What Can We Find From IP Statistics ?

Japan Patent Office

Ryo FUNAKOSHI
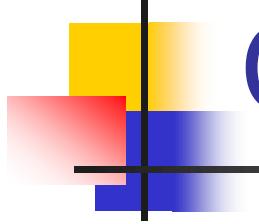
OUTLINE

- Importance of Statistics

- What is IP statistics

- Data Availability
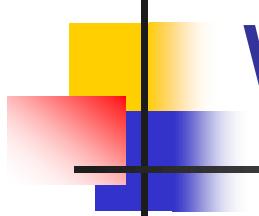
Why Statistics? (1)

- "I keep saying that the sexy job in the next 10 years will be statisticians, And I'm not kidding"

  - Hal Varian (Chief Economist, Google)
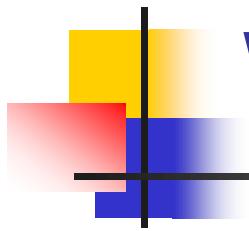
Why Statistics? (2)

- How do we navigate ourselves to our goal?
 -- > We may lose our way


- Where is our goal?
 -- > We may not find our goal

- Statistics can highlight our way
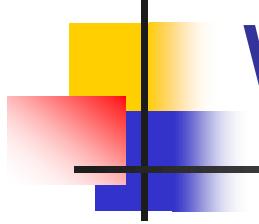
Why Statistics? (3)

- Based on Statistics,

We can
- envision our goals
- highlight the ways
- do actions
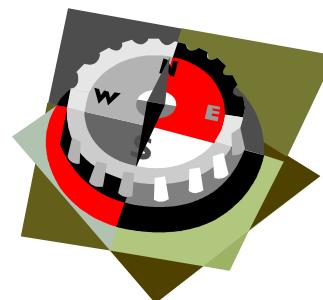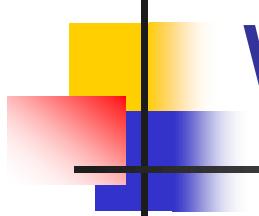
What is IP statistics?

Patent indicators are one of indicators

1) which reflect technology output

And

2) which are utilized for science innovation policy
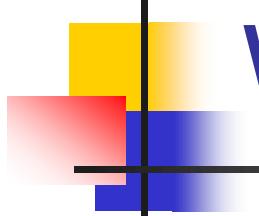
What is IP statistics?

- A Patent Document contains a large amount of information for statistics analysis

  - Technology (IPC, Prior arts)

  - Place (Address)

  - Time (Date of filing, Date of Grant)

What is IP statistics?
Front Page published in Japan Patent Office

(11) publication number
(43) publication date

(12) kind of document

(51) IPC

(21) application number
(22) filing date
(31) priority number
(32) priority data
(33) priority country

(71) applicant
(72) inventor
(74) attorney

(54) title of invention
(57) abstract
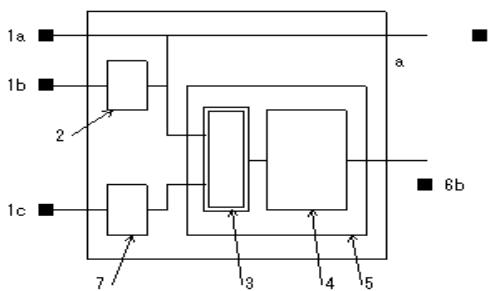
Indicators – view from technology

- IPC

- Patent indicators are a unique means to track the rise of emerging technologies

