TRADE POLICY

Lecture 8
Industrial upgrading and development in Northern Europe: The Swedish Model

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Background: Swedish development and growth

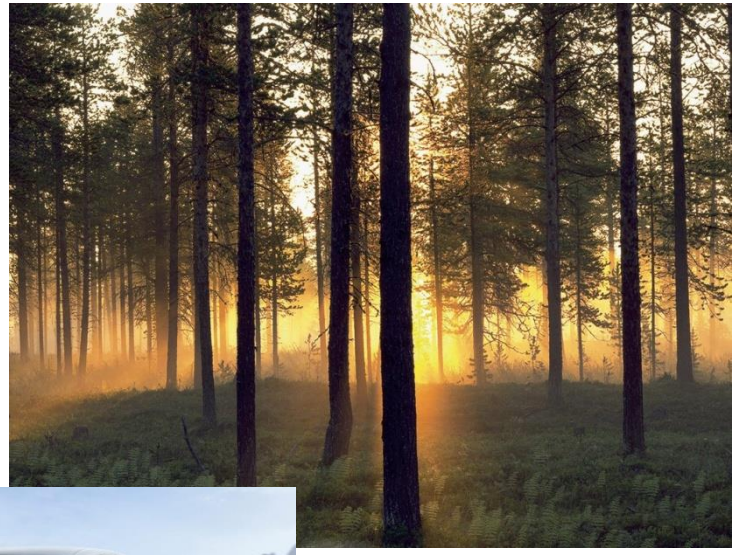
- One of the poorest countries in Europe 150 years ago – one of the most developed today
- Rapid industrialization process after 1870s
- Emergence of *New Economy* during past decades

Key questions

- How could the industrial breakthrough be so fast?
- What explains the continuing prominence of raw material based sectors?
- What explains the emergence of the *New Economy*?

How did Sweden get from this…

..to this?



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The industrial breakthrough

- Windows of opportunity
  - Foreign demand for grains and wood (1850s)
  - Chemical pulp technology (1870s)
  - Thomas smelting process (1870s)
- Responses
  - Export booms
  - Raw material based industry
  - Innovation and new enterprises: Ericsson, ASEA, Alfa-Laval, AGA, Nobel, SKF

Why were responses so strong?

- Sweden was well prepared to take advantage of emerging opportunities
- Institutional development
  - liberalism, property rights, land reform, company laws, financial system
- Knowledge and human capital
  - mandatory primary education (1842), reforms of classical universities, establishment of technical universities, industry associations

- Innovation system with *excess capacity* in place well before industrial breakthrough

Key words: Swedish industrialization

- *Benchmarking*
- *Imitation*
- *Learning*
- *Excess Capacity*

Industry example: The forest sector

- Sustained success since initial breakthrough in 1850s
  - Still nearly one-fifth of industrial output and bulk of net exports…
  - … in spite of continuous changes in demand, technology, competition, regulations, et.c.
- Capacity development: Institutions
  - To secure raw material supply
- Capacity development: Knowledge and skills
  - To adjust to changes in market conditions

The knowledge cluster

	Generation	**Dissemination**
Skills Education	Universities Research institutes	Research institutes
Knowledge Research	Universities Research institutes	Universities Research institutes

Today's forest industry: knowledge-intensive rather raw material-intensive

Other knowledge clusters

- Mining
- Metal industry
- Engineering
- Telecom and IT
- Pharmaceuticals
- Fashion?

