



Landscape of the International Patent System – Present and Future

JAUIP Summer IP Seminar, Practitioners Course

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- WIPO
- International norms and harmonization
- Changing landscape
- Current discussions at WIPO
 - Quality of patents
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- Some thoughts towards the future

World Intellectual Property Organization (WIPO)

www.wipo.int

- Since 1974, one of the UN specialized agencies
- Member States: 188
- Around 1200 employees from more than 90 countries
- Headquarters: Geneva
- Six External Offices, including Tokyo, Beijing and Singapore
- 95% of the budget from PCT/Madrid/Hague



WIPO Strategic Goals

- I. Balanced Evolution of the international normative framework for IP
- II. Provision of Premier Global IP Service
- III. Facilitating the use of IP for development
- IV. Coordination and development of Global IP infrastructure
- V. World reference service for IP information and analysis
- VI. Int. coop. on building respect for IP
- VII. Addressing IP in relation to global policy issues
- VIII. A responsive communications interface between WIPO, its MSs and all stakeholders
- IX. Efficient administrative and financial support structure

International patent cooperation in various spheres, pursued in parallel

- Political, legal and technical aspects
- Principles and frameworks
- Implementation and operation
- Norms
- Global filing service (PCT)
- Capacity building
- Technical infrastructure
- Technology platforms
- Arbitration and mediation

Formal treaty negotiation
Development of soft law
Sharing of info and experiences

WIPO

- UN special agency
- Started as an International Bureau of the Paris Convention (1883). The Convention Establishing WIPO entered into force in 1970.
- IPRs
- 180 Member States
- Expert's committees and WIPO General Assembly. Convene a Diplomatic Conference to adopt a treaty.
- Voluntary accession/ratification to its treaties
- Weak enforcement of treaties
- Voting rules exist, but consensus is usually sought.

WTO

- International organization
- Agreement Establishing the WTO (1994)
- Trade rules among Members
- 164 WTO members
- Package negotiation (Round): possibility of political compromise; IPRs at the TRIPS Council.
- Unless specified, WTO rules applicable to all members
- Dispute settlement mechanism and trade sanction (cross retaliation)
- consensus

Close cooperation between two organizations

International Norms and Harmonization

International norms

“Hard Law” (treaty, convention...)

- Advantage: binding effect
- Disadvantage: formalistic (Diplomatic Conference; accession and ratification); Several years between the adoption and entry into force

“Soft Law” (recommendation, resolution, model law...)

- Advantage: Timely response to the challenge; flexible application (guidelines, progressive approach possible)
- Disadvantage: non-binding

Treaties in the field of patents administered by WIPO

<http://www.wipo.int/treaties/en/>

	Member States
• Paris Convention for the Protection of Industrial Property (1883)	173
• Patent Cooperation Treaty (1970)	150
• Strasbourg Agreement Concerning the International Patent Classification (IPC) (1971)	62
• Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure (1977)	73
• Patent Law Treaty (2000)	37

PCT: Contact and assistance

PCT

Further information: <http://www.wipo.int/pct/>

- PCT Distance Learning Course (4h)
- Learn the PCT Video Series

General questions: pct.infoline@wipo.int

Budapest Treaty

<http://www.wipo.int/treaties/en/registration/budapest/>

The Contracting States are:

- obliged to **recognize the deposit of microorganism to one of the 45 International Depositary Authorities (IDAs)** where applicants seek to fulfill the disclosure requirement under the applicable law;
- are not obliged to establish an IDA on their own territory.

Advantages of the Treaty:

- Simplification and reduction of depositing costs;
- Promotion of R&D through access to deposited biological material;
- Promotion of cooperation and exchange between IDAs.

Patent Law Treaty (PLT) (2000)

<http://www.wipo.int/treaties/en/ip/plt>

Formality requirements → efficient patenting procedures

- Objectives:
 - harmonization and **simplification of formality requirements** set by national/regional patent laws;
 - **Streamlining the procedures** for obtaining and maintaining patents.
- PLT provisions are applicable to:
 - national (regional) patent applications and patents; and
 - PCT applications in the national (regional) phase.
- In general, the PLT sets the **maximum set of requirements** the office of a Contracting Party may apply.
- **Main features:**
 1. **Filing date** requirements.
 2. Whenever feasible, formality requirements regarding the **form and contents of applications** are in line with the **PCT requirements**.
 3. **Model international Forms**.
 4. **Extension of time limits** and **reinstatement of rights**.

TRIPS Agreement

<http://www.wto.org/trips>

Patents; Copyright and Related Rights; Trademarks, Geographical Indications; Industrial Designs; Layout-Designs of Integrated Circuits; Undisclosed Information and Unfair Competition.

- Built on the WIPO treaties already existed: ex. the Paris Convention.

Minimum standards:

- Subject-matter and conditions for protection;
- Rights to be conferred and permissible exceptions to those rights;
- The minimum duration of protection.

Enforcement:

- General principles; civil and administrative procedures and remedies, provisional measures, special requirements related to border measures and criminal procedures.

Dispute settlement – subject to the WTO dispute settlement procedures

- Cases of “non-violation complaints” are not yet determined.

International Treaties

Rationale

- Promote international legal certainty and fairness
- Remove inadequate barriers for obtaining and enforcing IP rights at the international level
- Improve access to patent information

Parties

- Two States (free trade agreement)
- Multi States (regional patent organization, regional economic area, plurilateral trade agreement)
- Global agreements among States at WIPO, WTO...

↔ Practical cooperation at the administrative level
(ex. patent offices)
- IP5, Prosur, Asean etc.

International Treaties

International treaties

(1) Non-discrimination due to the nationality, place of residence, place of invention

ex. National treatment (Paris Convention); Most-favoured nation principle (TRIPS Agreement)

(2) International convergence of norms

- Harmonization of national laws and practices
Paris Convention, Patent Law Treaty (PLT), TRIPS Agreement
- Establishing an international system
Patent Cooperation Treaty (PCT)
- Kind of comity / mutual recognition
Priority claim under the Paris Convention, Budapest Treaty

(3) Assist dissemination of patent information

IPC, WIPO standards on patent documentation

Harmonization efforts since 1980's

WIPO

- Starting from discussions on a grace period, extensive harmonization of patent laws sought in 80s. **Draft Treaty Supplementing the Paris Convention as Far as Patents Are Concerned**
- Diplomatic Conference in 1991. No agreement between the countries supporting the **first-to-file principle** (EP, JP) and **the first-to-invent and a broad grace period** (US).
- US stated maintenance of the first-to-invent principle in 1993.
- Started discussions in 1995 on the **Patent Law Treaty (PLT)** concerning formality issues. PLT adopted in 2000.
- Started discussions on the **Substantive Patent Law Treaty (SPLT)** in 2001. Difficulties due to different priorities of Member States. Discussion suspended between 2006-2008.

GATT(WTO)

- **GATT Uruguay Round:** discussions on trade related aspects of IPRs (1986)
- Chair's Final Draft in 1991
- Agreement Establishing the WTO adopted in 1994 (**TRIPS Agreement** in the Annex)
- **Doha Declaration** on TRIPS and Public Health in 2001
- General Council Decisions that led to the **amendment to the TRIPS Agreement** (new Article 31bis)

What is harmonization of laws?