Indicators - Field of Technology

Fig. 4.4: APPLICATIONS FILED - FIELD OF TECHNOLOGY
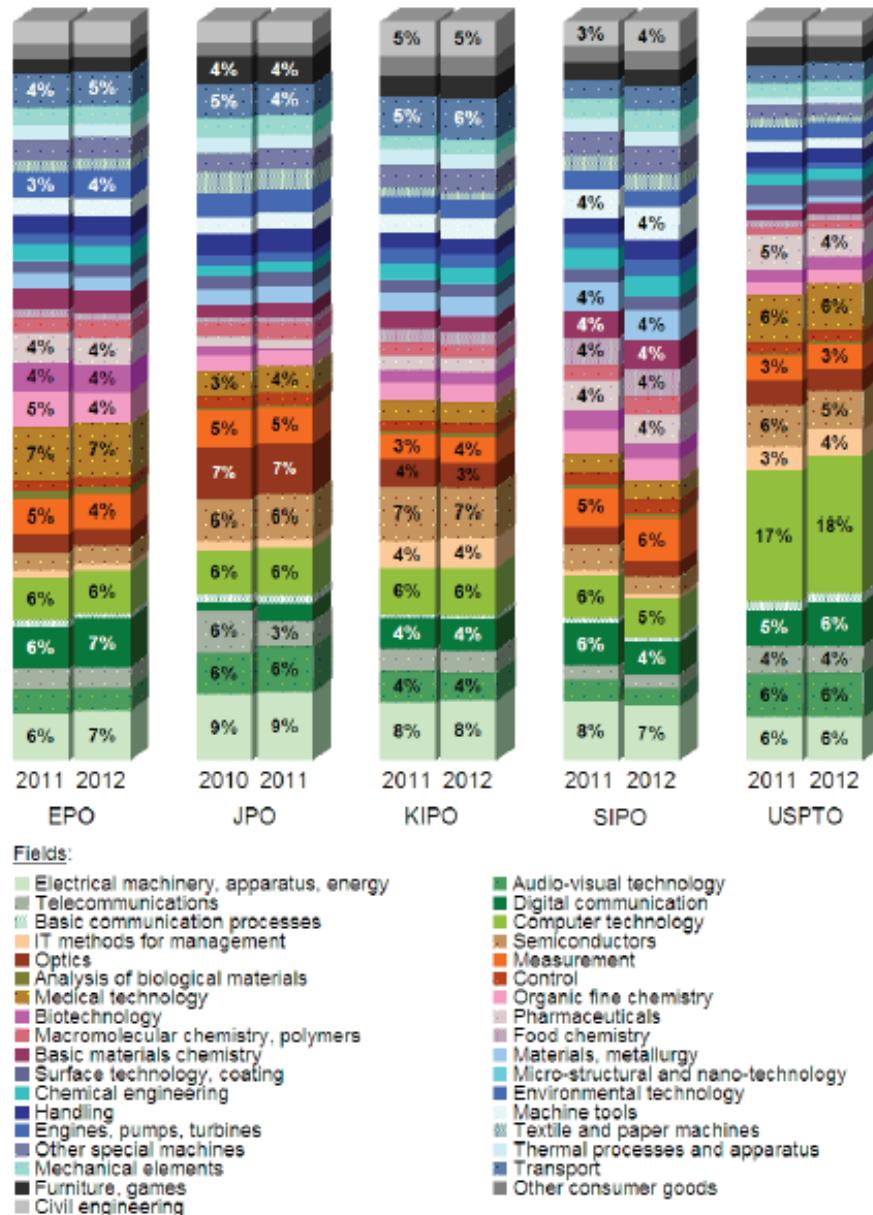
Indicators – view from address

- Address of applicants and inventors:

the place where the inventions were born

Patent are used to monitor the technological performance of companies, regions or countries

Indicators – Location and Technology
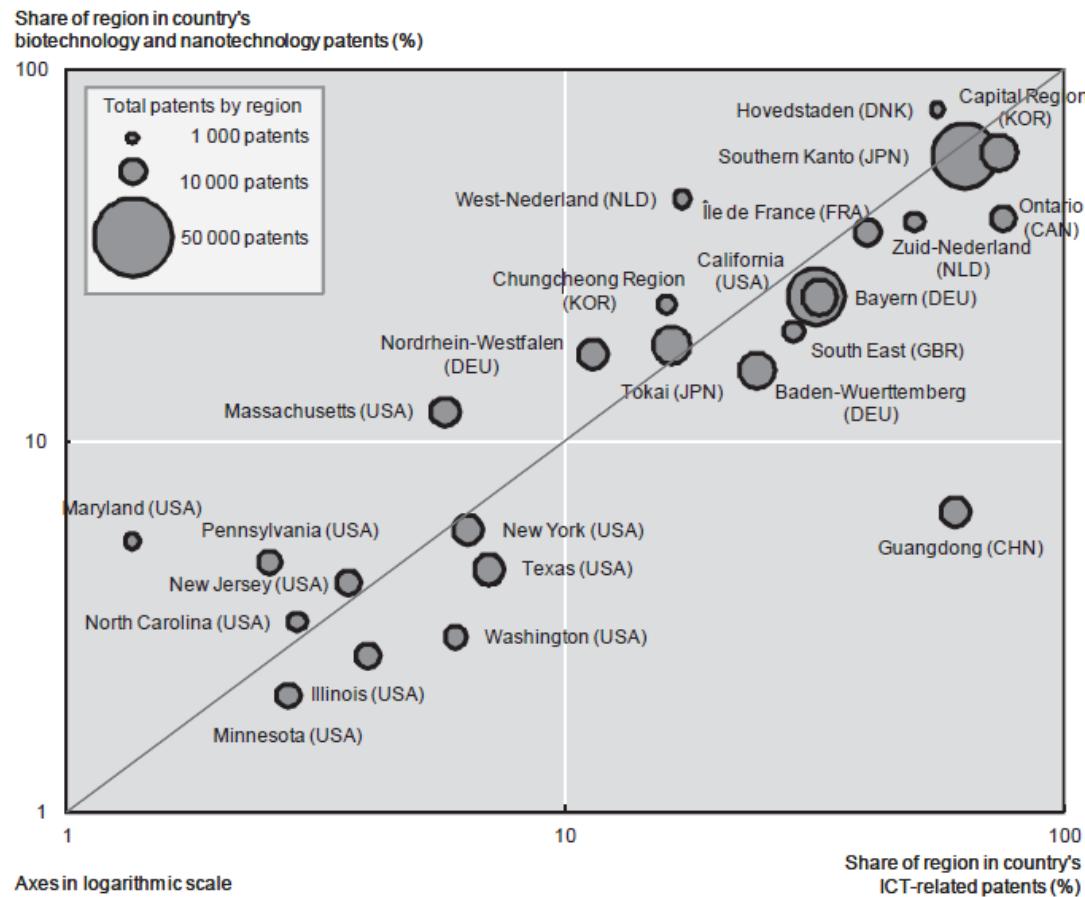
Fig2. Innovation hot spots in ICT, Biotechnologies and nanotechnologies, 2006-2008 (Source: OECD, STI Scoreboard 2011)
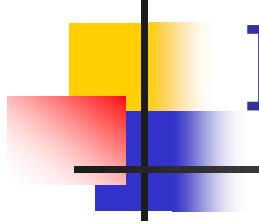
Indicators

