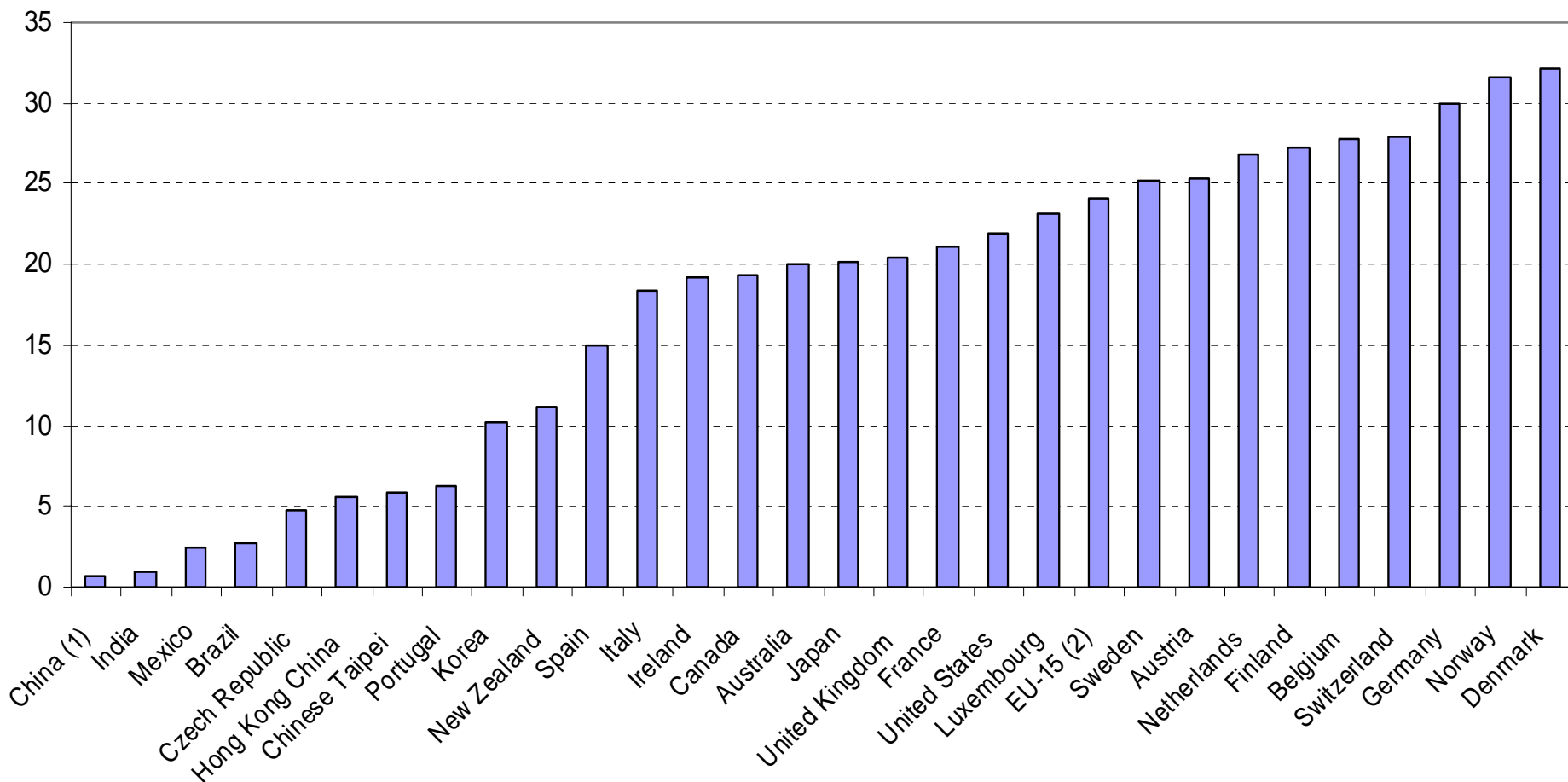


Manufacturing still provides an important contribution to aggregate productivity growth