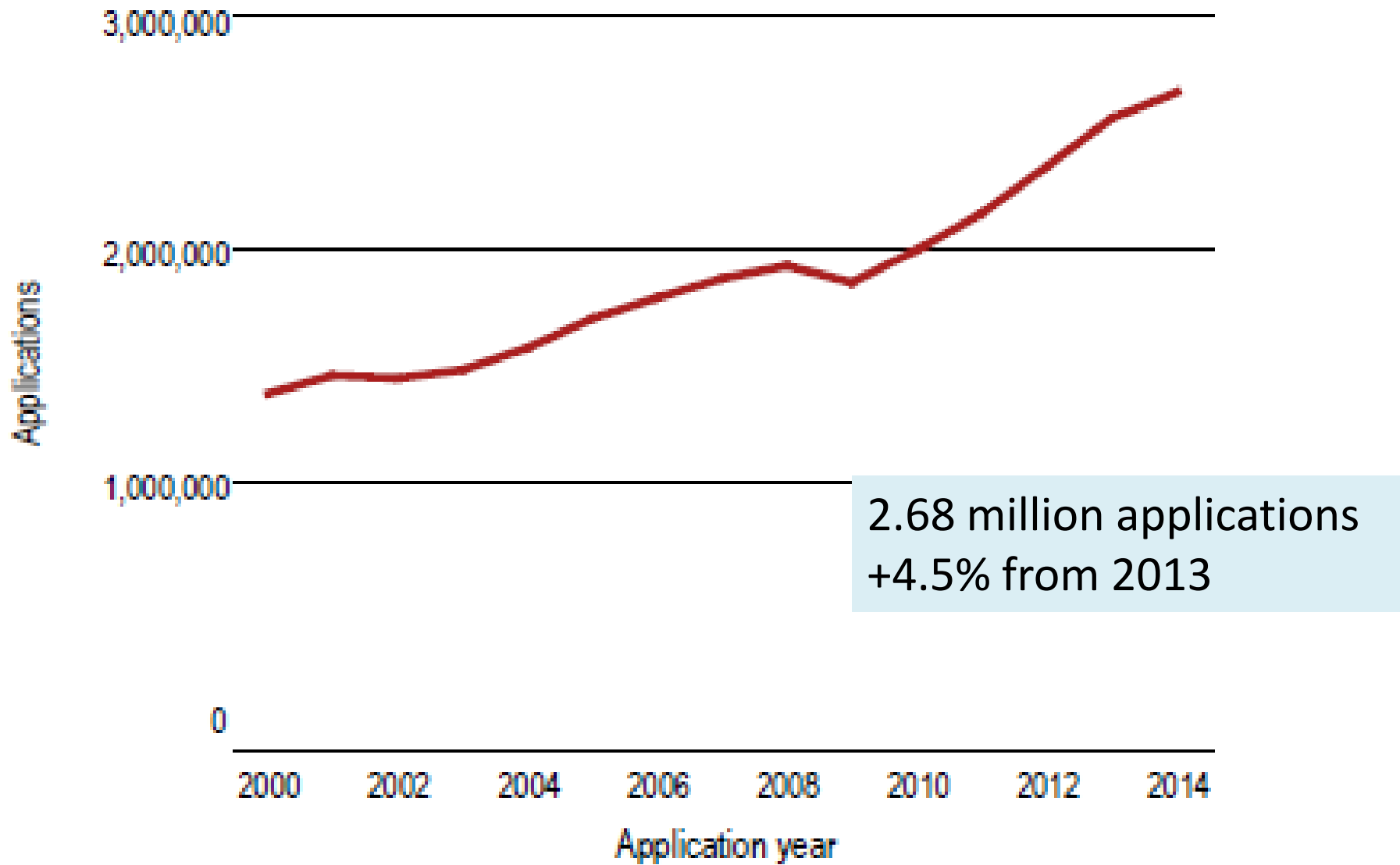
- Features of “harmonization” (Boodman)
 - Presuppose and preserve the **diversity**
 - Its components, while retaining their individuality, form a new and more **complex entirety**
 - Objectively, it could involve both **consonance and dissonance**

Harmonization processes sought when the diversity creates a particular “dissonance”.

- The nature and forms of attaining harmony **depends on the specific situation and circumstances**.
- “**Flexibility**” is often a necessary part of creating and managing a relationship with diversity.
- Both harmonization and flexibility **cannot be discusses in abstract**.
- Both notions are **dynamic** – establishing and re-establishing harmony in the changing world