- Patent citations point the use of previous inventions in new inventions, which makes it possible to identify the influence of particular inventions or particular sets of inventions and map between in the economy.

Indicators – Technological Proximity
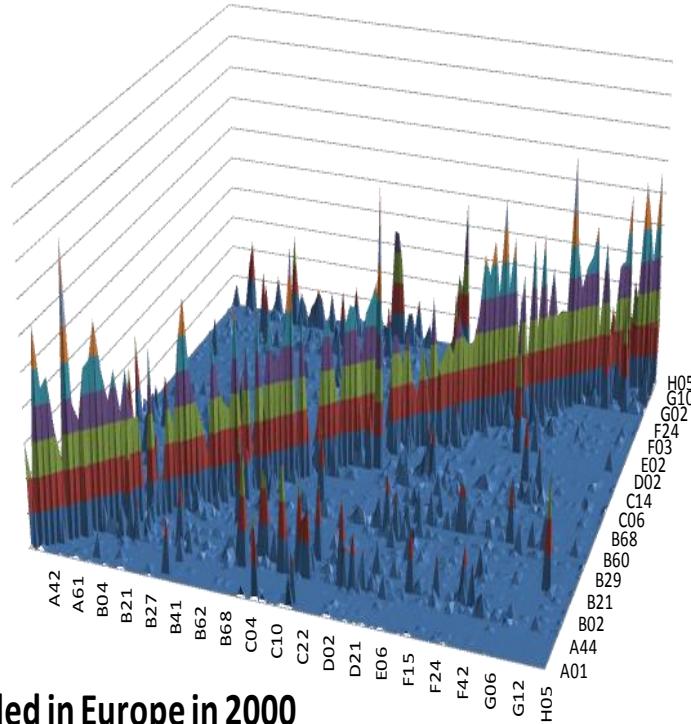
Patents filed in Europe in 2000
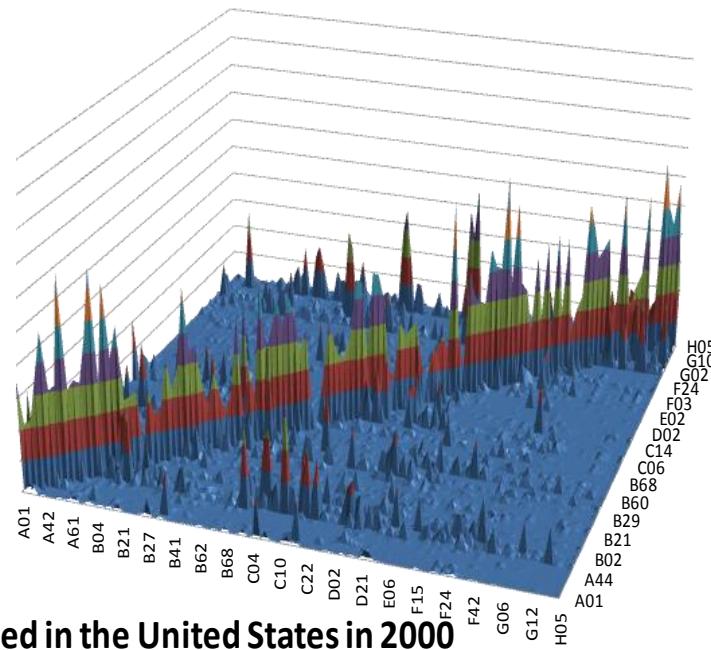
Patents filed in the United States in 2000