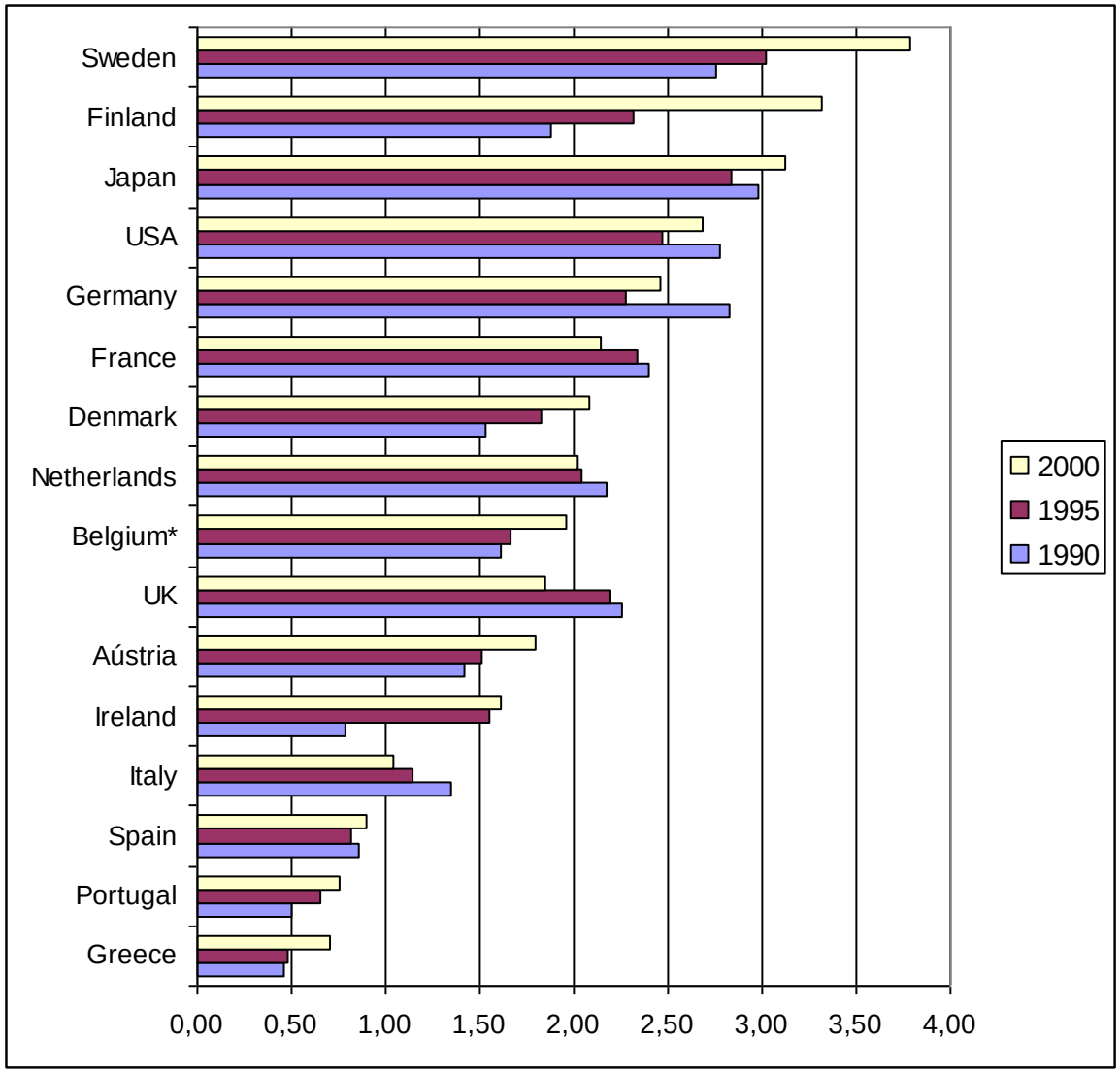
Prerequisities

- Broad-based education system needed to create necessary skill base
  - Public university system without tuition fees, plus grants and subsidized loans to cover living expenses
    - Universal rather than targetted benefits
  - Substantial investments into basic research
- Links between basic research and innovation activities
  - Triple helix

