

**COST Action IS0605 –
Econ@Tel:
A Telecommunications
Economics COST Network**

IPTS, Sevilla 2-4 April 2008

A BRAND NEW INDICATOR

**Telecommunications through the lens
of trademark applications, 1996-2007**

Sandro Mendonça

ISCTE – Lisbon University Institute
SPRU, University of Sussex

Roberto Fontana

University of Pavia
CESPRI, Bocconi University

Overview:

Motivation

Conceptual issues

Empirical applications

Conclusions

“... too much energy has gone into squeezing the last bit of juice out of old data collected for different purposes relative to the design of new types of data”

Kenneth Arrow

The motivation:

Measuring change

- **Innovation and industrial transformation are difficult to measure**
- **Dynamic competition is a complex, multidimensional phenomenon**
- **Is an important task since it is a key driving force behind growth**

The argument:

Trademark data can be seen as

- **A partial output indicator of innovative activity**
- **An empirical tool for researching industrial dynamics**
- **An empirical ingredient for analysing sectoral competitiveness and economic growth**

In search of a new indicator:

WHY TRADEMARKS?

Trademark statistics are interesting because:

- increasingly available on electronic platforms**
- regular long-term data availability**
- broken down by product classes**
- close to commercialisation of new products**

Major economic indicators of innovative activity:

Input indicators

- **Research & Development expenditures**
- **Technical employees**

Output indicators

- **Publications**
- **Patents**

What are trademarks?

**" A distinctive sign used to distinguish the goods or services of an enterprise from those of another "
(WIPO, 2003)**

Types of trademarks (not mutually exclusive):

- letters, words or combinations of words**
- symbols (logos)**
- tri-dimensional signs**

AND ...

- sound, smell, colour, hologram ...**

Examples of trademarks:

Word mark

Yellow Pages

Slogan

"Let your fingers do the walking"

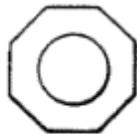
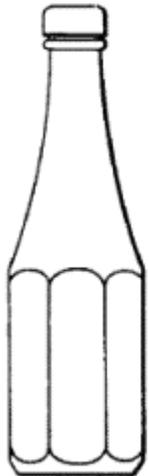
Logo

"walking finger logo"



Three-dimensional mark
bottle shape for ketchup

tured by



IZ

Sound mark

Intel Corporation



Trademarks as an IPR:

The exclusive right to use or license the mark throughout the territorial area designated in association with the Nice Classes (up to 45) of goods and services claimed in the trademark application for 10 years, indefinitely renewable.

Institutions involved:

- National patent and trademark offices (e.g. INPI)
- World Intellectual Property Organization (WIPO)
- Office for Harmonisation in the Internal Market (OHIM)

OHIM manages the Community Trade Mark (CTM)

It costs from about € 2079 + € 200 by Nice Class over 3 classes.
A successful registration can take up to one year.

Trademarks as indicators of what?

The case can be made that trademarks capture new products (*new brands*) introduced in the marketplace.

