

# Swedish Experience of Collecting Data on Inward and Outward Research and Development

Anne-Christine Strandell, ITPS

\*

Knowledge Economy Indicators

Helsinki 2 - 3 March 2006

# Surveys on R&D in Sweden



- Outward R&D in 20 Swedish international enterprise groups (60 enterprises) in manufacturing industry
- Inward R&D in 10 foreign controlled enterprise groups (30 enterprises) in manufacturing industry
- R&D in Sweden by  
Foreign controlled enterprises  
Swedish international enterprises  
Domestic enterprises
- Foreign takeovers in the Nordic countries (FOTON)
- Internationalisation of corporate R&D (ITPS)  
10 studies including China, India, Japan and Sweden

# Globalisation of R&D with focus on big enterprise groups in Sweden

## **Outward R&D - 20 groups**

- LM Ericsson, Saab, Sandvik, SCA, Scania, Volvo
- Alfa Laval, Assa Abloy, Atlas Copco, Cardo, Duni, Electrolux, Gambro, Getinge, Industrier, Haldex, Hexagon, L E Lundbergföretagen, Lindéngruppen, SKF, Sydsvenska Kemi

## **Inward R&D in 10 groups**

- AstraZeneca, Pharmacia (Pfizer), Volvo Car (Ford) Stora Enso, ABB, AGA (Linde) Svedala Industri (Metso), BT Industries (Toyota) + 2 groups with no available data on R&D in Sweden

# Outward R&D - variables

R&D expenditures by country  
R&D person years by country  
Educational qualifications by country

How and why big changes in R&D?  
Role of government?

# Inward R&D - variables

R&D expenditures in Sweden

R&D person years in Sweden

R&D in Sweden as a percentage of the group's global R&D

Educational qualifications in Sweden

How and why big changes in R&D?

Role of government?

# Increased R&D Abroad by Swedish International Groups

## **How**

Acquisitions, Greenfield

## **Why**

Adapt product & processes

Need of supporting production

## **Role of Government to maintain or increase R&D in Sweden**

Reduce taxes & financial support

Education, supply of skilled people

# Increased R&D in Sweden by Foreign Controlled Groups

## **How**

Expansion of existing capacity

## **Why**

Need of supporting production

Access to research in Sweden

## **Role of Government to maintain or increase R&D in Sweden**

Public financing of research at universities

Attraction of foreign experts and researchers

# Research questions ITPS project on Corporate R&D

- How much of R&D is global?
- What are the driving forces and barriers?
- What are the challenges and opportunities for countries?
- What are the policy options, especially for Sweden?



# Objective of Foreign Takeovers in the Nordic Countries

To study the impact of foreign takeovers on local innovation capabilities in the Nordic countries

To study how this issue is approached by policy makers and give examples of good policy practices in this area



