

# Service marks as indicators for knowledge-based services

Stephan Gauch

Ulrich Schmoch

Fraunhofer Institute for Systems and Innovation Research

[stephan.gauch@isi.fraunhofer.de](mailto:stephan.gauch@isi.fraunhofer.de)



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# The innovation indicator landscape

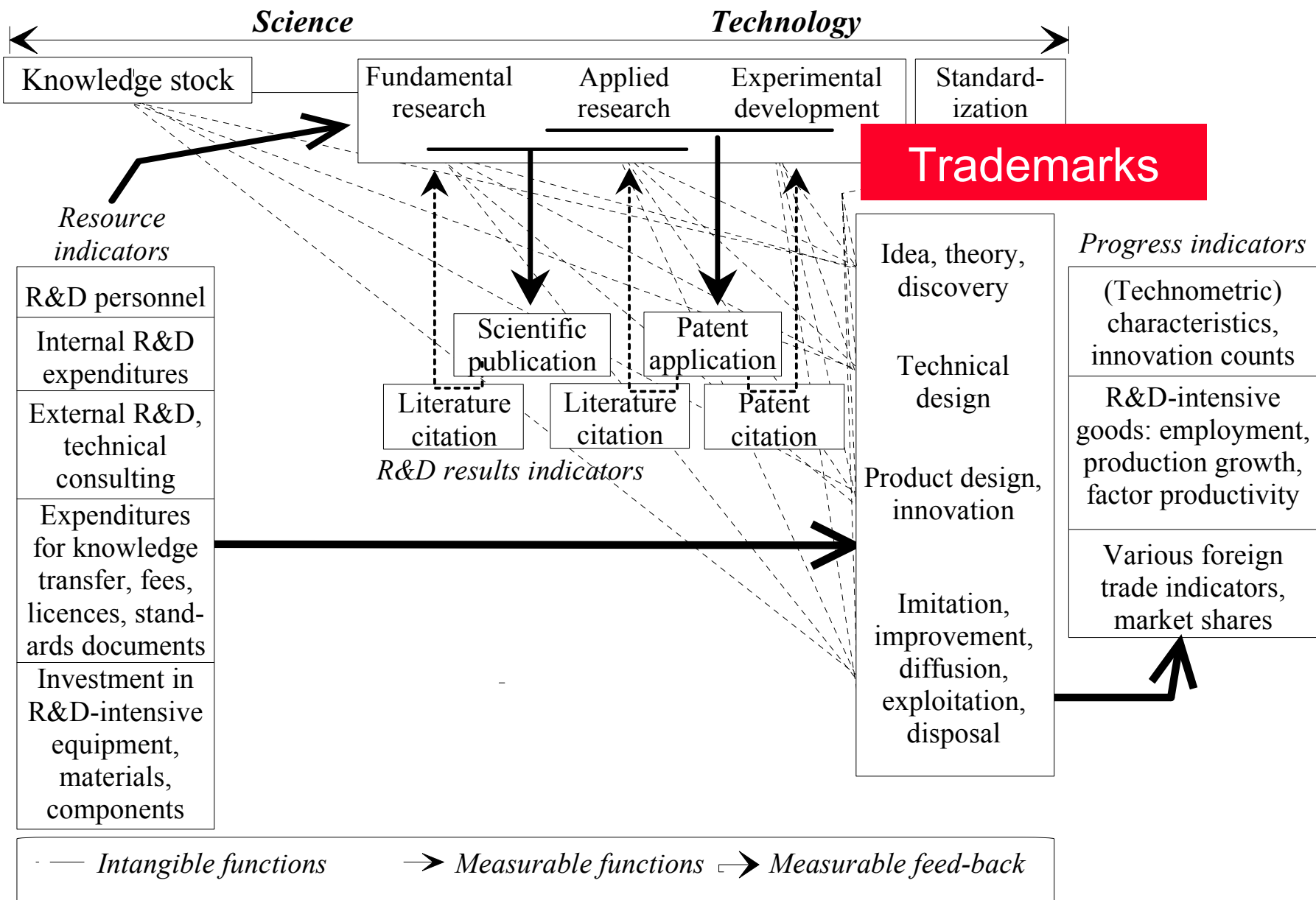
## A short film

Directed by

The community of innovation indicator researchers



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# The End



# Service marks as indicators for knowledge-based services

The main movie

Why do we need trademarks as indicators?

