Finland as a Knowledge Economy

- Elements of Success and Lessons Learned

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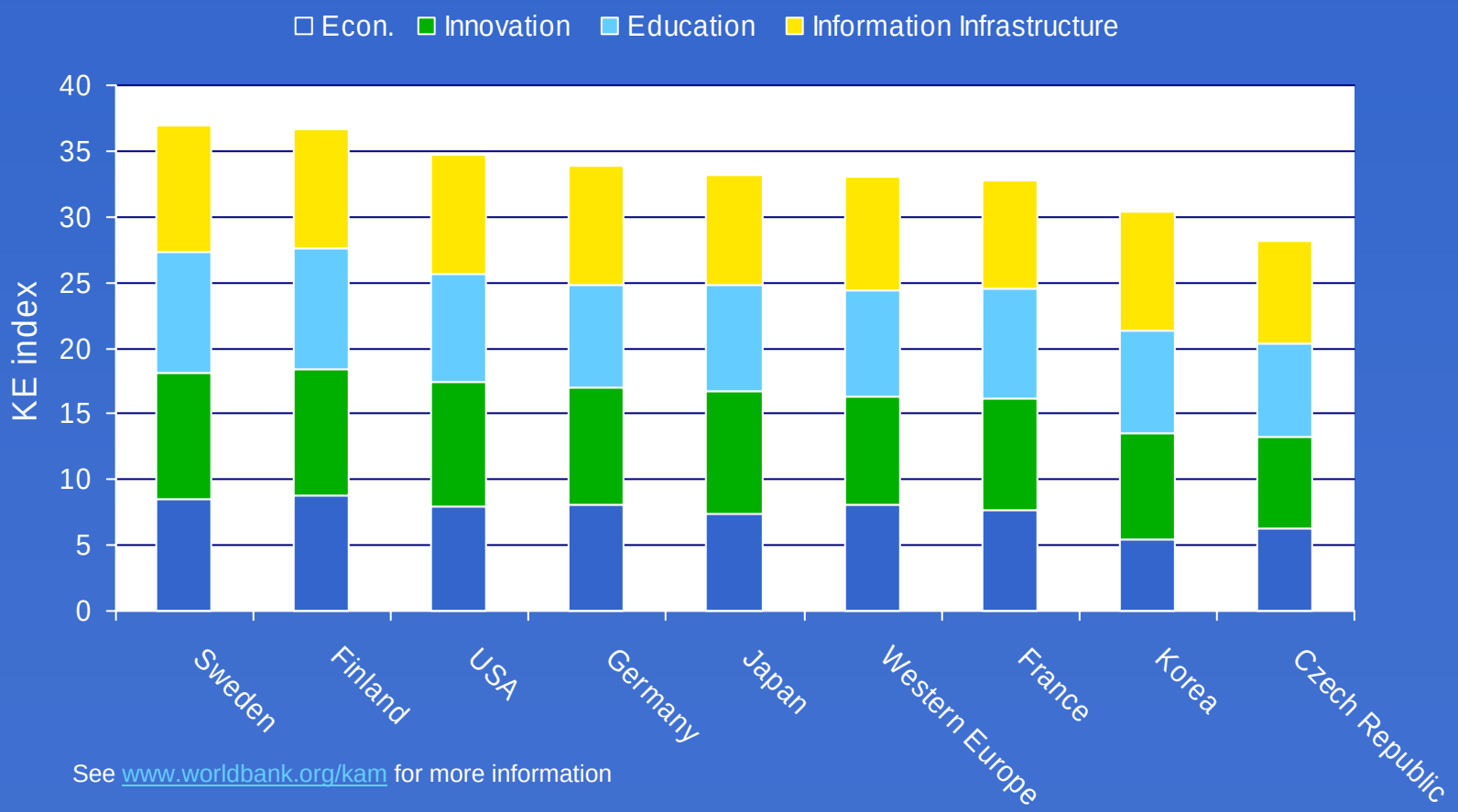
The Knowledge Economy Index (KEI) in selected countries and regions