Indicators
- Trademark

Figure 3. Evolution of the applications since 1975 in 6 major offices

Legend: China, France, Germany, Japan, OHIM, United States

(STI WORKING PAPER 2009/6)
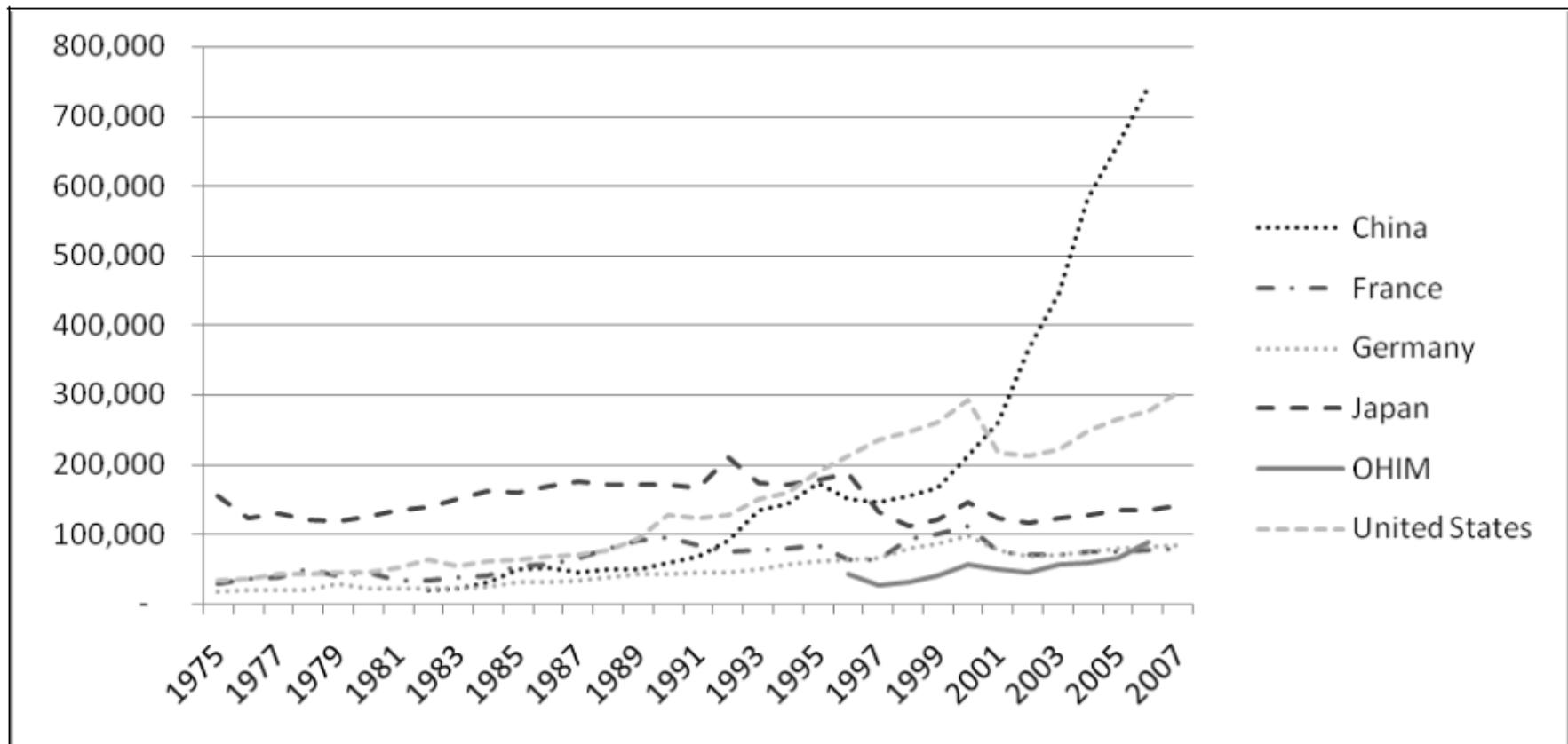
Indicators - Trademark

Table 1. Survival rate of registered trademarks at USPTO between 1987 and 2007

| Registration date	Still valid in 2008	Cancellation or abandonment date																				
		2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
2007	99.97	0.03																				
2006	99.87	0.10	0.03																			
2005	99.75	0.10	0.11	0.03																		
2004	99.66	0.10	0.13	0.09	0.02																	
2003	99.63	0.09	0.09	0.10	0.07	0.03																
2002	99.51	0.13	0.10	0.07	0.08	0.07	0.03															
2001	87.81	11.59	0.13	0.09	0.07	0.09	0.07	0.02														
2000	45.56	38.49	14.85	0.09	0.10	0.09	0.09	0.09	0.01													
1999	45.89	0.14	40.48	11.95	0.10	0.12	0.10	0.08	0.09	0.01												
1998	44.40	0.09	0.31	41.46	12.53	0.13	0.12	0.10	0.11	0.08	0.02											
1997	41.19	3.00	0.10	0.34	42.95	11.28	0.12	0.09	0.09	0.10	0.07	0.02										
1996	30.00	10.72	3.55	0.19	0.14	40.95	12.49	0.10	0.13	0.08	0.09	0.09	0.03									
1995	29.76	0.10	11.85	3.33	0.04	0.15	52.77	0.19	0.13	0.08	0.08	0.13	0.08	0.03								
1994	29.52	0.04	0.10	12.44	3.87	0.05	2.38	49.52	0.26	0.11	0.09	0.09	0.14	0.10	0.02							
1993	30.00	0.04	0.04	0.11	12.90	3.74	0.31	2.38	31.98	16.66	0.09	0.10	0.10	0.12	0.07	0.01						
1992	30.17	0.11	0.01	0.02	0.13	14.43	2.50	0.06	0.37	32.29	18.45	0.13	0.12	0.10	0.09	0.07	0.01					
1991	30.00	0.04	0.02	0.01	0.02	0.09	16.19	0.06	0.05	0.09	27.26	24.80	0.14	0.13	0.10	0.10	0.17	0.02				
1990	28.76	0.06	0.01	0.01	0.03	0.05	0.55	14.77	0.02	0.04	0.13	24.59	29.67	0.13	0.11	0.11	0.15	0.12	0.03			
1989	41.32	0.04	0.08	0.05	0.03	0.04	0.07	0.66	1.31	0.02	0.05	0.39	28.94	26.14	0.11	0.10	0.15	0.10	0.14	0.01		
1988	43.15	0.08	0.09	0.07	0.04	0.05	0.04	0.08	0.04	0.04	0.03	0.12	0.33	28.65	26.26	0.11	0.15	0.09	0.18	0.11	0.03	
1987	37.14	5.64	0.06	0.08	0.05	0.05	0.06	0.05	0.04	0.02	0.03	0.05	0.06	0.32	30.40	24.72	0.14	0.11	0.13	0.15	0.09	0.02

