

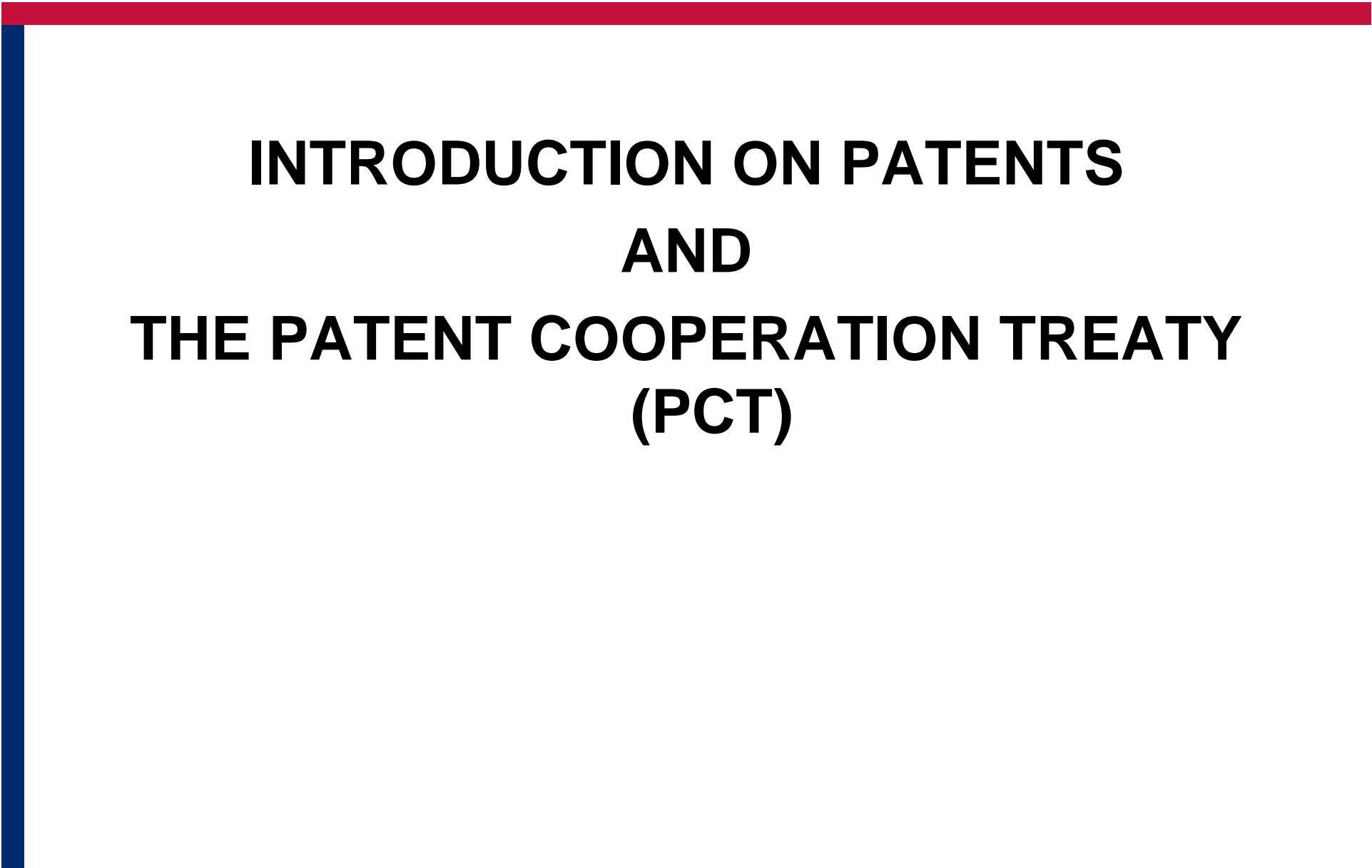


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Jordan's Accession to the Patent Cooperation Treaty (PCT): Impact Assessment

September 2016



**INTRODUCTION ON PATENTS
AND
THE PATENT COOPERATION TREATY
(PCT)**

WHAT IS A PATENT?

“A patent is a document issued by a government office (or a regional office acting for several countries) that describes an invention and creates a **legal situation** in which the patented invention can be exploited (manufactured, used, sold, imported and licensed) **with the authorization of the owner of the patent for a limited time** (generally 20 years)” (WIPO)

WHAT IS A PATENT?

Once an invention is patented,

It may not be exploited in the country by persons other than the owner of the patent unless the owner agrees to such exploitation under a licensing agreement.

Thus the owner of the invention has the

statutory right to prevent others from commercially exploiting his invention

CONDITIONS FOR A PATENT?

1. The invention must consist of **patentable subject matter**.
2. The invention must be **industrially applicable (useful)**
3. it must be **new (novel)**
4. it must exhibit sufficient **“inventive step” (be non-obvious)**
5. The **disclosure** of the invention in the patent application must meet **certain technical standards**.

WHAT IS THE PCT?

1. The **PCT** is an international agreement **administered by WIPO.**
2. The PCT **facilitates the acquisition of patent rights** in a large number of countries (**currently 151 contracting states**).
3. The PCT **streamlines the process** of securing patents for an invention **in multiple countries** by **eliminating duplications in filing** separate patent applications for the same **invention in several countries.**

WHAT IS THE PCT?

- ✓ The PCT is a **patent filing system**
- ✗ not a **patent granting system**

The decision to grant patent rights is under the **jurisdiction of national patent offices.**

PCT APPLICATION PROCESS

The process is divided into two main phases:

- I. INTERNATIONAL PHASE**
- II. NATIONAL PHASE**

PCT APPLICATION PROCESS:

INTERNATIONAL PHASE

STANDARD PROCESSING PROCEDURE

1. Filing of the international application using a PCT filing office;
2. Establishment of the international search report and the non-binding written opinion by one of the “International Searching Authority (ISA)”. First search report is conducted after 16 months from priority date;
3. The publication of the international application on PATENTSCOPE together with the ISA by the International Bureau of WIPO after the expiration of the 18 months from priority date; the international disclosure of the invention in the public domain (Chapter I of the PCT);

PCT APPLICATION PROCESS:

INTERNATIONAL PHASE

OPTIONAL PROCEEDURE

4. Establishment of a supplementary international search report (SIS). (Chapter II of the PCT);
5. A non-binding international preliminary examination on patentability is communicated to the assigned national and/or regional office for processing the national phase of patent registration (Chapter II of the PCT).

Options 4&5 above give the applicant an extra opportunity to refine his invention prior to examination by the selected national receiving offices

PCT APPLICATION PROCESS: NATIONAL PHASE

1. Prior to the expiry of 30 months of the PCT application, the applicant can proceed by processing his application in the designated countries (national patent offices)
2. The processing, in many cases, requires hiring a national IP agent, filing a national application, paying national patent application fees and translation costs when needed.
3. Moreover the receiving office may request additional evidence in respect of the substantive conditions of patentability **as identified under national laws.**

PCT ADVANTAGES

- ✓ The PCT application process removes duplication associated with filing multiple patent applications in different PCT member states.
- ✓ The PCT provides the applicant with the opportunity to request an international preliminary examination report and supplementary search report (SIS) which enhances the search for new patent documents and gives the applicant the opportunity to further refine his invention and decide on the most suitable countries where his invention can be patented.
- ✓ If the invention is not patentable at the end of the search reports, the applicant can abandon his application without incurring additional costs for filing multiple applications in foreign countries.