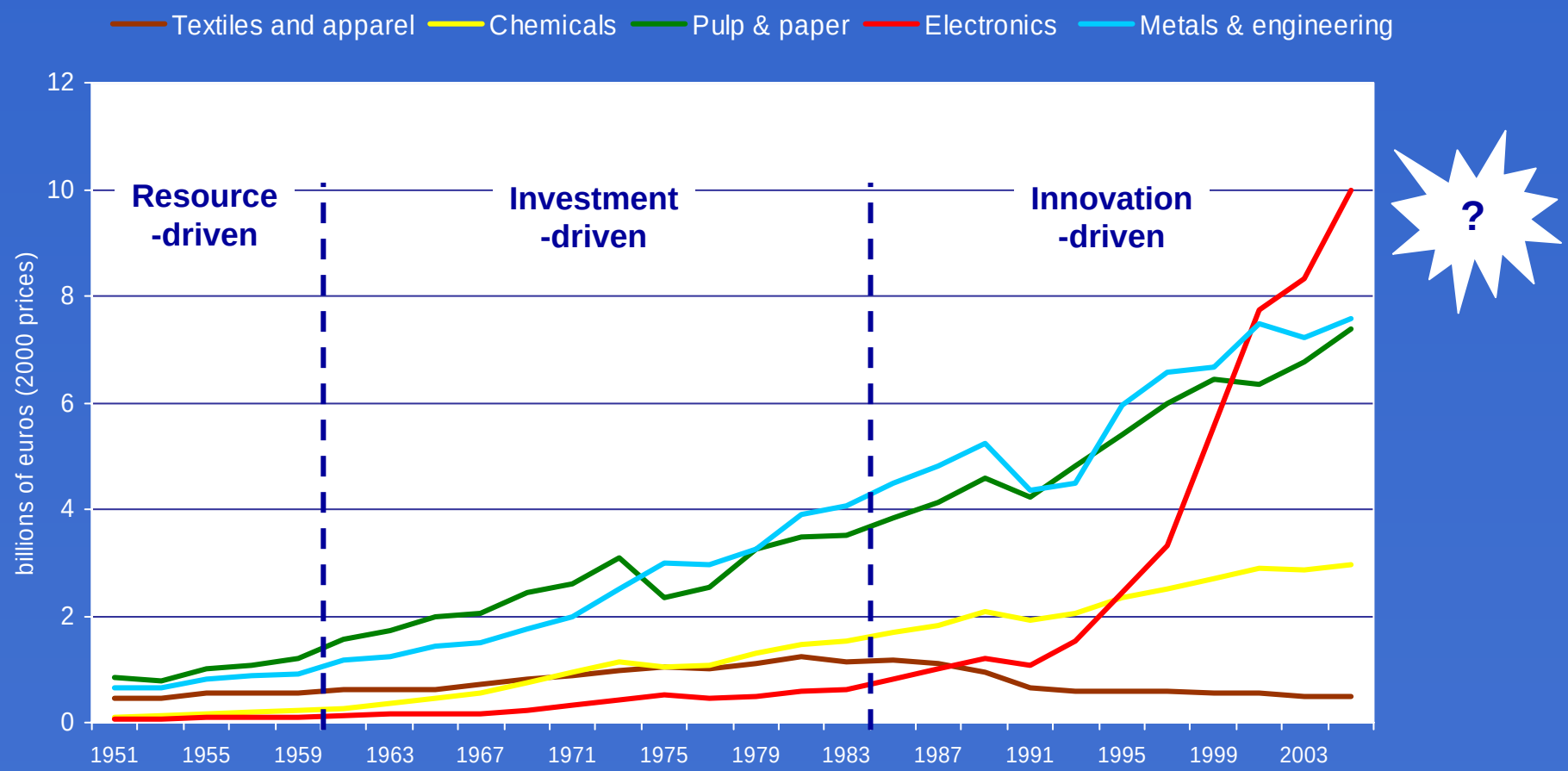
See www.worldbank.org/kam for more information

Structure of presentation

1. The Finnish path towards a Knowledge Economy (KE)?
2. How did Finland become a KE?
   - Role of industrial policies?
   - Successfulness, replicability?
3. Future challenges?

