Proceedings of the British Academy, Volume 131, 2004 Lectures
P. J. Marshall (ed.)

This volume contains sixteen lectures given to the National Academy for the Humanities and Social Sciences in 2004. The topical issues debated in this volume include the patenting of AIDS drugs, the future pensions crisis (a lecture given by the Governor of the Bank of England), Britain's universities, and Pan-Islam. There are studies of Shakespeare, Pope, Montaigne, Robert Graves, and William Faulkner. And there are lectures on the Inquisition, empires in history, and the journey towards spiritual fulfillment.

Challenging Acts of International Organizations Before National Courts
August Reinisch (ed.)

The challenging of acts of international organizations before national courts is the focus of this book. After the Kadi-hype following the 2008 European Court of Justice judgment, this book demonstrates that problems of judicial review of acts of international organizations are relevant in many organizations and in many different contexts. This book presents a broad picture concerning potential challenges of acts of international organizations before national courts. It covers such diverse international organizations as the United Nations itself, its subsidiary organs, such as the specialized international criminal courts for the former Yugoslavia and Rwanda, the European Patent Office, the European Schools, EUROCONTROL, OPEC, or INTERPOL. Building on the case law of domestic courts, the chapters highlight similar legal
issues according to four introductory working hypotheses. They relate to the nature of judicial review of acts of international organizations, its interdependence with domestic methods of incorporating international law, to the conditions of a human rights-based review and to the inter-relationship between domestic challenges and the safeguard of the independent functioning of international organizations. The book’s conclusion brings the different findings together and analyses them in the light of the initial working hypotheses. It also discusses whether attempts to secure a certain minimum level of legal protection against acts of international organizations through judicial review by national courts may contribute to securing greater accountability of international organizations.

Global Patents

Marketa Trimble

Published in print: 2012 Published Online: May 2012
Item type: book

In today’s globalized economy, many inventors, investors, and businesses want their inventions to be protected in many, if not most, countries. However, there currently exists no single patent that will protect an invention globally, and despite the attempts in international treaties to simplify patenting, the process remains complicated, lengthy, and expensive. Furthermore, the necessity of enforcing patents in multiple countries exists without any possibility of concentrating in one location any parallel proceedings that concern the same invention and the same parties, thus making the maintenance of parallel patents infeasible. This book explains why the absence of a “global patent” persists and discusses the events in the 140-year history of patent law internationalization that have shaped the solutions. The book analyzes the ways in which patent holders attempt to mitigate the problems that arise from the lack of global patent protection. One way is to concentrate enforcement in one court of patents granted in multiple countries, which makes the enforcement of the patents less costly and more consistent. Another way is to attempt to use the litigation of a single country patent to reach acts that occur outside the country, which can mitigate the lack of patent protection outside the country. However, both the concentration of proceedings and extraterritorial enforcement suffer from significant limitations. This book explains these limitations and presents the solutions that have been proposed to address them. It includes a thorough comparative analysis of the extraterritorial features of U.S. and German patent laws, and original statistics on U.S. patent litigation. Based on a comprehensive treatment of the various facets of
transnational enforcement challenges, the book proposes the next stage of patent law internationalization.

**Patenting Procedures and Filing Strategies at the EPO**
Niels Stevnsborg and Bruno van Pottelsberghe

in *The Economics of the European Patent System: IP Policy for Innovation and Competition*

Published in print: 2007 Published Online: May 2007  
Item type: chapter

This chapter describes the various routes that can be chosen to obtain patent protection in some or all of the European countries. The EPO offers a centralized granting process, which includes various stages from the search for prior art, to the substantive examination and the final decision to grant the application. A typology of four broad filing strategies is developed to characterize the applicants' behaviour: a good will with fast track, a good will with slow track, a bad will with slow track, and a deliberate abuse of the system. It is shown that the chosen strategy will affect the patenting route, the drafting style, and the interaction with the EPO. Some of these filing strategies may induce an unwanted burden on the patent office; a disproportionate degree of uncertainty to competitors; and an unclear published prior art.