What are the problems in current trademark analyses?

How to solve these problems?

Some Results!



# Why do we need another innovation indicator for services?

- Services become more important
- Measure innovation in services using survey data? (CIS)
- There exist some innovation indicators for services like labour force, turnover etc. (data only for few countries!)
- Patents for services? (in "some" IPR regimes)
- How measure innovation in product-related services?



# Criteria for trademarks as innovation indicators (Schmoch 2003)

- A significant correlation between marks and innovation must exist.
- Sufficiently high number of trademark applications
- Databases should be available
- Sufficient level of disaggregation (subsectors, time, etc.)
- Comparative approach between countries has to be possible



# Current research in quantitative trademark analysis

- Actual research in quantitative trademark analysis to measure innovation

- Djellal & Gallouj (2001)
- Schmoch (2002, 2003, 2004)
- Gatrell & Ceh (2003)
- Mendonca, Pereira & Godinho (2004)
- Gauch (2005)
- Magani (2006)
- ...

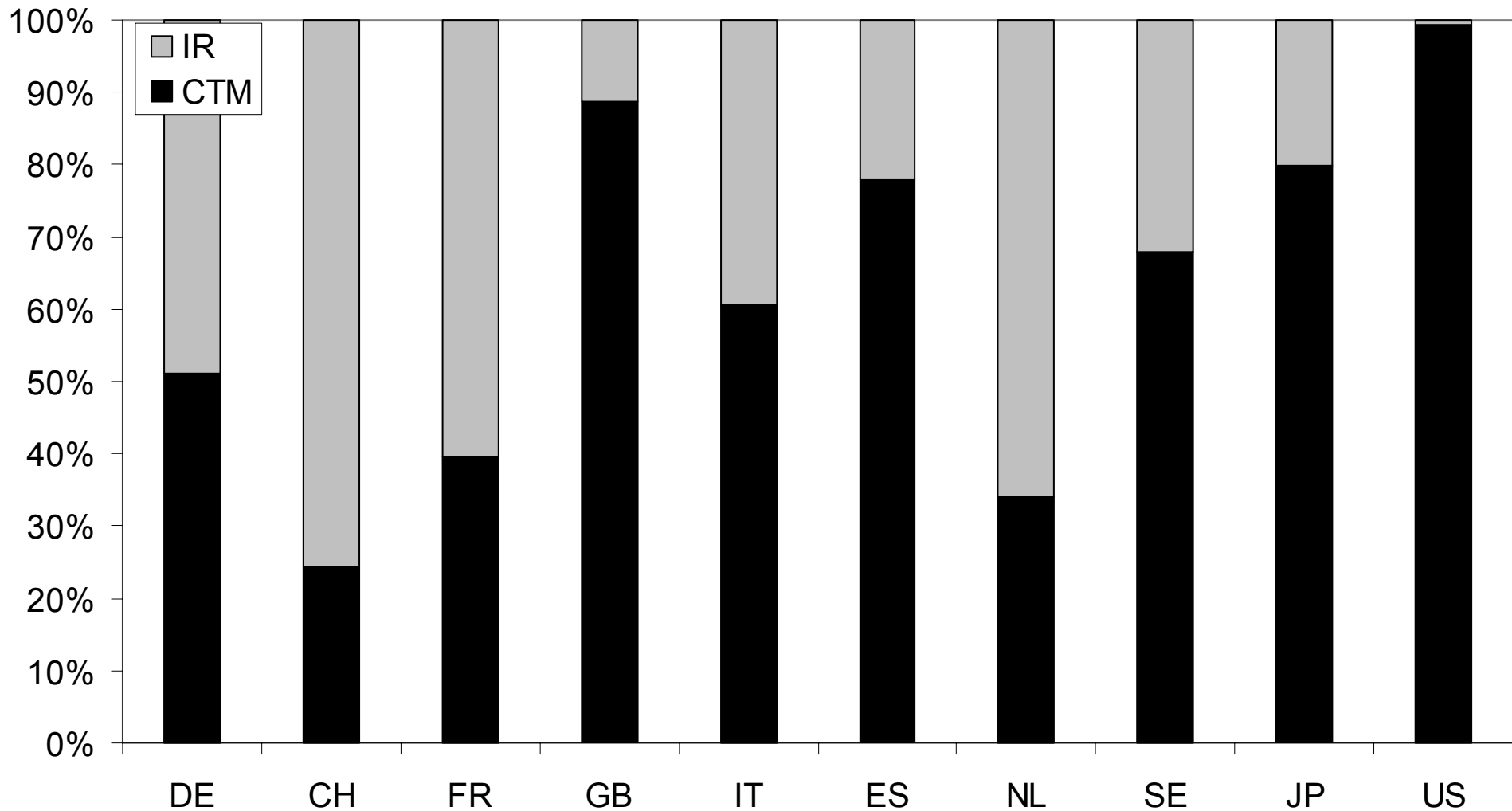


# Problems in current trademark analysis

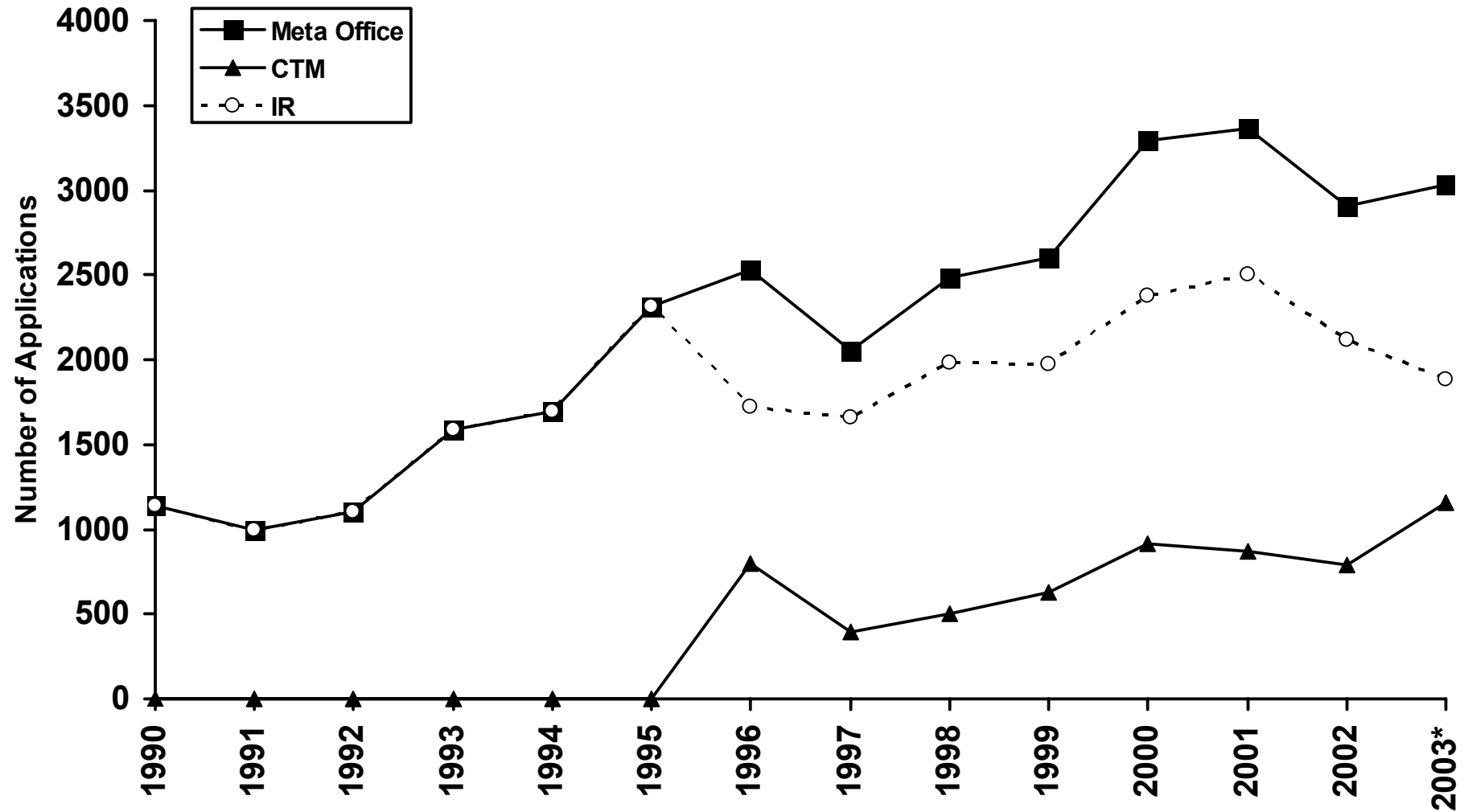
- Problems in current trademark research
  - International Registrations vs. Community Trademarks
    - Underestimation using only CTM (e.g. in Switzerland)
    - "Meta-Office" == sum of IR and EU trademarks/country
  - Does not account for product-related services
  - Level of abstraction often too high to draw sector-based conclusions

