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IMPACTS OF IPRS BASIC PROVISIONS IN CPTPP ON TECHNOLOGY TRANSFER AND INNOVATION - SUGGESTION IN INDONESIA

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Abstract

Indonesia has expressed interest in signing the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). This is a new-generation free trade agreement considered a good signal for global economic integration. It is expected to create more opportunities and advantages for developing ASEAN countries (Brunei, Malaysia, Singapore, and Vietnam) in terms of investment, technology transfer (TT), and innovation. Some basic provisions regarding intellectual property rights (IPRs) support the transfer of foreign technologies to enhance innovation and competitiveness for domestic enterprises in these member developing countries. However, these provisions trigger several disadvantages, such as TT and innovation challenges. Therefore, this study aims to determine the impacts of IPRs' basic provisions in CPTPP on technology transfer and innovation-suggestion in Indonesia. As an expert in TT, the author introduced some IPRs basic provisions of CPTPP and analyzed the impacts of these provisions on TT and innovation activities for developing countries. The result showed that Indonesia prepared the applicable laws in its accession to CPTPP.

Keywords : *Innovation, intellectual property rights, technology transfer*

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I. INTRODUCTION

Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)¹, is the new generation free trade contract signed by 11 countries, namely Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam.

CPTPP was used to replace The Trans-Pacific Strategic Economic Partnership Agreement (TPP)² after the withdrawal of the USA on January 21, 2017. The agreement, which covered the entire provisions, was signed by 12 countries on February 4, 2016 however, it was ineffective due to the American retreatment. Furthermore, the remaining 11 member countries decided to re-

¹ "Trans-Pacific Partnership Agreement (TPP)," New Zealand Foreign Affairs and Trade, accessed June 20 2020, <https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-concluded-but-not-in-force/trans-pacific-partnership-agreement-tpp/>.

² Comprehensive and Progressive Agreement for Trans-Pacific Partnership, opened for signature February 4 2016.

sign the agreement in 2017 and agreed to continue the TPP under a new name CPTPP. The signing ceremony was held on March 8, 2018, in Santiago, Chile.

This agreement is comprehensively based on intellectual property (IP), which includes provisions that cover the entire IPRs protection and enforcement sector. Besides, IPRs protection and enforcement, Technology Transfer, and innovation are three separate terms that are closely related. An ideal IPRs protection and enforcement play a positive role in Technology Transfer (TT) and innovation activities. In fact, it triggers foreign investors to invest more intellectual assets as a capital contribution. The more successful the TT, the better the innovation.

Indonesia has expressed interest in signing the CPTPP because its competitors in the ASEAN bloc also signed this agreement, which tends to receive more foreign investment and technological cooperation exchange from Western member countries and other industrialized regions.

Furthermore, there is an undeniable fact that the CPTPP is expected to offer more opportunities and advantages for the ASEAN member countries (Brunei, Malaysia, Singapore, and Vietnam), such as foreign investment, TT, and innovation. In other words, some IPRs basic provisions include mutual support from all member countries in terms of transferring foreign technologies, enhancing innovation and competitiveness for domestic enterprises in these developing countries. However, these provisions also partly trigger certain disadvantages, challenges associated with TT, and innovation for CPTPP members.

The research briefly introduces CPTPP and the relationship between IPRs, TT, and innovation. It further analyzes the impact of some IPRs' basic provisions on TT and innovation activities in developing countries. Finally, based on these analyses, this study suggests that Indonesia enacts applicable laws in its accession to CPTPP for better use of IPRs provisions and simultaneously prevents the side-effects.

In terms of methodology, the library research was predominantly employed in this study. Therefore, relevant articles, books, local and international legal reports, reviews, conferences, and seminar papers constituted the main source of information. Secondary data were obtained from literature review, online articles, dialogues, and different documents available on the internet about IPRs, TT, and innovation legal rules implemented by the CPTPP. In addition, the Indonesian economic development, IPRs enforcement and protection situation, TT, and innovation activities were also analyzed.

II. WHY IS INDONESIA INTERESTED IN JOINING THE CPTPP?

Indonesia, a diverse archipelago nation of over 300 ethnic groups, has the largest economy in Southeast Asia. This nation has always had impressive economic growth since overcoming the Asian financial crisis in the late 90s. Presently, Indonesia is the world's 4th most populous nation, a member of the G-20, and the 10th largest economy in terms of purchasing power parity. As an emerging lower-middle-income country, Indonesia has made enormous gains in poverty reduction, by more than half since 1999, to 9,4% in 2019. However, 25,1 million citizens out of relatively 267,3 million still live below the poverty line. Based on the data acquired in March 2019, approximately 20,6% of the entire population's income marginally hovers above the national poverty line.³

The country has sustained average economic growth rates above 5% since 2000 and made significant strides in reducing poverty. However, economic analyses point to several factors constraining Indonesia's growth potential, notably tepid productivity and the slow expansion of the labor force and manufacturing industries. Technology plays a key role in overcoming these constraints and boosting future growth. Internationally, advanced and developing economies alike believe emerging technologies offer sustainable growth. In addition, adopting new technologies boosts productivity by enabling the efficient utilization of resources, new product development, and entry into markets. Indonesia is no exception in this regard, and the government recognizes the role of technology and innovation in achieving economic growth targets and higher incomes. Furthermore, technology adoption is expected to constitute relatively 2,8 trillion USD to the Indonesian economy by 2040, spurring the gross domestic product (GDP) by an additional 0,55 percent annually for the next 2 decades. The private sector accounts for one-fifth of the agricultural R&D, partly because of the large plantation-based structure supporting the economy⁴.