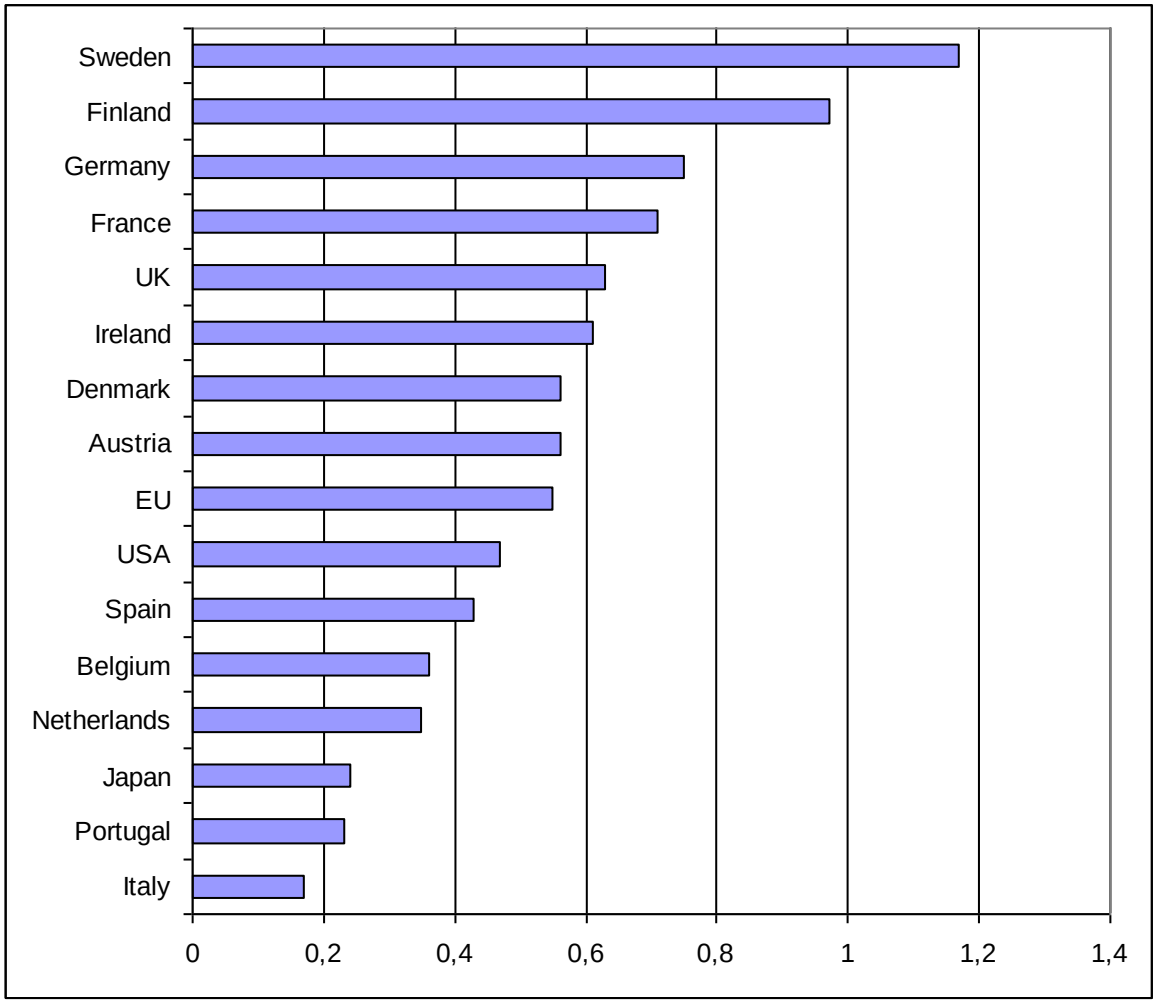
Result: a knowledge economy

- Sweden is a prominent knowledge economy investor…
  - R&D, education, training
- …and there are good outputs as well
  - patent rights, scientific publications
  - high tech production of goods and services: telecoms, internet, pharmaceuticals, finance, professional services