**Conclusion**
Michael A. Carrier

in *Innovation for the 21st Century: Harnessing the Power of Intellectual Property and Antitrust Law*

Published in print: 2009 Published Online: May 2009  
Item type: chapter

This concluding chapter synthesizes the benefits of treating the IP and antitrust laws together in seeking to foster innovation. It recounts the wide swath of the economy and expanse of cutting-edge innovation topics covered by the proposals. It shows how the recommendations rescue Congress's intent, and recaps the nuance and practical nature of the proposals. It underscores the global appeal of the topics and analysis of the laws of Australia, China, the EU, India, Japan, and Korea. Finally it shows how the book seeks to carve out a greater role for innovation in copyright, patent, and antitrust law.
The patent system has been faced for more than ten years with an avalanche of patent filings, which puts into question its ability to fulfil its social mission of encouraging innovation and the diffusion of technology. This situation is due to the emergence of new technologies, the adoption of new and more aggressive IP strategies by the business sector, and progressive global harmonization of patent systems. This book aims at providing an analysis of patent systems in general, and the European patent system in particular. Through an emphasis on the historic, strategic, and legal context of patent systems the first part of the book shows how patents progressively have been designed as an incentive mechanism which allows their holder to charge a mark up over the marginal cost through restricted competition. Patents also involve the disclosure of inventions, and hence encourage the diffusion of knowledge. Over the past century patents have gradually become the currency of technology markets. The book demonstrates how the design of patent law and practice can benefit from economic analysis, regarding notably the patent subject matter (what should be patentable or not), the optimal inventive step, the scope of protection, and the duration. The second part of the book is devoted to the European patent system. Patenting procedures in Europe are complex, as national routes exist in parallel with the centralized procedure handled by the European Patent Office, triggering complex strategies by applicants in order to maximize their exclusive rights and reduce competition. The recent development of various filing strategies and their impact on the granting process are examined in the light of factual evidence. The recent explosion of the number and size of patent applications raises the issue of quality maintenance. The book puts forward issues to be addressed by patent policy in Europe: putting quality of patents first, making procedures stricter for applicants, reinforcing the integration of the system at the European level, and inscribing the economic mission of the system in the European Patent Convention so that the case law would integrate economic concerns.

Intellectual Property Rights, Development, and Catch-Up
Hiroyuki Odagiri, Akira Goto, Atsushi Sunami, and Richard R. Nelson (eds)

Published in print: 2010 Published Online: May 2010
Economic development involves a process of catching up with leading countries at the time. Catch-up is never achieved by investment in physical assets alone: also needed are the learning of modern technologies and accumulation of a country's own technological capabilities. Nevertheless, most literature on economic development has paid scant attention to this technological aspect of catch-up or at best assumed that developing countries can simply take advantage of the backlog of technologies practiced in advanced countries. Despite this assumption catch-up can only occur with significant efforts and capacity. Moreover, the speed of catch-up depends not just on the technological distance from the leaders but also on the country's social capability and legal, economic, and scientific institutions. One such institution is the regime of intellectual property rights (IPR), particularly patents. Patents may promote innovation and technology transfer. Yet they may prove to be barriers for developing countries that intend to acquire technologies through imitation and reverse-engineering. Therefore, the current move to harmonize the IPR system internationally, such as the TRIPS agreement, may have unexpected consequences on developing countries. This book explores this issue through an in-depth study of ten countries and one region, ranging from early developing countries (USA, Nordic countries, and Japan) and post-World War II developing countries (Korea, Taiwan, and Israel) to more recent developing countries (Argentina, Brazil, China, India, and Thailand). These studies clearly indicate that the impact of IPR is complex and significantly varies across industries and across development stages.