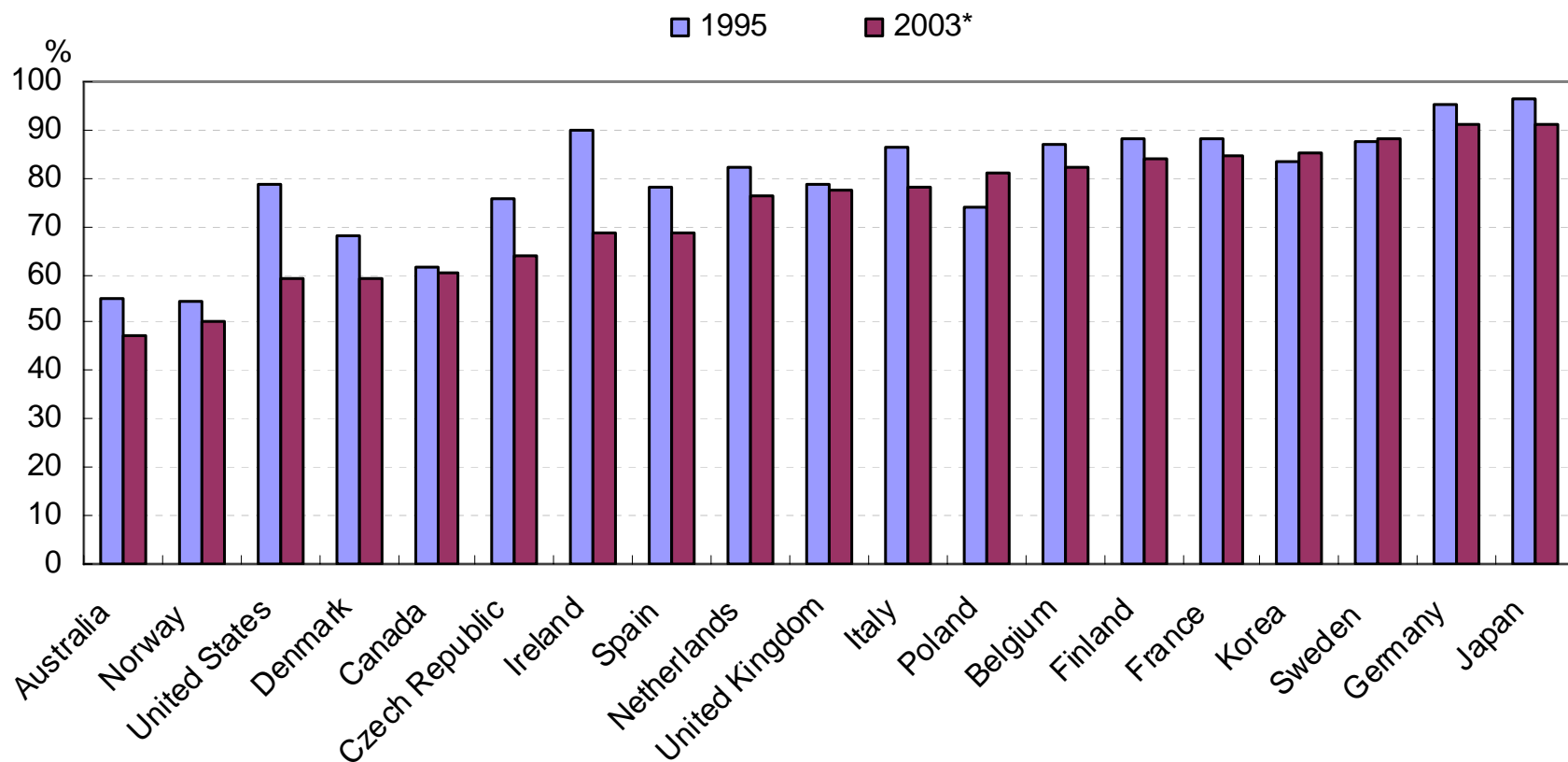
Contribution to average growth in value added per person, 1990-2003, in %