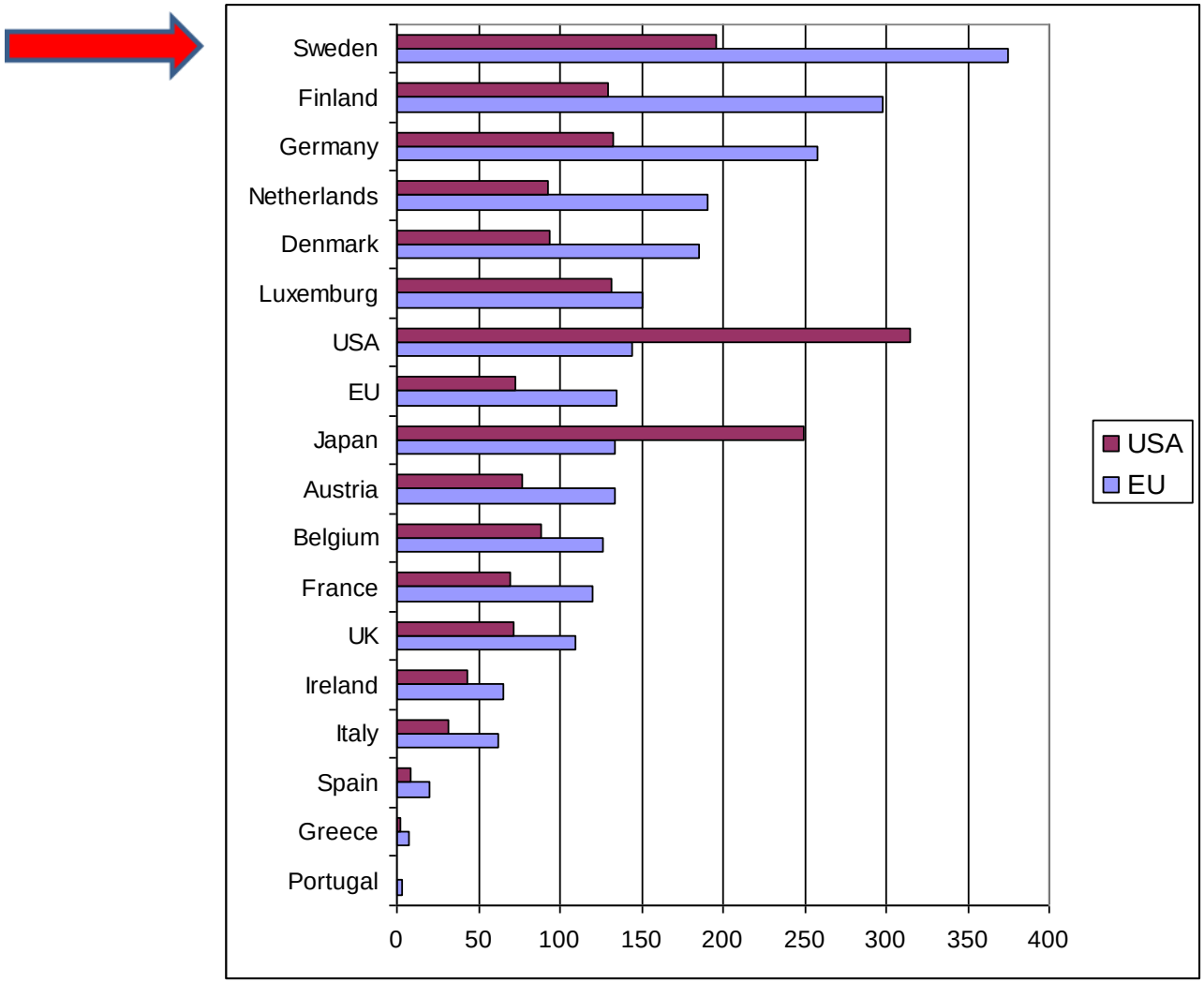
R&D as share of GDP, percent