**Patent as a Market Instrument**

Dominique Guellec, Bruno van Pottelsberghe, and Nicolas van Zeebroeck

in *The Economics of the European Patent System: IP Policy for Innovation and Competition*

Published in print: 2007 Published Online: May 2007  
Publisher: Oxford University Press  
DOI: 10.1093/acprof:oso/9780199216987.003.0004

This chapter investigates the use and impact of patents on markets. Patent strategies are variegated and often sophisticated, far beyond the basic justification of patent systems. Strategic patenting (patent thickets, picket fences, inventing around, defensive patenting) behaviours inevitably translate into a snowball effect of patent applications by the business sector. Licensing-out and licensing-in are also more frequent practices, as witnessed by the growth of the market for technology. The
increased number of patents, their highly skewed value distribution, and their more sophisticated exploitation has strengthened the need for reliable valuation methods, including the cost, market, and income approaches. IP rights are gradually being used as financial instruments, including as collaterals to loans, securitized assets, and tradable assets.

Bruno van Pottelsberghe

in The Economics of the European Patent System: IP Policy for Innovation and Competition

This chapter explores several challenges facing the patent system: university patenting, the cost of patents, and the growing number and voluminosity of patent filings. The pros and cons of academic patenting are investigated through its potential impact on the quality and quantity of scientific research. A methodology for the evaluation of patent costs is then presented. The international comparison shows that European patents are more expensive mainly due to the translation costs (including intermediation with patent attorneys) and the validation fees in each national patent office following approval by the EPO. The chapter ends with a brief illustration and explanation of the recent boom in the patent workload, characterized by an increase in both the number of patent filings and their size (number of pages or number of claims).

The European Patent System at the Crossroad
Dominique Guellec and Bruno van Pottelsberghe

in The Economics of the European Patent System: IP Policy for Innovation and Competition

As the role of patents has become central in the knowledge economy, there is evidence that the current institutional and legal setting is unable to cope with the corresponding challenges. This difficulty is illustrated by the explosion of patent numbers and voluminosity, by recent controversies around genes and software, and by the inability of European countries to move forward with a more integrated patent
system. This chapter presents a series of possible reforms based on economic analysis. These include putting the quality of patents first so as to reduce the number of applications; making procedures stricter for applicants; reinforcing the international integration of the system at a European level; and inscribing the economic mission of the system in the European Patent Convention so that the case law would integrate economic concerns.

Introduction
Hiroyuki Odagiri, Akira Goto, Atsushi Sunami, and Richard R. Nelson

in Intellectual Property Rights, Development, and Catch-Up: An International Comparative Study

Published in print: 2010 Published Online: May 2010
DOI: 10.1093/acprof:oso/9780199574759.003.0001
Item type: chapter

This chapter first argues that catch-up is a complex process and that developing countries rely on diverse means to acquire technologies from advanced countries and build their own capabilities. Then, after briefly describing the history of the patent and other intellectual property right (IPR) system and the TRIPS agreement, the chapter surveys past studies on the role of IPR, particularly in relation to technology transfer. It is emphasized, however, that to understand the role of IPR in catch-up an in-depth analysis of individual countries is essential. The chapter then gives a brief account of the long-term economic growth record of ten countries and one region (Nordic) that are discussed in this book and summarizes briefly each of the following chapters.

IPR and US Economic Catch-Up
David C. Mowery

in Intellectual Property Rights, Development, and Catch-Up: An International Comparative Study

Published in print: 2010 Published Online: May 2010
DOI: 10.1093/acprof:oso/9780199574759.003.0002
Item type: chapter

This chapter discusses the case of USA, in which economic catch-up with such European countries as Britain and Germany occurred during the final decades of the nineteenth century. Throughout this catch-up process, its growth trajectory changed from the one that relied on expanding capital and labor inputs to a more knowledge-intensive
It acquired knowledge needed for this transition from outside as well as from within. The patent law was enacted in 1790, soon after its independence, and influenced the development of corporate structure and strategy. The chapter discusses the technology transfer and intellectual property protection in the textile industry that occurred mainly in 1810–60, the “Golden Age” of the independent inventor, such as Edison, in 1860–1900, the patent regime and economic catch-up in organic chemicals in 1900–30, and the relationship between patent policy, antitrust policy, and the structure of industrial R&D.