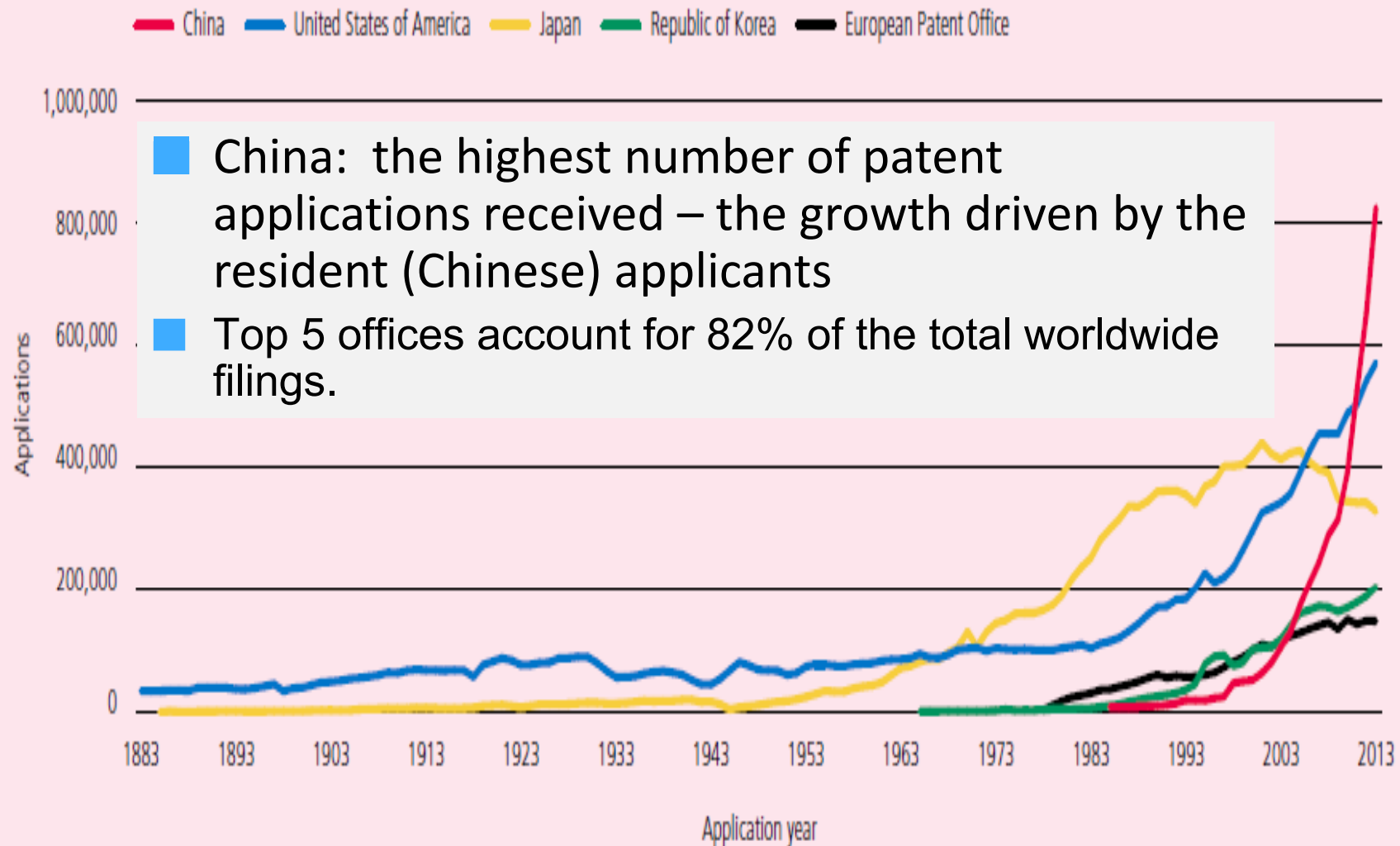
Changing Landscape

Patent applications worldwide, 2014

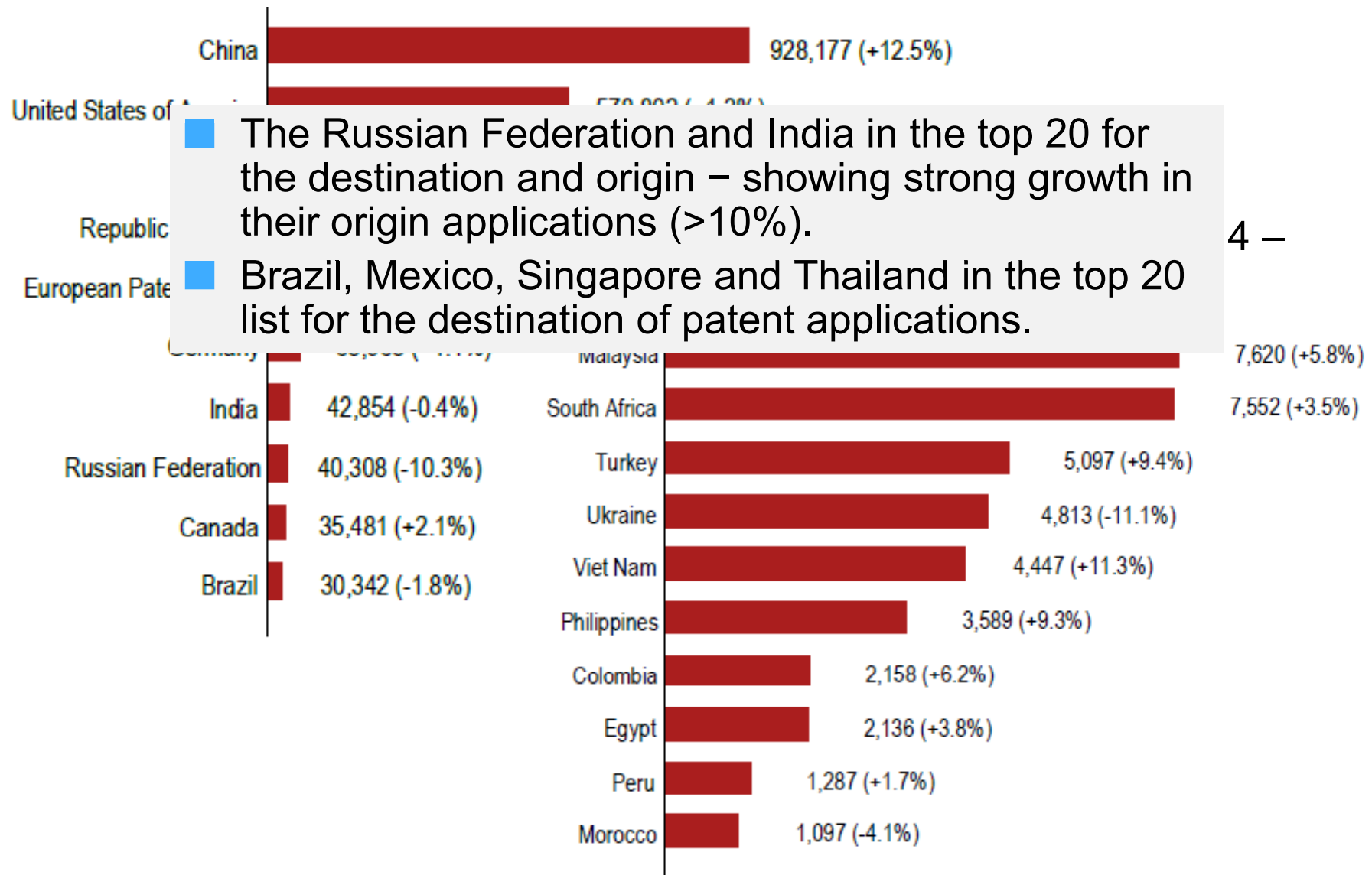


Intellectual Property Statistics: <http://www.wipo.int/ipstats/en/>

Trend in patent applications for the top five offices

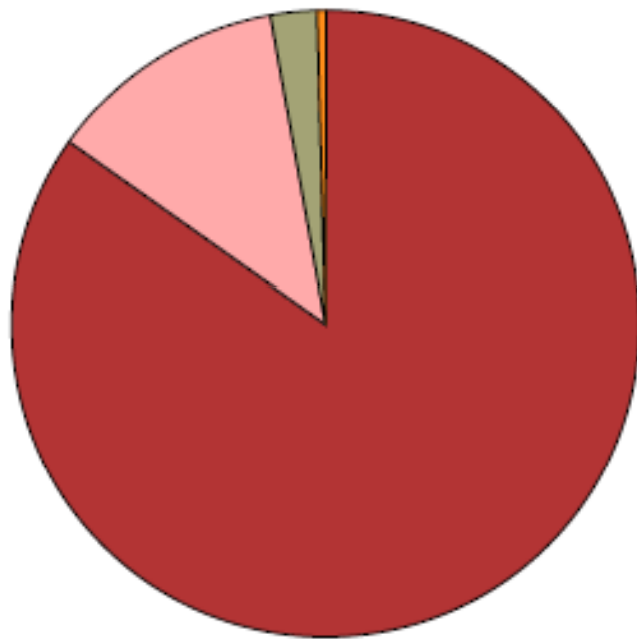


Patent applications filed in 2014 – Top 10



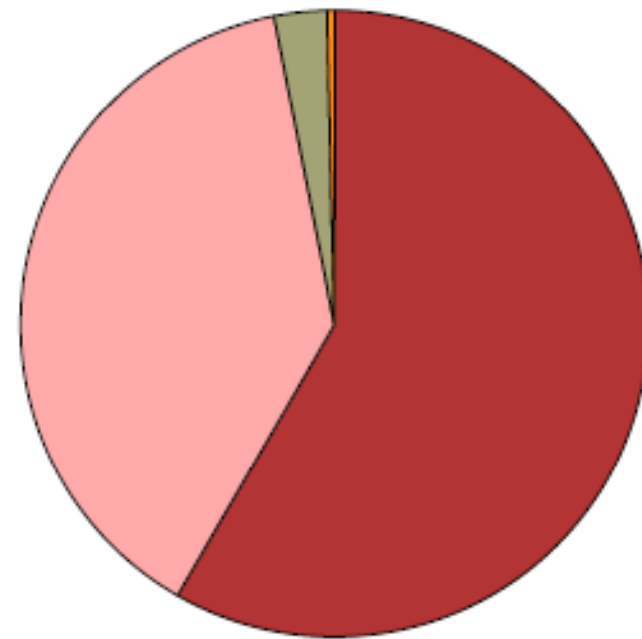
Patent applications by income group

2004



High-income: 84.8%
Upper middle-income: 12.4%
Lower middle-income: 2.4%
Low-income: 0.4%

2014



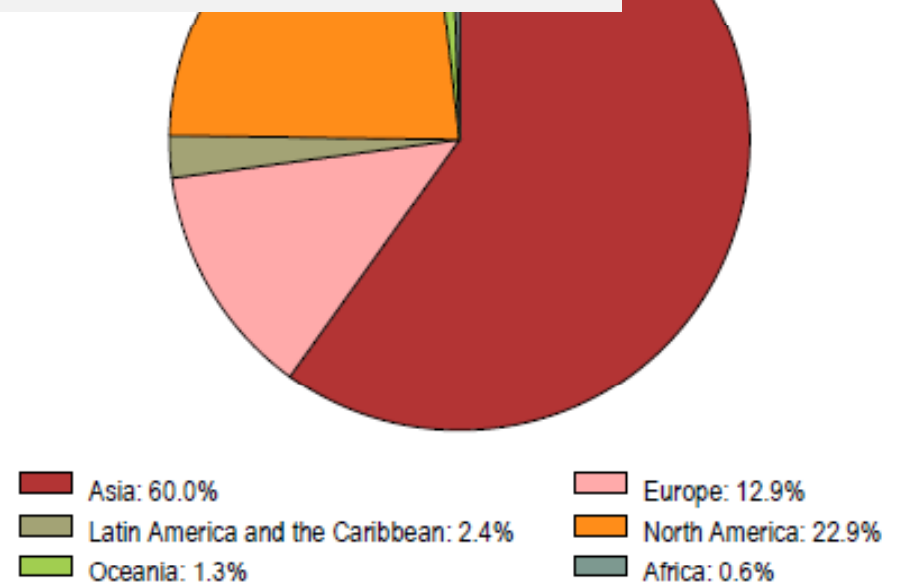
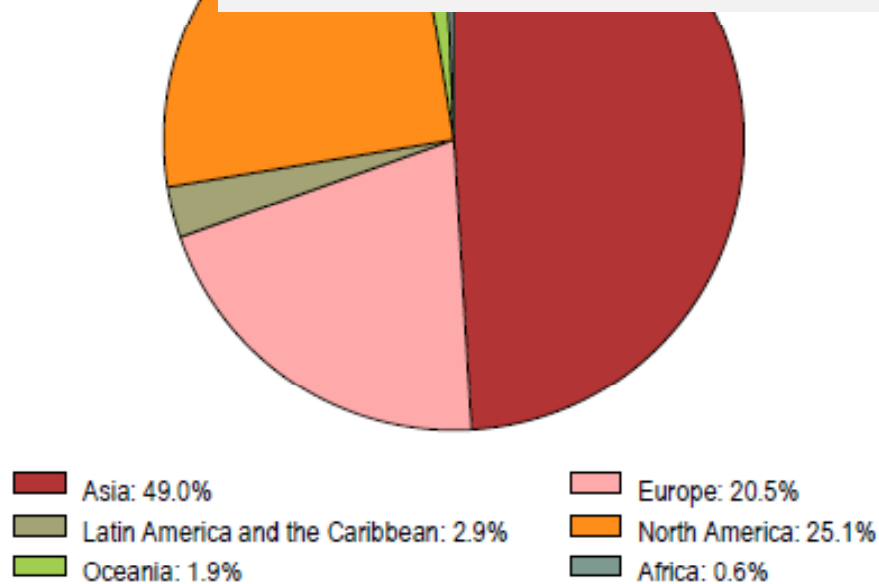
High-income: 58.4%
Upper middle-income: 38.5%
Lower middle-income: 2.7%
Low-income: 0.4%