Productivity and hourly labour costs for manufacturing differ, 2003, in USD

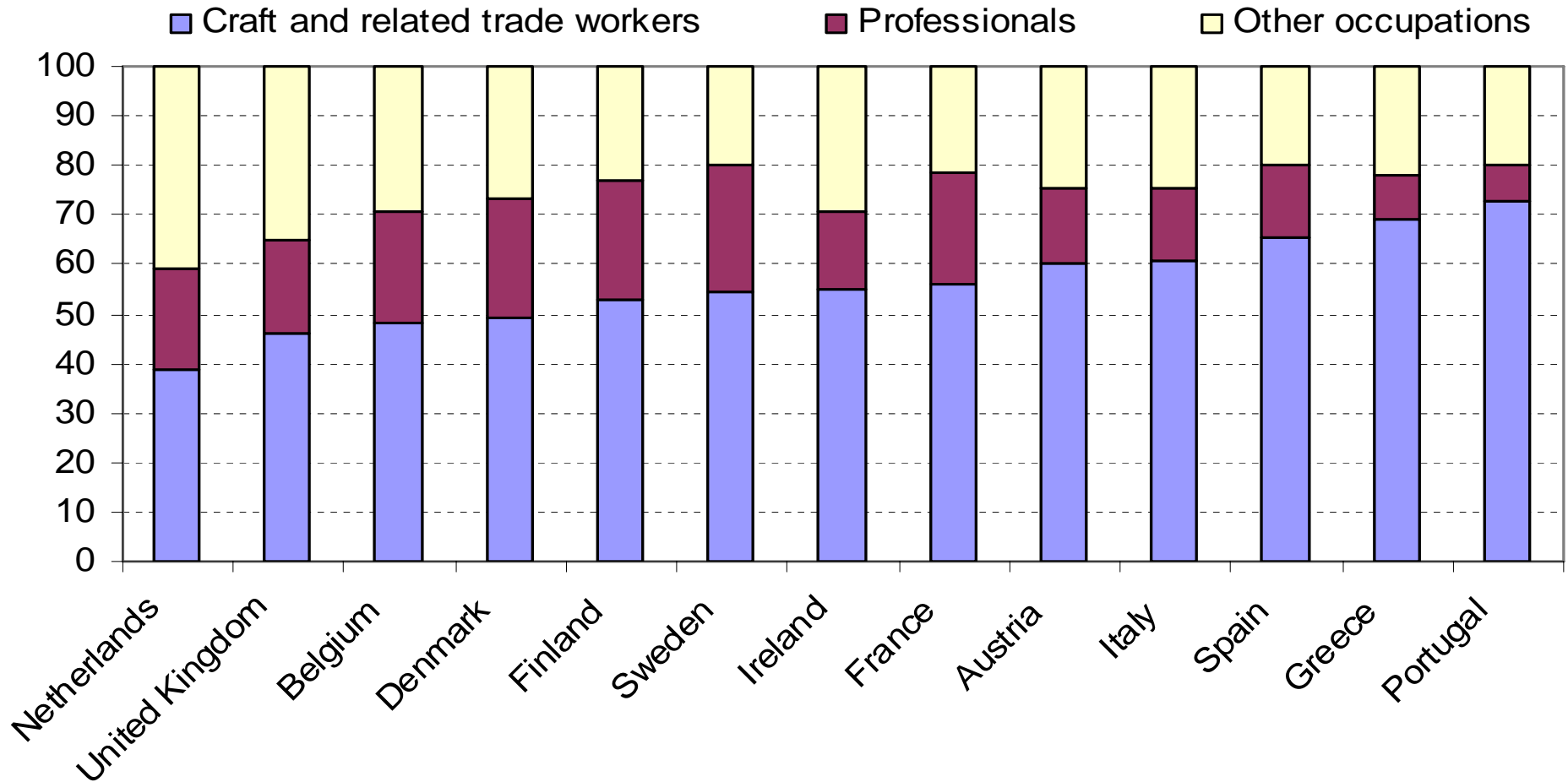


Manufacturing still accounts for the bulk of R&D, share in Business expenditure on R&D, in %



The interaction of manufacturing and services is growing

Share of production and services workers in manufacturing employment, 2002, in %



Overall trends in manufacturing

1. The share of manufacturing in OECD economies is declining, although production continues to rise.
 2. The character of manufacturing is changing – more focus on high-value added activities, blurring with services, but no longer growth of high-technology manufacturing.
 3. A growing integration of manufacturing throughout the value chain, though more in some industries than in others.
 4. Innovation in manufacturing (as measured by patents) remains dominated by OECD countries.
- Challenges:
 - Adjust to structural change.
 - If manufacturing is important for OECD countries – ensure that this remains a viable sector of activity.

