

WIPO-OECD Workshop on Statistics in the Patent Field

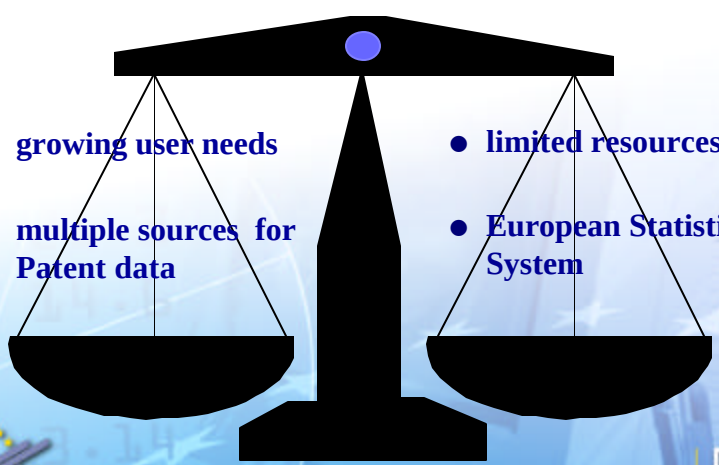
Patent statistics and indicators within the European Statistical System

a presentation by Guido Strack
Eurostat



Patent statistics at Eurostat

trying to find the balance

- 
- growing user needs
 - multiple sources for Patent data
 - limited resources
 - European Statistical System



Growing user needs

- The Lisbon process and the ERA
- Measurability and benchmarking
- Reliable indicators of good quality
- Patents are considered as proxy output indicator for innovation and research results
- EPO applications and USPTO grants are recognised structural indicators



Eurostat: Structural indicators for Innovation and Research

- **R&D expenditure** - GERD (Gross domestic expenditure on R&D) - as a percentage of GDP - currently at 1.94 % - Target: 3 %
- **Spending on Human Resources** (Public expenditure on education)
- **Level of Internet access** in households (40.4 %) and enterprises (79.5%)
- **Science and technology tertiary graduates** as % of age group 20-29



... including Patents

- Patents EPO - Number of patent applications from EU to the European Patent Office (EPO) per million inhabitants **158.7** (2000), **161.1** (2001)
- Patents USPTO - Number of patents granted to EU by the United States Patent and Trademark Office (USPTO) per million inhabitants **74.0** (2000), **80.1** (2001)



Eurostat's current activities

- collecting data from EPO and via DG RTD from USPTO
- treating data for statistical purposes and creation of indicators
- regionalisation of data down to NUTS level 3
- loading of data into the reference database **New Cronos**
- publishing data:
 - in STI publications like Panorama and Pocketbook
 - in general publications like Eurostat Yearbook and Regional Yearbook
 - in small but focussed free publications of the SIF series
 - everything available on the web
- participation in international discussions on the development of patent statistics



The Statistical Pocketbook ...

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1.2 R&D OUTPUTS

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Table 1.2.4 Patent applications to the EPO from the EU – 1996 and 2001 (1, 2)

	Total number		Distribution by IFC sector in % – 2001								Annual average growth rates (3)	Per million population	
	1996	2001	A	B	C	D	E	F	G	H	1996-2001	1996	2001
EU-15	36 100	102 088	75.8	78.4	18.3	1.8	4.2	8.8	16.3	18.8	11.0	91	151.8
D	956	1 048	74.8	76.6	20.5	3.1	3.8	6.1	13.6	11.4	18.3	94	112
DE	680	7 128	24.1	33.0	18.4	1.1	4.5	8.3	16.1	14.1	76.6	180	271
FR	14 028	25 488	11.7	23.2	14.8	1.3	4.1	12.6	15.4	17.4	33.0	180	318
UK	48	82	33.8	36.1	11.3	-	4.3	11.8	15.3	18.3	11.4	5	8.5
IT	511	563	25.2	22.4	14.3	2.1	5.8	7.8	11.8	12.2	12.6	13	24
ES	5 175	8 588	18.3	18.0	13.8	1.1	3.7	8.1	16.8	16.8	8.7	100	146
NL	142	321	31.5	33.4	18.3	0.2	3.8	3.3	25.8	32.6	18.1	30	36
FI	2 908	4 378	21.1	23.1	11.3	3.4	5.5	11.2	13.3	10.8	8.3	51	75.4
SE	47	103	2.8	28.4	18.5	-	9.3	18.4	8.3	8.8	11.5	101	211.4
BE	2 808	3 081	13.5	12.3	14.6	0.8	3.1	4.3	22.4	28.8	13.0	136	240
A	398	1 414	15.8	23.2	14.8	2.3	9.3	11.4	11.8	15.1	12.3	98	174
P	15	56	24.1	28.2	22.6	1.2	8.4	11.8	5.3	6.2	38.0	2	5.4
GR	88	1 758	1.8	11.8	6.8	1.6	2.7	3.8	15.1	40.6	14.6	114	338
S	1 987	3 258	11.8	11.8	11.8	1.8	2.3	2.8	8.3	11.3	11.3	111	181
DK	4 880	3 088	18.1	13.6	15.3	1.2	4.2	6.3	23.4	18.1	18.6	82	133.8

(1) 2001 provisional data.