Patent applications by region

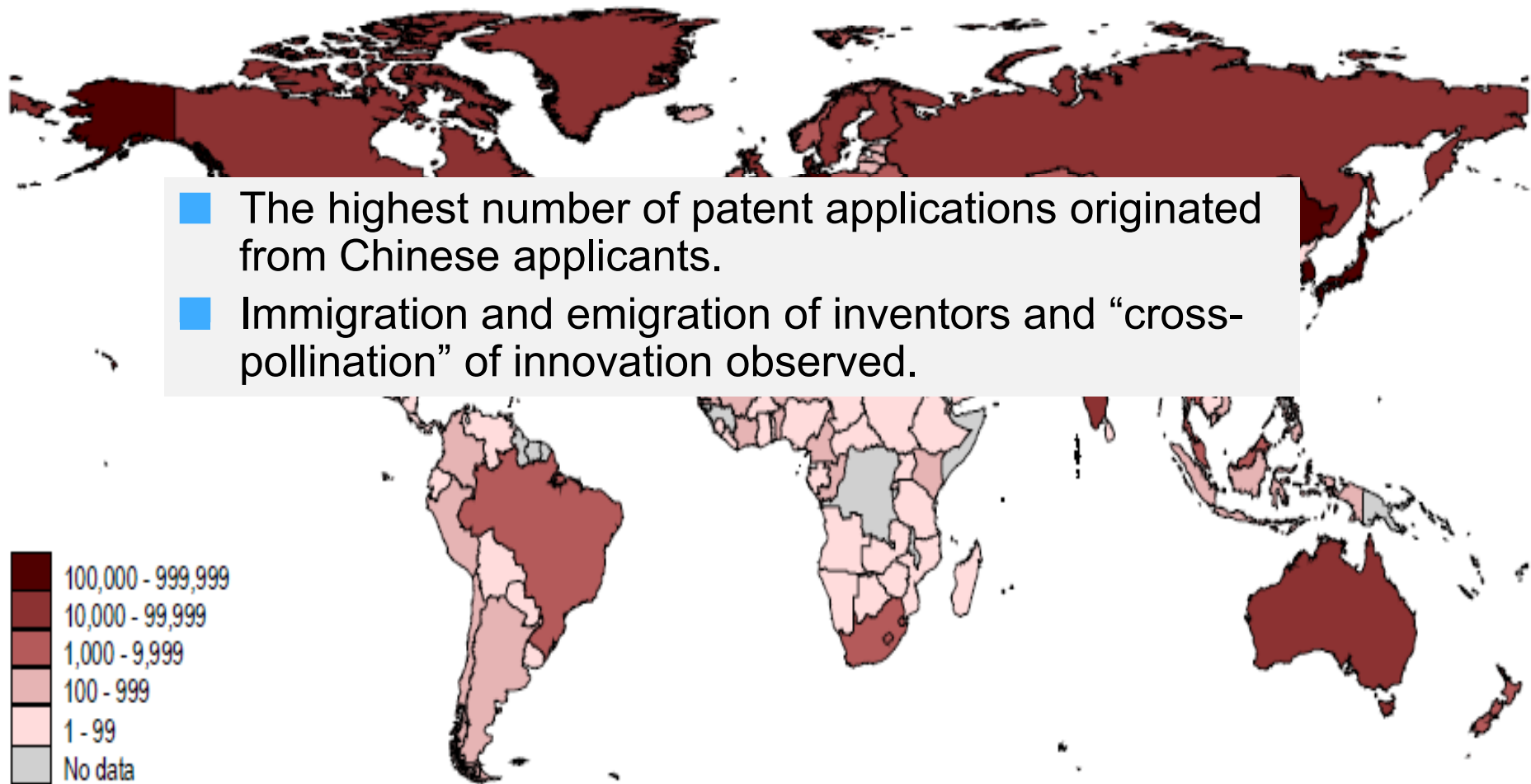
2004

2014

Asian patent offices received 60% of all patent applications worldwide and 94% of all utility models worldwide in 2014.



Equivalent patent applications by origin, 2014



Filing Growth Rate by Technology

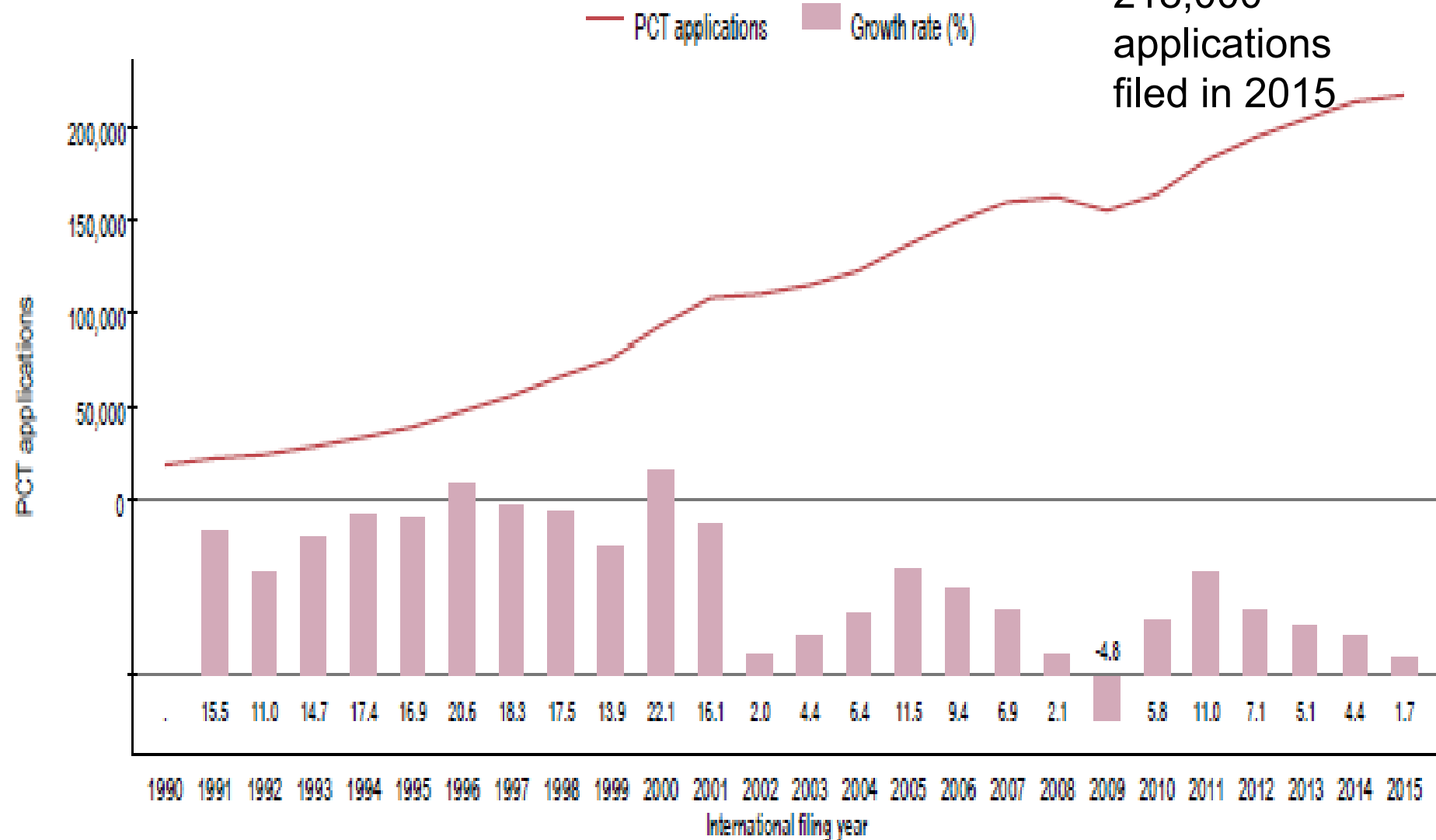
Technology	Average Annual Growth Rate (%)			
	1972-82	1983-90	1991-94	1995-07
Digital communication	4.9	9.3	4.0	<u>15.2</u>
Pharmaceuticals	7.8	5.3	4.8	<u>10.7</u>
Computer technology	6.0	10.4	-5.7	<u>9.2</u>
Medical technology	4.9	6.4	5.9	<u>8.1</u>
Semiconductors	8.7	8.4	-7.6	7.7
Telecommunications	4.1	8.6	0.5	<u>7.2</u>
Biotechnology	5.7	9.0	7.3	5.8
Electrical machinery, apparatus, energy	1.2	1.1	0.5	5.6
Measurement	2.2	2.5	-5.1	5.5
Organic fine chemistry	-1.9	0.9	1.1	4.7
Audio-visual technology	5.7	6.2	-3.2	4.5
Transport	-0.6	3.2	3.4	4.2
Optics	3.4	7.6	-2.3	3.8
Civil engineering	0.0	1.9	4.4	2.3
Handling	-0.9	1.2	2.9	2.2
Other special machines	-0.6	2.9	-0.7	2.0

Note: WIPO's IPC-Technology concordance table is used to classify the data by fields of technology