Indonesia's economic activity is centered on 3 major sectors, namely mining, such as natural gas extraction, manufacturing, and agriculture. Nevertheless, it remains an agricultural nation, with 68 percent of the population residing in rural areas. As a result, its IPRs protection status significantly lags behind.⁵

³ "The World Bank in Indonesia: An Overview," World Bank, <http://www.worldbank.org/en/country/indonesia/overview>, accessed 23 June 2020.

⁴ Jane G. Payumo, et al., "An Entrepreneurial, Research-Based University Model Focused on Intellectual Property Management for Economic Development in Emerging Economies: The Case of Bogor Agricultural University, Indonesia," *World Patent Information*, no. 36 (2014): 22.

⁵ "Innovate Indonesia: Unlocking Growth Through Technological Transformation," Ministry of Finance Republic of Indonesia, accessed 23 June 2020, <https://www.adb.org/sites/default/files/publication/575806/>

The first modern patent laws were traced to the mid-15th century. Indonesia relied on the Dutch system for years until it adopted Law Number 6 in 1989.⁶

Presently, the country is developing in all areas, based on the existing technology. The number of foreign and domestic investments keeps increasing yearly. One of the growing investments in the creative industry is because society carries out virtually all activities, including businesses and communication in cyberspace. This technological advancement is also slowly changing the pattern of economic activities in the community.⁷

It was also noted that CPTPP signed by 11 countries in Santiago, Chile, is expected to offer much more opportunities and advantages for the enterprises and citizens of member countries, particularly developing nations in ASEAN. Irrespective of the USA withdrawal from TPP on January 30, 2017, the CPTPP is still the largest new-generation free trade agreement in the world with a huge market of approximately 500 million people, which accounts for relatively 13,5% of the global GDP. CPTPP maintained the core contents of TPP, which stipulates various fields including IP and tax reduction, technical barriers, labor, environment, governmental, and procurement, etc. However, this agreement allows member countries to temporarily delay the implementation of several regulations to ensure equity and fairness under the new context. This is achieved through its sub-laws, engagements, appendix, or bilateral treaties to ensure it is beneficial to each country. The accession into the agreement not only supports ASEAN member countries in terms of enhancing cooperation in these regions, it also promotes exports in Japanese, Australian, Canadian, and Mexican markets as well as attracts more foreign investors in sectors and industries that these nations intend to develop, generate capital from big enterprises, and create a long-term, transparent investment environment, which thereby fosters TT and innovation. Among the member countries in Asia, Malaysia benefits the most (relatively 2% GDP), followed by Vietnam and Brunei with approximately 1,5% GDP. According to studies carried out on CPTPP, Vietnam's services, posts, and telecommunications, electronic commerce, textile, leather, shoes, etc., tend to possess disruptive and exponential development.⁸

innovate-indonesia-unlocking-growth.pdf.

⁶ W. Lesser, "Intellectual Property Protection for Indonesia," in the *Second Conference on Agricultural Biotechnology* (Jakarta, Indonesia: 13-15 June 1995).

⁷ Ranti Fauza Mayana Tanwir and Daniel Hendrawan, "Alternative Resolution of Intellectual Property Disputes as Part of Investment in the Creative Industry Sector Under Indonesian Law," *Humanities & Social Sciences Reviews* 7, no. 5 (2019): 94, DOI: 10.18510/hssr.2019.7512.

⁸ "CPTPP Facilitates Cooperation in Asia-Pacific Region," *Nhan Dan Online*, March 7, 2018, accessed February 6, 2020, <https://en.nhandan.com.vn/business/item/5905502-cptpp-facilitates-cooperation-in-asia-pacific-region.html>. See also "CPTPP – Opportunity for Vietnam to Join Global Value Chain," *Vietnam*

Moreover, the integration of the ASEAN bloc tends to be threatened as CPTPP-ratifying countries such as Canada and Japan redirect trade from non-participating nations, namely Indonesia and the Philippines, to its members to benefit from lesser tariffs. Although some ASEAN countries have not shown interest in the CPTPP agreement due to its entry requirements and the withdrawal of the United States, Thailand, Philippines, and Indonesia are still part of the agreement despite the changes in circumstances.⁹

In addition, an ambitious step taken by Indonesia is its accession to the CPTPP. Its membership considerably boosts the economic heft irrespective of the current exclusion of both the United States and China. Moreover, a motivating factor is a fact that two of Indonesia's economic competitors, Vietnam and Malaysia, are founding members of the CPTPP.¹⁰ In a meeting held in Bangkok with their Thai counterpart Don Pramudwinai, their Japanese Foreign Minister Toshimitsu Motegi promised to get Thailand involved in the agreement at an early date during the minister's week-long tour of Southeast Asia.¹¹

Briefly, Indonesia is currently one of the countries that have expressed interest in signing the CPTPP for promoting its TT and innovation activities. However, there is a need to consider the advantages and disadvantages, particularly the challenges, associated with the IPRs provisions of CPTPP.