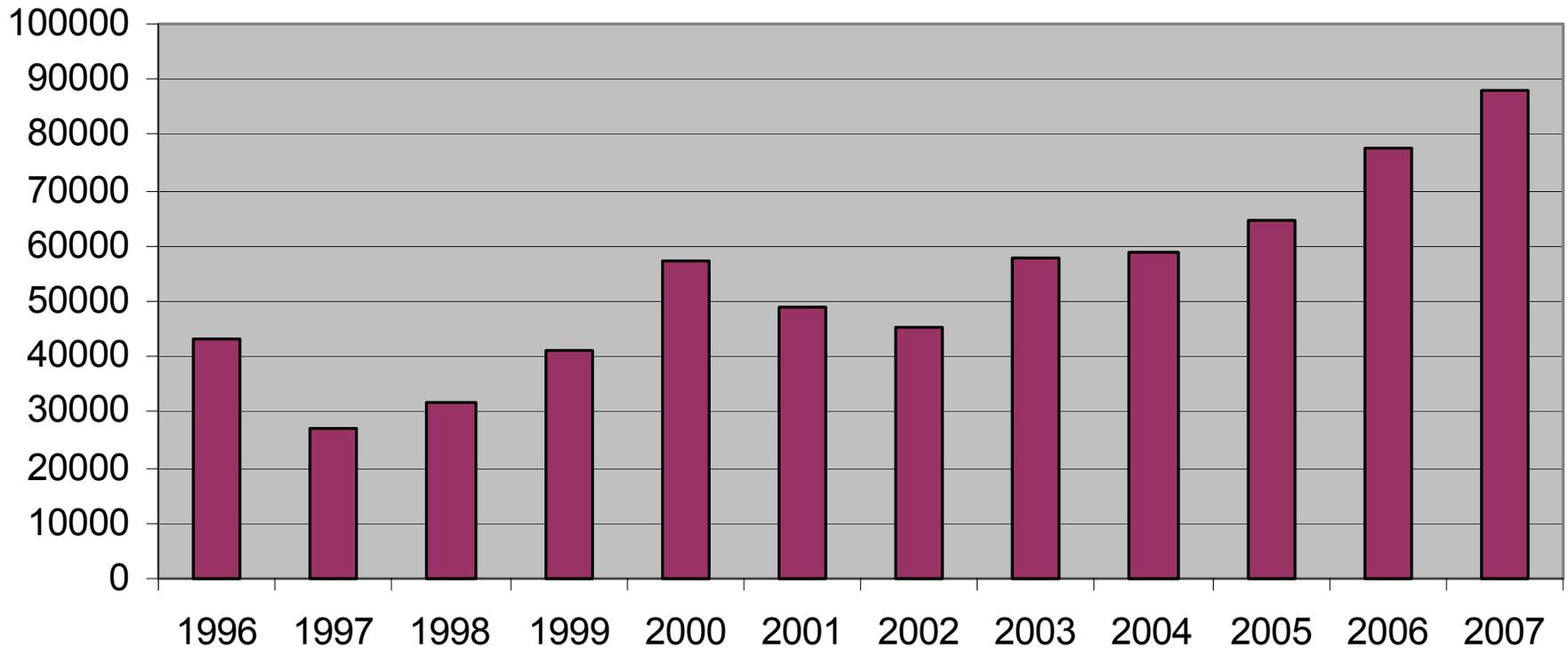
If so, the trademark indicator is a partial measure of output with the advantage of covering many SMEs and Services.

Limitations: MANY! of which...

- the 45 Nice classes are very aggregate
- agencies do not identify the industry of the applicant
- a TM can be filled covering many Nice classes, and a brand can be protected by many types of TM (confusing!)

Community Trade Marks (CTMs)

Total applications 1996-2007



Source: OHIM data, collated from several annual reports

Patterns and trends in Community trademarking

- **553,691 CTMs were filed in 12 years by firms from all over the world**
- **In 2007 69,4% of the applications were coming from the EU (58,1% in 1996)**
- **EU's 5 largest trademarking countries (DE, GB, ES, IT, FR) account for 50,5% of all EU applications for 1996-2007**
- **Correcting for size (pop.; GDP) smaller countries come out best: Nordic countries, Ireland, Austria, NL....**
- **Best performers over time: PT, IE, NL, AT, and recently, new EU members**
- **The US was until recently, the single largest community trademarker ... now taken-over by Germany**

