様　式　Ｃ－１９、Ｆ－１９－１、Ｚ－１９　（共通）

科学研究費助成事業　　研究成果報告書

平成　３０　年　　９　月　１１　日現在

機関番号：　３２６８９
研究種目：　若手研究(B)
研究期間：　2015～2017
課題番号：　１５Ｋ１６９６２

研究課題名（和文）Promoting Innovation through the Definition of an Appropriate Scope for Patent Protection in Asia

研究課題名（英文）Promoting Innovation through the Definition of an Appropriate Scope for Patent Protection in Asia

研究代表者

Ｒａｄｅｍａｃｈｅｒ　Ｃ（Rademacher, Christoph）

早稲田大学・法学学術院・准教授

研究者番号：３０６０９７７２

交付決定額（研究期間全体）：（直接経費）　　2,800,000円

研究成果の概要（和文）：I wrote a number of articles and book chapters and gave a number of lectures and presentations on the appropriate scope of patent protection, focusing both on appropriate enforcement procedures as well as on limitations and related procedure.

研究成果の概要（英文）：I wrote a number of articles and book chapters and gave a number of lectures and presentations on the appropriate scope of patent protection, focusing both on appropriate enforcement procedures as well as on limitations and related procedure. Highlights were my contributions to the METI working group trying to establish a dispute resolution mechanism for standard-essential patents in Japan in 2017 and early 2018, and my conference presentation at the 1st World Conference on Access to Medical Products and International Laws for Trade and Health in Delhi in 2017.

研究分野：　Patent Law

キーワード：　Patent　Antitrust　Standards　ICT　Pharmaceutical invention

１．研究開始当初の背景

Throughout the 1990ies, policy makers in developed countries have tried to argue for and establish the broadest-possible scope of patent protection. This policy has increasingly come under attack by academics and parts of industry who suggested a more nuanced approach to patent protection. The rising importance of technology standards and standard-essential patents in the ICT industry as well as the bitter disputes over the appropriate scope of patents for pharmaceutical inventions provides the background of this research project that commenced in 2015.

２．研究の目的

As indicated, stronger patent protection does not necessarily further improve the innovative output in an economy. For example, when Japan introduced stronger patent protection in the course of the patent law reform of 1988 by allowing multiple claims per patent and introducing patent term restoration of up to five years for pharmaceutical patents, empirical evidence suggested that the introduction of such stronger protection did not have any effect on innovation or R&D output. A more recent field of intensive debate regarding overprotection of technology through patent law in developed countries, especially in the US, the EU, Japan and recently China, is the conflict between patent law and antitrust law for patents covering inventions that are essential for technology standards. Technology standards can be a very helpful instrument in commercializing new technology. Prominent standards include data transmission standards, such as UMTS, LTE or IEEE 802.11, and data encryption standards such as MPEG. Once a standard technology is set, market participants have to use such standard in order to be able to supply relevant products. If one company controls patents on such standard, it could arbitrarily block competitors from entrance into the market, thereby discourage competition and impede innovation. To counter such potentially anticompetitive exercise of the market power of standard-essential technology originators, it has become common practice that standard-setting organizations request all companies whose technology is used in the setting of a standard to submit a declaration that it will grant licenses on standard-essential patents at reasonable and non-discriminatory terms. A patent infringer can therefore invoke a competition law defense, protecting him against injunctive relief, as long as he commits to pay a reasonable license fee. During the last years, courts in the US, Germany, Japan and China have struggled with the meaning “reasonable terms.” The majority of court cases, especially recent decision from the US, Japan and China, have resulted in rather low payments being seen as appropriate and “reasonable”, leading to a devaluation of standard -essential patents around the globe. The initial purpose of this research was to connect the dots between different courts and industry players in developed and developing countries and analyze the ongoing developments in order to contribute to a balanced treatment and exploitation of standard-essential patents in Japan and other key jurisdictions. While courts and academics already achieved a certain degree of alignment between US and Japanese courts, further alignment and understanding especially including China and the EU would be important for Japanese and other international academics and patentees to properly understand the degree of protection their limitations in different markets. This research ultimately aims for a harmonized level of protection of standard-essential patents in key jurisdictions around the world.