III. RELATIONSHIP BETWEEN INTELLECTUAL PROPERTY RIGHTS, TECHNOLOGY TRANSFER, AND INNOVATION

Technology transfer (TT) refers to conveying scientific results, technical expertise, or know-how from an individual or organization to another. Innovation refers to the successful and effective commercialization of IP, technology transfer, new products, and services. Furthermore, IPRs protection, TT, and innovation are closely related and intertwined, despite being three separate terms.

News Agency, November 2, 2018, accessed 2 June 2020, <https://en.vietnamplus.vn/cptpp-opportunity-for-vietnam-to-join-global-value-chain/141180.vnp>.

⁹ "How Will the CPTPP Pan Out for ASEAN?" *The ASEAN Post*, accessed 6 February 2020, <https://theaseanpost.com/article/how-will-cptpp-pan-out-asean>.

¹⁰ Kyle Springer, "Time to Jumpstart Australia-Indonesia Economic Relations," *The Diplomat*, February 8, 2020, accessed 18 May 2020, <https://thediplomat.com/2020/02/time-to-jumpstart-australia-indonesia-economic-relations/>.

¹¹ "Japan Pledges Support for Thailand Joining Pacific Trade Pact," *Kyodo News*, 8 January 2020, accessed 18 May 2020, <https://english.kyodonews.net/news/2020/01/bf7dc1caa9dd-japan-pledges-support-for-thailand-joining-pacific-trade-pact.html>.

IP protection plays a positive role in TT, including technology licensing. Strong ones encourage TT through increased trade in IP products and services, foreign direct investment (FDI), and joint ventures. However, stronger IPRs protection tends to restrict TT because it hinders other competitors from using patented technologies and expensive IP products.

The intellectual industries positively contribute to the overall U.S. trade balance through royalties and licensing fees. Rights-holders authorize the use of technologies, trademarks, and entertainment products owned by entities in foreign countries.¹² In 2009, U.S. receipts from cross-border trade in the form of royalties and license fees relating to patent, trademark, copyright, and other intangible rights, totaled 89,8 billion USD, less than the 93,9 billion USD realized in the previous year. Also, in the same year, US royalties and license fees to foreign countries amounted to 25,2 billion USD, less than the 25,8 billion USD realized in 2008. Industrial processes, computer software, and trademarks accounted for the bulk of US international trade in intangible assets. This measure of cross-border by U.S. companies includes transactions affiliated and unaffiliated to foreign Industries.¹³

IPRs protection encourages R&D activities, which leads to innovation because it allows innovators to benefit from their creative activities. However, the impact on innovation varies with a country's level of development and factor endowments. It encourages nations with significant innovative capacity and *vice versa*.

In cases where international TT is performed through IP licensing, an assignment from the developed, developing, and least developed countries (LDCs), with stronger IPR protection, led to greater innovation and increased licensing in these nations. TT is advantaged in Western companies with higher profits due to lesser production costs in developing countries and LDCs. However, it involves other costs in terms of contract negotiations, transferring the necessary technology, and the rents are given to the innovator's license to discourage imitation. Furthermore, by reducing the risks of imitation, stronger IPR protection in the developing countries and LDCs also reduces licensing costs, thereby encouraging it and boosting resources for innovation in advanced nations.

The use of indices based on the perceived strength of a country's patent law and its impact on an IPR regime enhances growth, depending on the

¹² Amanda Horan, Christopher Johnson, and Heather Sykes, "Foreign Infringement of Intellectual Property Rights: Implications for Selected U.S. Industries," US International Trade Commission: Office of Industries Working Paper, 2005, 4.

¹³ Jennifer Konecz and Anne Flatness, "US International Services," Survey of Current Business: US Bureau of Economic Analysis, 2010.

characteristics of the nation. IP protection is presumed to boost growth in more advanced economies, with all things being equal. It also seems to lead to advanced growth in both developed countries and LDCs. However, it has an insignificant effect on middle-income countries. The developed countries benefit the most in terms of growth because stronger IPR protection encourages TT and Innovation. The LDCs, with little capacity to imitate and innovate, benefit from the growth of a stronger IPRs regime. However, the available evidence is vague, and the same channels through which the LDCs benefit from a stronger IPR regime were discovered to have a slightly positive impact on many technology diffusion pathways, including trade, FDI, and licensing. On the other hand, middle-income countries are likely to have some level of imitation capacity. Therefore, stronger IP protection has 2 offsetting effects, namely boosting TT through increased imports and FDI and reducing the extent of imitation.¹⁴