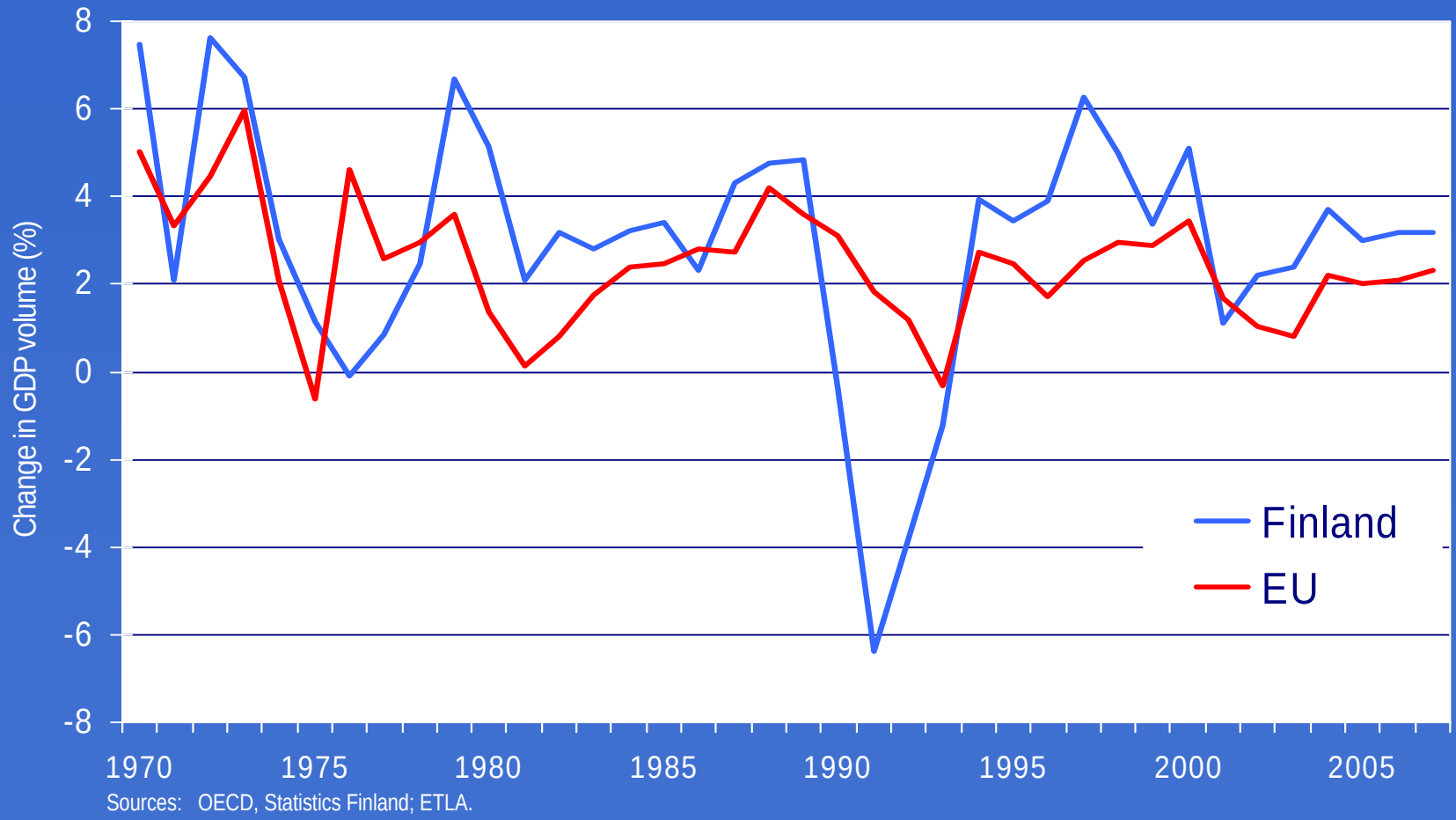
1. The Finnish path towards a KE?