# CIS findings

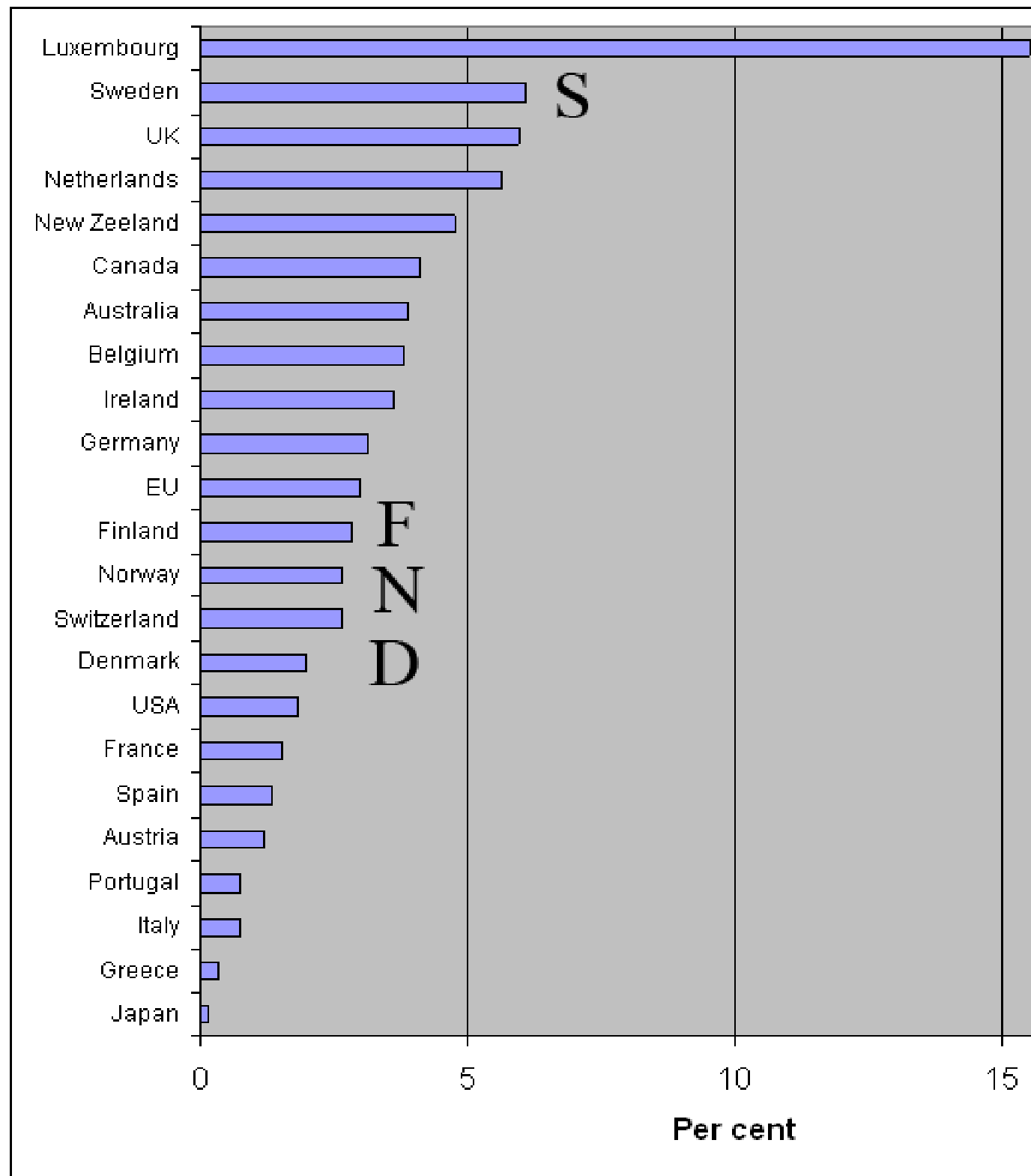
**There are no truly significant differences between domestic companies and foreign multinationals as regards innovation activities.**