Briefly, IP is a trade-related matter that is still developing, while IPRs protection and enforcement, TT, and innovation have a close relationship. Furthermore, good IPRs protection and enforcement play a positive role in TT, including technology licensing. The strong ones promote TT through increased trade in IP products and services, foreign direct investment (FDI), and joint ventures. However, stronger IPRs protection tends to restrict TT because it hinders other competitors from using patented technologies and expensive IP products. IPRs protection encourages R&D activities, which leads to innovation because it allows innovators to benefit from their creative activities. However, the impact of IPRs protection on innovation varies in different countries based on their level of development and endowments factor. It encourages nations with significant innovative capacity and vice versa.

However, in the past few decades, IPRs have played an important role in many countries' legal and economic policies. It has become the burning issue in several negotiations, topic discussions, and disputes in world trade. The developed countries always want to have stricter protection of IPRs to protect their technology. On the contrary, developing and least developed countries (LDCs) are against the abuse of IPRs in the market. It is always put up for negotiations during the regional trade agreements. Knowledgeable-Economy and globalization encourage IP protection, TT, and innovation, in various countries. However, monopolizing IPRs to gain profits is difficult because the law-makers need to possess an appropriate directive and strategy for its promotion.

¹⁴ "The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence," United Nations Industrial Development Organization Working Papers, 2006, ix-x.

In CPTPP, IP Chapter contains many regulations and high standard engagements, compared to the recently enacted legal rules by the ASEAN member countries. Firstly, the agreement requires its members, such as Vietnam, to issue a higher standard of IPRs protection for the following reasons extending the protection scope for testing data and other information related to the agricultural-chemical products, including translating the type of geographical indications, allowance of electronic application for IPRs registration, transparency in terms of processing IP applications, filing and setting-up of effective mechanism against infringement acts, particularly those in the digital world. Secondly, CPTPP requires its members to issue criminal sanctions (apart from civil and administrative rules) against certain IPRs violations, such as fake products, trademarks, copyright infringement, illegal copies of movies, regardless of the commercial scales. Thirdly, the agreement requires stricter custom measures than the current regulations in the Law on Customs and its guiding sub-laws. For example, the custom units are authorized to control exports and transition goods deemed to be misappropriated with IPRs without owners' requirements.

In addition, CPTPP issues a series of substantial delays and limitations regarding IPRs protection in Chapter 18 of TPP. Firstly, the agreement delays implementing certain TPP provisions, such as Articles 18.37(2) and 18.37(4), which permit the patentability for available products with second use, and plants, respectively. Secondly, CPTPP delays two duties that are agreed upon and engaged by all TPP's members. First, according to Article 18.46, prolonged duration is associated with the fact that the patent office inappropriately or unnecessarily delays issuing certificates. Second, Article 18.48 involves the inappropriate or unnecessary delays involved in issuing circulation licenses for the pharmaceutical drugs granted with patent certificates.

Thirdly, the agreement delays the implementation of Article 18.50 of TPP regarding testing results and confidential data protection. In addition, TPP requires its member countries to issue five years (in minimum) data protection when it mandates a new pharmaceutical product patent owner to provide certain information to get its first circulation license. Fourthly, the agreement delays all the implementation of Article 18.51 of TPP because these provisions exceed the legal rules of many countries by seeking biological product protection (biological product is a drug produced from live biotic organisms, i.e., vaccine).

Fifthly, the agreement delays the implementation of Article 18.36 of TPP when member-countries such as Vietnam and several others were asked to issue a copyright protection term of 70 years rather than 50. Sixthly, the agree-

ment delays the implementation of Articles 18.68 and 18.69 of TPP concerning the duties associated with developing appropriate protective measures and those related to the management information, respectively. Seventhly, the agreement delays the implementation of 18.79 of TPP when members are mandated to issue laws or provisions for broader protection of satellite signals with encrypted and cable programs. Finally, the agreement delays the implementation of Article 18.82 of TPP when members are asked to issue provisions relating to duties of Internet service providers in the case of live broadcasting copyright infringement.

B. SOME IPRS BASIC PROVISIONS RELATING TO TECHNOLOGY TRANSFER AND INNOVATION

IP Chapter contains many duties and poses as basic requirements for member countries. Its first provisions regarding objectives, principles, and engagements (Articles 18.2, 18.3, and 18.4) focus on members' duties in terms of protection and enforcement of intellectual property rights which contributes to the promotion of technological innovation, including its transfer and dissemination in terms of formulating or amending the laws and regulations, adopting measures necessary to protect public health and nutrition, to promote their interest in vital sectors relevant to their socio-economic and technological development. The provisions also need to provide appropriate measures, consistent with the IP chapter, to prevent intellectual property rights abuse by stakeholders or resort to practices that unreasonably restrain trade or adversely affect the international technology transfer.