Industrial transformation in Finland



Source: Statistics Finland

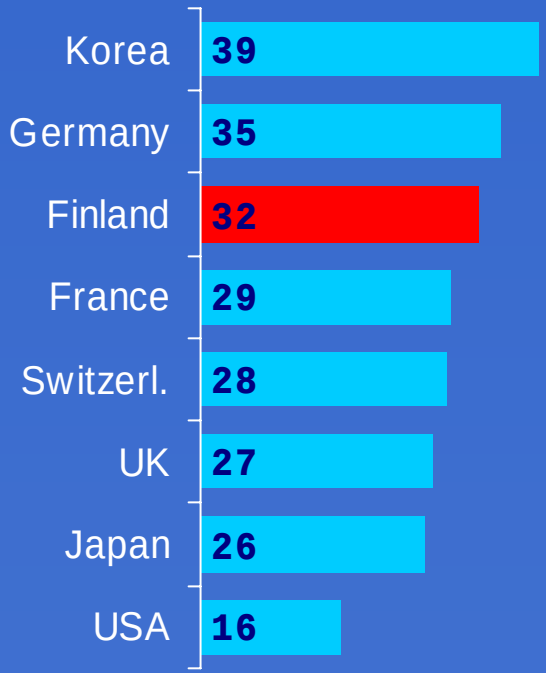
Seriousness of recession – Rapidness of recovery



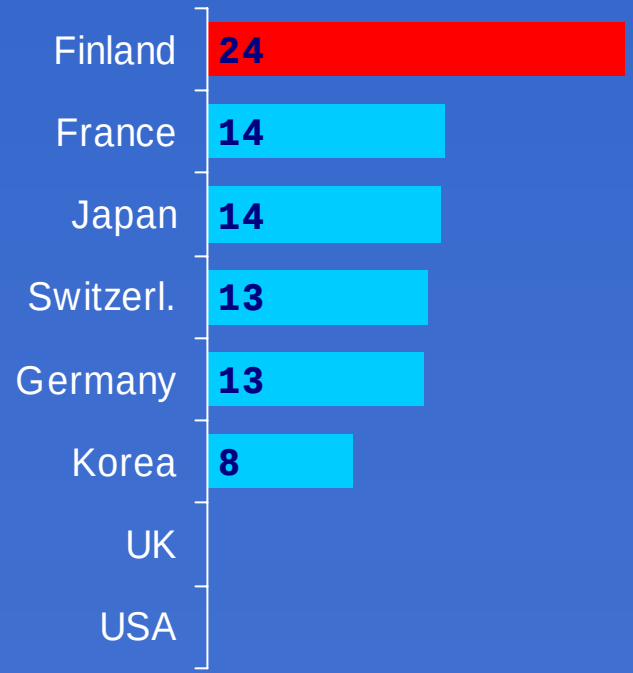
Sources: OECD, Statistics Finland; ETLA.

Heavy emphasis on education and R&D

Science & engineering grads, % of all ('98)



R&D personnel per 1,000 employment ('03)



Source: OECD

2. How did Finland become a KE?

Shift in broader economic policy regime

1950s - mid 1980s

- Investment-driven industrialization
  - Standardized products
  - Capital-investments
- Taxation
  - Supporting firm growth rather than profitability
- Public governance
  - Transparency
  - Concencus-building
- Strong commitment to education
  - Equality
- Industrial policies – short-term macro stability
  - Regulated markets
  - Active exchange rate policy
  - State-owned firms
  - Infant-industry support