(2) Reference year corresponds to year of filing.

Source: Eurostat – Poisson statistics, data – DG.

... shows data for EPO applications from the EU



Table 1.2.5 Patent applications to the EPO from the Candidate countries, Iceland, Norway, Japan and the USA – 1996 and 2001 (1, 2)

	Total number		Distribution by IFC sector in % – 2001								Annual average growth rates (3)	Per million population	
	1996	2001	A	B	C	D	E	F	G	H	1996-2001	1996	2001
ACC	294	568	24.3	10.0	15.1	2.8	4.1	9.8	16.1	16.6	14.8	4	8
CY	2	11	46.4	8.1	18.2	-	-	-	9.1	18.2	40.8	3	14
CZ	48	110	17.6	24.3	15.3	0.3	3.8	11.4	12.4	1.2	18.8	5	11
EE	6	15	23.4	6.6	18.0	-	-	13.3	40.1	6.7	30.8	4	11
HU	112	180	24.3	8.3	13.0	-	3.2	4.8	34.2	23.1	11.2	11	19.4
LV	8	18	31.3	8.2	18.1	-	4.2	5.6	5.6	-	11.5	3	8
LT	6	8	26.7	-	11.1	-	-	-	22.2	-	8.4	2	2
MT	2	4	8.3	-	-	-	-	90.1	41.6	-	14.8	5	10
PL	32	57	23.7	17.0	12.3	1.8	7.2	14.2	12.6	11.1	25.8	1	3
SK	23	39	23.0	14.0	18.0	-	-	16.3	6.1	16.7	4.1	5	6
SJ	41	18	26.8	8.1	17.4	0.6	6.8	6.2	8.5	23.6	14.3	21	41
IS	19	17	33.3	11.7	5.8	-	-	17.8	21.8	-	-12.2	2	2
NO	13	17	8.8	23.5	17.3	-	1.4	11.8	1.5	28.4	0.8	1	1
TR	18	77	38.6	4.2	7.6	10.4	3.5	17.4	11.1	15.3	31.9	8	1.5
IS	8	39	52.8	4.5	17.3	-	-	-	15.5	18.5	32.7	38	117
NO	388	1 300	28.8	16.2	11.2	0.4	11.3	10.4	11.8	11.4	21.8	83	288
JP	12 641	22 225	8.4	14.8	15.3	1.2	0.7	7.7	24.8	26.4	11.8	101	175.4
US	38 138	47 202	18.1	11.3	18.2	1.8	1.6	4.6	25.5	16.5	10.8	156	170.4

(1) 2001 provisional data.

(2) Reference year corresponds to year of filing.

Source: Eurostat – Poisson statistics, data – DG.

... but also for Candidate countries and others



PATENT APPLICATIONS TO THE EPO CONTINUE AN UPWARD TREND, ESPECIALLY IN THE HIGH TECH FIELDS

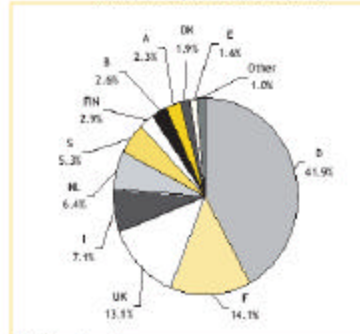
Patent applications to the European Patent Office – EPO – continue growing steadily. In 2001, the EPO filed 80 890 patent applications from EU-15, 47 202 from the United States and 22 236 from Japan. As a proportion of the population, Japan recorded the highest ratio – 175 patent applications per million inhabitants, followed by the USA (170) and the EU (161).

Within the EU and in absolute terms, Germany continues to account for the largest proportion of total EU patent applications to the EPO (41.9 %). However, when taking population into consideration, Sweden and Finland recorded the highest rates. Although patent applications to the EPO from the Candidate countries are below the EU average, some of them show rates per million inhabitants above some of the Member States.

An important proportion of the growth of patent applications to the EPO is accounted for by the increase of applications in the high technology fields. Whilst patent applications to the EPO from the EU grew at an annual average growth rate of 11.6 % during the 1995-2001 period, high tech patent applications recorded a growth rate equal to 22.1 %.