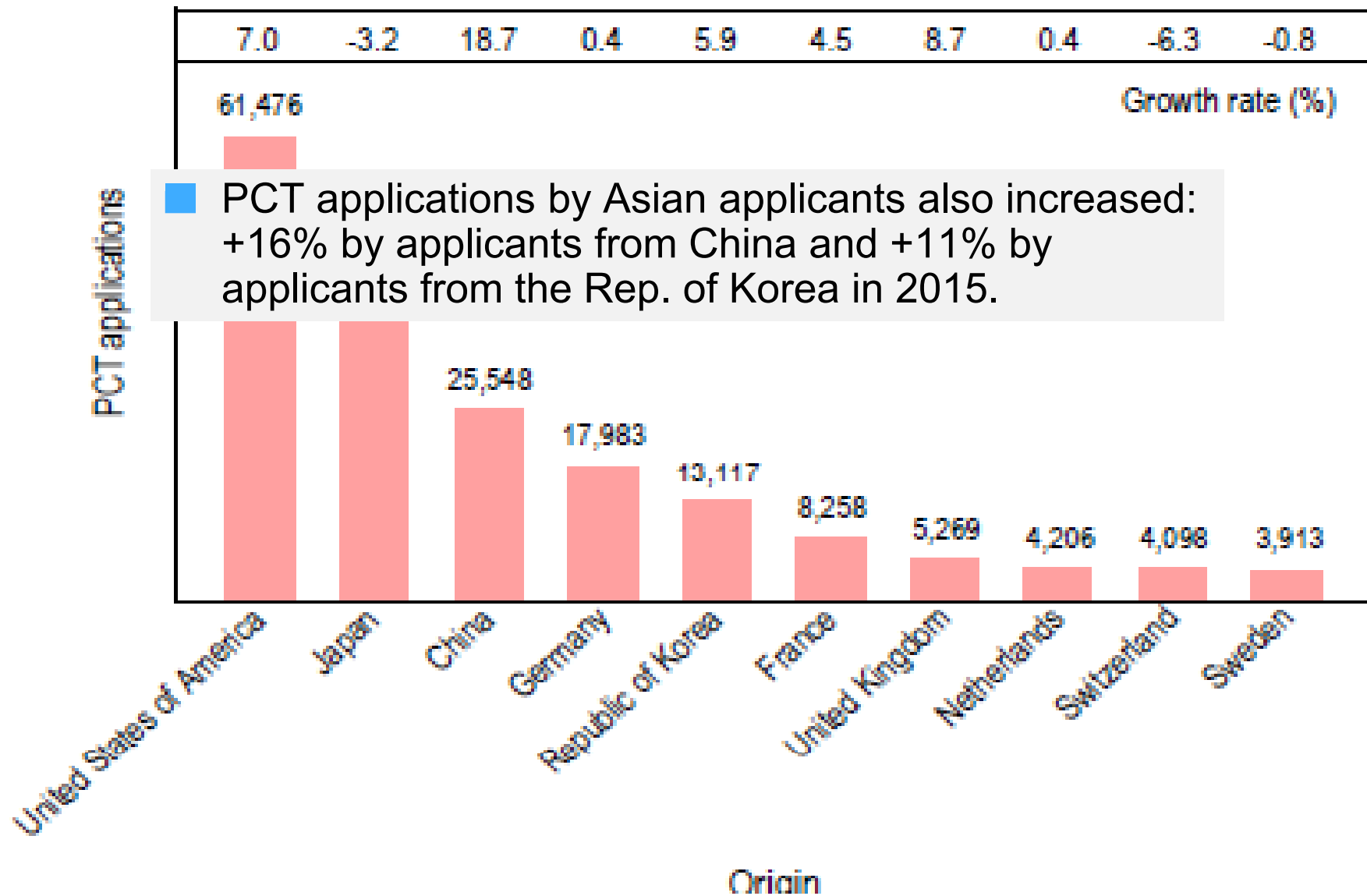
Source: WIPO document PCT/WG/4/4, Table 8

No. of the PCT applications

218,000
applications
filed in 2015



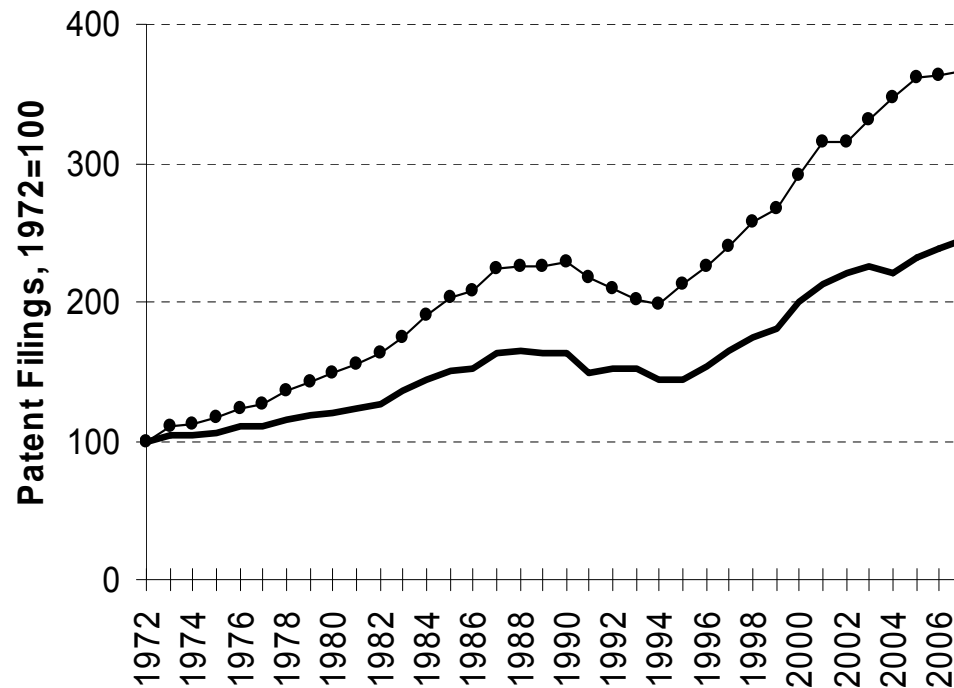
PCT applications by origin – Top 10, 2014



Filing Trends for Complex versus Discrete Technologies (1972=100)

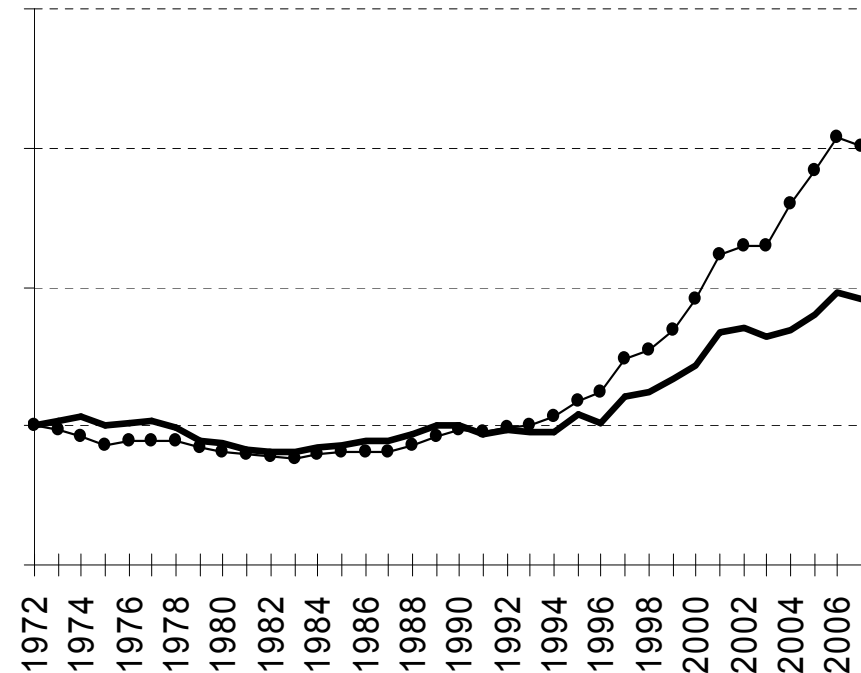
First filing

- First Filing: Complex-Product Technologies
- First Filing: Discrete-Product Technologies



Subsequent filing

- Subsequent Filing: Complex-Product Technologies
- Subsequent Filing: Discrete-Product Technologies



Source: WIPO document PCT/WG/4/4, Figure 8

Changing landscape (1)

Internationalization of science and technology production

- Shifting nature of innovation – “who”; “how”; “what for”
- Shifting nature and importance of IP
 - increased tradability of IP
 - new collaborative mechanisms and IP intermediaries
 - aligning IP strategies with business strategies