PCT ADVANTAGES

- ✓ The PCT provides 30 months (as opposed to 12 months under Paris Convention from the priority date) to convert the PCT application into parallel patent applications in promising PCT member states.
- ✓ The PCT does not eliminate the option of patent filing using the Paris Convention (direct route). Inventors who are only seeking to protect a patent in one or two countries can continue to do so using the direct route.

PCT ADVANTAGES

- ✓ Under the PCT route, the invention is published using the **PATENTSCOPE** after the expiration of 18 months from the earliest filing date, whereas under the current Jordan Patent Regulation No (32) year 1999, the **patent application is not published until the initial approval to the patent is issued.**
- ✓ The publication of a patent using the PATENTSCOPE puts the invention in the **global patent landscape.** The inventor can choose to **highlight his/her interest in concluding licensing agreements** which can be an effective mean of globally advertising and identifying potential licensees for the invention.

PCT ADVANTAGES

- ✓ The PCT gives the IPPD Directorate the opportunity to speed-up patent search using the International Search Authority (ISA), thus enhance patent processing efficiency at the IPPD.
- ✓ PCT applications can be filed electronically using the PCT Safe.

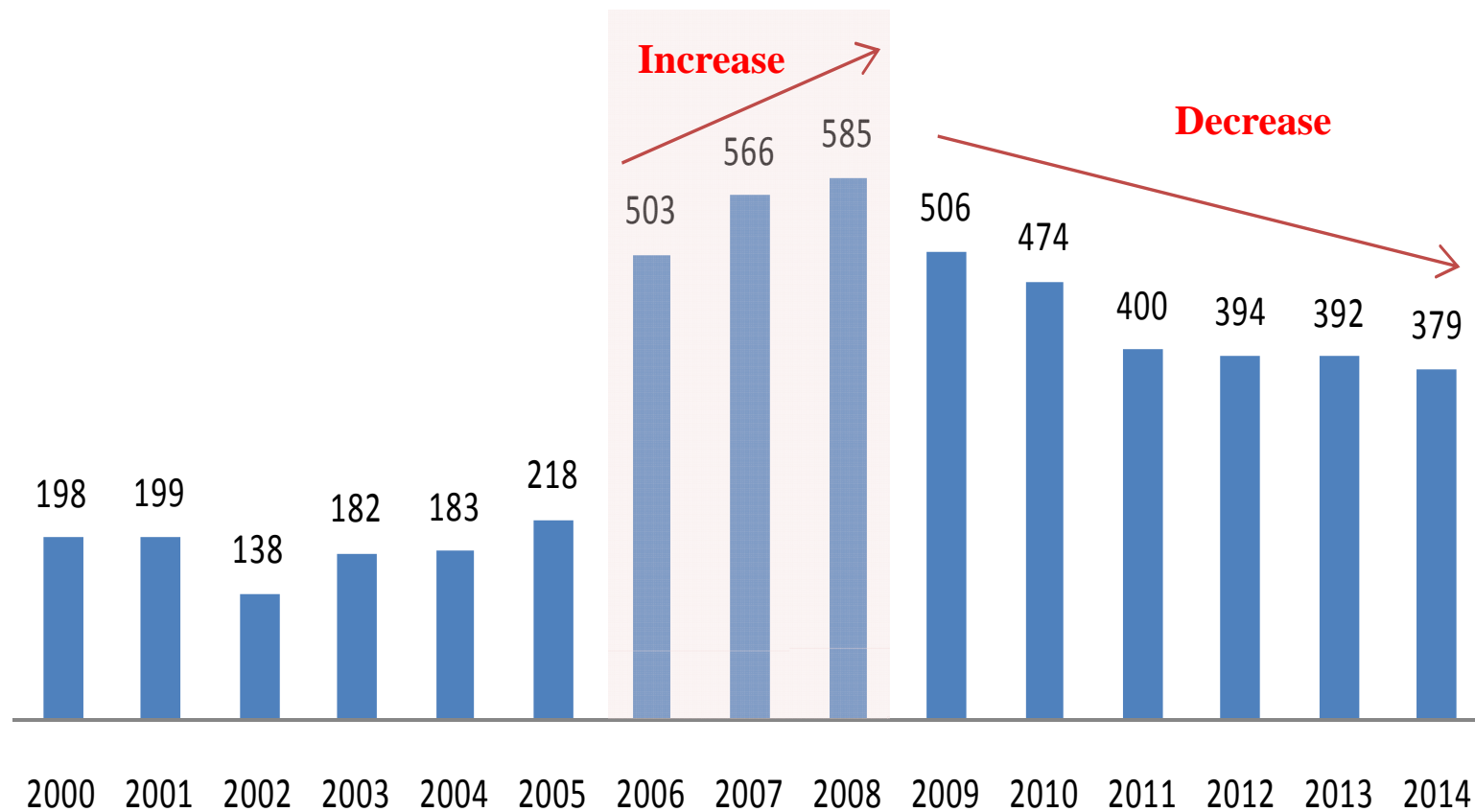


**PATENT TRENDS IN JORDAN
AND
ABROAD BY JORDANIAN ORIGIN**

Patenting Trends in Jordan

Patent applications

Total patents applications submitted to the IPPD Patent section in Jordan for the period 2000-2014 reached 5,317 applications.