*However, domestic multinationals*

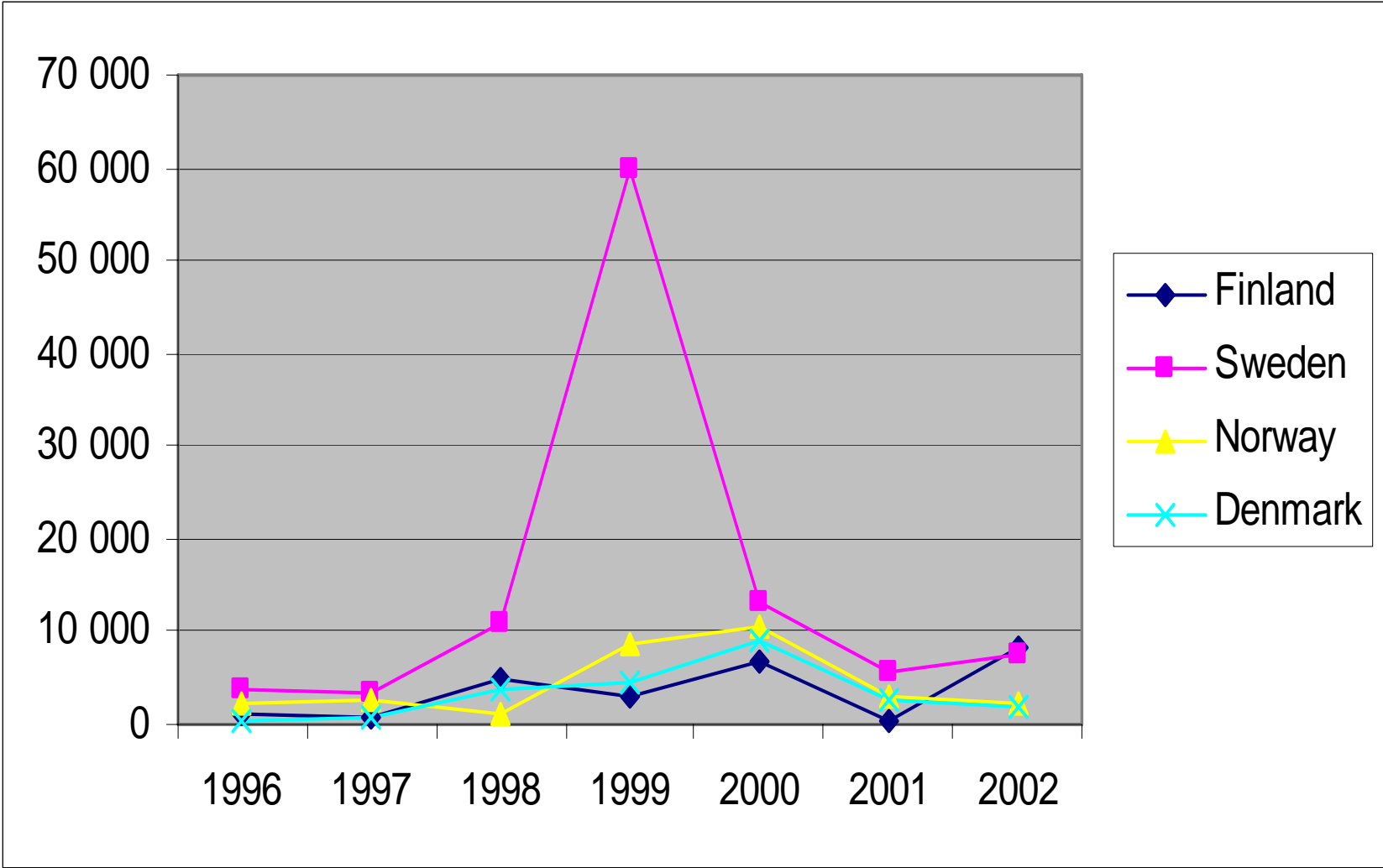
- outperform foreign owned firms in terms of R&D investments in Finland and Sweden.
- are the main beneficiaries of public R&D support
- are also more closely embedded in the national innovation system compared to foreign multinationals

The value of Inward Mergers and Acquisitions in per cent of GDP, 1996-2002.