Source: USPTO Trademark Database, OECD calculations. (STI WORKING PAPER 2009/6)

# Indicators
- Patents and Trademarks
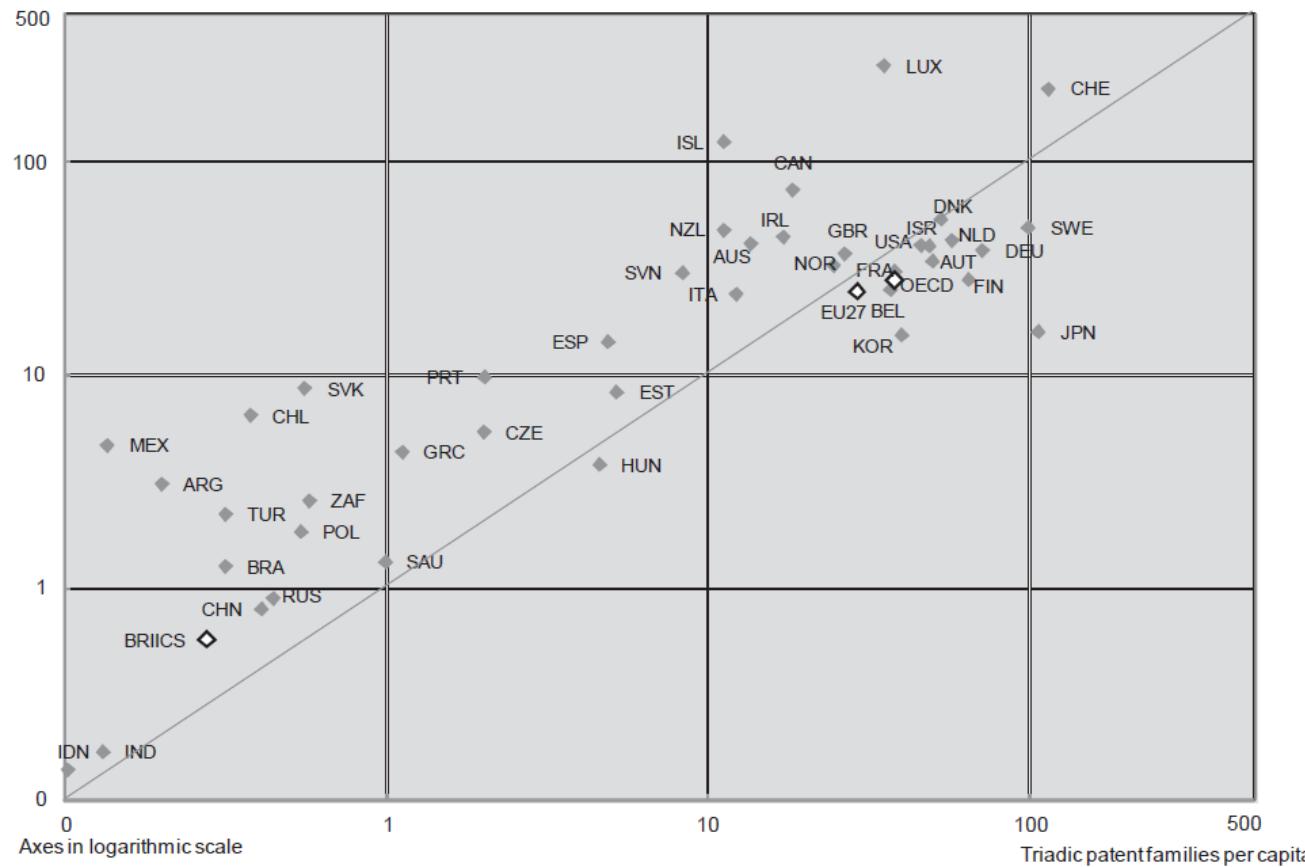
Fig4. Patents and Trademarks per capita, 2007-2009 (Source: OECD, STI Scoreboard 2011)