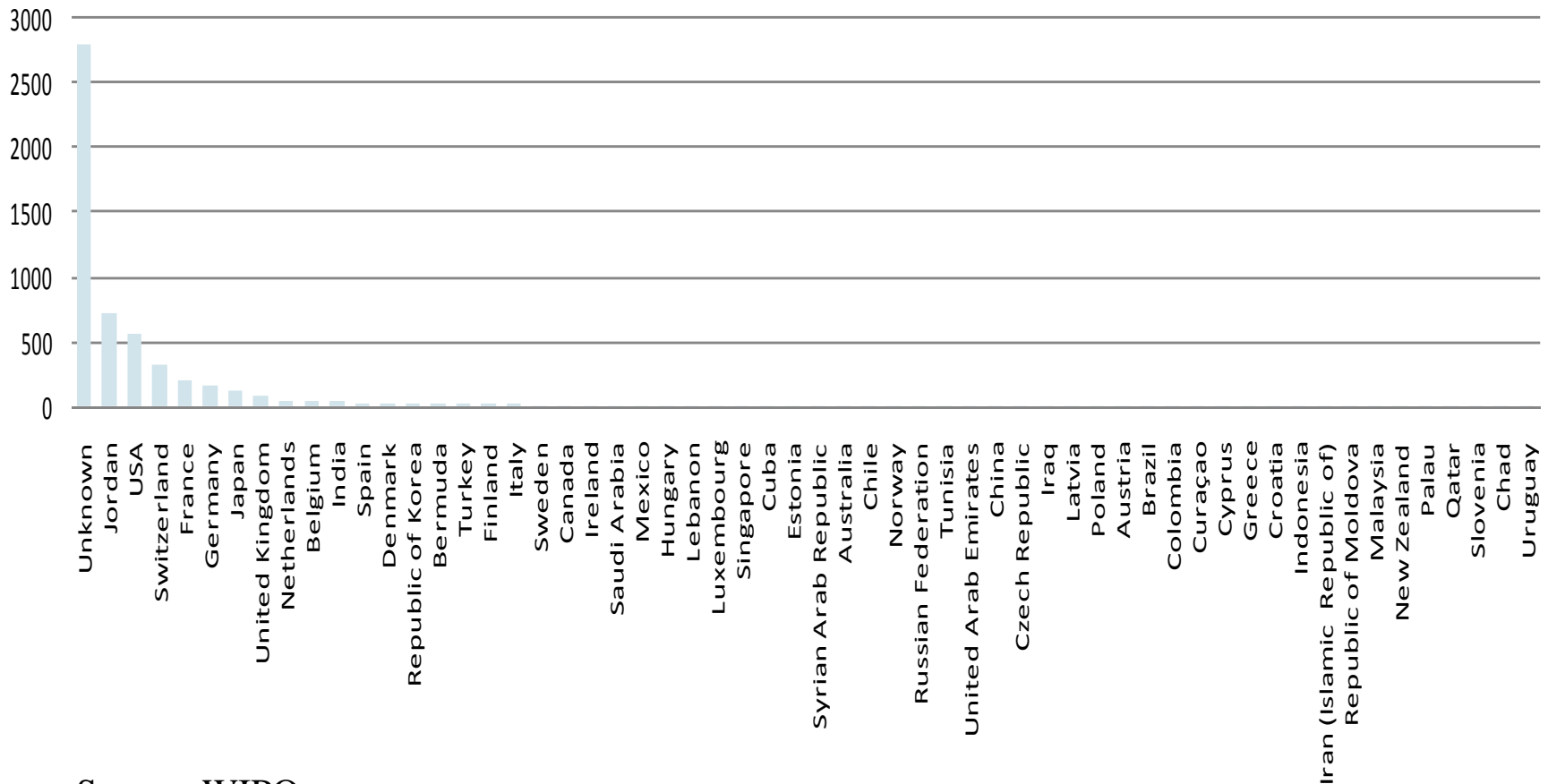


Source: WIPO

Patenting Trends in Jordan

Patent applications by nationality

Top patent applications for the period (2000-2014) were submitted by nationals from Jordan, USA, Switzerland, France, Germany, Japan and the United Kingdom.

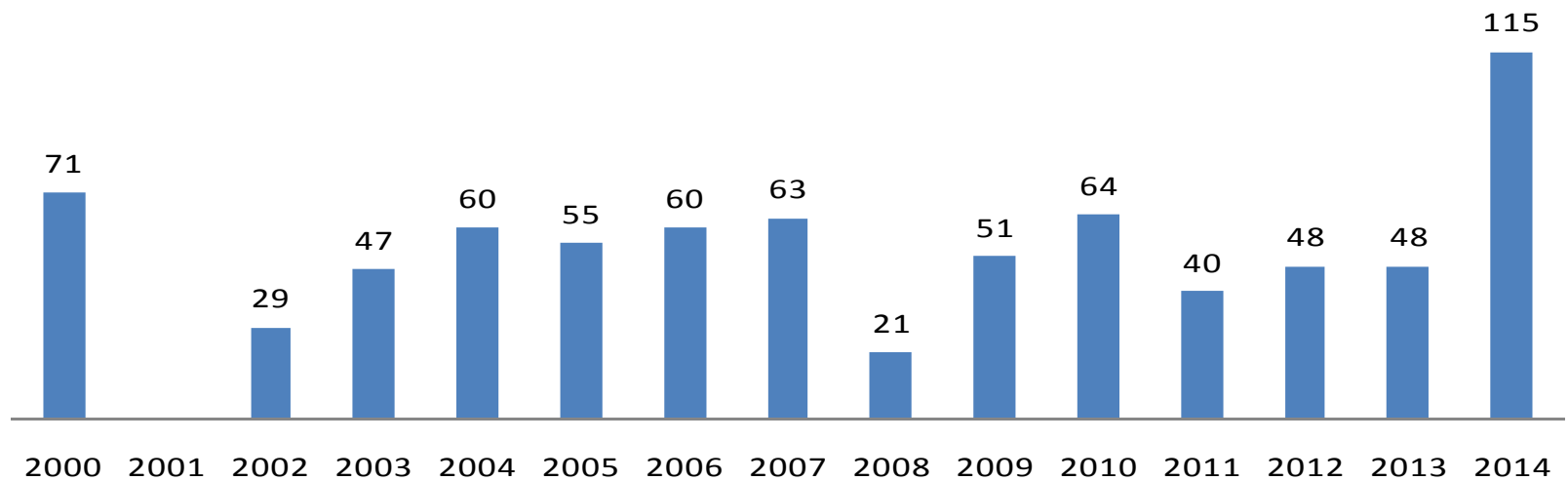


Source: WIPO

Patenting Trends in Jordan

Patent registration

Total patents granted by the IPPD Patent section in Jordan reached a total of 772 patents for the period 2000-2014

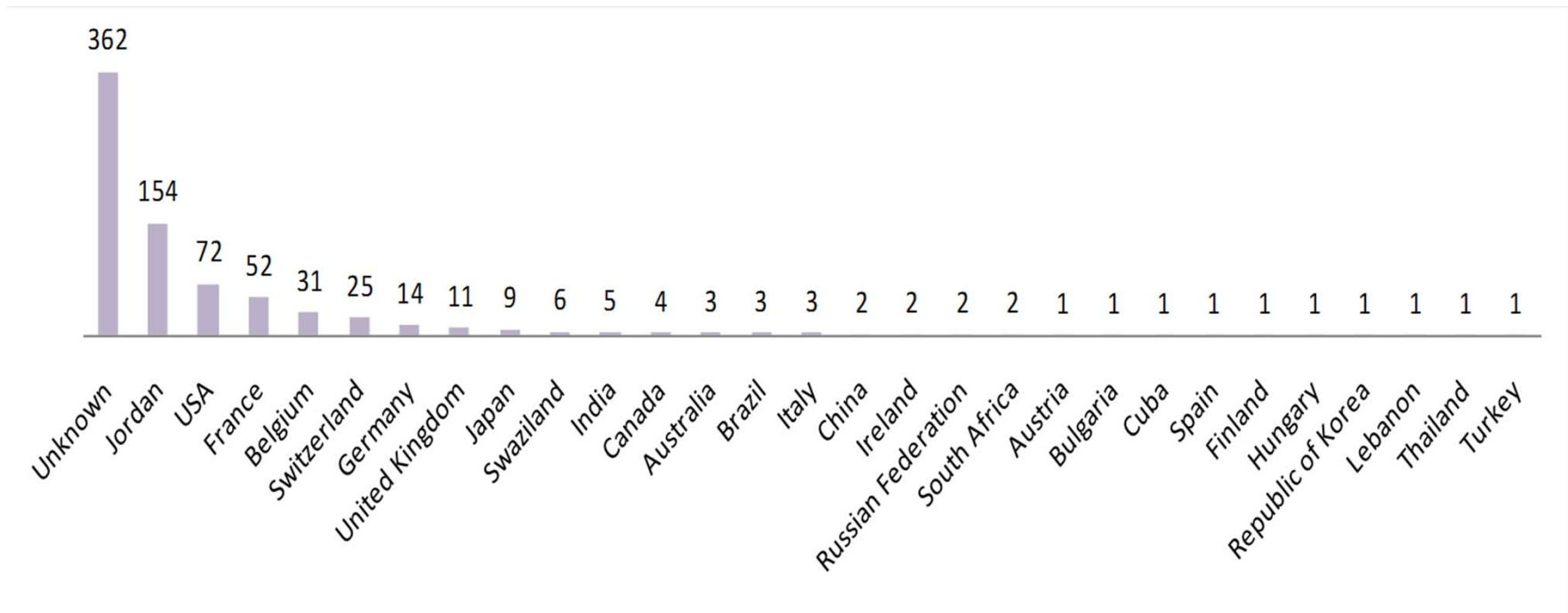


Source: WIPO

Patenting Trends in Jordan

Patent registration by nationality

The majority of patents granted for the period (2000-2014) were to nationals from Jordan, USA, France, Belgium, Switzerland, Germany and the United Kingdom.