Moreover, member countries have a basic public policy to "...(a) promote innovation and creativity, (b) facilitate the diffusion of information, knowledge, technology, culture, and arts, as well as (c) foster competition and open efficient markets, through their respective intellectual property systems....."

There are no doubts about the role of technology in national development. Besides, it is described as the driving force behind a country's economic development, power, and well-being. Therefore, TT is a necessary condition for economic sustainability and innovation, particularly for developing countries such as Indonesia and Vietnam. However, they have low initial starting points, poor technological levels, and weak technical conditions.

Similarly, the bulk of international TT occurs in the private sector that is in form of firms in advanced countries to those in Indonesia. Occasionally, it is also from firms in advanced countries to Indonesian state-owned enterprises. Another channel for international TT occurrence in the public sector is through the official development assistance (ODA) programs, which usually

contain its component, specifically in the form of technical assistance or manpower training initiatives. This is provided by the technical assistance agencies of individual donor countries, such as the Japan International Cooperation Agency (JICA) or *Gesellschaft für Technische Zusammenarbeit* (GTZ) of the German government, or by multilateral aid agencies, including the World Bank, the Asian Development Bank (ADB), and the United Nations Industrial Development Organisation (UNIDO). Generally, TT through the public sector is less important compared to that of the private.¹⁵

In recent years, Indonesia has consecutively participated in several free trade agreements, both bilateral and multilateral, within and outside the ASEAN's framework,¹⁶ thereby contributing to the rise of collaborative contracts, foreign investment projects in the country, and technological innovations such as telecommunications in industries. The pattern of inward technological flows seems to be dominated by FDI as the main channel for acquisition. In some sense, this has been the country's implicit 'technology policy.' The government's favorable attitude towards FDI was largely based on the promise of technology introduced as part of the investment package.¹⁷ Unlike the other 3 ASEAN countries, namely Malaysia, the Philippines, and Thailand, Indonesia lacks data on the number of technology licensing agreements signed by firms. These include domestic industries without foreign equity ownership and joint ventures with foreign investors' licensors. However, as an approximation, the data on royalty and licensing payments to the major technology suppliers in the Asia-Pacific region, namely the US and Japan tend to be used.¹⁸ For instance, in the publication of Japan's Agency of Industrial Science and Technology in 1992, it was reported that out of its total technological exports of 339,4 billion Japanese Yen during the fiscal year in 1990, 5,8 percent of the total amount (19,7 billion Japanese Yen) went to Indonesia.¹⁹

However, the number of technologies transferred to Indonesia are still modest compared to that of the foreign investment projects on this island. Moreover, even the acquired ones are obsolete and unsuitable for local conditions. One recent example of offering outdated Japanese equipment to Indo-

¹⁵ Thee Kian Wie, *Channels of International Technology Transfer in Indonesia: A Brief Survey*, Working Paper Series Volume 2001-32 (Kitakyushu: The International Centre for the Study of East Asian Development, 2001), 13.

¹⁶ "Indonesia in Free Trade Agreements," Global Business Guide, accessed June 2 2021, http://www.gbgin-donesia.com/en/main/business_guide/2016/indonesia_in_free_trade_agreements_11504.php.

¹⁷ Thalib, "Technology Transfer in Indonesia," 76.

¹⁸ Hal Hill and Brian Johns, "The Transfer of Industrial Technology to Western Pacific Developing Countries," *Prometheus* 1, no. 1 (2008): 62, DOI: 10.1080/08109028308628916.

¹⁹ Agency of Industrial Science and Technology, *Trends in Principal Indicators on Research and Development Activities in Japan* (Tokyo: Technology Research and Information Division, General Coordination Department, 1995), 34.

nesia was the 72 secondhand trains, approximately 30 years old, presented by the Tokyo government to the Jakarta metropolitan transport authority in May 2000.²⁰ Moreover, according to some studies, not all imported technologies are equally suited for implementation in the country.²¹

There are many reasons behind Indonesia's inability to having received good technologies. The government has attempted to use some performance requirements in its foreign investment regulations to effect more rapid TT. However, its either the regulations are weak or have not been enforced, and no specific incentives have been given to encourage foreign direct investment that is bound to upgrade local technological capabilities. In accordance with the Indonesian patents system, even the role played by the government has no effect on TT. Furthermore, no specific regulations on TT have been issued. Besides, there is relatively slight pressure on industrial firms to invest in technological activities. Trade ownership restrictions, backed by market power in the hands of large domestic conglomerates, hold back technological activities, both by privileged firms and those relatively deprived. Moreover, there are certain conflicting policies. Some are geared to meeting the needs of special sections of an industry, while others are deficient in addressing certain requirements they are supposed to meet. The policies' responsibility is spread over different agencies, with slightly effective coordination and sometimes active rivalry.²²

Therefore, to embrace opportunities and advantages stipulated in CPTPP, Indonesia needs to implement detailed, concrete legal rules on IP, TT, and innovation to make these regulations real, effective, and feasible. Therefore, it is advantageous to realize and implement certain desires when Article 18.5 regarding Nature and Scope of Obligations is beneficial to its members, which is stated as follows

"...A Party is not obliged to provide more extensive protection for, or enforcement of, intellectual property rights under its law than is mandated by this Chapter, provided that such protection or enforcement does not contravene its provisions. Each Party is free to determine the appropriate method of implementing the provisions of this Chapter within its legal system and practice."