Indicators
- Patent and R&D

Japan

US

Korea

China

R&D (YEN)

JPO, Trend of patent application, 2013

How to use IP indicators

IP statistics

Government, Administrative Agency	Patent Office itself	Industry, Research Institution
Basic Data for -Science Innovation Policy	Basic Data for -Examination Policy -International Cooperation Policy	Basic Data for -R&D -M&A
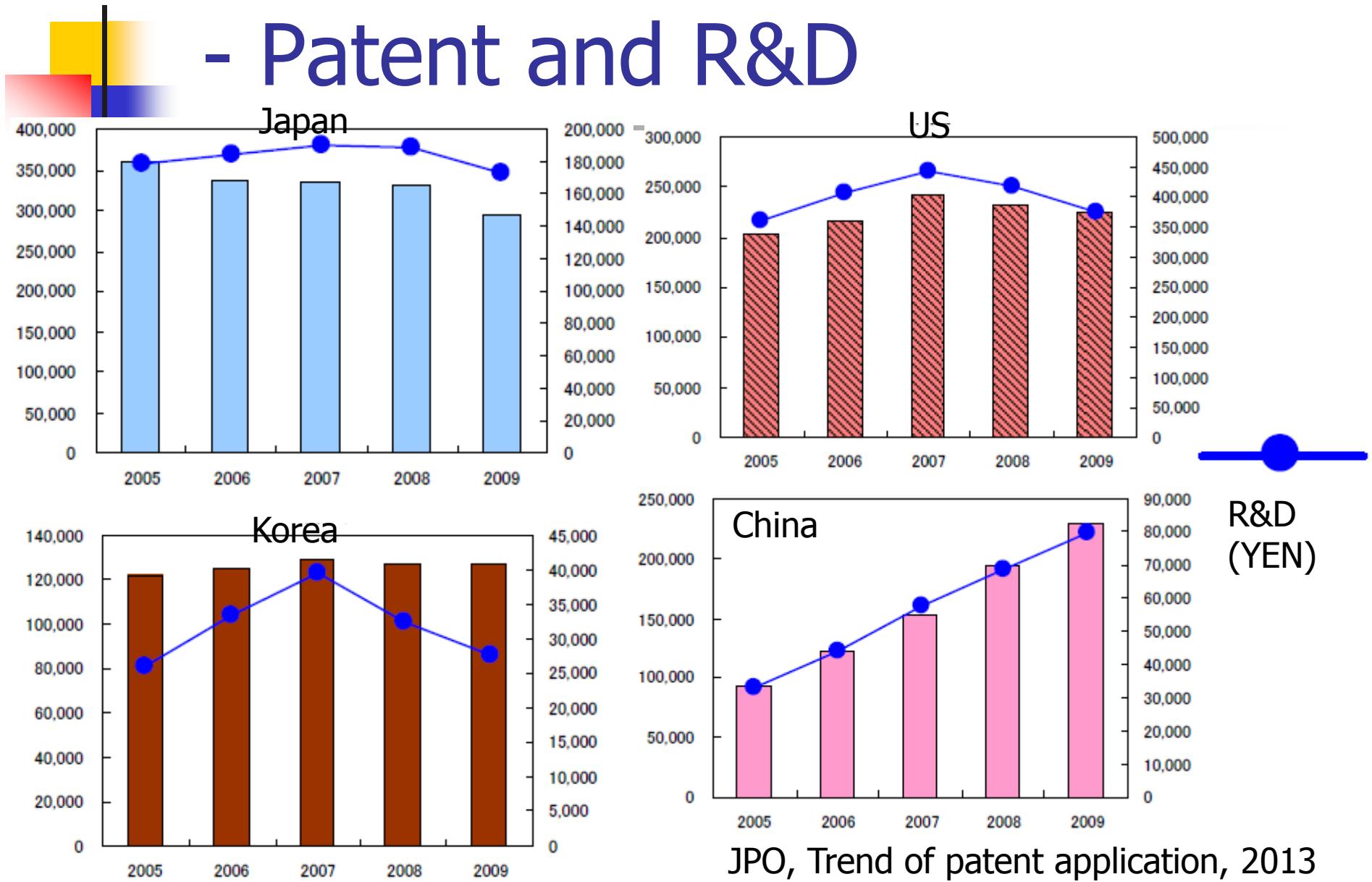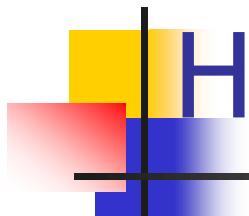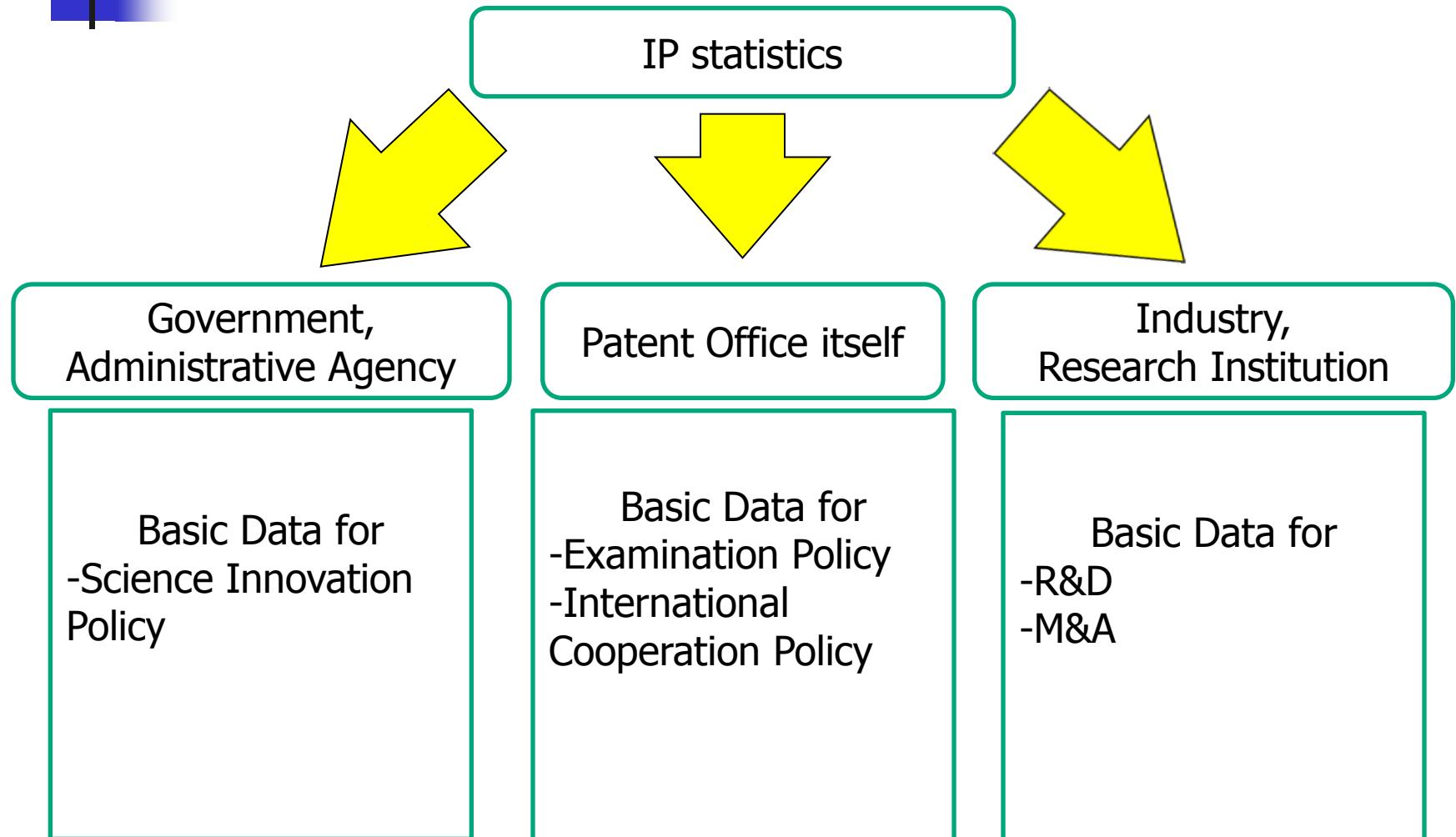
How to use indicators