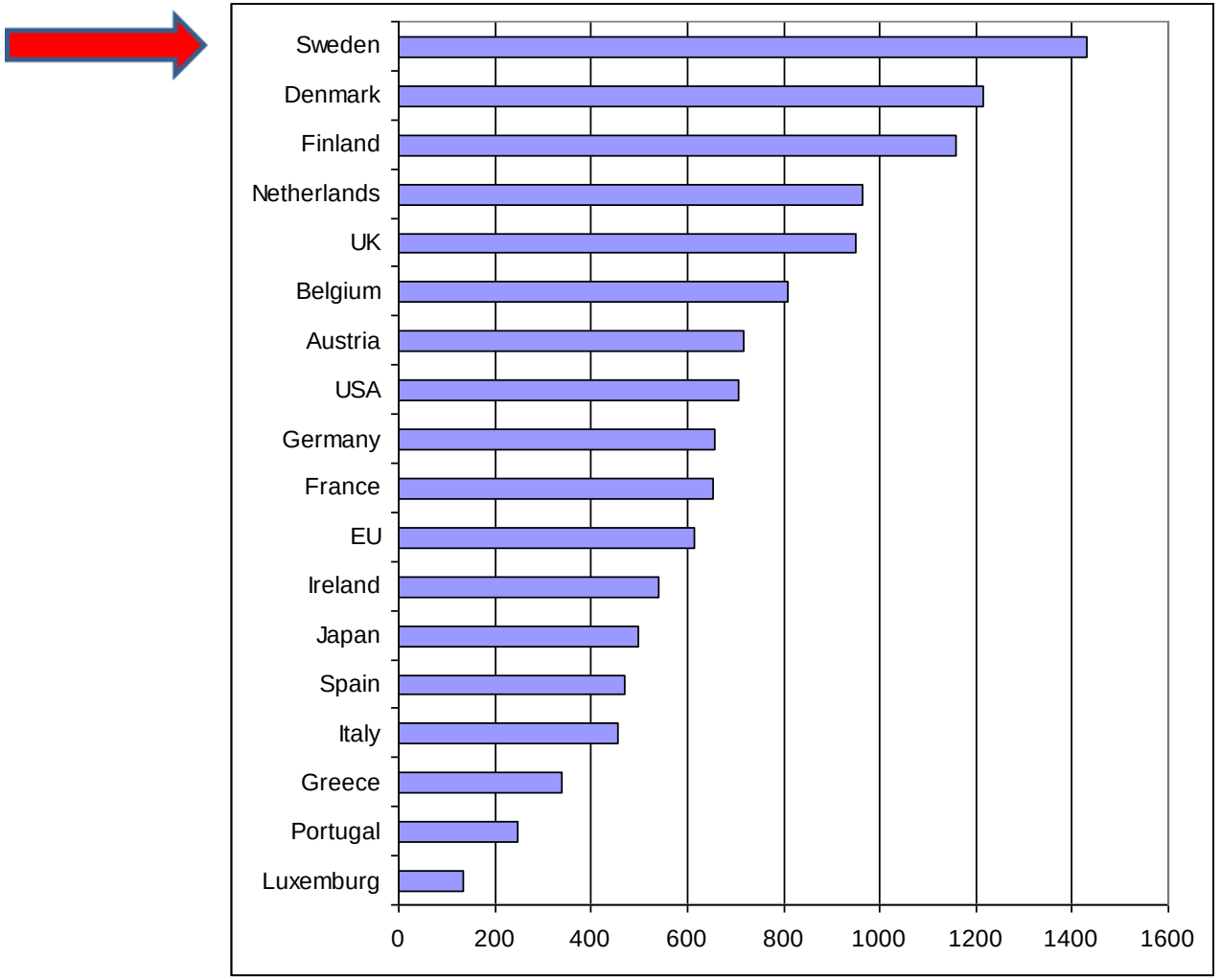
New PhDs in science and technology 1999, promille of 25-64 age group