While overprotection of innovation should be avoided, an insufficient degree of patent protection can also be problematic. Especially the pharmaceutical industry routinely demands strong and reliable patent protection and claims that it would be economically impossible to develop new and potentially life-saving drugs and therapies without a firm statutory monopoly for their inventions. Developed countries like Japan, the US and the EU have introduced different instruments e.g. providing for patent term extensions for pharmaceutical patents. Under certain circumstances, new therapeutic uses of known substances are considered patentable after the patent on the

original substance has expired, which enables pharmaceutical companies to “evergreen” patent protection on drug inventions.

The situation is different in less developed countries. For example, Indian courts and the Indian patent office have received a significant amount of attention over its decisions to refuse patent protection for the cancer drug *Gleevec* invented by the Swiss pharma company Novartis, as the Indian Supreme Court held in 2013 that Novartis’ patent application covered a new, but not-inventive form of use of a known substance, despite Novartis being able to obtain patent protection for *Gleevec* in many other jurisdictions. While India was forced to generally allow patent protection for pharmaceutical and chemical products when it had to sign the TRIPS-Agreement in order to enter the WTO in 1994, it continues to refuse granting patents on new forms of known substances that do not result in an increased efficacy of that substance, making it very difficult to evergreen pharmaceutical patents in India. Such resistance to patent new uses of known substances, along with local working requirements, the risk of compulsory licenses on patents and, arguably most importantly, procedural deficiencies in obtaining patents at the patent office and enforcing them in civil litigation resulted in India often being considered as patent unfriendly and difficult for innovation. The second purpose of this research was to analyze and assess whether the weak patent protection offered in India is appropriate for the development of the domestic Indian economy or not, i.e. if underprotection of inventions is generally problematic, or whether and to what extent it may actually be justified as being supportive for technological and economic development. Here, it will be particularly interesting to compare the Indian experience with recent Chinese and earlier Japanese development, as both China’s and Japan’s domestic technological development benefitted at an early stage by a weak patent system, which was, however, strengthened at a critical stage of economic growth and technological progress to encourage and promote domestic innovation.

I expect that this research will improve the understanding of fundamental characteristics of patent law throughout key jurisdictions in Asia and beyond, and will provide new guidance to academics and patent users as well as government officials in Asian countries when assessing the chances and limitations of patent protection.

３．研究の方法

As proposed, I conducted a series of interviews with relevant judges, academics, and industry representatives in Europe, Japan, the US, and other Asian countries. In addition, I reviewed evolving literature and court decisions as well as of legislative and administrative initiatives. I had the opportunity to give a number of talks and presentations at law conferences in and outside Japan during which I could receive substantive feedback from academics and practitioners.

４．研究成果

I wrote a number of articles and book chapters and gave a number of lectures and presentations on the appropriate scope of patent protection, focusing both on appropriate enforcement procedures as well as on limitations and related procedure. We hold a well-attended international conference at Waseda University in 2015 during which leading judges, academics, and industry representatives discussed the crossroads of patent law and competition law in the US and in Japan, as well as the necessity and appropriate balance for protecting pharmaceutical innovation, looking into Japanese, US, and Indian perspectives. Two additional personal highlights that I would like to emphasis were (1) my contributions to the METI working group trying to establish a dispute resolution mechanism for standard-essential patents in Japan in 2017 and early 2018, and (2) my conference presentation at the 1st World Conference on Access to Medical Products and International Laws for Trade and Health hosted by the Indian government and the WHO in Delhi in 2017.