Number of Patent Applications
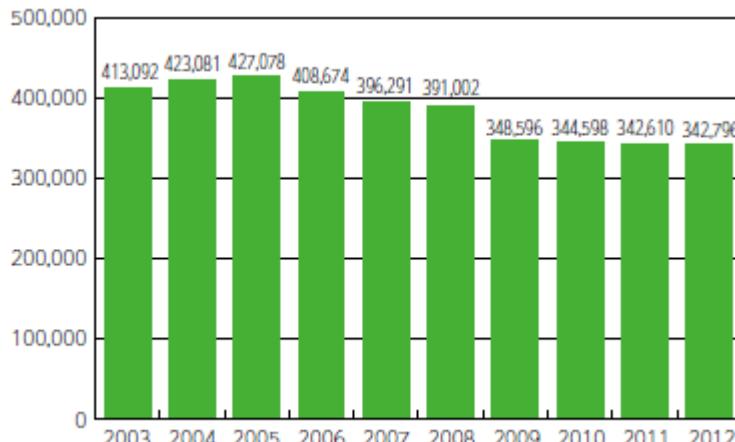
Number of Applications awaiting the First Action and First Action Pendency
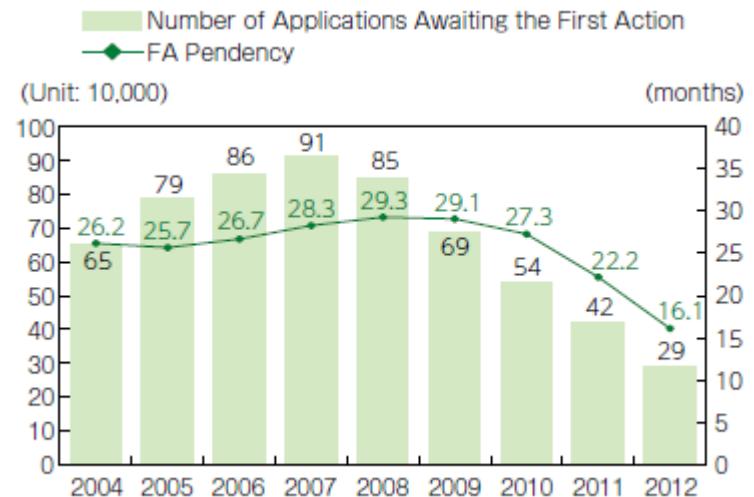
JPO's goal is that JPO has to decrease the FA pendency less than 12 months.
Based on the result of statistics,
- JPO re-distributes human capital
- JPO hired fixed-term examiners
- JPO increases the outsourcing of prior art searches
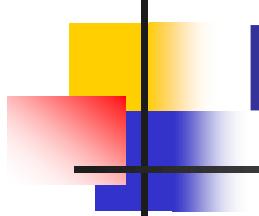
How to use IP indicators