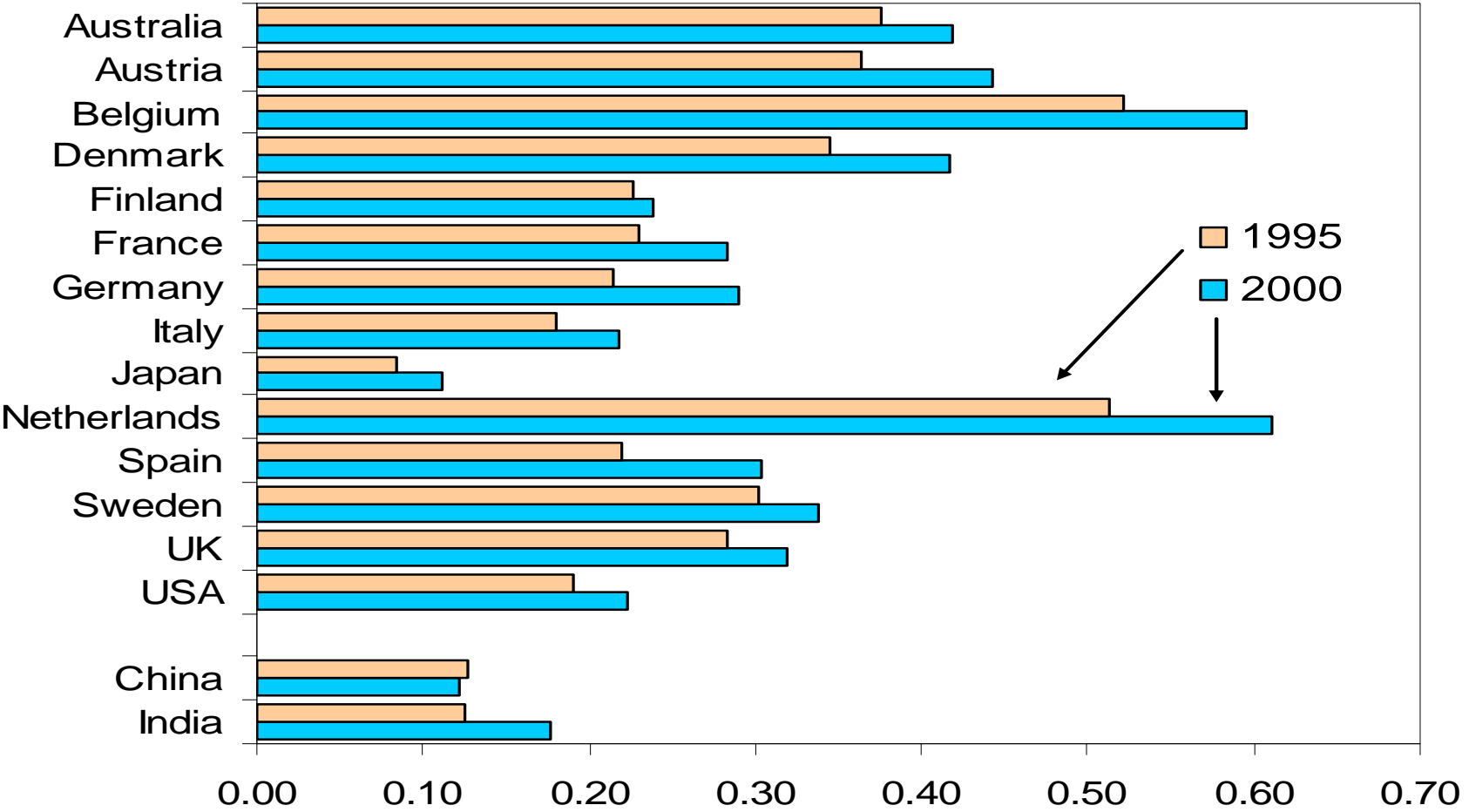
Second question: The globalisation of value chains – what does this involve?

- Growing integration of production, increasingly at the global level:
 1. Which functions do firms keep in-house and which do they out-source, either domestically or internationally?
 2. Production can become fragmented, with growing trade in intermediate inputs.
 3. Firms may focus on core competences and strategic functions.
- Theoretical considerations:
 - What are the transaction costs of engaging in outsourcing?
 - How can firms control internal and external production?
 - In practice, firms carefully weigh costs and benefits.