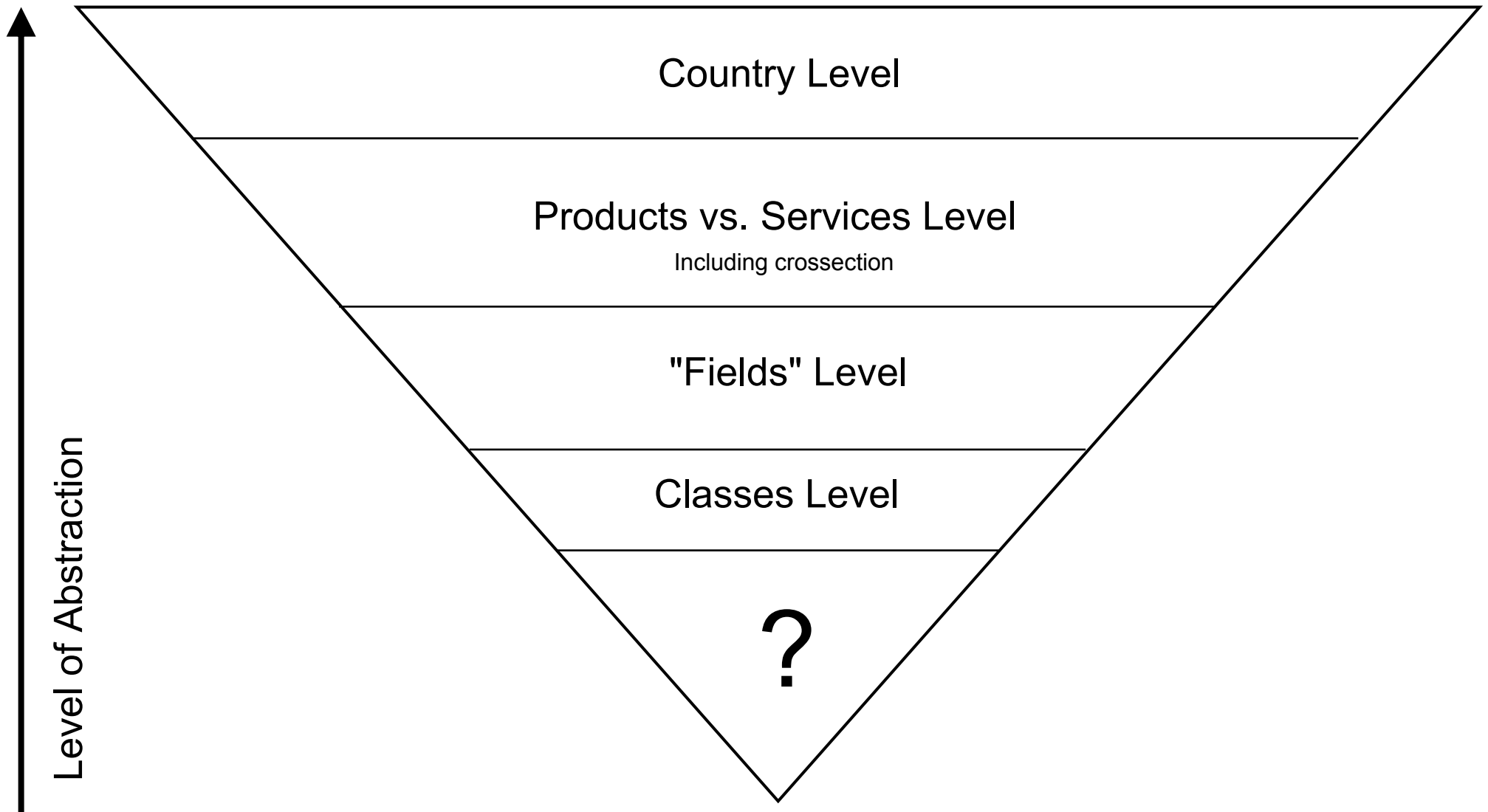


# Distribution of filings of IR and CTM trademarks for selected countries in 2002



# Trademark Applications in Switzerland between 1990 and 2003 by Regime

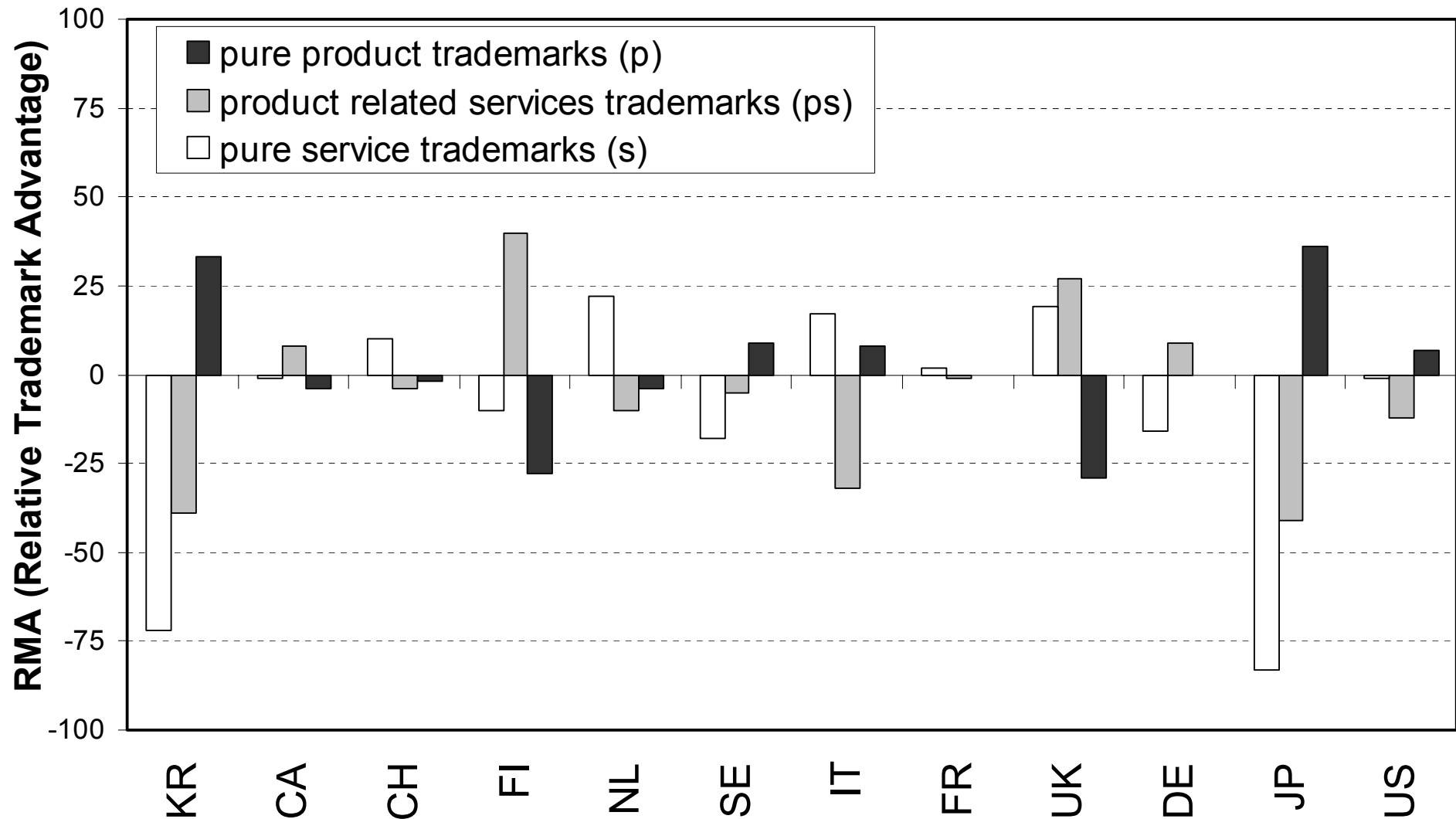




<b>Field</b>	<b>Nice Class</b>
Chemistry	1, 2, 3, 4, 13
Pharmacy	5
Metal Products	6
Machinery	7, 8
Electronics	9, 14
Medical Technology	10
Electrical Devices	11
Vehicles	12
<b>Products</b>	
Management	35
Finance	36
Repair	37
Telecommunications	38
Transport	39
Material Treatment	40
Entertainment	41
Other services	42 (43, 44, 45)



# Specialisation of EU and IR trademarks for selected countries of product, service and product/service trademarks in 2002/2003



$$RMA = 100 \tanh \ln [(M_{ij} / \sum_i M_{ij}) / (\sum_j M_j / \sum_{ij} M_{ij})]$$



# The Problem of the Nice Classification

## Nice Class 9:

Scientific, nautical, surveying, photographic, cinematographic, optical, weighing, measuring, signalling, checking (supervision), life-saving and teaching apparatus and instruments; apparatus and instruments for conducting, switching, transforming, accumulating, regulating or controlling electricity; apparatus for recording, transmission or reproduction of sound or images; magnetic data carriers, recording discs; automatic vending machines and mechanisms for coin-operated apparatus; cash registers, calculating machines, data processing equipment and computers; fire-extinguishing apparatus.