The provisions stated in the IP Chapter concerning the objectives, prin-

²⁰ Yamashita Shoichi, *The Role of Foreign Direct Investment and Technology Transfer Implications for Indonesia* (Hiroshima: Hiroshima University Press, 1992), 6.

²¹ Kuroda Akira, *Technology Transfer in Asia. A Case Study of Auto Parts and Electrical Parts Industries in Thailand* (Tokyo: Maruzen Planet, 2001), 38-39, 186.

²² Thalib, "Technology Transfer in Indonesia," 76.

ciples, agreement, nature, and scope of duties positively affect all members. However, they also contain standards and duties that all members need to fulfill to promote TT and innovation. However, it is difficult to achieve the target of TT and innovation effectively and advantageously. Firstly, though many IPRs provisions of TPP are delayed in CPTPP, IP Chapter sets an extremely high and concrete standard related to its protection compared to previous trade agreements. Secondly, to promote TT and innovation, members have to protect and enforce IPRs appropriately according to the agreement's standards. However, these IPRs basic provisions tend to be debatable because of unclear explanations and interpretations about its scope.

Regarding TT models, the transferee country issues appropriate IPRs legal rules to support the reverse engineering and 'suitable' technology imitation compared to the agreement's requirements. However, developed countries often require high IPRs protection standards. Moreover, the technology owners in these countries desire to transfer and disseminate it as well as officially enhance innovation with traditional trading transactions. Therefore, other unofficial ways like 'legal' and 'reasonable' imitation or copy are not allowed. Thirdly, Indonesia or transferee countries are unhappy with these provisions because TT and innovation implementation needs to be executed through bilateral and even multilateral. Furthermore, state cooperation requires concrete and important duties. Some conditions are suitable for the CPTPP provisions even though the countries are able to issue protective public health and nutrition necessities.

It is evident that there are strict and binding clauses related to Article 18.6 Understandings Regarding Certain Public Health Measures. This clearly stipulates that,

"The Parties affirm their commitment to the Declaration of TRIPS and Public Health... therefore... (a) The obligations of this Chapter does not and need not prevent a Party from adopting certain measures to protect public health. Accordingly, while reiterating their commitment, it was affirmed that this Chapter needs to be interpreted and implemented in a manner supportive of each Party's right to protect public health and, particularly, to promote access to medicines for all... (b) In recognition of the commitment to access to medicines that are supplied in accordance with The TRIPS or health solution, Each Party has the right to determine the factors that constitute a national emergency or other circumstances of extreme urgency. This is based on the fact that public health crises, including those relating to HIV/AIDS, tuberculosis, malaria, and other epidemics, represent national emergency or other circumstances of ex-

treme urgency....”

However, only clause (c) requires certain conditions to implement the provisions stated in (a) and (b) as follows:

“With respect to the aforementioned matters, supposing any waiver of the TRIPS Agreement provision, or amendment, is forced with respect to the Parties, and a Party’s application of a measure in conformity with that waiver or amendment is contrary to the obligations of this Chapter, the Parties shall immediately consult to adapt this Chapter as appropriate in the light of the waiver or amendment.”

Based on similar approaches and conditions regarding the protection of public health and nutrition, particularly the accession to cheap drugs according to the pharmaceutical parallel import provisions of CPTPP, Article 18.11 in respect to parallel trade generally stated that “This Agreement prevents a Party from determining whether or not the exhaustion of intellectual property rights is applicable under its legal system.” However, the footnote (8) of this Article clearly stated that “for greater certainty, and without prejudice to any provisions addressing the exhaustion of intellectual property rights in international agreements, a Party needs to be considered as one.”

Article 18.11 and its footnote (8) shows that countries’ desires during TPP and CPTPP negotiations are similar to that of TRIPS (The Agreement on Trade-Related Aspects of Intellectual Property Rights²³), which permits members to decide whether or not certain mechanisms allow parallel import freely. Earlier, during TPP negotiations, some countries intentionally invalidate the laws and practices of several member nations in terms of protecting and preventing new pharmaceutical products from competing with the former ones. However, in CPTPP, there is no basis for member states to alter these laws and practices, including the biological ones. Therefore, even though the provisions of parallel import for pharmaceutical products are temporarily frozen, it does not mean that member countries are able to access these cheap drugs. However, another research needs to be specifically carried out to analyze drug accession rights according to CPTPP.