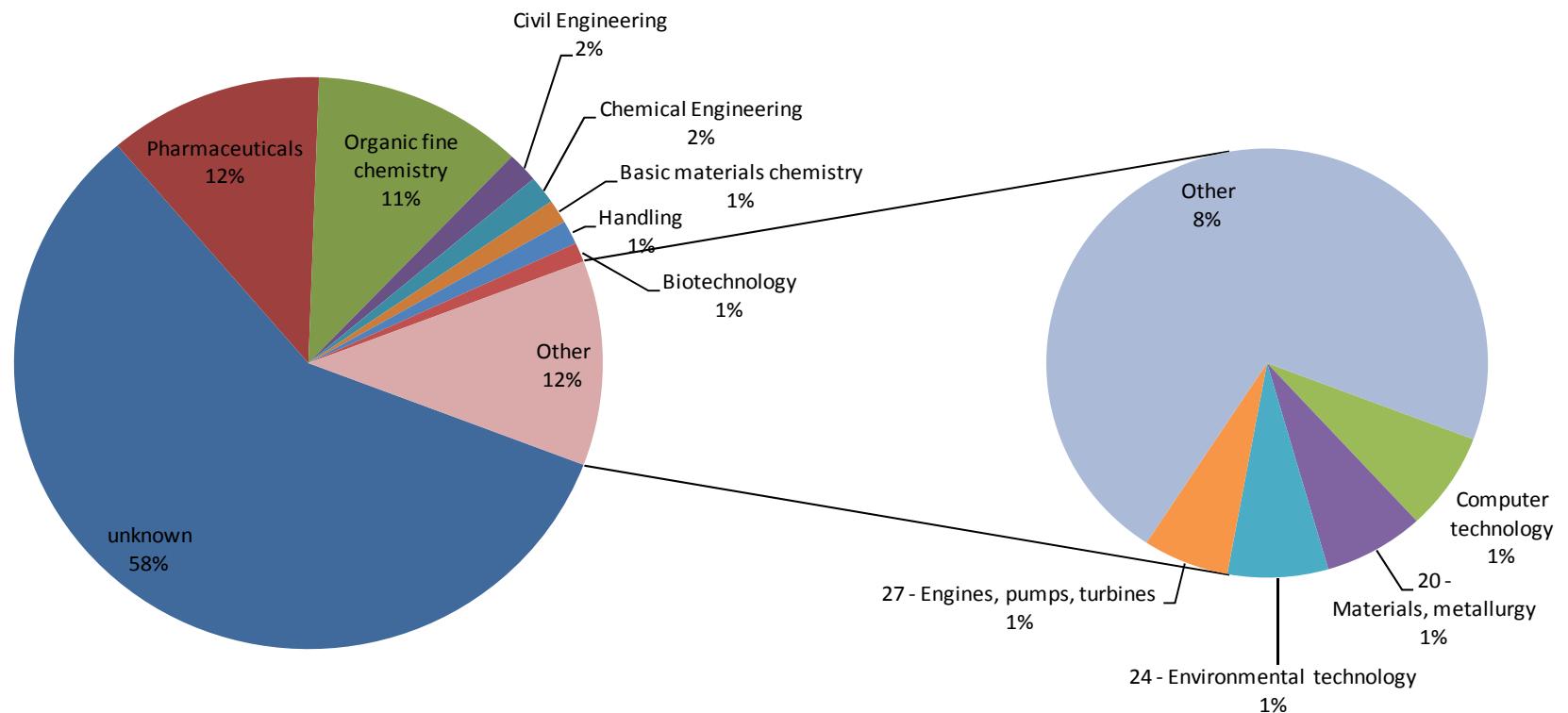


Source: WIPO

Patenting Trends in Jordan

Patent registration by technology

Patents granted by the PRO are mostly concentrated in pharmaceuticals, organic fine chemistry, civil engineering and chemical engineering



Source: WIPO

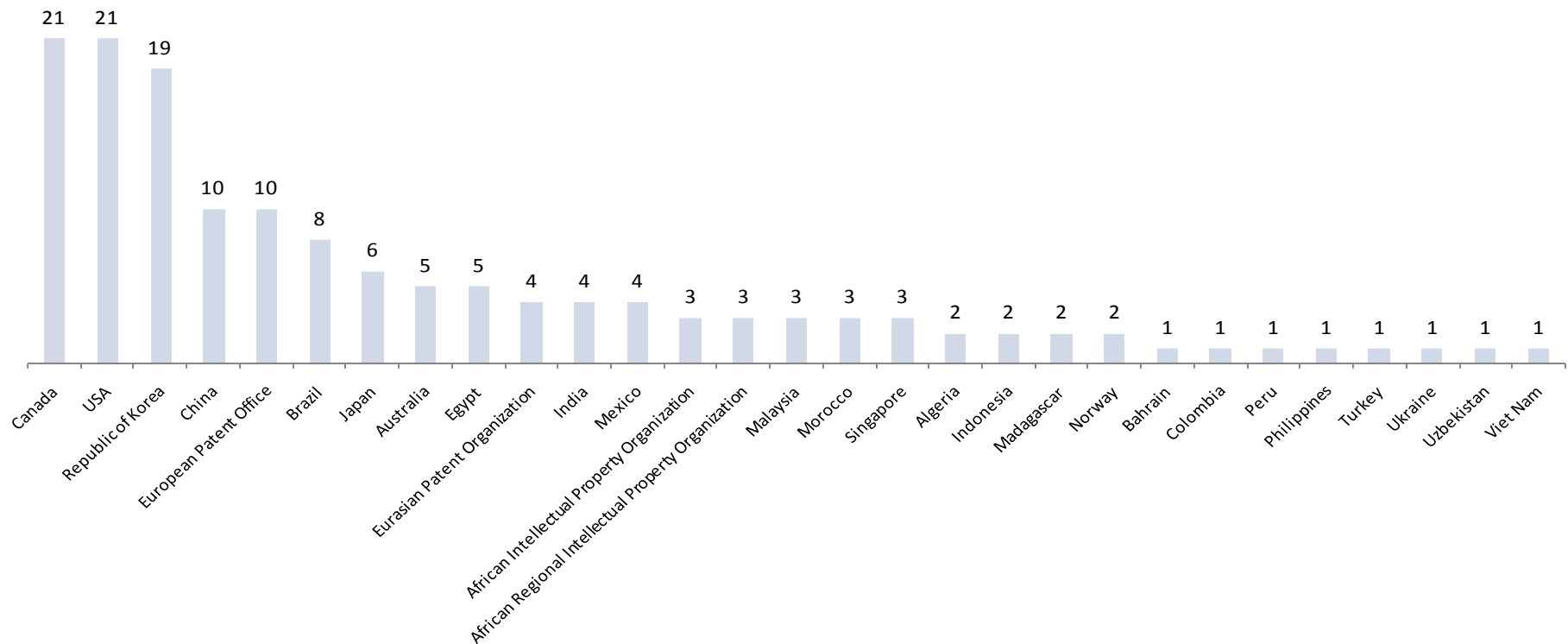
PCT national phase entry by Jordanian Origin