Evidence for the growth of global production networks

1. Intra-firm trade accounts for a large part of total trade.
2. Trade flows between parents and foreign affiliates have large impacts on trade balances.
3. Intermediate products account for a growing share of global trade flows.
4. Imported intermediate inputs are of growing importance for total input in domestic production.
5. Foreign affiliates may mainly produce for exports (instead of for domestic production), sometimes back to the country of origin.
6. A growing complexity of trade patterns and sources of intermediate inputs.

A growing ratio of imported to domestic inputs, 1995-2000



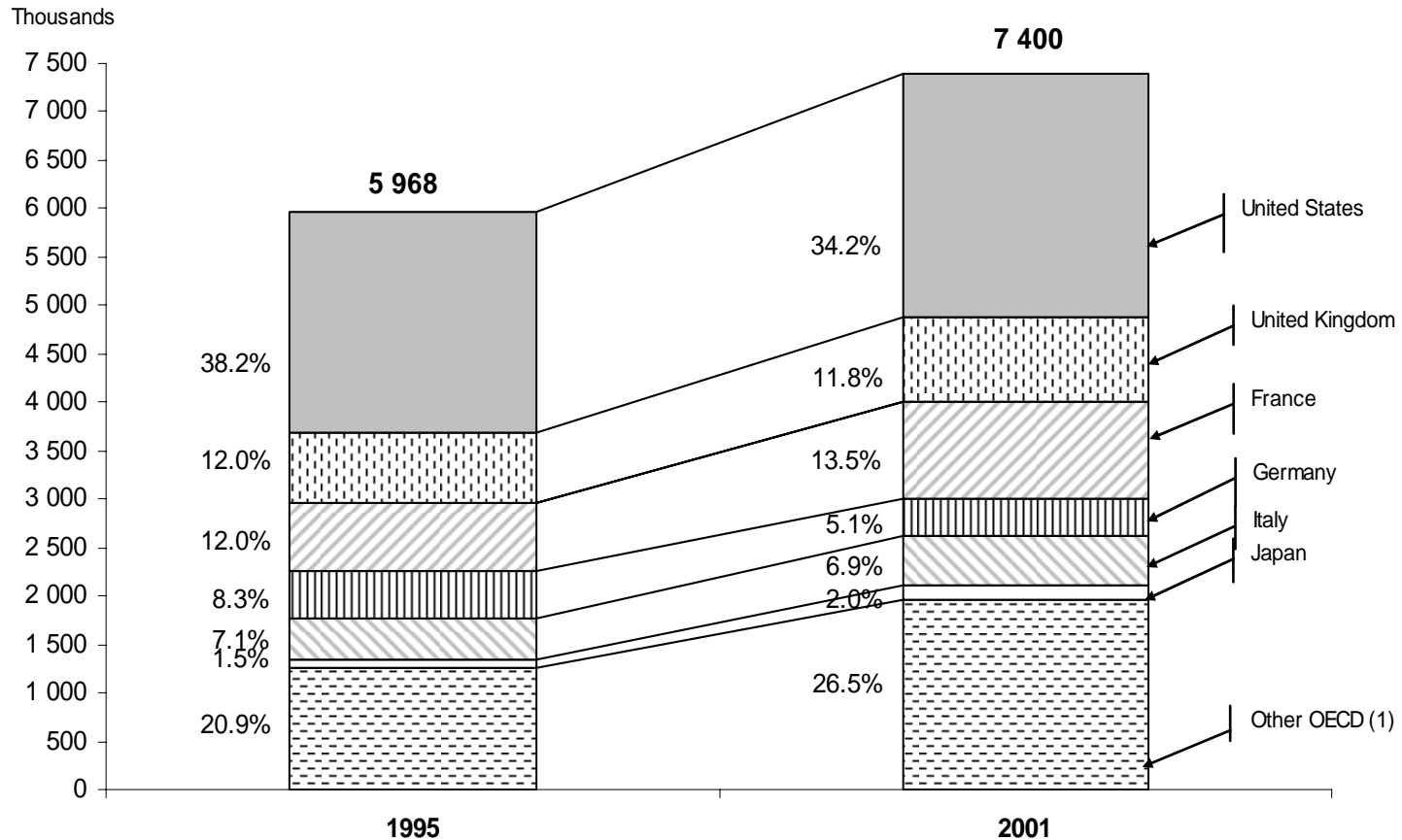
Key drivers

1. Competitive pressures – companies are looking for ways to improve efficiency and costs.
2. Falling costs and growing efficiency of transport and communications – enabling greater integration.
3. Growth of new markets, notably China and India, that offer scope for expansion abroad.
4. Focus on core strengths.
5. Access to factor inputs, including skilled workers.
6. Increased in fixed costs for some areas of production – leading to growing concentration.
7. Growing complexity of production – not all competencies may be available within the firm.