５．主な発表論文等
（研究代表者、研究分担者及び連携研究者には下線）

〔雑誌論文〕（計　3　件）

- Christoph Rademacher, Patent Damages in Japan: Why do Japanese Courts award so little?, 272 Patents & Licensing (2017), 9-18
- Christoph Rademacher、**待望の決定を経て－標準必須特許は欧州でも無用となったか、知的財産法政策学研究第** 48 **号**(2016), 193-212 (**査読無**)
- Christoph Rademacher、**松本　慶**: **欧州の統一特許裁判所制度の導入と日本への影響、日本知財学会誌　第** 11 **巻第** 3 **号** (2015), 36-43

〔学会発表〕（計　14　件）

- Enforcement of Standard-Essential Patents in Europe after 2015 – An update, Symposium hosted by the LES and the METI SEP Study Group, Tokyo, February 26, 2018
- Protecting and Stimulating Pharmaceutical Innovation: A Review of the Japanese Experience, 1st World Conference on Access to Medical Products and International Laws for Trade and Health, Delhi, November 23, 2017
- Expertise, Efficiency, Equity – searching for an appropriate degree of bifurcation of patent infringement and validity, ATRIP Annual Congress, Wellington, New Zealand, October 25, 2017
- Enforcement of Standard-Essential Patents in Europe after 2015, 2nd Study Group Meeting, Ministry of Economy, Trade and Industry, Tokyo, August 1, 2017
- How Much Bifurcation Does an Efficient Patent Enforcement System Require?, 5th Asia-Pacific Intellectual Property Forum, Kanazawa University, Kanazawa, Japan, March 19, 2017
- Interplay of Infringement Proceedings and Validity Determination in the US and in Japan, 5th Waseda Global Patent Enforcement Strategy Symposium, Waseda University, December 3, 2016
- Patent Damages in Japan and US, 16th Annual Intellectual Property Scholars Conference, Stanford Law School, USA, August 11, 2016
- Injunctive Relief in Japanese Patent Law, Conference on Injunctions in Patent Law, Adam Mickiewicz University Poznan, Poland, June 2, 2016
- Patentschutz für die zweite medizinische Indikation [Patent Protection for the second medical indication, German], 15. Düsseldorfer Patentrechtstage, Düsseldorf, Germany, March 10, 2016
- EU **競争法－垂直的制限規制の実務**, **デュッセルドルフ日本商工会議所法務委員会主催セミナー**, Düsseldorf, Germany, November 20, 2015
- German-Japanese Perspectives on how to limit SEP enforcement, International Symposium on Legal Reforms in Standard Essential Patents Context, Tsinghua Law School, Beijing, China, November 18, 2015
- After Years of Waiting – Are SEPs now worthless in Europe?, **北海道大学情報法政策学研究センター知的財産法研究会**, Sapporo, September 19, 2015
- **医薬特許のあり方における特許法、行政上の諸問題-日米印の視点から-、第** 4 **回早稲田グローバル特許権行使戦略セミナー、**Waseda University, June 27, 2015
- Enforcement of Standard-Essential Patents in Japan and Europe, 2015 Asia-Pacific Intellectual Property Forum, National Taiwan University, Taiwan, June 9, 2015

〔図書〕（計 2　件）

- **Injunctive Relief in Japan: A General Civil Law Approach, in: Rafal Sikorski (Ed.): Patent Law Injunctions, Wolters Kluwer, 2018 (forthcoming)**
- **The Theory and Practice of Patent Damages in Japan and the US – Explaining the Differences that Remain, in: Takenaka, Toshiko (Ed.): Patent Law and Theory: A Handbook of Contemporary Research, 2nd edition, Edgar Elgar Publishing, 2018 (forthcoming)**

〔産業財産権〕

○出願状況（計　　件）

名称：
発明者：
権利者：

種類：
番号：
出願年月日：
国内外の別：

○取得状況（計　　件）

名称：
発明者：
権利者：
種類：
番号：
取得年月日：
国内外の別：

〔その他〕
ホームページ等

６．研究組織

(1)研究代表者
ラーデマッハ・クリストフ（RADEMACHER, Christoph）
早稲田大学・法学学術院・准教授
研究者番号： 30609772

(2)研究分担者
（　　）

研究者番号：

(3)連携研究者
（　　）

研究者番号：

(4)研究協力者
（　　）