Knowledge Flows and Catching-Up Industrialization in the Nordic Countries: The Roles of Patent Systems
Kristine Bruland and Keith Smith

This chapter discusses the catch-up experience of Nordic countries — Denmark, Norway, Sweden, and Finland — which stretches back at least to the late eighteenth century, gathered force in the mid-nineteenth century, and extended into the late nineteenth and early twentieth centuries. The patent system began relatively early, which facilitated inward technology transfer in two ways: first, via foreign patenting in the Nordic region and, second, via patent systems (“imported patents”) that permitted Nordic citizens to appropriate foreign-developed inventions. However, there were many methods of acquiring and developing intellectual property, including societies, foreign work experience, immigration, exhibitions, and industrial espionage, and many ways to protect it. The chapter thus emphasizes the broader dimensions of learning and the creation of knowledge assets, and therefore the need to set IPRs within a wide context of knowledge creation.

IPR and the Catch-Up Process in Japan
Hiroyuki Odagiri, Akira Goto, and Atsushi Sunami

This chapter discusses the catch-up experience of Nordic countries — Denmark, Norway, Sweden, and Finland — which stretches back at least to the late eighteenth century, gathered force in the mid-nineteenth century, and extended into the late nineteenth and early twentieth centuries. The patent system began relatively early, which facilitated inward technology transfer in two ways: first, via foreign patenting in the Nordic region and, second, via patent systems (“imported patents”) that permitted Nordic citizens to appropriate foreign-developed inventions. However, there were many methods of acquiring and developing intellectual property, including societies, foreign work experience, immigration, exhibitions, and industrial espionage, and many ways to protect it. The chapter thus emphasizes the broader dimensions of learning and the creation of knowledge assets, and therefore the need to set IPRs within a wide context of knowledge creation.
This chapter discusses the experience of Japan, whose catch-up efforts started after the Meiji Restoration of 1868 that established the modern central government. It also had the second catch-up period after the defeat in World War II. Its patent and other intellectual property laws were enacted during 1884–8. The laws have been modified several times to accommodate increasing applications and changing needs. Japan imported numerous technologies from abroad through licensing, joint ventures, capital participation by foreign firms, and reverse-engineering. The presence of IPR probably facilitated technology importation and gave incentives for domestic firms to invest in improving imported technology and commercializing it. Yet, there are also cases in which IPR created cost disadvantages or barriers for Japanese firms, such as those of nylon and semiconductors. It is therefore extremely difficult to argue whether IPR helped or deterred Japan's catch-up.

IPR and Technological Catch-Up in Korea
Keun Lee and Yee Kyoung Kim

in Intellectual Property Rights, Development, and Catch-Up: An International Comparative Study

Published in print: 2010 Published Online: May 2010
Publisher: Oxford University Press
DOI: 10.1093/acprof:oso/9780199574759.003.0005
Item type: chapter

This chapter discusses the catch-up experience of Korea, in which the present intellectual property legislation was established in 1961. Three stylized facts are noted about patenting trend: shift from petty (utility) patents to regular (invention) patents, shift from individual inventors to corporate inventors, and shift of share among patent applications from domestic applicants (when foreigners had little interest in Korean IPRs) to foreign applicants and, in the 1990s, again to domestic applicants. These shifts suggest that Korean firms had accumulated high-tech capabilities and became sensitive to IPRs by the mid-1980s. Korean firms, particularly in electronics, invested heavily in R&D to accumulate their own technologies and, having learnt the importance of IPR through a number of patent-related legal disputes with American and Japanese firms, started to utilize their own IPRs to achieve competitive advantages.
This chapter discusses the experience of Israel. At the time of its independence in 1948, its people came from different parts of the world, providing them with international orientation from the beginning. As a result, many of the businesses targeted foreign markets, mainly USA and Europe, and were more concerned with the intellectual property regime in these foreign countries than Israel's own. Together with public support for innovation and military-related expenditure, some startup firms, mainly in information technologies, grew and succeeded in IPO (initial public offering) or selling themselves. Another successful case is Teva, now the largest generic drug producer. It benefited from the patent law amendment in 1967, which allowed local firms to copy patented drugs if the patent owners did not market them in Israel. This provision was dropped after TRIPS; however, Teva had accumulated process technologies by then.