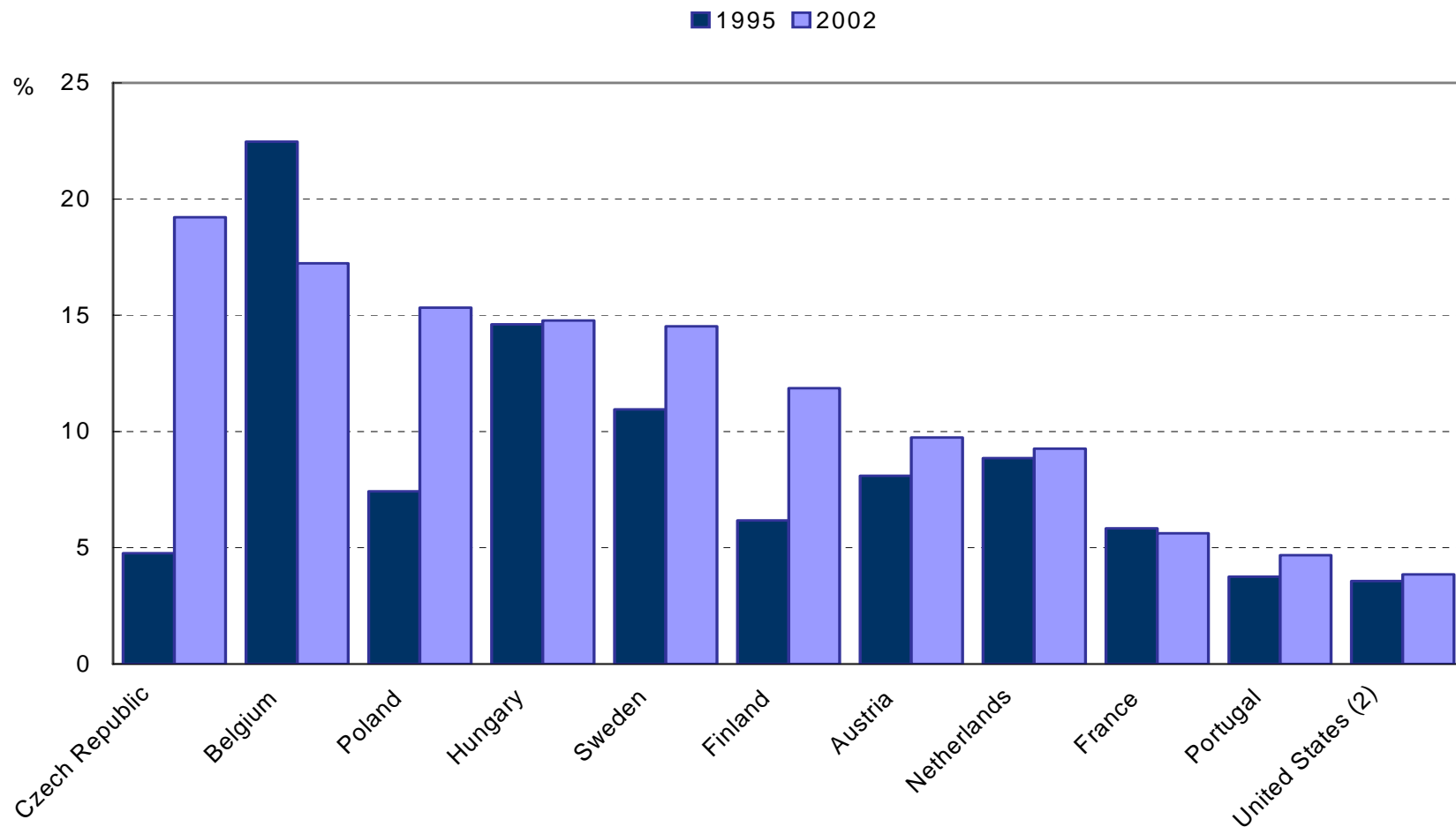
Impacts of globalisation on employment

- Direct impacts:
 - Short-term loss if domestic activities are off-shored.
 - Short-term gains if foreign affiliates locate within OECD economies.
- Indirect impacts:
 - Firms may focus on core strengths, with possible potential for growth.
 - Positive impacts through productivity growth, price effects and impacts on consumer wealth and demand.
- The available empirical studies suggest that the overall impacts of globalisation on employment are relatively small, but:
 - Impacts in specific industries (e.g. textiles), regions (heavily concentrated on industries that are in decline) and worker groups (low-skilled workers that are older and with long job tenures) can be quite substantial.
 - Impacts on specific OECD countries may also be larger, in particular countries that are heavily concentrated on industries that can be outsourced.

Foreign affiliates are of growing importance for employment – manufacturing, in 1000 persons



Foreign affiliates are of growing importance for employment – services, in % of total employment