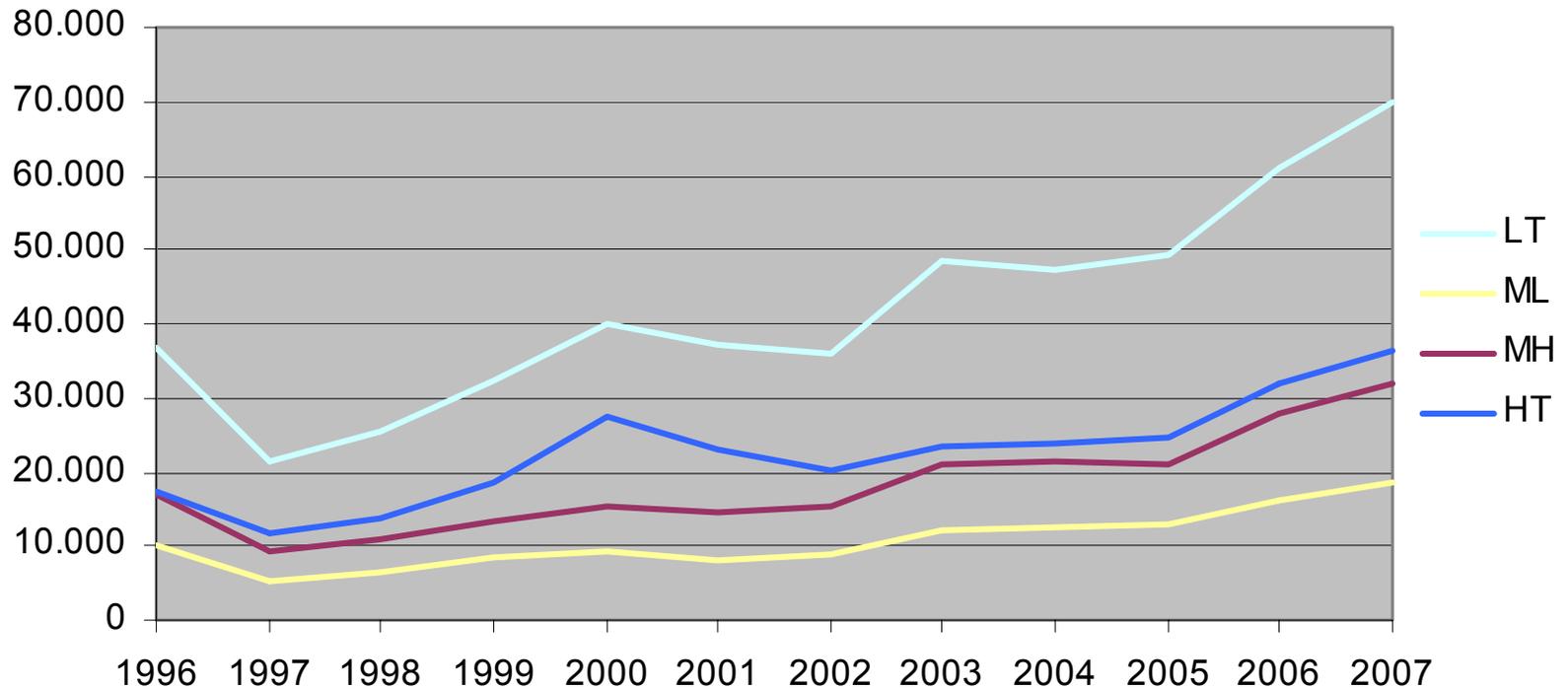
What is being trademarked?

Structure and sectoral dynamics of CTM "trademarking"