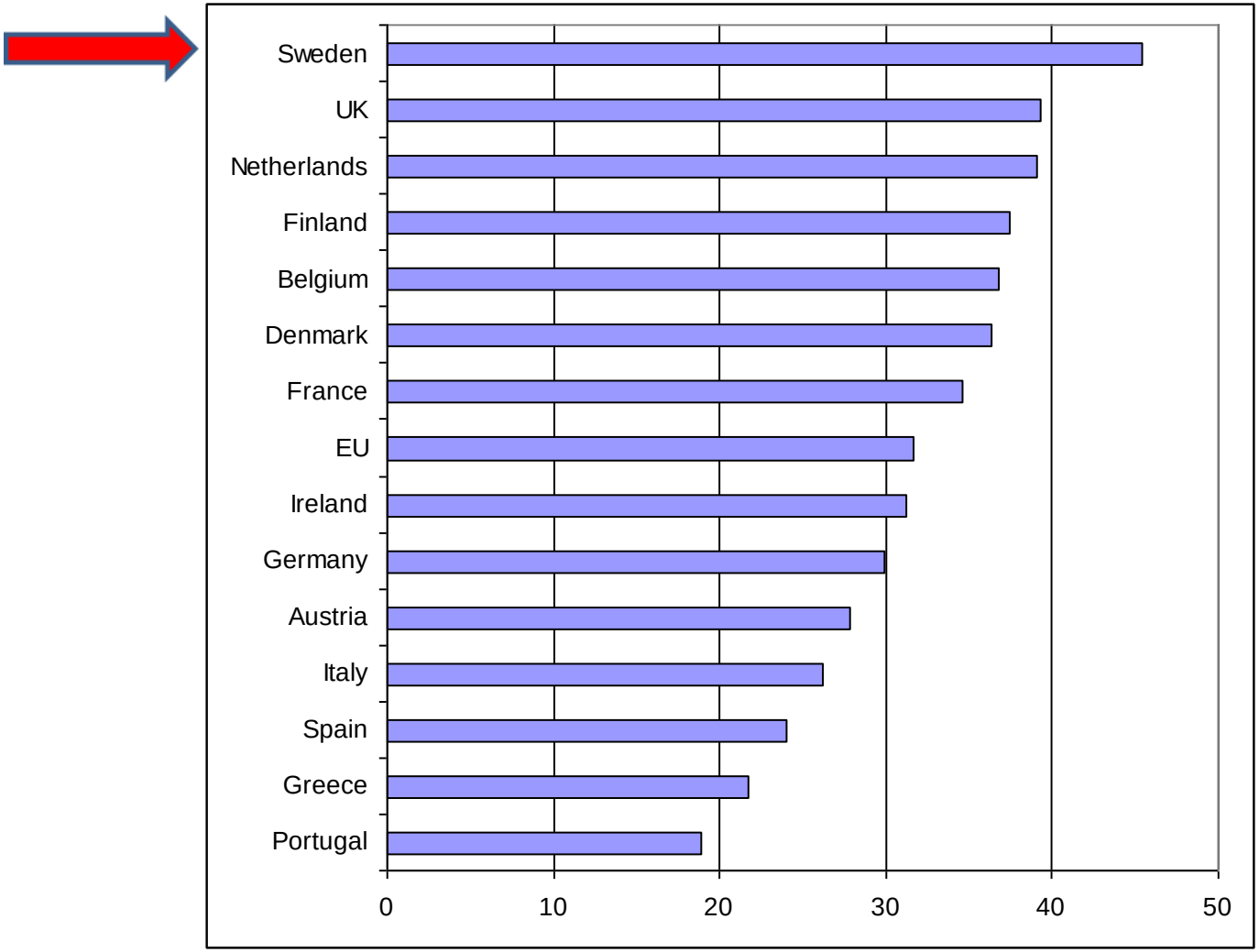
Patent issues in EU and US markets, per million inhabitants, 2000



Articles in scientific journals, per million inhabitants, 1999



Share of employment in knowledge intensive services, 1999, percent



Not only product innovation

- Business model innovation, service innovation

Result: Swedish industry structure

- Swedish industry is dominated by relatively large, well-known MNEs (unusually many for a small country)
- Focus on knowledge-intensive activities (often with clear resource base)
- Continuous focus on innovation
- Most of the market outside Sweden
- Expansion strategies based on greenfield investment
- Value-based governance: need to socialize foreign employees

- Role of egalitarian income policies: to stay in business, firms have been forced to match salaries paid by leading sectors

And the next step…?

OUR SEVEN COMMITMENTS

1. Provide fashion for conscious customers
2. Choose and reward responsible partners
3. Be ethical
4. Be climate smart
5. Reduce, reuse, recycle
6. Use natural resources responsibly
7. Strengthen communities

FROM THE LIFE OF BLAZER #0214443

This blazer is sold for £79.99/€129.

It is made of 83% organic cotton and 17% hemp.

No chemical pesticides or fertilisers have been used.

You can wear it and love it for many years, but if you don't want it anymore you can leave it at any H&M store and we will give it a new life.

FROM THE LIFE OF DENIM #0143891

Over 1 million pairs of this denim have been sold since 2012.

Today it's made using innovative waterless technology.

With this and other improvements in the production, the water use is 65% lower than before.

This means that almost 31 million fewer litres of water have been used.

FROM THE LIFE OF T-SHIRT #0141569

This T-shirt has been made with 50% organic cotton.

That means 19% less carbon emissions than using conventional cotton only.

About 26% of its carbon emissions occur when it's washed or tumble-dried at home.