Regarding the IPRs enforcement to promote TT and innovation, irrespective of whether the situation is improved once it accedes to TRIPS, its implementation in Indonesia is still generally weak. Protection of IPRs in particular or intellectual assets ensures owners are liable to use them legally. The economic or property rights of these owners need to be respected. All policies

²³ “TRIPS – Trade-Related Aspects of Intellectual Property Rights,” World Trade Organization, https://www.wto.org/english/tratop_e/trips_e/trips_e.htm, accessed June 20, 2020.

and legal rules need to ensure that the economic or property rights are able to enforce IPRs. This is described as the enforcement of legal rules and regulations and the implementation of policies regarding IPRs. However, it is also a part of the IP law enforcement. Briefly, this is an aspect of its protection because all associated rules ensure its owners legally use their IP to enforce IPRs. Therefore, it is necessary to adopt all legal and relevant policies regarding IPRs such as civil, criminal, and administrative laws, including customs and border control regulations.

Indonesia is a net importer of IP-intensive goods and has sought to strengthen IPRs protection.²⁴ Over the years, the country has participated in signing several international agreements regarding promoting IPRs activities. In 1979, it was regarded as a member of the World Intellectual Property Organization (WIPO). However, in 1994, it became a member of the Convention on Biological Diversity (CBD) recognizes sovereign countries due to their genetic resources, which is subject to IPRs. In 1995, Indonesia joined the ASEAN Framework Agreement on Intellectual Property Cooperation and the World Trade Organization (WTO). In 1996, it also ratified the Trade-Related Aspects of Intellectual Property Rights (TRIPS), which sets IP standards. Furthermore, in 2006 it ratified the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), and presently implemented the standard material transfer agreement (SMTA) for the exchange of biological and genetic resources.

Indonesia has promulgated several national legislation initiatives parallel to these international treaties and agreements and updated its IPR laws on patent, utility model, industrial design, copyright, and related rights, and trademark. Therefore, seven laws concerning IPR regarding patents, trademarks, copyright, industrial design, and plant variety protection (PVP) have been currently passed.²⁵

The Indonesian IP legislation has substantially been revised in recent years to ensure it is in line with the regional and international IPR standards. The national laws related to IPRs are reported as follows law No. July 19 July 29, 2002, on Copyright, Law No. August 14 August 1, 2001, regarding Patents, Law No. August 15 August 1, 2001, regarding Marks, Law No. December 30 December 20, 2000, regarding Trade Secret, Law No. December 31 December 20, 2000, regarding Industrial Designs, Law No. 32 of December 20,

²⁴ Gregory D. Graff, "Echoes of Bayh-Dole? A survey of IP and Technology Transfer Policies in Emerging and Developing Economies," in *Intellectual Property Management in Health and Agricultural Innovation*, Anatole Krattiger, Richard Mahoney, Lita Nelsen, et al., eds. (Oxford: MIHR and PIPRA, 2007), 169.

²⁵ "WIPO Lex," World Intellectual Property Organization, accessed 30 August 2012, <http://wipo.int/wipo-lex/en>.

2000, regarding Layout Designs of Integrated Circuits, Laws of Republic of Indonesia No. 29 of 2000 on Plant Variety Protection.

However, to help the Indonesian research institutions and universities benefit from IPRs, Law No. 18 on National Systems for Research, Development, and Application of Technology were issued. This policy which requires the IP and TT management setup standards with monetary oversight and other benefits, was commercialization in 2002.²⁶ In addition, the following sub laws were enacted Government Regulation (PP) 20/2005 on Transfer of Technology of Intellectual Property and Result of R&D Institutes and Universities, as well as Government Regulation (PP) 23/2005 on Financial Management of Public Service Agency (*Badan Layanan Umum*/BLU). Furthermore, in 2007 Government Regulation No. 51 was issued to prescribe Geographical Indications' guidelines and regulatory framework to protect the industries where goods are manufactured.

The international treaties Indonesia adheres to includes Paris Convention on Industrial Property, WIPO Convention, Convention on Biological Diversity, Berne Convention on Literary and Artistic Works, agreement on Trade-Related Aspects of Intellectual Property, Patent Cooperation Treaty, held in 1950, 1979, 1994, 1997, 1995, and 1997 respectively. This simply means that Indonesia's IP legislation is comprehensive and encompasses all aspects of IP protection in accordance with international standards.

It is an undeniable fact that Indonesia has been making efforts to leave the U.S. Priority Watch List in order to combat IPR violations and infringements to secure its trading partners.²⁷

The number of IPRs applications and registration was recently increased due to the good policy and newly enacted laws. Patent and trademark applications have steadily grown over the years (1997 to 2011), with the majority being non-resident applicants.²⁸ However, despite all these amendments and reviews, IP enforcement in Indonesia is problematic because individuals do not know their rights and usually fail in terms of defending themselves.²⁹

²⁶ "Mapping Research Systems in Developing Countries - Country Report: The Science and Technology System In Indonesia, South Africa, France," United Nations Educational, Scientific and Cultural Organization (UNESCO), accessed 9 January 2008, http://portal.unesco.org/pv_obj_cache/pv_obj_id_C74B5BE23B9439279E9C04C2F80B90867DF30200/filename/Indonesia.pdf.