- Though Jordan is not yet a member of the PCT, **Jordanian nationals are already submitting PCT application using PCT member states in which they have established formal residency.**
- By being Jordanian nationals, these applicants obtain a 90 percent reduction on PCT application fees.
- There are a total of 148 applications submitted by Jordanian nationals in 29 PCT member states during the period 2000-2014.

PCT national phase entry by Jordanian Origin

Priority countries for PCT national phase entry

Priority national phase entry for Jordanian PCT applications were **Canada, USA, Korea, China, and the European Patent Office (EPO)**

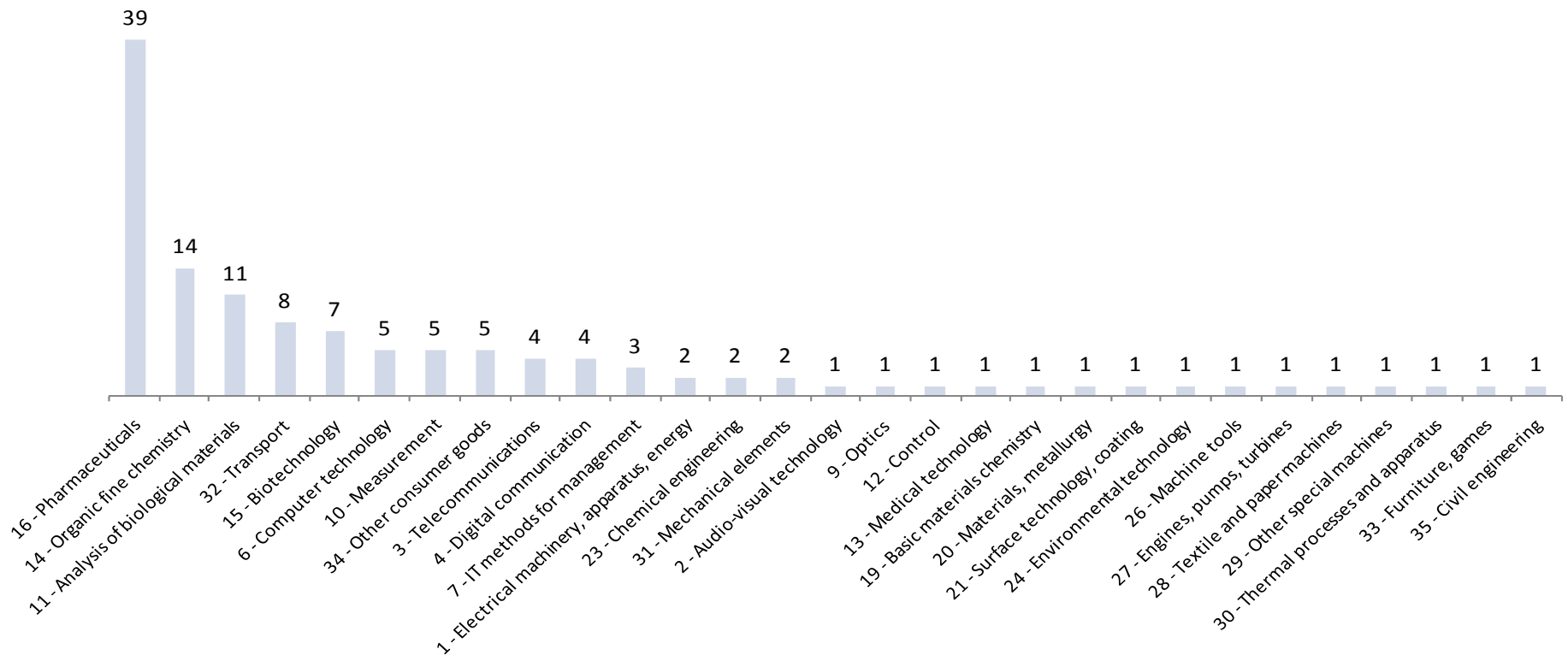


Source: WIPO

PCT national phase entry by Jordanian Origin

Priority technology for PCT national phase entry

Priority technology is concentrated in pharmaceutical industry, organic fine chemistry, analysis of biological material, transport, and biotechnology.



Source: WIPO



PCT ACCESSION RISK ASSESSMENT

PCT Accession Risk Assessment Methodology

- One-to-one interviews were undertaken during the period May-June 2016 with IP Community.
- The interviews were based on a questionnaire that addresses **patent registration, overall innovation environment in Jordan, and PCT accession; advantages and disadvantages.**

IP COMMUNITY INTVIEW LIST

Institution	Name	Expertise
The Jordanian Association of Pharmaceutical Manufacturers (JAPM)	Hanan Sboul	Pharmaceuticals
Oasis 500	Laith Shukri & Luma Fawaz	Venture Fund for Information and Communications Technology (ICT)
iPark	Mohammed Aljafari	Commercialization of IP
Saba IP	Ghaida Ala'Eddin	IP Agent
Intellectual Property Matters Co. Ltd	Maha A. Majeed	IP Agent
SMAS – IP	Jehad Al Kharouf	IP Agent
University of Jordan	Dr Mohammad H. Kailani	Chemical IP
University of Jordan	Prof. Ameen Khraisat	Dental IP
National Centre for Agricultural Research and Extension (NCARE)	Dr Muien Qaryouti, Eng. Emad Kar'an & Eng. Ammar Hattar	Agriculture IP
Registration of new plant varieties / Ministry of Agriculture	Eng Rima Mouhed & Eng Nour Habahbeh	Agriculture IP
Eskadenia	Doha Abdelkhaleq	Information Technology

Interview Results

- Most of the individuals/institutions that were interviewed were in favor of PCT accession, a few were neutral.
- Only the pharmaceutical sector had a serious objection towards joining the PCT.

PCT ACCESSION RISK ASSESSMENT

JAPM view on PCT accession

- The PCT will increase the number of patent applications and patents granted in Jordan thus prevent the pharmaceutical industry from developing branded generics.
- Major impact will be a decline in the number of products that can be developed by local companies, limiting their growth and expansion plans, decreasing jobs and decreasing sales locally and in export markets.
- The weakening of domestic production of generics will decrease domestic competition, and will force the MoH to purchase originator drugs at higher prices, thus increase the health bill of the Government.