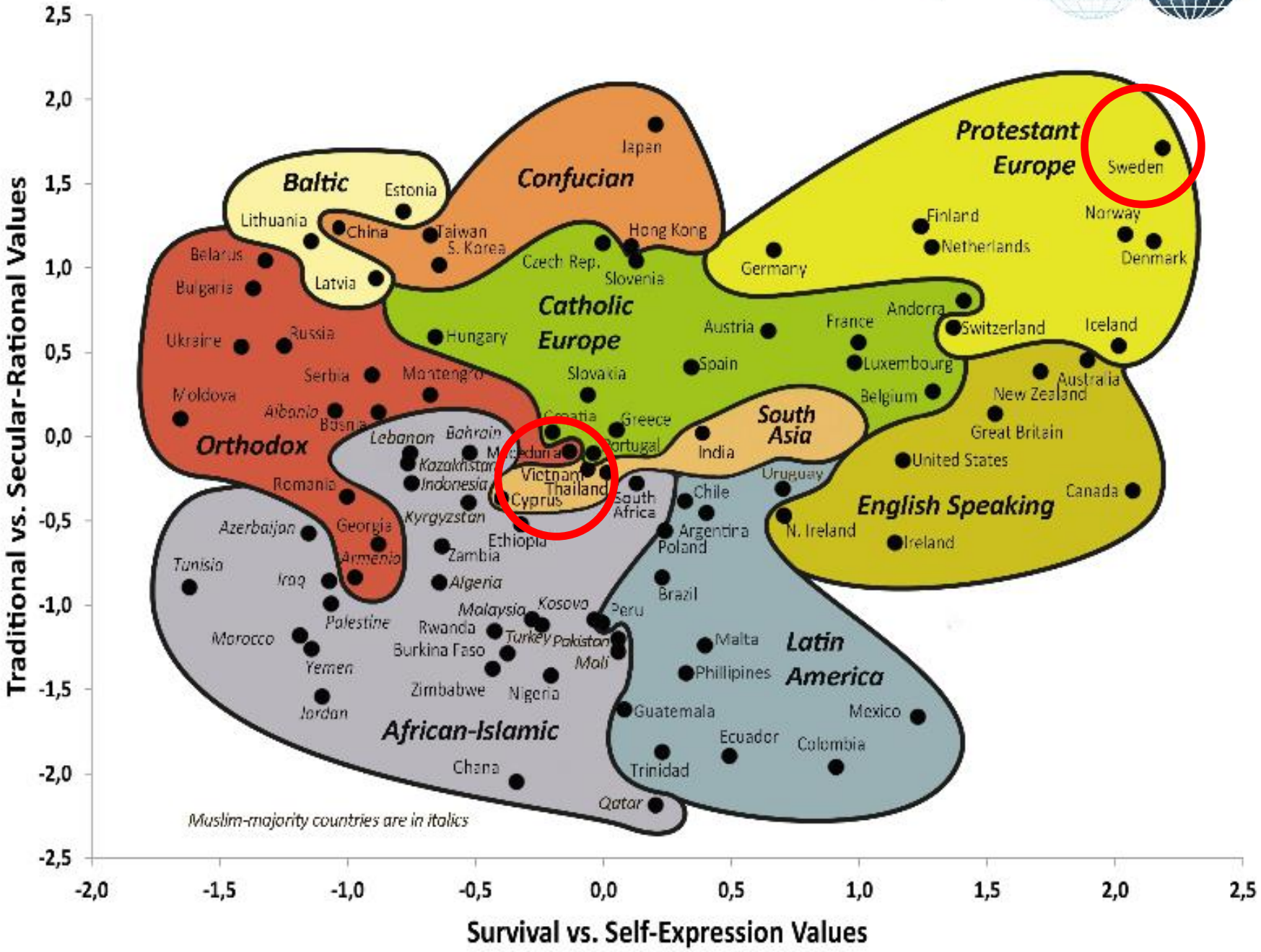
You can wash it at up to 60 degrees, but choosing 30 instead will save you money and requires 50% less energy.

Values and culture…

Our values

- Humbleness and willpower
- Leadership by example
- Daring to be different
- Togetherness and enthusiasm
- Cost-consciousness
- Constant desire for renewal
- Accept and delegate responsibility

But perhaps Sweden is extreme…?



Summary

- Path dependence: history matters
- Heavy focus on development of institutions, knowledge and skills needed to sustain competitive advantages in resource-based industry
- Knowledge clusters
- Values and culture