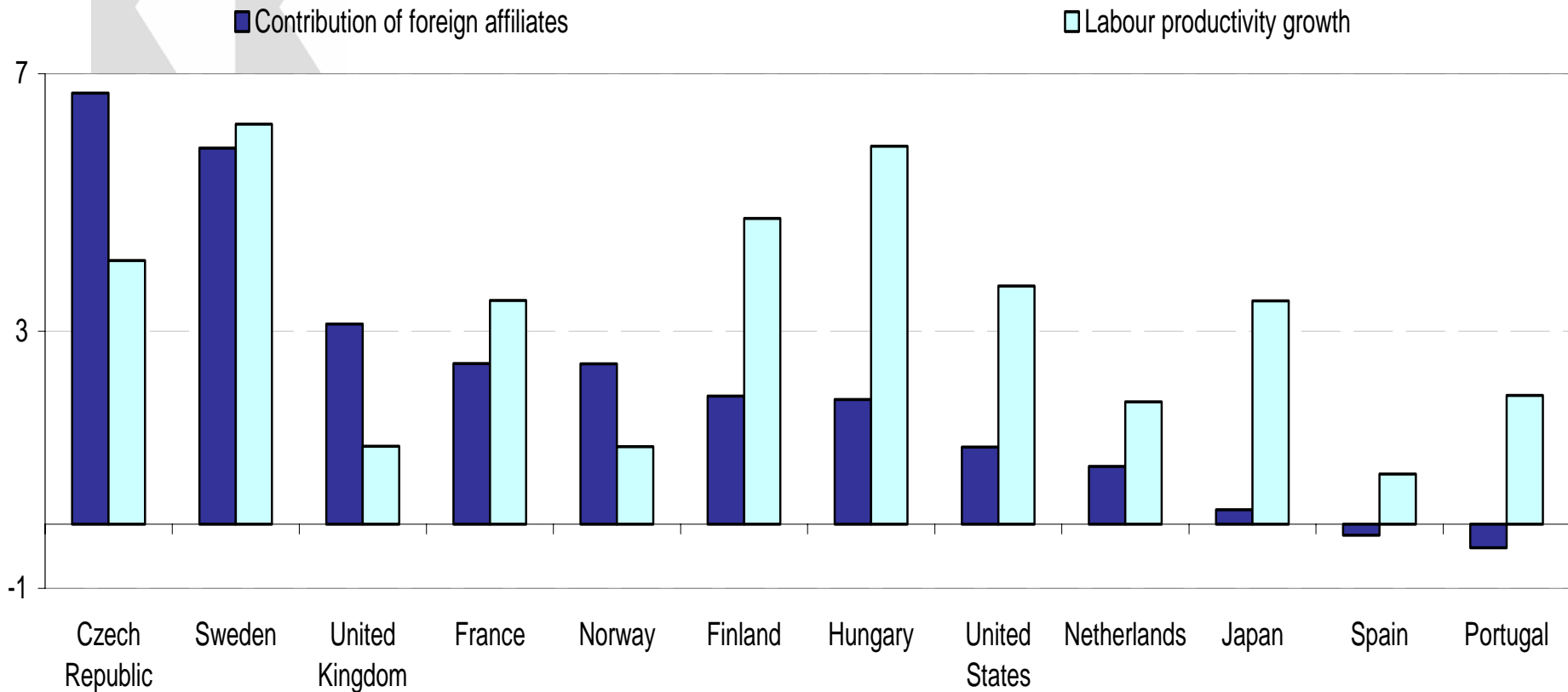


Impacts of globalisation on productivity

- Globalisation is expected to enhance productivity:
 - Firms will be able to specialise.
 - Firms outsource to enhance efficiency and reduce costs.
 - Globalisation will increase pressures on companies to innovate and become more efficient.
- Evidence:
 - Foreign affiliates have demonstrable direct and indirect impacts on productivity performance.
 - Econometric work with firm-level data shows that globally engaged firms have stronger productivity performance, e.g. in:
 - Being engaged as a multinational
 - Being engaged as an exporter in foreign markets
 - Sourcing inputs from abroad, in off-shoring some of its production.
 - Globalisation has increased real wages.

Foreign affiliates have a considerable impact on productivity growth

Contribution to annual productivity growth in manufacturing, 1995-2001, in percentage points



In sum

1. Globalisation is having considerable impacts:
 - In changing trade patterns and comparative advantage of OECD and non-OECD countries
 - In creating a larger global market.
 - In improving productivity growth and increasing wealth and incomes.
 - In affecting employment in some countries and regions and for some worker groups. – Overall, however, the employment impacts appear to be rather small.

2. The main challenges are:
 - Adjusting to these changes – enabling structural change and moving into new areas of economic activity (or retaining existing strengths).
 - Innovation
 - Inclusiveness.

Some preliminary policy implications (1)

1. Adjust to structural change – policies are well known and are currently being elaborated further:
 - Competitive product markets, where resources can be allocated from growing to declining sectors of the economy.
 - Well-functioning labour markets and institutions.
 - Well-functioning financial markets
 - Sound macro-economic policy.
- OECD has a wide range of work available on these issues, including the OECD Jobs Study, which is currently being re-examined.

Some preliminary policy implications (2)

2. Move up the value chain – what is now an innovative product, will eventually be a commodity. Key policies:
 - Innovation and technology policies
 - Foster new areas of economic activity
 - Cluster policies and local efforts
 - Upgrade human resources
 - Enhance attractiveness