PCT ACCESSION RISK ASSESSMENT

IP Agents view on PCT accession

- IP Agents presented a counter argument to that proposed by JAPM.
- They argued that Jordan's PCT accession might increase the overall number of applications that express interest in registering their patents in Jordan. However, based on the results of the international search reports, IP agents believe that most PCT applications for Jordan will be dropped; resulting in a reduced number of PCT national filing in Jordan.

PCT ACCESSION RISK ASSESSMENT

Proving the argument

- The impact assessment will undertake analysis of current Arab PCT member states to assess whether an increase in PCT applications and registration has occurred.
- The impact assessment will further focus on two Arab countries: Algeria and Saudi Arabia. Algeria, since the Jordanian pharmaceutical industry has investments in this country. Saudi Arabia, since it was recommended by JAPM as a case study.

PCT ACCESSION RISK ASSESSMENT

PCT Arab Member States

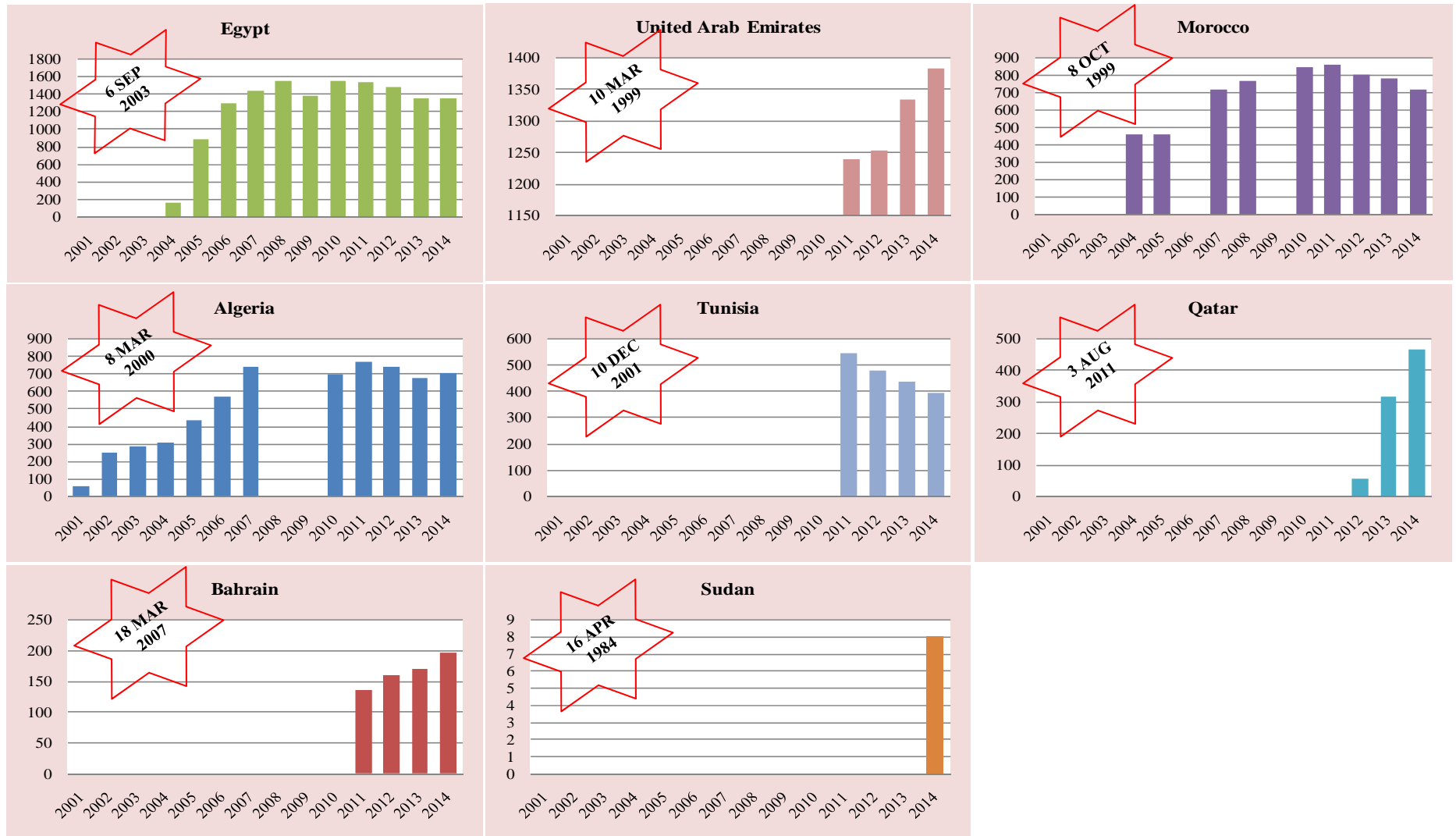
Country	PCT Accession Date	Country	PCT Accession Date
Mauritania	13 Apr 1983	Comoros	03 Apr 2005
Sudan	16 Apr 1984	Libya	15 Sep 2005
United Arab Emirates	10 Mar 1999	Bahrain ²	18 Mar 2007
Morocco	08 Oct 1999	Qatar ²	03 Aug 2011
Algeria ²	08 Mar 2000	Saudi Arabia	03 Aug 2013
Oman ²	26 Oct 2001	Kuwait	09 Jun 2016
Tunisia ²	10 Dec 2001	Djibouti	23 Jun 2016
Syrian Arab Republic	26 Jun 2003		
Egypt	06 Sep 2003		

² With the declaration provided for in PCT Article 64(5).

Source: WIPO

PCT ACCESSION RISK ASSESSMENT

PCT National Phase Entries Arab Member States



Source: WIPO

PCT ACCESSION RISK ASSESSMENT

PCT National Phase Entries Arab Member States

- Becoming a PCT member State does not necessarily mean that patent applications will inundate the national patent office; this is an inaccurate perception.
- The only countries that witnessed immediate national phase entry of PCT applications post accession were: Egypt, Algeria and Qatar.
- Morocco that acceded to the PCT in October 1999, did not receive any national phase PCT applications until 2004 (5 gap years).
- The United Arab Emirates received national phase applications after 10 years.

PCT ACCESSION RISK ASSESSMENT

PCT National Phase Entries Arab Member States

- Tunisia after 10 years, Bahrain after 4 years, and Sudan only received national phase PCT applications after 30 years.
- Oman, Libya, Syria and Saudi Arabia did not receive any PCT national phase entries until 2014.
- The trend for national phase PCT applications is not on a continuous upward cycle, but fluctuates between the years.
- Tunisia for example had a drop in PCT national phase applications immediately after 2011, whereas Algeria and Morocco's applications peaked in 2008 but dropped in 2014

PCT ACCESSION RISK ASSESSMENT

Case of Algeria

- Algeria is considered as the 2nd largest Pharmaceutical market in Africa with an annual sustained growth of 10%.
- Due to the high import bill of branded drugs and a generous social security system that reimburses 80% of drugs, **the Algerian government adopted new policies to increase local drug manufacturing by encouraging joint ventures and licensing deals with multinational pharmaceutical companies to increase domestic production capacity.**