Growing demand for patent protection internationally

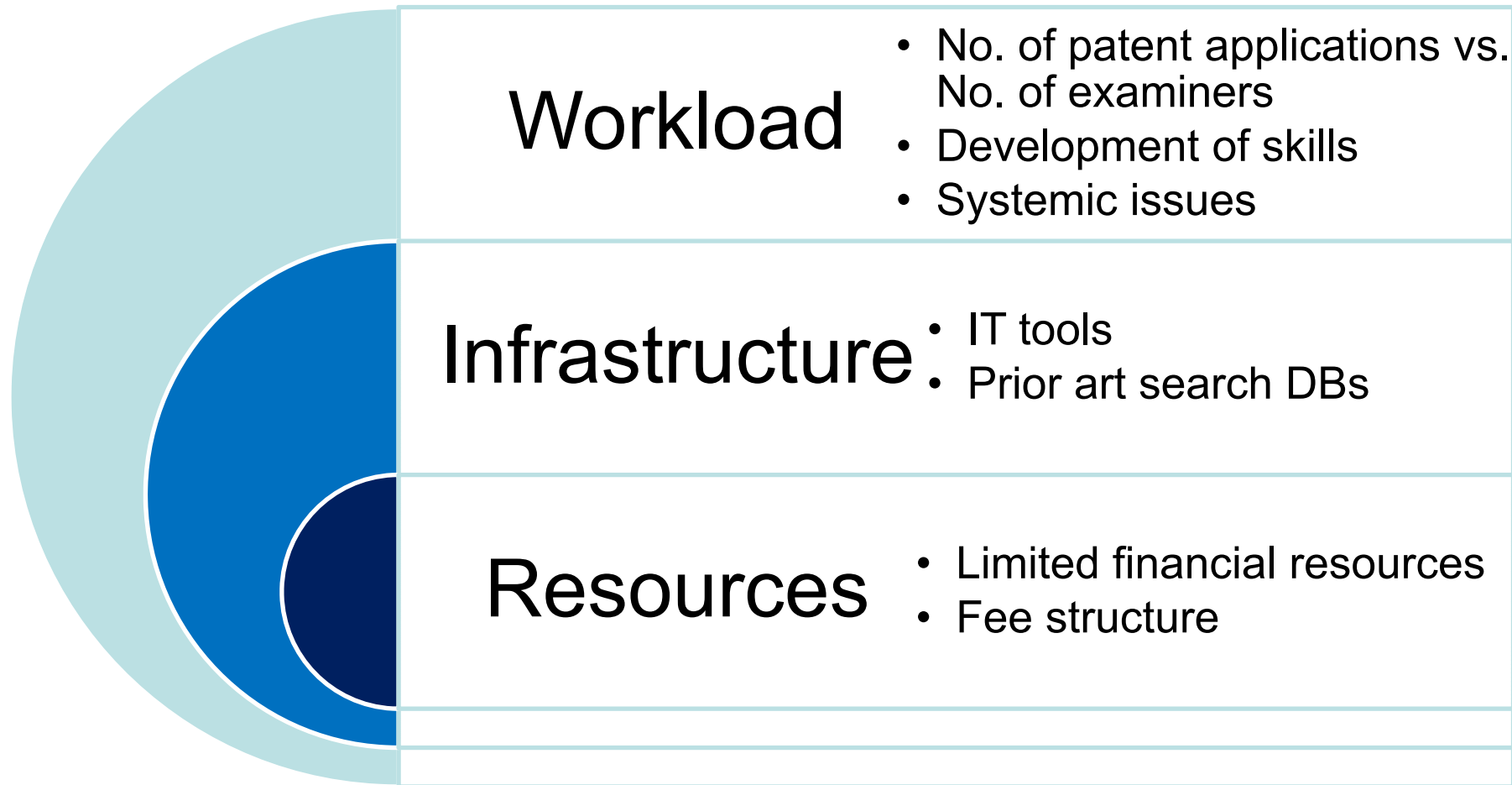
- Rise of new innovating countries
- Desire to protect inventions abroad
- Increased focus on knowledge

Changing landscape (2)

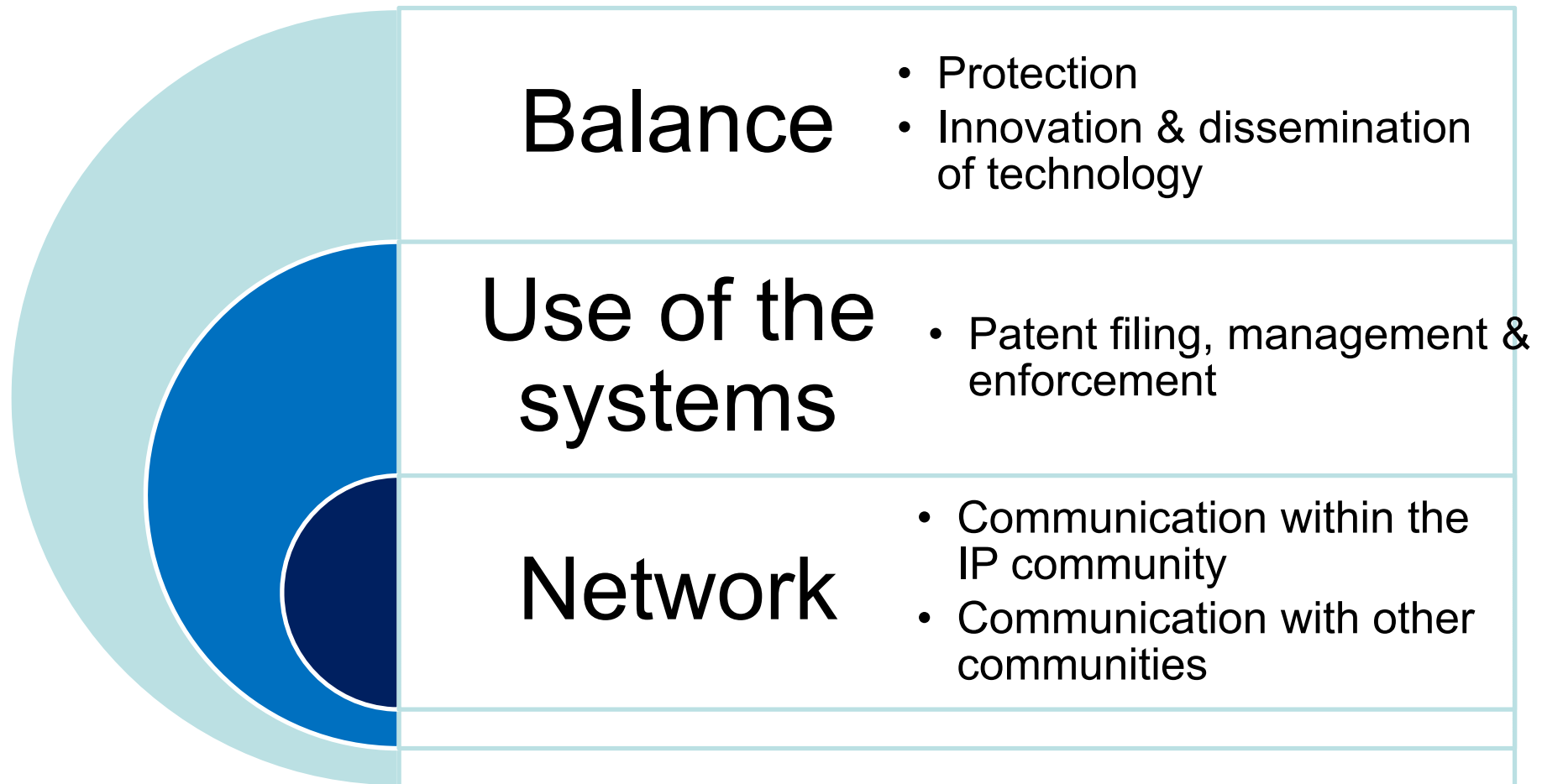
Implications of the patent systems to global policy concerns

- Increased attentions to the impacts of IPRs on public policies
 - Patent policy as an integral part of national policies (trade, science and technology, industrial development, public health, competition, agriculture and food security etc.– tensions could arise even within one country)
-
- ➡ Growing demand for balancing various interests of stakeholders
 - both at the national and international levels
 - different innovation/business models
 - ➡ Enlarged participation in policy debates
 - ➡ Increased number of international fora

Challenges – IP Offices



Challenges – IP systems



Current Discussions at WIPO

- Selected Issues -

What is the SCP?

- **S**tanding **C**ommittee for the Law of **P**atents.
- It is a forum to discuss issues, facilitate coordination and provide guidance concerning the progressive international development of patent law, including harmonization of national laws and procedures.



<http://www.wipo.int/scp>

SCP Mandate

**SCP consists of Member States;
as well as IGOs and NGOs as observers**

**Agenda and future work are set by
Member States**

Forum for: (1) Policy debates, (2) sharing
information, experiences and best practices,
(3) negotiation of international norms.

**SCP deals with clusters of issues rather than
each issue in isolation**

Five issues being considered by the SCP

1. Exceptions and Limitations to Patent Rights

2. Quality of Patents, including Opposition Systems

3. Patents and Health

4. Transfer of Technology

5. Confidentiality of Communications between Clients and their Patent Advisers

QUALITY OF PATENTS

Quality of patents is an essential aspect of the patent system in order for it to serve its purpose.

Errors in patent grant and administration procedures lead to legal uncertainty and costs for all users.



Quality of Patents (2)

Quality-related aspects of the System:

- Legislation
- Practices
- Substantive matters
- Procedural matters

Constant
review and
adjustment

- Search and examination

- Third party observation & Opposition mechanisms

- Practical guidelines & training programs for patent office employees

- Conducts of patent applicants

- Quality Control

- Quality Management Systems (QMS)

International initiatives relating to patent quality

WIPO

- Quality of PCT work products
 - Improvement of the PCT system
 - ➔ PCT Working Group; Quality Subgroup
- Quality of national/regional patents (incl. PCT national phase)
 - SCP
 - WIPO CASE – sharing search&examination reports etc.
 - Examiners training and patent drafting training

Other international cooperation

- sharing search and examination work products
- utilizing search and examination capacity of other offices
- examination by a regional patent office

In addition, various initiatives related to technical infrastructure of IP Offices.