# The Problem of the Nice Classification

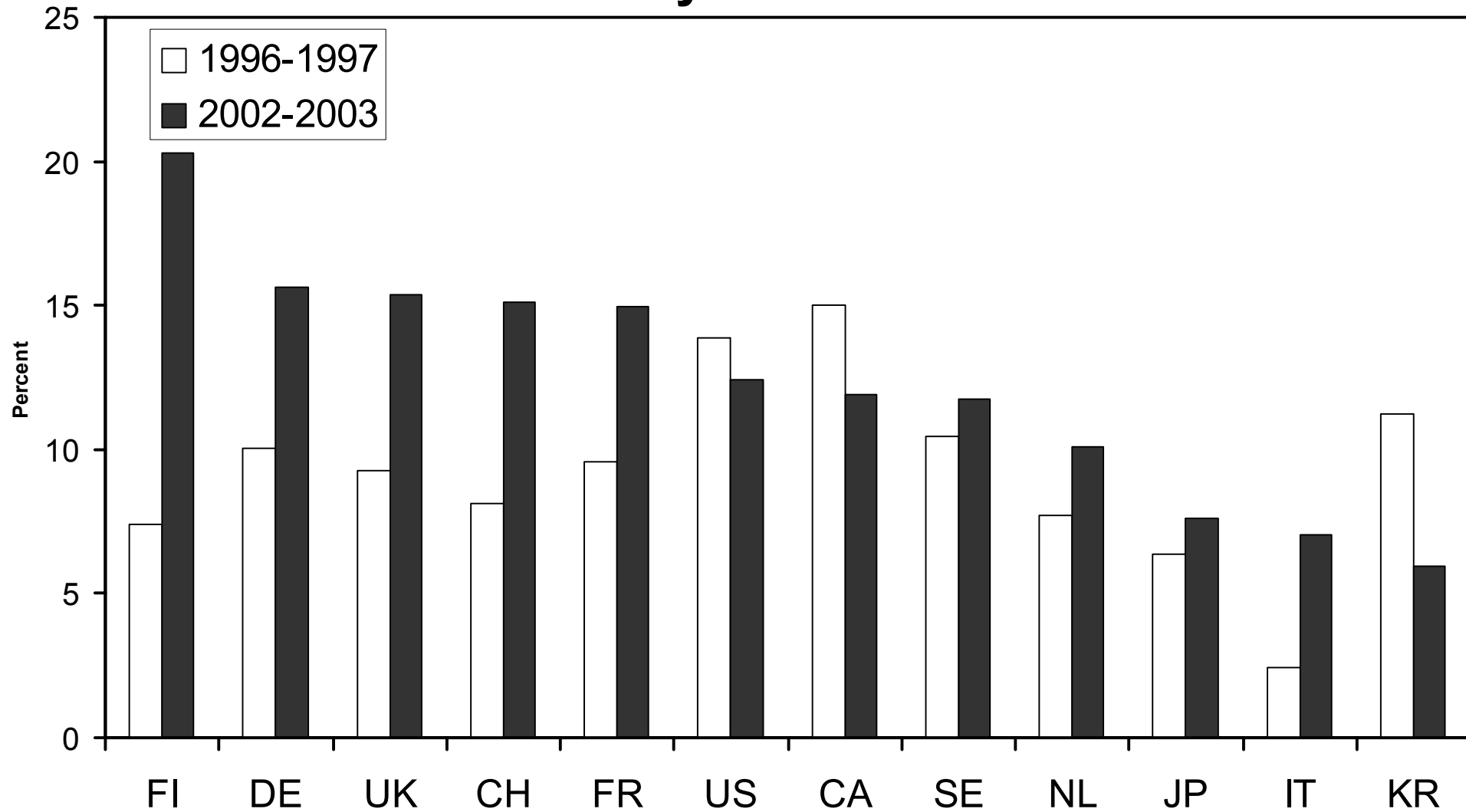
## Nice Class 42:

Scientific and technological services and research and design relating thereto; industrial analysis and research services; **design and development of computer hardware and software**; legal services.