PCT ACCESSION RISK ASSESSMENT

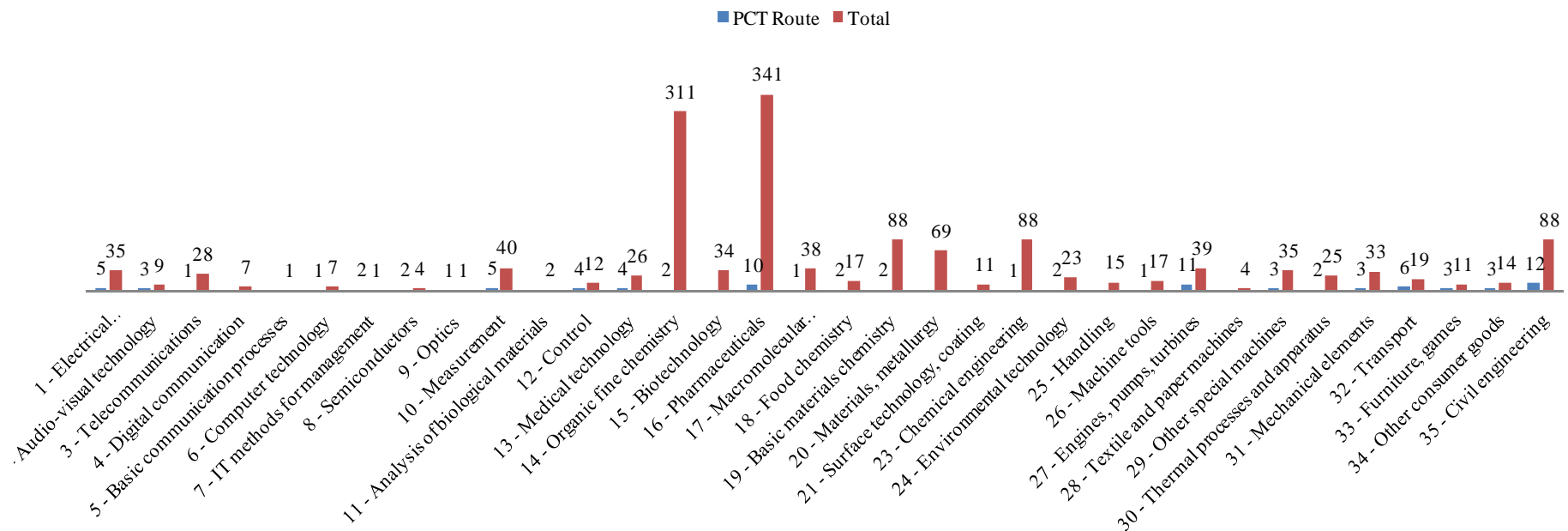
Case of Algeria

- The Jordanian pharmaceutical industry established its own manufacturing and subsidiary facilities in Algeria.
- The second largest multinational firm to invest in Algeria is the Jordanian Hikma Pharmaceutical with a total value of investment reaching 164.8 million dollars.
- Jordan pharmaceutical company Dar Al Dawa has also entered into manufacturing agreement and a strategic R&D cooperative agreement with the Algerian Soidal Group (80% share owned by the State) to develop and manufacture new drugs.
- **As such, the Jordanian pharmaceutical industry has managed to grow its pharmaceutical business in Algeria though Algeria is a PCT Member State.**

PCT ACCESSION RISK ASSESSMENT

Case of Algeria

- Despite being a PCT member, the majority of patents published through the receiving office in Algeria **were processed through the direct route rather than the PCT route**.
- **This demonstrates that the PCT filing route may not be the most viable and the most cost-effective mode for filing patent applications.**

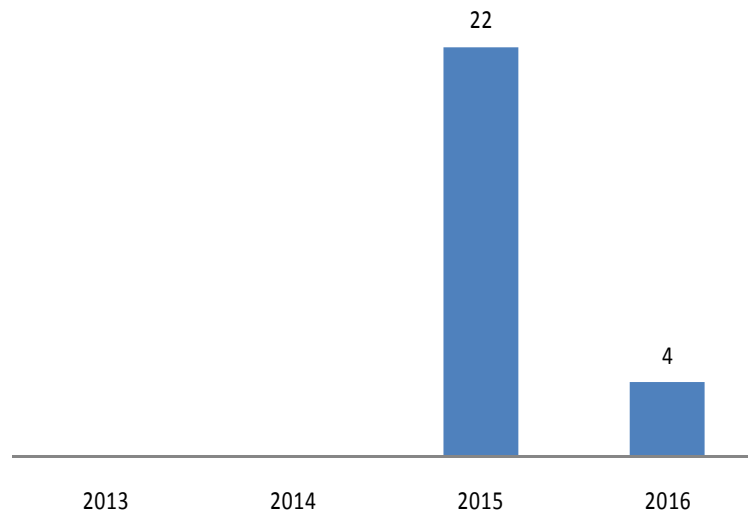


Source: WIPO

PCT ACCESSION RISK ASSESSMENT

Case of Saudi Arabia

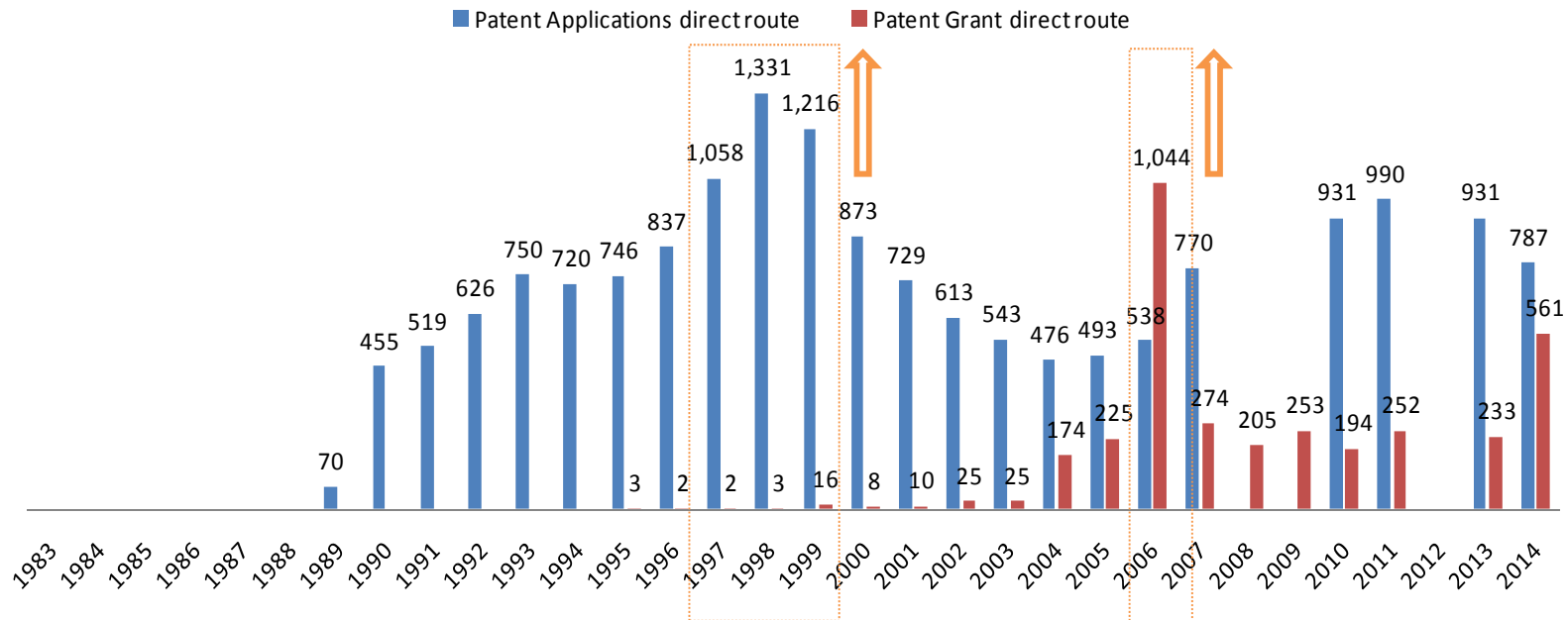
- Saudi Arabia did not receive any national phase entry of PCT applications post its accession (i.e. PCT applicants in PCT member states did not claim priority date for national phase entry into Saudi Arabia post accession for the period 3 August 2013 - December 2014)
- In 2015 Saudi Arabia received 22 PCT applications, while in 2016 they received only 4 applications to date.