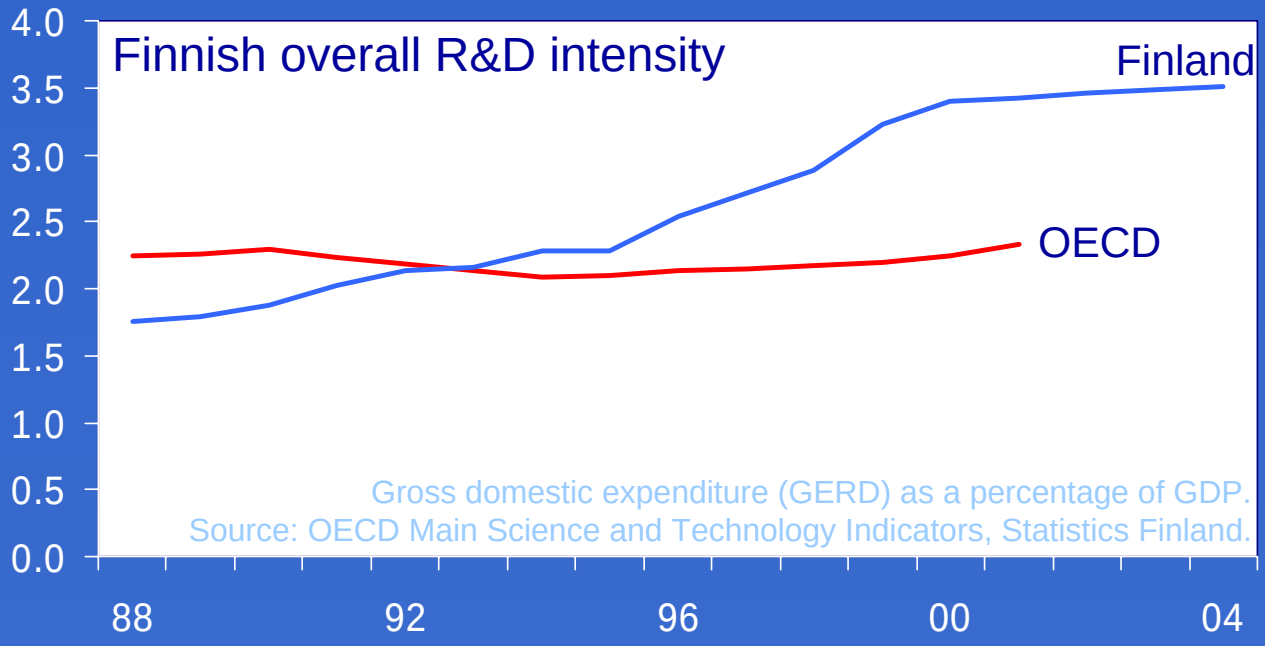
Late 1980s - ?

- Innovation-driven industrialization
  - Diversified and new products
  - R&D-investments
- Taxation
  - Neutralization through tax reform
- Public governance
  - Transparency
  - Concencus-building
  - New institutions
- Strong commitment to education
  - Equality
  - Rapid increase in ICT enrollment
  - Emphasis on vocational training, adult training etc.
- Industrial policies – longer-term conditions providing
  - Liberalization
  - Fusion of S&T and industrial policy
  - Partial privatization
  - Emphasis on R&D and innovation