	1996	2001	2007	YAGR 1997-2007
%ind	76%	62%	63%	5,6%
%srv	24%	38%	37%	11,5%

Source: elaborations on OHIM data, collated from several annual reports

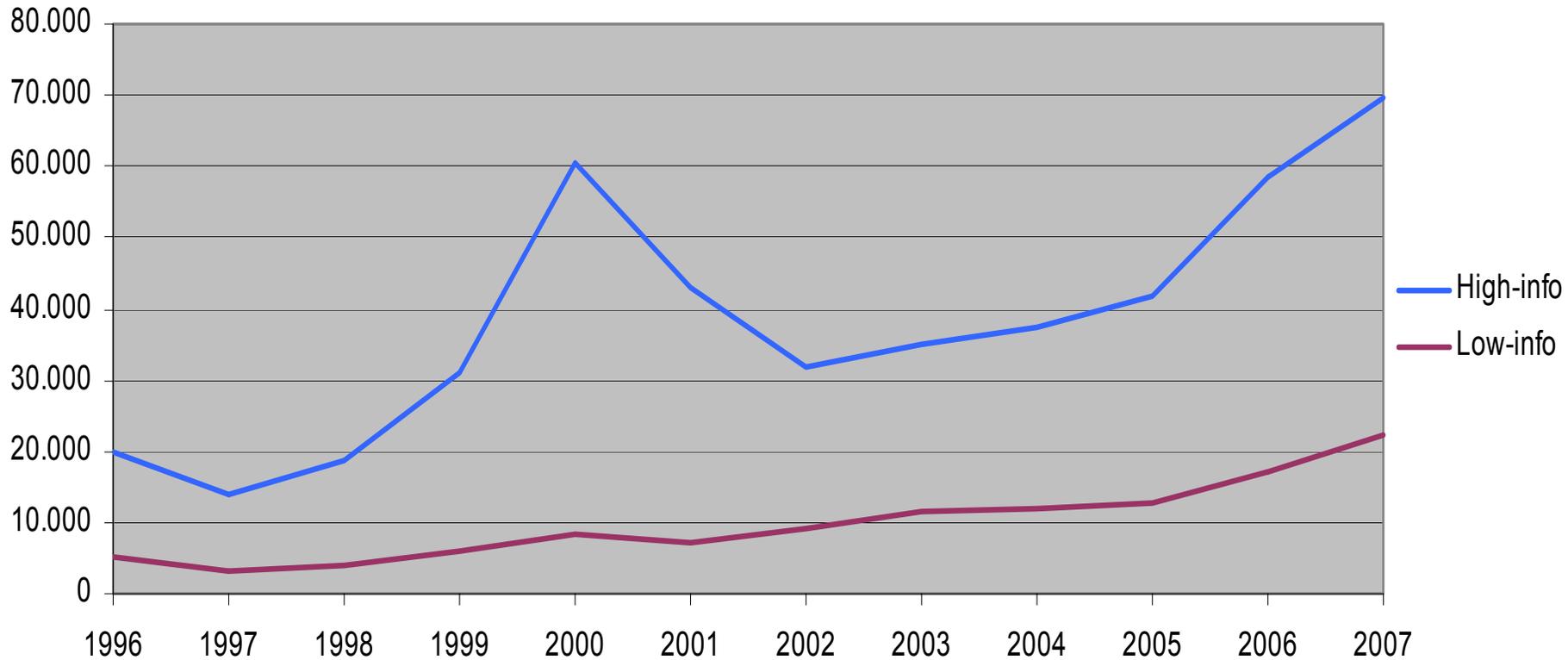
Types of industrial goods being trademarked



Source: elaborations on OHIM data

Note: OCDE's sectors derived from authors' correspondence table

Types of services being trademarked



Source: elaborations on OHIM data

Note: OCDE's sectors derived from authors' correspondence table

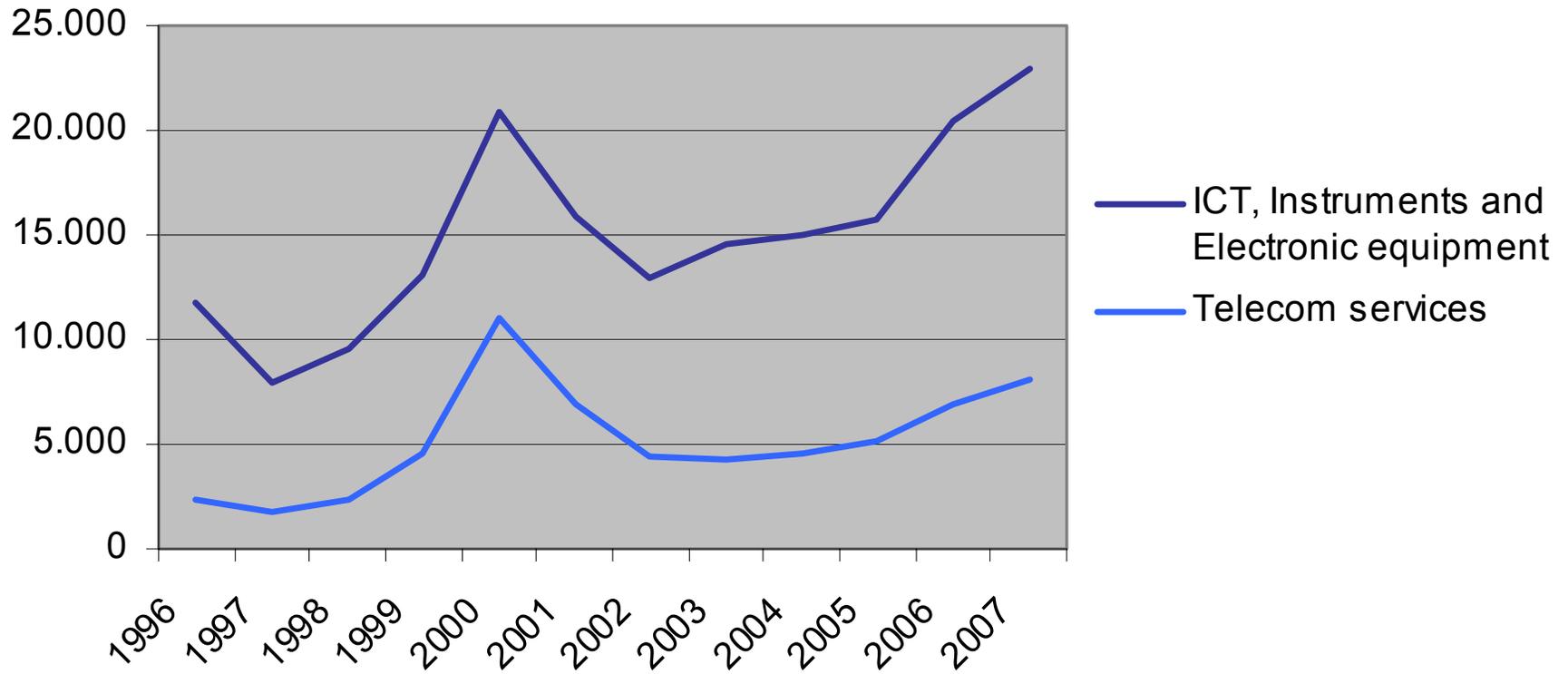
What service classes are *increasingly* trademarked?