Annual Conference

<Patent Statistics For Decision Makers>

- 2010 Vienna

- 2011 Washington DC

- 2012 Paris

- 2013 Rio de Janeiro

- 2014 Tokyo
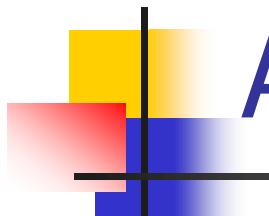
Availability of Data

- Where do we collect data for IP Statistics?

- Document data

e.g.) IPDL (JPO), Espacenet (EPO), etc

- Raw data

e.g.) Standardized Data : JPO

DocdB, PATSTAT : EPO

Harmonized Name Data, etc : OECD

Data Availability

http://www.ipdl.inpit.go.jp/homepg_e.ipdl

Data Availability

`http://patft.uspto.gov/`

United States Patent and Trademark Office
An Agency of the Department of Commerce

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Data Availability

EPO Worldwide Patent Statistical Database (PATSTAT)

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Product 14.24

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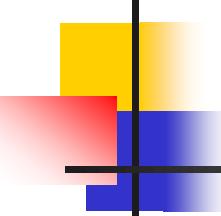
Data Availability

Raw data on patents

The OECD has developed 4 different sets of patent data, for research and analytical work only. The detailed raw data can be downloaded from a secure – password protected – server. Please send an e-mail to sti.contact@oecd.org to request access to one of the datasets, mentioning **"OECD patent database"** in the title of your message.

- OECD Triadic Patent Families Database, July 2011: set of patents filed for at the EPO, the Japan Patent Office (JPO) and granted by the USPTO that share one or more priority applications.
- OECD REGPAT Database, July 2011: patent applications to the EPO and PCT filings linked to more than 5 500 regions using the inventors/applicants addresses (covering regions from selected countries outside the OECD area).
- OECD Citations Database, July 2011: citations from patents published by the EPO and the WIPO (PCT).

Also available: the OECD HAN database

The OECD "Harmonised Applicants' Names" database provides a dictionary of applicants' names which have been elaborated with business register data, so that it can easily be matched by all users. The data is based on applicant's for patents filed to the EPO and through PCT. The dataset is complementary to Eurostat's method for harmonising applicants names.

Most of these datasets mainly derive from EPO's Worldwide Statistical Patent Database (PATSTAT, April 2011) which provides a harmonised and comparable set of information on patent applications taken in patent offices worldwide. Please contact the EPO for further information on this database.

http://www.oecd.org/sti/inno/oecdpatentdatabases.htm

Patent Statistics Manual
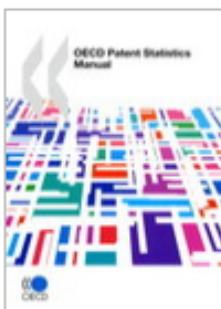
OECD Patent Statistics Manual

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Hide / Show Abstract

This 2009 edition of the *OECD Patent Statistics Manual* takes stock of the recent developments in the field. It provides guiding principles for the use of patent data in the context of S&T measurement, and recommendations for the compilation and interpretation of patent indicators in this context. It aims to show what patent statistics can and cannot be used for, and how to count patents in order to maximise information on S&T activities while minimising statistical noise and biases. Finally, it describes how patent data can be used in the analysis of a wide array of topics related to technical change and patenting activity including industry-science linkages, patenting strategies by companies, internationalisation of research, and indicators on the value of patents.

http://www.oecd-ilibrary.org/science-and-technology/oecd-patent-statistics-manual_9789264056442-en

Thank you