The highest ratio of high tech applications per million inhabitants at the international level was registered by the USA (57) followed by Japan (45) and the EU (32). Within the EU, Finland (116) leads, followed by Sweden (101) and the Netherlands (69), all of which were above the USA average. The country with the highest proportion of high tech patent applications in total applications in 2001 was Finland (40.3 % of the total).

Figure 1.2.2 Distribution of patent applications to the EPO from the EU by Member State in 2001 (1-2)

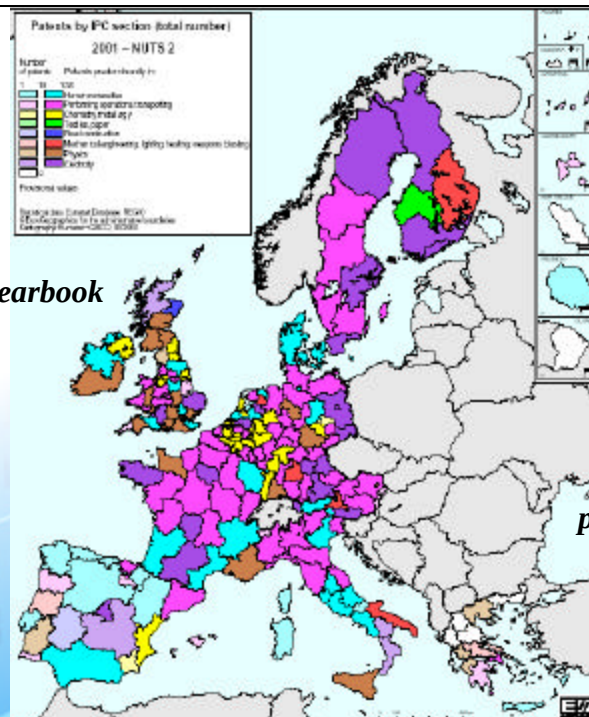


(1) 2001 provisional data.
(2) Reference year corresponds to year of filing.
Source: Eurostat – Patents statistics, data – 2002

... illustrating distributions, highlighting tendencies and dealing with specific fields - like high tech.



A page from the Regional Yearbook



based on regional patent data

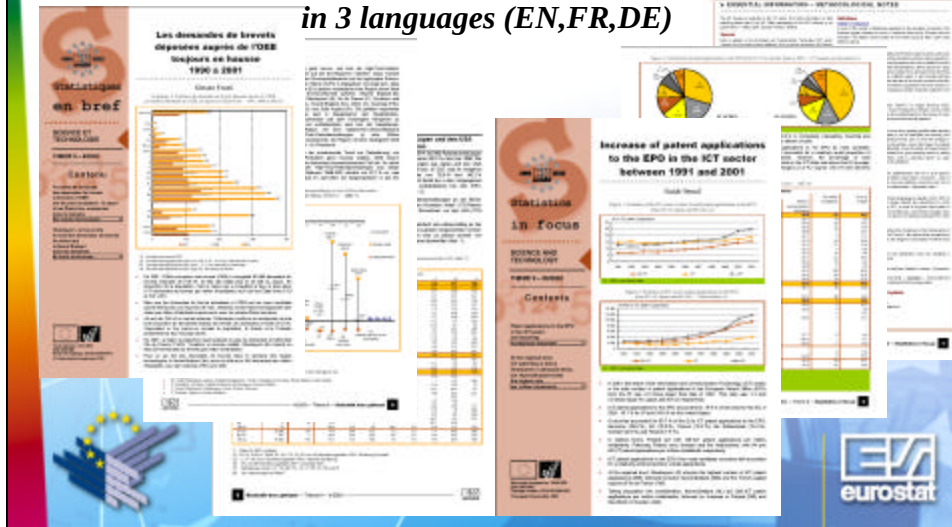


Statistics in focus (SIF)

up to date focussed information

available on the web for free

in 3 languages (EN,FR,DE)



Current main activities

New Cronos

- Data update to 2001 for EPO applications (regional dimension / IPC and high-tech) and USPTO grants
- Integration of Candidate Countries patent data into one single patent data sub-theme
- Meta-data update and standardisation (SDDS)

2 new SIFs

- "Patent applications to the EPO continue on an upward trend 1990 to 2001"
- "Increase of patent applications to the EPO in the ICT sector between 1991 and 2001"

Future planning

**Achieve enlargement of data quality and coverage
with a two-step approach: research + production
in co-operation with: DG RTD, OECD, WIPO, EPO**

Areas of activities

- harmonisation of inventors/enterprise names
- classification of inventors by sector
- optimisation of regional data (quality and USPTO)
- triadic patent families
- mapping IPC on NACE and/or fields of technology
- distinguishing grants and applications
- Community Patent