YAGR	2002-07
35. Business consultancy	17,1%
36. Finance	14,2%
37. Construction and repair	14,8%
38. Telecommunications	10,9%
39. Transport and travel	11,9%
40. Treatment of materials.	15,5%
41. Education, sports and culture	14,4%
42. Research	10,5%
43. Food and drink services	15,6%
44. Medical services	17,1%
45. Personal and social services	34,0%

Source: elaborations on OHIM data

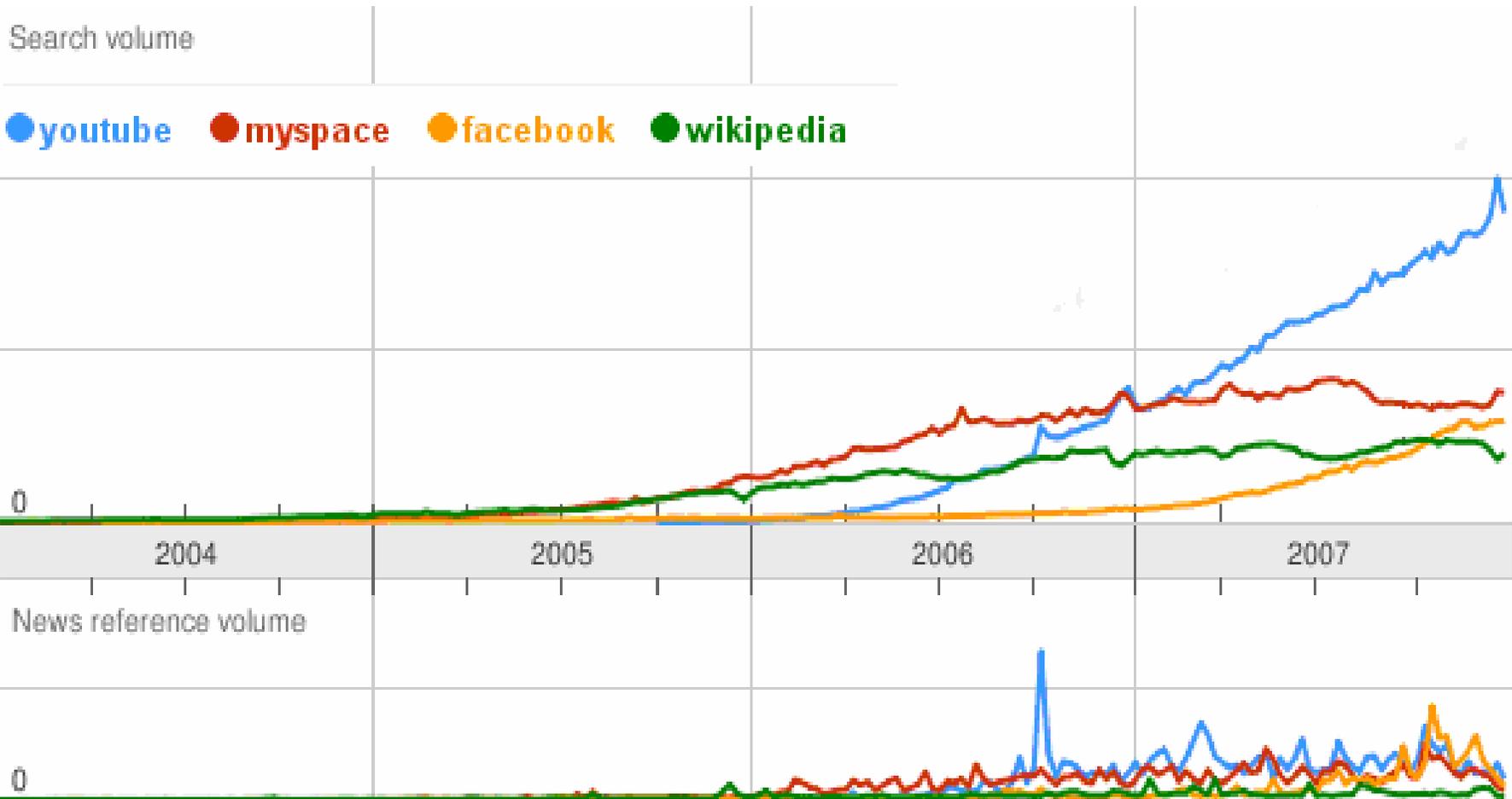
Note: for the average services' sector YAGR was 14,3%