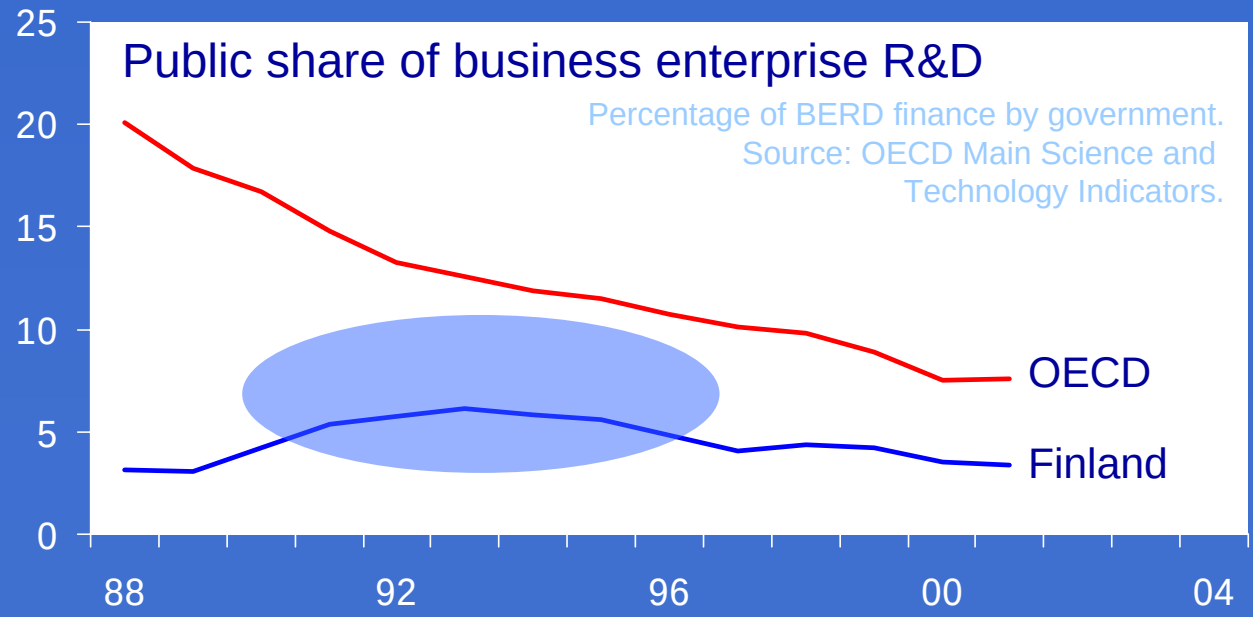
Milestones in the reorientation of IP

- 1987: founding of S&T Policy Council in 1987
- 1988: first reference to ’NIS’ in policy analysis
- 1990: S&T Policy Council review takes NIS as cornerstone for policy - focus on R&D
- 1991: reference to Porterian concept of ’clusters’, large research project involving ETLA in background
- 1993: MTI white paper ’National Industry Strategy for Finland’
- 1996: S&T Policy Council review highlights importance of ’KE’
  - Increase in R&D expenditures in 1996 with aim to raise R&D/GDP to 2,9%
  - Cluster program, regionalisation of IP
- 2001: MTI white paper ’Business Environment Policy in the New Economy’
- 2003: S&T Policy Council raises concern over utilization of university research and globalization
  - Working group in 2005 for reforming the research system
- 2004: ’Finland in the Global Economy’ -strategies 2004-2006

Despite deep recession, more emphasis on R&D…



…but still low public share



Successfulness, replicability?

- Policies mattered although in an indirect and responsive way. There was no master plan or magic recipe!!
  - Roots of industrial success date back to 1950s and 1960s – policies emerge in mid 1980s
  - Basic policy design copied from Sweden, OECD etc.
  - Increase in R&D etc. mainly due to private sector developments (Nokia is another story!)

- But there has been successful elements:
  - State-owned firms as industrialization strategy in 1950s and 1960s (national champions?)
  - Education always a high priority, flexibility and high absorptive capacity (density of networks)
  - Evidence of complementarities:
    - R&D and education
    - R&D in private and public sectors
  - Many relatively small-scale technology programs
    - Competitive funding in selected technology fields
    - Collaborative and application-oriented
  - Institutional preconditions:
    - S&T Policy Council, Sitra ⇨ concensus-building
    - Decentralized decission-making: Tekes, Academy of Finland
    - Deregulation, transparency, concencus-building public governance
  - Policies are implemented, not only formulated

3. Future challenges?

Globalisation…!

Some future challenges

- Finnish R&D-oriented strategy subject to increasing competition due to globalisation
  - Relocation of production...and R&D?
  - How should the R&D budget of 1,68 billion € be allocated?
    - Technology fields, types of activity...etc.
    - Ear-marked vs. tax reliefs
  - Sustainability of the welfare state - ageing of the population?
- Imbalances in FDI, sluggish entrepreneurship
- Productivity and renewal of traditional industries?
- What happens in the ICT sector – what happens to Nokia?
- Can we expect a ‘new Nokia‘ in another field? What about biotech, nanotech, bio-nano-ICT?

Nokia in the Finnish economy

Nokia's estimated 2005 share in	
GDP	3%
% point contribution to GDP growth	0,5%
R&D (GERD)	33%
Exports	20%
Employment, total	1%
Employment, manufacturing	5%
Market value at HEX	~40%

Source: Etla estimates

Thank you!

For further information:

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