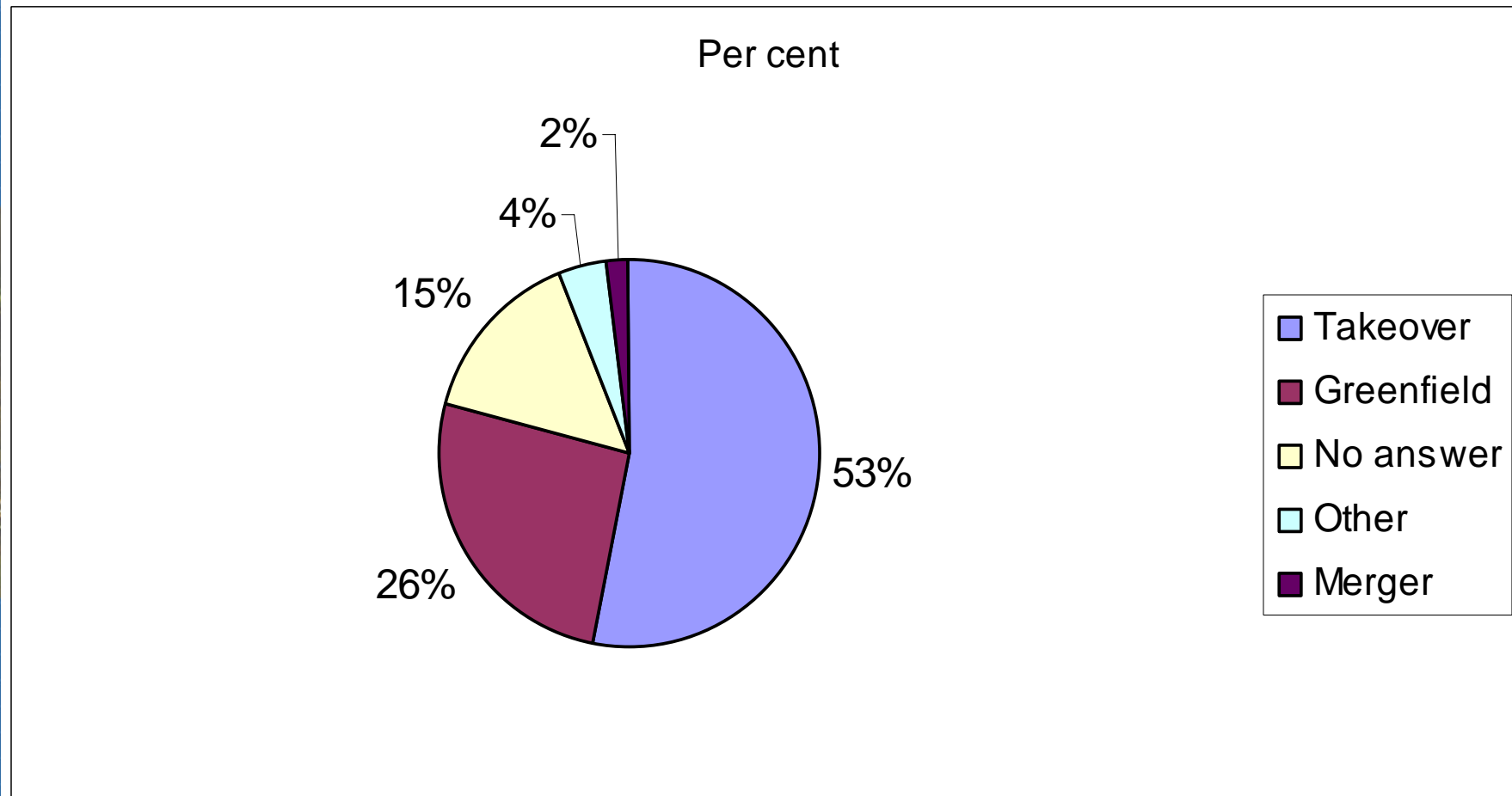
Denmark, Finland, and Norway should be able to attract more foreign investments.



# Foreign takeovers, Million USD



## Mode of entry in Sweden 2004 by number of enterprises



Data on mode of entry is only available in Sweden

## The three biggest investors in the Nordic countries by number of employees

Host country	Country of origin 1	Country of origin 2	Country of origin 3
Denmark 1999	The US	The Netherlands	Germany
Finland 2002	Sweden	The US	Denmark
Norway 2002	Sweden	Denmark	The Netherlands
Sweden 2002	The US	UK	Finland

Note: DK, share of value added