This chapter first points out that, for Argentina, the twentieth century was the period of falling behind. Although catch-up occurred during 1860–1929, the economy at the time was mainly based on agriculture. By contrast, industrialization and technological capability building took place while the overall economy was falling behind following the government's import substitution policy and macro instability. The chapter examines technology transfer, learning, and innovation in the country's catch-up and falling-behind processes, and the role
of intellectual property regime. It is argued that the IPR regime had little impact except for on agriculture and pharmaceuticals. These two industries are analyzed in detail to suggest that the domestic pharmaceutical firms failed to accumulate technological capabilities even in the absence of product patents and that genetically modified soybeans diffused widely because the American inventor, Monsanto, failed to secure a patent for it in Argentina.

Accumulation of Technological Capabilities and Economic Development: Did Brazil's IPR Regime Matter?
Roberto Mazzoleni and Luciano Martins Costa Póvoa

in Intellectual Property Rights, Development, and Catch-Up: An International Comparative Study

Published in print: 2010 Published Online: May 2010
Publisher: Oxford University Press
DOI: 10.1093/acprof:oso/9780199574759.003.0009
Item type: chapter

This chapter discusses Brazil. After a long period of decline, growth spurted during 1950–80 and, in 1968–73, the growth rate reached 11.2 percent. As three case studies illustrate, the patent system mattered little for Brazil's industrial development. The success of two national champions, Embraer (aircraft) and Petrobras (oil drilling), in building world-class technological capabilities mostly derive from various government policies that promoted them, and the patent system neither helped nor hindered them. In the case of the pharmaceutical industry, where the patent system usually plays a more significant role, the 1969 patent law amendment to help domestic firms was not successful. Thus the chapter argues that a coherent government policy, including education policy and trade policy, rather than intellectual property policy, plays a much more significant role in deciding the rate and direction of the development of technological capabilities.

Relationships between IPR and Technology Catch-Up: Some Evidence from China
Lan Xue and Zheng Liang

in Intellectual Property Rights, Development, and Catch-Up: An International Comparative Study

Published in print: 2010 Published Online: May 2010
Publisher: Oxford University Press
DOI: 10.1093/acprof:oso/9780199574759.003.0010
Item type: chapter
This chapter discusses the catch-up process of China post-1949, especially after the initiative of “Open Doors” since 1978. Domestic firms adapted to the intellectual property right system through gradual innovation, especially using utility models, i.e. petty patents. Even though most Chinese firms have not been able to become true innovators, several succeeded in developing innovative capabilities, such as Huawei, a communication equipment manufacturer. The litigation brought by Cisco against Huawei stimulated the formulation and improvement of Huawei's IPR strategy and, gradually, Huawei has developed new collaborative relationships with multinationals. However, this case is rather exceptional and most inventions are carried out by a handful of large firms. China's patent system has played an important role in stimulating innovation for both multinationals and domestic firms even though its net impact on technology transfer and domestic firms' catch-up is yet unclear.

The Accumulation of Capabilities in Indian Pharmaceuticals and Software: The Roles that Patents Did (and Did Not) Play
Bhaven N. Sampat
in Intellectual Property Rights, Development, and Catch-Up: An International Comparative Study
Published in print: 2010 Published Online: May 2010
DOI: 10.1093/acprof:oso/9780199574759.003.0011
Item type: chapter

This chapter discusses India. Following the 1972 patent law amendment that prohibited product patents in pharmaceuticals, new Indian pharmaceutical firms entered and old firms expanded, competing to reverse-engineer bulk drugs. Also, two government pharmaceutical firms provided a training ground for scientists who later established private firms. Since the 1990s, some firms began to move away from imitation to innovation but, with the 2005 reform of the patent law to comply with TRIPS, the future of the pharmaceutical industry is yet unclear. In software, the growth was supported by the liberalization in the 1980s and 1990s that made the import of hardware and multinationals' investment easier, and by the presence of a large pool of technically trained engineers. Unlike pharmaceuticals, however, patents were generally not a big factor.