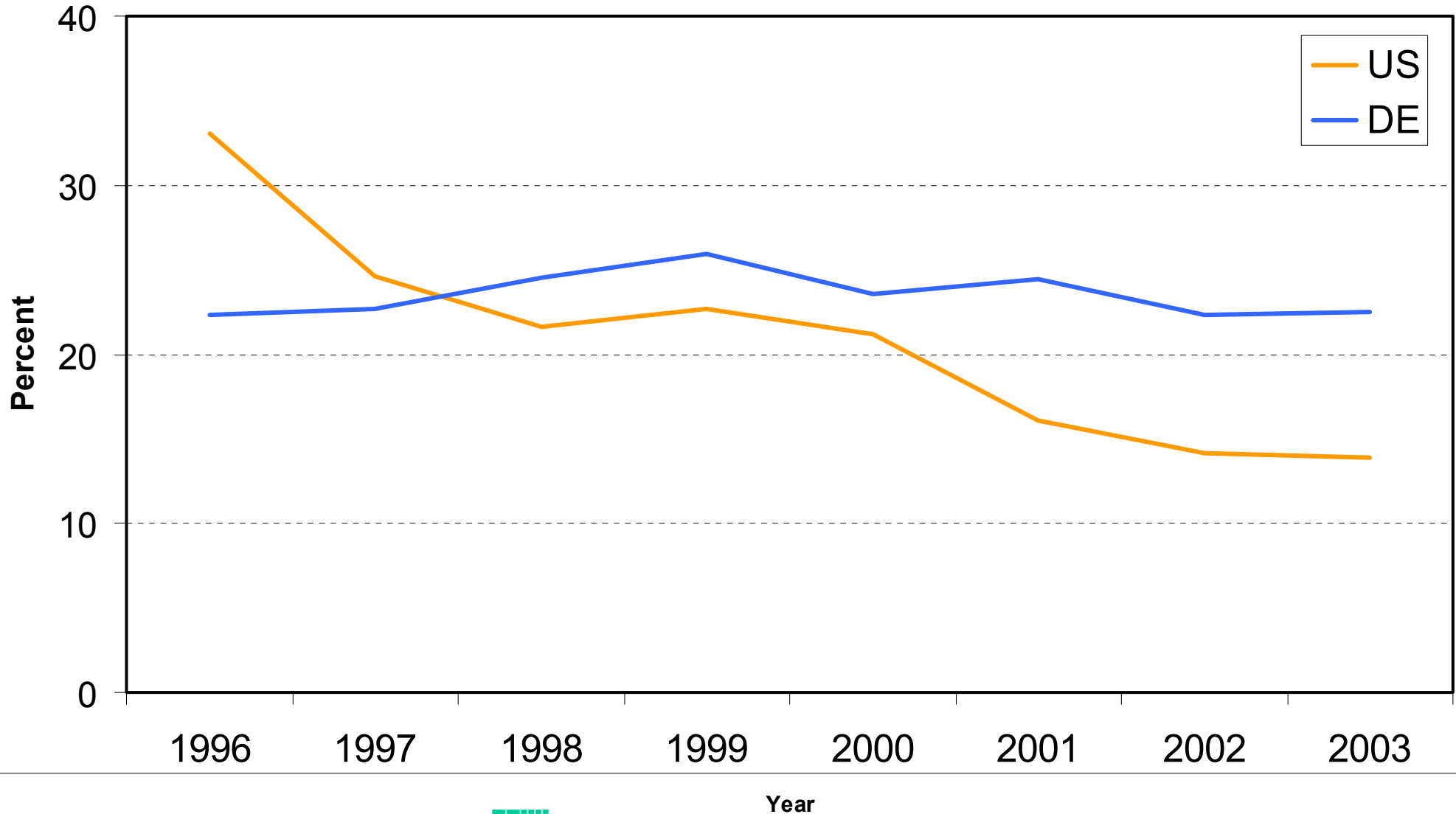
**Solution:** Using additional keyword based strategies on the "Goods and Services"-Field in Trademarks



# Shares of IT related trademarks for selected countries for 1996/1997 and 2002/2003 by total



# Share of EU and IR IT related trademarks between 1996 and 2003 for Germany and the US



# Discussion

- Trademarks are suitable innovation (output) indicators for services!
- To draw comparative conclusions "Meta Office" analyses have to be conducted!
- To draw sector-based conclusions keyword-based strategies are necessary!
- Relation of patents and trademarks in the US (complementary vs. substitutive?)

# Thank you!



# Share of German enterprises (in percentages) using patents or marks

Sector	Patents	Marks
Manufacturing	20	16
Total services	6	8
Wholesale trade	9	18
Retail trade	1	3
Transport, postal services	1	2
Finance, insurance	1	10
Data-processing, telecommunications	7	12
Technical services	20	13
Consulting	2	5
Renting	7	15
Other services	11	6

Source: Computation by Christian Rammer (ZEW), based on data of the Mannheimer Innovationspanel, 2000



# Analysis of the impact of different variables on innovation in knowledge-intensive services (Germany)

Sector	Indicator	Correlation
Manufacturing	Patents	Highly significant
	Marks	Highly significant
All services (without trade)	Marks	Significant
Technology-oriented services	Patents	Highly significant
	Marks	Low significance
Knowledge-intensive services	Patents	Low significance
	Marks	Significant