SCP activities

- **Opposition systems** and other administrative review mechanisms
WIPO
 - Implementation of various opposition systems and other administrative review mechanisms within the national/regional patent systems (document SCP/18/4) – preparing update and a new webpage
- Studies on **inventive step** and **sufficiency of disclosure**
- **Work sharing** programs among patent offices and use of external information for search and examination
 - Collection of information (document SCP/20/8)
 - Sharing experiences relating to international work sharing and collaboration initiatives
 - **Webpage:** <http://www.wipo.int/patents/en/topics/worksharing/>

International worksharing and collaborative activities

Sharing Search and Examination Work Products

[PCT system](#)

[WIPO CASE](#)

Regional frameworks (ex. PROSUR, ASPEC)

Bilateral frameworks (ex. KIPO-USPTO)

Patent Prosecution Highway (PPH)

Unilateral use of information concerning corresponding foreign application and grant

Utilizing search and examination capacity of other offices

[WIPO International Cooperation for Examination of Inventions \(ICE\)](#)

Regional cooperation (ex. CADOPAT)

Bilateral cooperation (ex. Monaco-EPO)

Examination by a regional patent office

Acceptance of equivalent search and examination done by certain other offices

Public Health: Some thoughts – basic facts

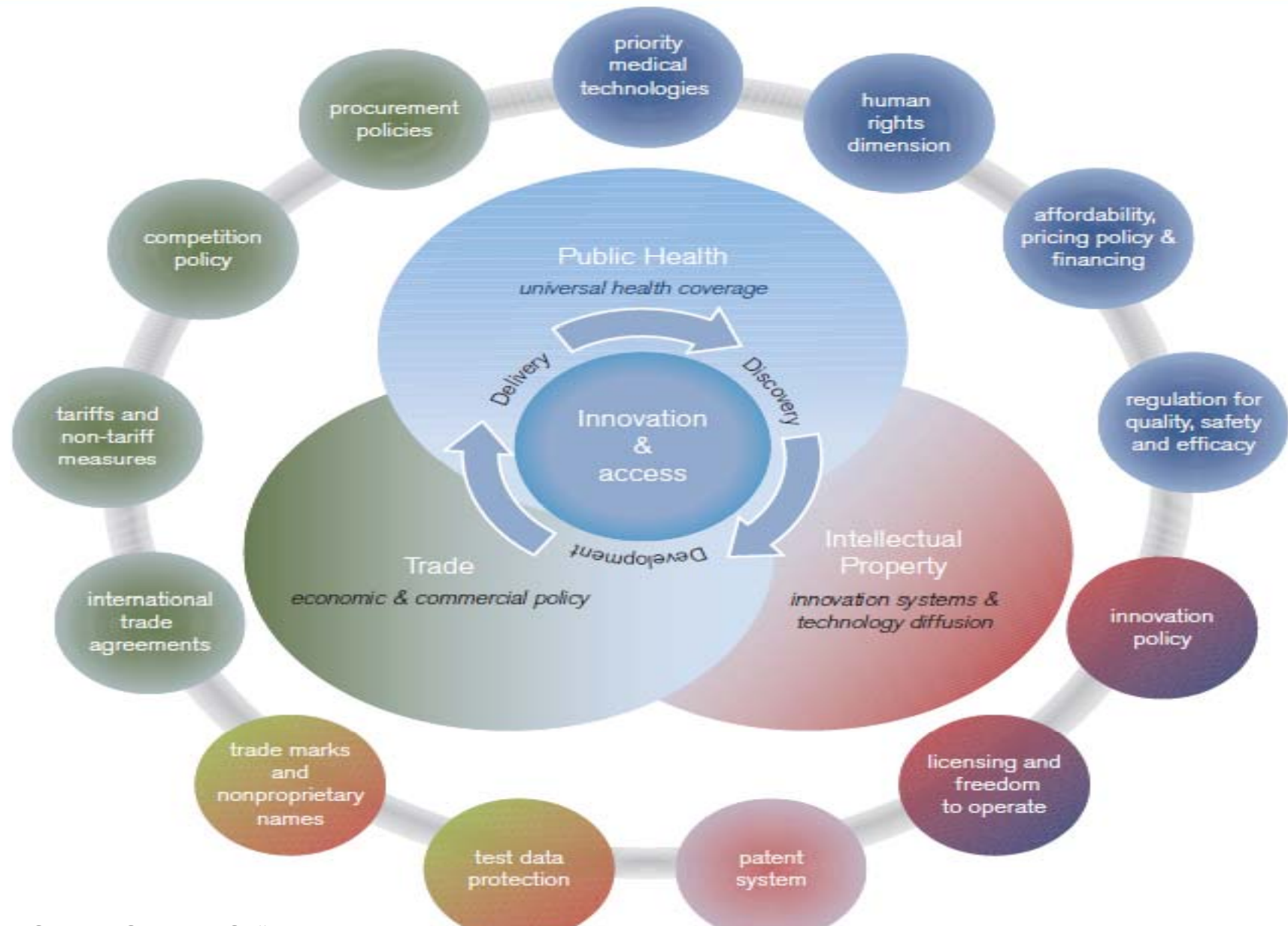
- Between 20 and 60% of health budget in LICs goes to medicine purchase.*
- In 36 out of 89 countries, out-of-pocket expenditures for health accounted for more than 50% of total health spending in 2009.*
- Almost half of the disease burden in LMICs is caused by non-communicable diseases.*

[* WHO, WIPO, WTO “Promoting access to medical technologies and innovation”]

- Estimations of pharmaceutical R&D costs varied from US\$92 million to US\$883.6 million.*
- Based on estimations by the PhRMA, bringing a new medicine from discovery to market can take between 10 and 15 years.*
- The average product development time is getting longer. [IFPMA]
- The failure rates for biotherapeutic products are about 96%. [IFPMA]

- Over the past 10 years, health expenditures in OECD countries grew almost twice as fast as the whole economy. [OECD]
- Worldwide spending in medicines will reach almost US\$1.3 trillion in 2018 (+30% from 2013). New high-cost medicines contribute to the increase in HICs. [IMS report]

Mapping the policy intersections: key areas of law and policy for innovation and access



WHO, WTO, WIPO “Promoting Access to Medical Technologies and Innovation: Intersections between public health, intellectual property and trade”

Study on the disclosure of INN

- International Non-proprietary Name (INN)
 - Unique, universal nonproprietary name to identify each pharmaceutical substance; widely used by health professionals
ex. ibuprofen, paracetamol, atazanavir, sofosbuvir
 - Intended for use in pharmacopeias, labelling, product information etc.
 - Selection and their publication administered by the WHO

Particular challenges in searching pharmaceutical substances disclosed in patent applications

atazanavir
(INN)

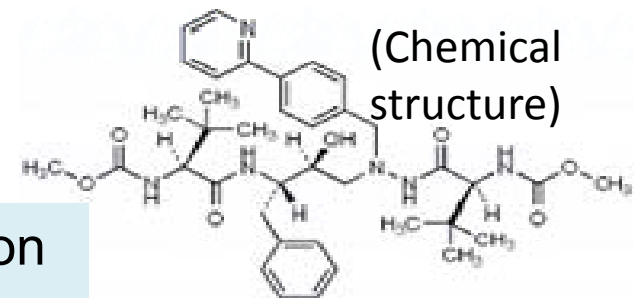
198904-31-3
(CAS Reg.
number)

Methyl N-[[[(1S)-1-[[[(2S,3S)-3-hydroxy-4-[2S)-
-2-[(methoxycarbonyl)amino]-3,3-dimethyl-N'-{[4-
(pyridin-2-yl)..... (IUPAC chemical name)

BMS-232632
(manufacturer
name)

C₃₈H₅₂N₆O₇
(Molecular
formula)

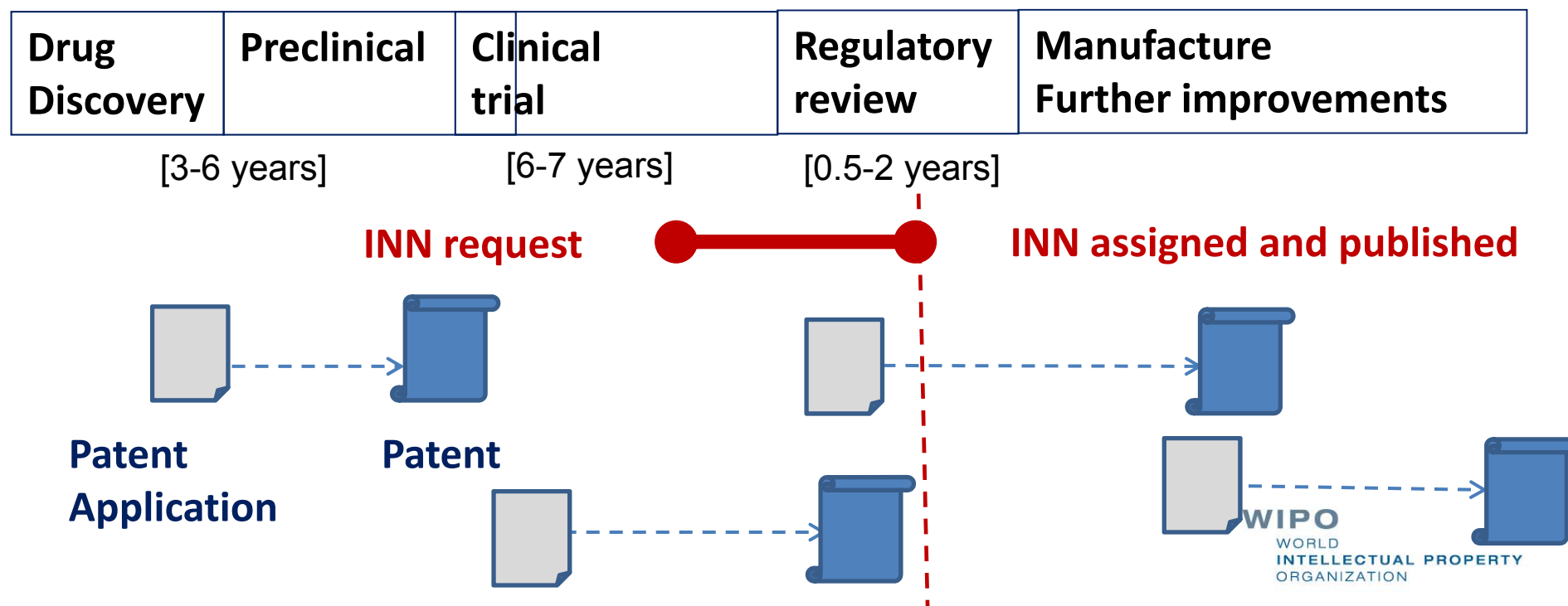
(Chemical
structure)