 - Protect IPR – build on intangible assets
 - A level playing field – trade and investment policies.
- Moreover, countries may also have unique strengths (e.g. natural resources) that enable them to compete internationally.
- These policies all accept that globalisation is happening and has thus far delivered considerable benefits to OECD economies and many non-member economies.

Some preliminary policy implications (3)

3. Avoid protectionist policies that may reduce the benefits of globalisation or that only offer a short-term solution to the adjustment challenge:
 - For example, policies that penalise companies engaging in off-shoring are likely to reduce efficiency and raise costs.
4. Avoid a political backlash against globalisation:
 - Assist those workers that are most affected by globalisation, e.g. by an activating social safety net, active labour market policies and policies for life-long learning.
 - Spread the benefits of globalisation as widely as possible, by using trade, investment and development policies to create greater opportunities for countries that may be left behind, notably in Africa.
 - Address other global concerns that are linked to globalisation, such as environmental challenges, to make globalisation considered an opportunity, rather than a threat.

Finally

- This work is still preliminary – it will be finalised in the course of this year.
- This presentation presents my personal views, and does not necessarily reflect the views of the OECD, or its member countries.
- Comments are welcome.
- Sources and key references follow on the next page.

Thank you.

Key OECD sources and references

- **Sources:**

- OECD STAN database: www.oecd.org/sti/stan
- OECD Input-Output tables: www.oecd.org/std/io-tables/data
- Other OECD data: see www.oecd.org/statistics

- **Selected references:**

- OECD (2005*a*), Science, Technology and Industry Scoreboard 2005, www.oecd.org/sti/scoreboard
- OECD (2005*b*), Economic Globalisation Indicators, OECD, Paris.
- Chiara Criscuolo (2005), The contribution of foreign affiliates to productivity growth, STI Working Paper 2005/8, OECD, Paris.
- Dirk Pilat and Anita Wolfl, Measuring the Interaction between Manufacturing and Services, STI Working Paper 2005/5, OECD, Paris.
- Dirk Pilat, Agnes Cimper, Karsten Olsen and Colin Webb, The Changing Nature of Manufacturing in OECD Economies, STI Working Paper, forthcoming.