ICT-based goods and services



Source: elaborations on OHIM data

(search for) ICT-based goods and services



Source: Google trends, January 9, 2008

Multiplication of telecom brands in Portugal: an illustration of “new product war”

Late in the year 2000 a new mobile communications service was launched. It focused on teenagers and practised attractive price discounts for calls within a network of subscribers. Few months latter alternative products of competing operators mushroomed.

Original product



Quasi-clones



Conclusions:

Can we learn from TM data?

- **A unique and under-exploited source of information**
- **Trademarks reflect product innovation and industrial evolution**
- **A complementary indicator to existing telecommunication indicators**

Appendix: more information...

Creating and building brands: Motivations

- Building inelasticity around the product and achieving a premium pricing (differentiation, line extensions)
- Opening up opportunities to enter new product segments or entirely new lines of business (brand-stretching)
- Penetrating new geographical markets (geographical market diversification)
- Entering the market for trademarks (licensing)
- Saving on promotion expenditures (building loyalty)
- Achieving greater bargaining power against suppliers (supply chain coordination)
- Signalling changes in strategy or changes in corporate identity (internal and external marketing)
- Prolonging the protection conferred by other IPRs after their expiration date (namely patents)

Avenues for further research

Revealed Marketing Advantage (RMA)

$$\text{RMA } ij = \frac{TM_{ij}}{\sum_k TM_{kj}} \bigg/ \frac{\sum_l TM_{il}}{\sum_k \sum_l TM_{kl}}$$

Propensity to trademark (firms, industries and countries): number of trademarks registered per unit of marketing expenditure.

Portuguese trademarks: lessons learned

- **Trademarking is done mostly by firms: 86% (1980-2001)**
- **Concession rates: 86% residents, 96% non-residents**
- **Drop-out: 19% residents, 11% non-residents**
- **Highest non-resident trademarkers: US and UK, with Spain and Brazil as the most dynamic in the late 1990s**
- **In the early 1980s trademarks show the country's historical specialisation profile (footwear, paper, ...)**
- **The late 1990s witness the rise of service marks, namely in Education, Consultancy and Research classes**
- **OECD's taxonomy of technology intensive industries discriminates well among users and non-users of TMs**
- **Knowledge-based services apply significantly more trademarks than other services**