Currently, an applicant may choose any indication as long as the invention is sufficiently disclosed.

Is it feasible to require applicants to use the INN whenever it describes a pharmaceutical substance in its patent application and patent?

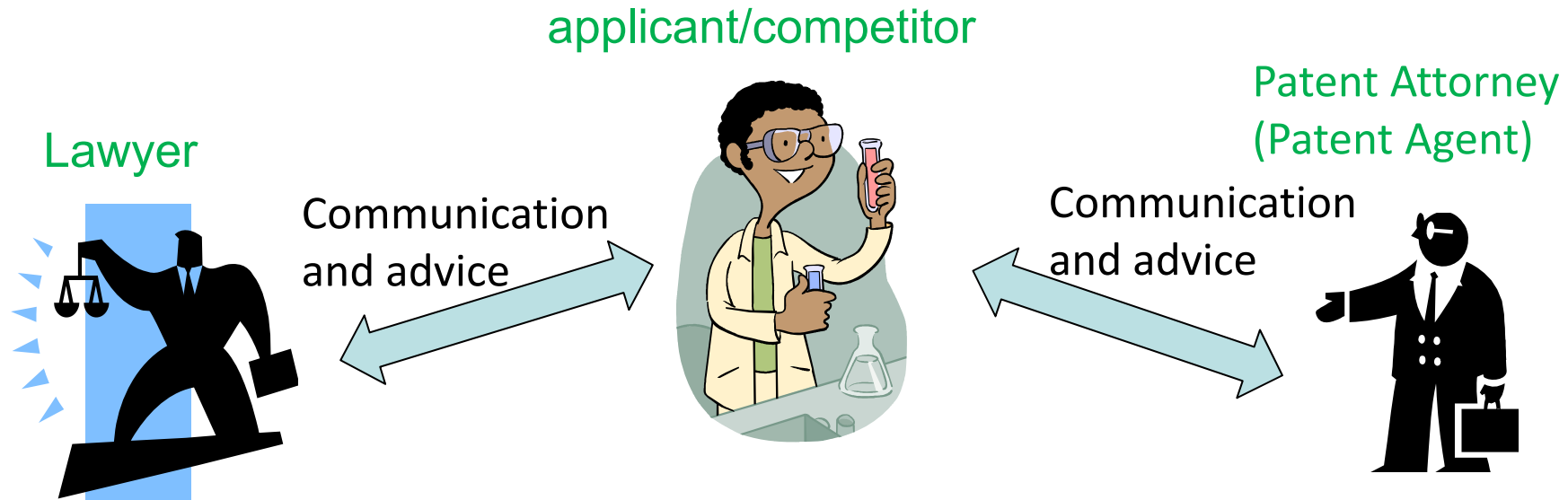
* Currently, no national/regional patent law requires the use of INN in identifying pharmaceutical substances.



Confidentiality of Communications between Clients and their Patent Advisers



http://www.wipo.int/scp/en/confidentiality_advisors_clients/



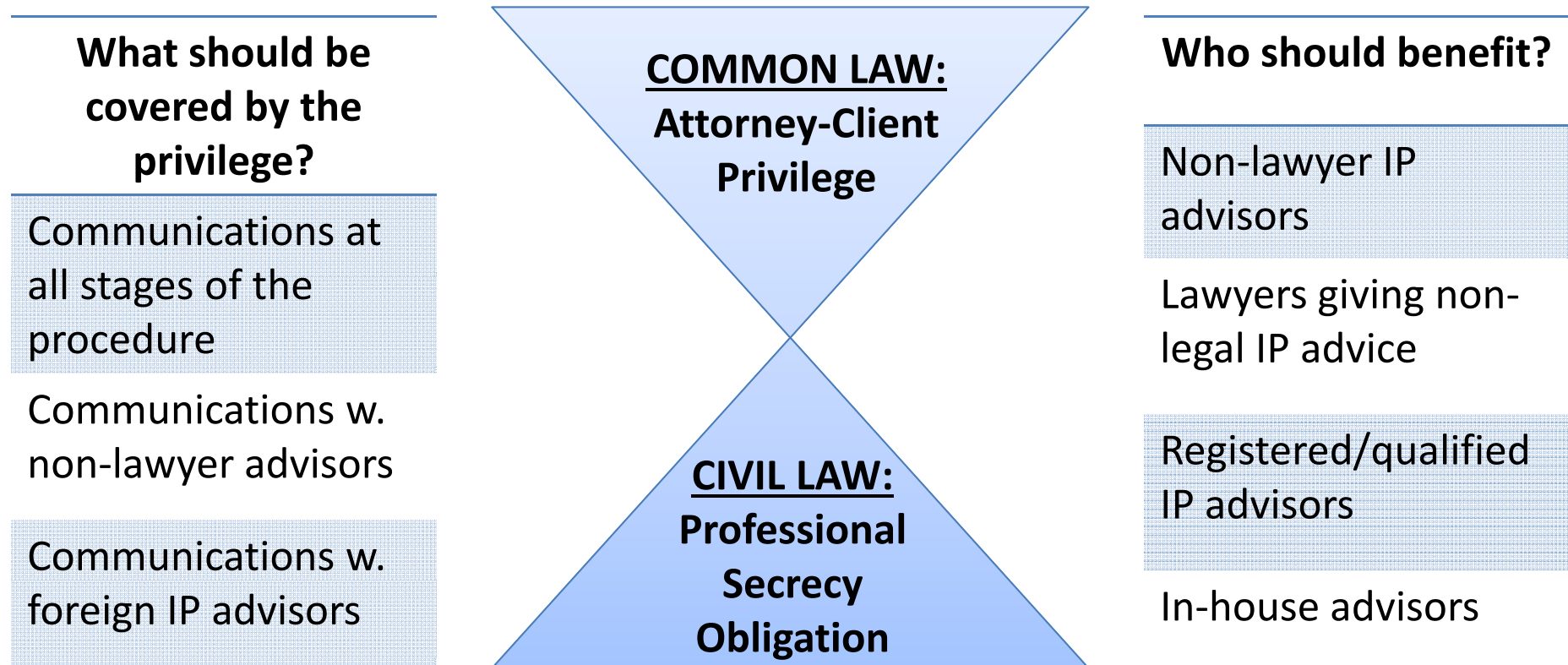
- **Client-attorney privilege**
(common law countries with “discovery” in a pre-trial phase)
- **Professional secrecy obligation**
(civil law countries without discovery)

- Confidentiality preserved?**
- In general, **professional secrecy obligation /code of conduct**
 - **Privilege not recognized** in some common law countries

*How to preserve **confidentiality of advice from patent advisors?***

*Free and frank communication between client and advisor
necessary for high quality advice*

Confidentiality of Communications (2)



Protection & advice are increasingly sought in many jurisdictions
→ more litigation in various jurisdictions
→ variations in jurisdictions lead to uncertainty and loss of confidentiality

Some thoughts towards the future

Some thoughts

Cooperation should take place in the complex web of national, bilateral, plurilateral, regional and multilateral frameworks – IP and beyond.

- Growing demand for patent protection

- Growing demand for quality, efficiency and effectiveness of the patent ecosystem

- ICT might bring fundamental changes in patent administration and patent management.

- Transparency of the patent system

- narrowing an information asymmetry gap
 - disclosure function of the patent system

- Coherence within various international frameworks (bilateral, plurilateral, multilateral ...)

Some thoughts

- Responding to common global challenges
 - What is our common goal?
- Static costs and benefits vs. dynamic costs and benefits
- Empirical and factual information to facilitate informed decision making by policy makers



Thank you

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