PCT ACCESSION RISK ASSESSMENT

Case of Saudi Arabia

- Despite the weak trend in PCT patent applications, Saudi Arabia has a very active patent portfolio.
- Between 1997-1999 Saudi Arabia received the highest number of direct patent applications that peaked in 1998 with 1,331 applications, and in 2006, Saudi Arabia granted the highest number of patents using the direct route which reached 1,044 patents.
- **The trend of high patent applications using the direct route continued in Saudi Arabia even post PCT accession (3 August 2013).**



PCT ACCESSION RISK ASSESSMENT

PCT Arab Member States, Saudi Arabia and Algeria

CONCLUSION:

1. Patent applications submitted using the PCT route will not necessarily result in an immediate hike in national phase entries, nor will they encourage or discourage cooperates or inventors from registering a patent.
2. The PCT filing route may not be the most viable and the most cost-effective mode for filing patent applications.
3. The decision guiding patent registration is **governed by deliberate business decisions**: such as market location, market size, presence or absence of competitors. As well as legal issues such as: the status of patent application in target countries, the level of patent protection (both law and enforcement in foreign countries) and novelty requirements as set under national laws.

PCT ACCESSION RISK ASSESSMENT

Jordan Innovation Environment

- Innovation in Jordan is guided by the Jordan Innovation Strategy (JIS) (2013-2017) which was developed by the Higher Council for Science and Technology (HCST)
- The Jordan Vision 2025 (JV 2025) also addressed innovation by promoting the concept of university-industry partnership in R&D, as well proposing subsidies to innovation by exempting R&D expenses from taxable income.

PCT ACCESSION RISK ASSESSMENT

Jordan Innovation Environment – IP Community

Awareness	<ul style="list-style-type: none">• Awareness on intellectual Property Rights in Jordan is limited in the private sector.
Cost and financing of innovation	<ul style="list-style-type: none">• Innovators are in need of financial support to realize their inventions.• Jordanian inventors avoid patenting their inventions due to the high cost of the patenting process: conceptualization, patent registration and legal fees, marketing and commercialization costs.• Research funding mechanisms (ex: SRSF) should be calibrated to focus on creating economic value rather than delivering academic research.• Research funding mechanisms (ex: universities) should reconsider patent ownership restrictions that prevent the inventor from reaping economic benefits from his invention.• Government should consider providing direct government grants to private sector innovators.
IP law and enforcement	<ul style="list-style-type: none">• Penalty infringement fine is low (JD 500) as per IP Agents.• Processing of IP cases within the Jordanian courts is slow, and this affects the overall speed of IP enforcement in the Kingdom.
IP Expertise	<ul style="list-style-type: none">• Jordan does not have expertise in drafting patents; mainly technical files related to patent filing for specific technologies.• Patent expertise in information technology and software applications is limited, or absent.
Creating economic value	<ul style="list-style-type: none">• Innovation should act as a problem-solving platform for the domestic industry.• Inventions that result from collaborative research between academia and the private sector should create spin-offs startups that can grow using equity funds thereby contribute to the growth and added-value of the local economy.

Jordan Innovation Environment

Global Competitiveness Index (GCI)

- The Global Competitiveness Report (GCR) is a yearly report published by the World Economic Forum.
- The report assesses the ability of countries to provide high levels of prosperity to their citizens. This in turn depends on how productively a country uses available resources.
- As such, the Global Competitiveness Index (GCI) measures institutions, policies, and factors that set the sustainable current and medium-term levels of economic prosperity.
- Jordan's performance in the Global Competitiveness Index (GCI) in 2015/2016 remained somehow stagnant compared to the year before and scored 4.2 out of 7, and ranked number 64 out of 140 economies.

PCT ACCESSION RISK ASSESSMENT

Jordan Innovation Environment

Indicators in the innovation improved slightly (3.67 to 3.7) some innovation indicators performed better than others as shown below:

- University - industry collaboration in R&D indicators ↓
- Government procurement of advanced technology products ↓
- Availability of scientists and engineers ↓
- Company spending on R&D ↓
- Capacity for innovation ↑
- Quality of Scientific Research institutions ↑
- PCT Patent Applications (applications/million population) ↑

By improving the innovation environment and adopting appropriate strategies to enhance innovation, Jordan will be able to improve its global rating in the GCI.

Jordan Innovation Environment

Recommendations

- ✓ The innovation environment in Jordan is in need of support. This support should start with building awareness on innovation as well as developing a collaborative platform between industry and academia to jump-start innovation and create new spin-off start-ups that can contribute to the economic growth of the Kingdom.
 - An example of this productive collaboration is the spin-offs created by the Massachusetts Institute of Technology (MIT) whereby the Bank of Boston in 1989 estimated MIT spin-offs to contribute to \$10 billion annually and 300,000 jobs to the Massachusetts economy. A similar example is the Stanford University which fueled the growth of many companies in California's Silicon Valley

Jordan Innovation Environment

Recommendations

- ✓ Jordan should develop the capacity needed to enhance IP awareness and IP technical expertise in information technology.
- ✓ Research funding mechanisms should be directed towards creating economic value rather than provide support solely for academic research purposes.
 - For example, the Moroccan Foundation for Advanced Science, Innovation and Research (mascir.com) provides innovation solutions to market needs in the wide fields of environment, energy & health.
- ✓ IP enforcement should be enhanced in the judicial system.
- ✓ New financing instruments to include direct government grants and incentives should be considered to support innovation and joint Research & Development (R&D) between academia and private sector enterprises.
 - For example, the JV 2025 includes a provision for exempting R&D expenses from taxable income.

Jordan Innovation Environment

Recommendations

- ✓ Jordan innovation strategy will end in 2017. It is recommended that a new strategy is developed to support innovation in Jordan focusing on :
 - **Current technologies:** pharmaceutical industry, organic fine chemistry, analysis of biological material, transport, and biotechnology).
 - **New and emerging technologies:** solar & photovoltaic, stem cell, ICT, nanotechnology, agriculture technologies, robotics
 - Innovation that acts as a **problem-solving platform to the domestic industry.**
- ✓ It is recommended that the strategy is developed by a senior committee that is headed by the HCST with partners from academia, inventors, private sector companies, venture capital investors as well as IP related organizations such as the IPPD, NCARE and entrepreneurship support and funding institutions such as iPark and Oasis.



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Thank You