²⁷ Ronald Kirk, "2012 Special 301 Report," United States: Office of United States Trade Representative, 2012, 11.

²⁸ "Statistical Country Profiles: Indonesia," World Intellectual Property Organization, accessed 20 June 2020, https://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=ID.

²⁹ Megawati Barthos and Rineke Sara, "Dysfunctional IP Infringements and Ineffectiveness of Enforcement Mechanisms Under Indonesian Law," *Journal of Legal, Ethical and Regulatory Issues* 22, no. 1 (2019): 2.

The enforcement of each IPRs object is managed, implemented, and shown as follows:³⁰

Patents- A patent is a right granted to an inventor to prevent others from making, using, importing, or selling the invention without the owner's permission. An invention is a new technical solution that is granted patent based on these two products and processes. A new Patent Act was enforced in Indonesia on 28 August 2016. Furthermore, one of the requirements mandates that the 'Statement of Ownership' need to be signed by the applicant when filing a patent application. The Authority of Patent Appeal Commission was responsible for enforcing this law and examining all types of patent-related petitions, including correcting the specifications, claims, and drawings after the application have been granted. The Commission is also responsible for foreign grants, mainly because local examiners are improperly equipped to undertake an independent and thorough search and examination. Therefore, such foreign grants need to be obtained from patent offices known to conduct an independent examination. However, in Indonesia, this practice is rare.

Marks- A mark is a signal in the form of a picture, name, word, letters, figures, the composition of colors, or a combination of these elements, to distinguish the goods and services of one trader from those of another. It is important to note that initially, three-dimensional signs (shapes), sound, and smell were not recognized as trademarks in Indonesia. However, the new Trade Mark Law (2016) contains provisions protecting non-traditional trademarks such as 3-dimensional signs, holograms, sounds, and smells. In addition, it also introduced certain provisions concerning the Madrid Protocol, thereby permitting Indonesia to become part of the trademark international registration system. Subsequently, the new law also accepted registrations for Geographical Indications (GI), where such marks indicate the manufacturer's location.

Industrial designs- An industrial design means an ornamental creation on the shape and configuration, or the composition of lines or colors, a combination of a three or two-dimensional form to produce an aesthetic appearance or pattern of a product, goods, or industrial commodities and handicrafts. However, when a design has already been disclosed in the market through production and sales, some IP owners try to protect theirs as copyright. To enforce the law related to industrial design, it is not clear whether or not the use of the copyright is entirely defensible in this case. However, a copyright record strengthens the legitimacy of the IP owner's claims and tends to be considered a possible strategy. In addition, Indonesia is aware of the new-generation free trade agreements, such as CPTPP or contracts between the European Union

³⁰ *Ibid.*

and other countries (i.e., Vietnam), which requires the current domestic policies and sub regulations to stipulate the protection of IPRs under the copyright or industrial design.

Copyright- Copyright grants exclusive rights to an author, such as the holder's moral, economic, and property rights to publish or reproduce their work. The rights are granted immediately after the fixation of the work. The kind of works protected by copyrights law in Indonesia is categorized in the science, arts, and literature fields, which principally includes books, computer programs, pamphlets, visual aids made for educational and scientific purposes, typographical arrangements, lectures, addresses, songs, or music with or without lyrics, dramas, musical dramas, dances, choreography, puppet shows, pantomimes and all forms of artwork, such as paintings, drawings, engravings, calligraphy, carvings, sculptures, collage, and applied arts, architecture and maps, photography and cinematography, translations, interpretations, adaptations, anthologies, data-bases, and other similar activities. The Directorate of Intellectual Property (DGIP) is responsible for the enforcement of Copyright Law, which provides a wide range of provisions to improve its protection in the country, including the extension of duration and regulations of activities considered an infringement. In litigation, the enforcement authorities need to be satisfied with and ascertain that the IP holder responsible for the prosecution is the rightful owner. However, it becomes problematic assuming the IP rights holder was unable to record the copyright in Indonesia.

The protection and enforcement of IPRs for enhancing TT and innovation in Indonesia are still limited due to various reasons. First, the government has insignificant human and financial resources to improve and enforce IP laws. Second, the competent authorities mostly ignore the presence of shops or street vendors that trade pirated works, fake products, or infringed software. Third, the courts do not support the enforcement of IPRs. Furthermore, the weak enforcement is also attributed to the legislative culture in Indonesia, in which its government often ignores important policies, including IP laws. Finally, there is a lack of qualified enforcement officials in the country.³¹

There are also several problems regarding dysfunctional elements discovered in the enforcement of IP legal rules in Indonesia. The first issue occurred when it was discovered that domestic judges are not familiar with patent matters and rely heavily on Patent Offices seeking their opinions on infringement and invalidation matters.³² This tends to be the reason foreign patent holders

³¹ Afifah Kusumadara, "Problems of Enforcing Intellectual Property Laws in Indonesia," International Association of Law Schools, accessed 15 June 2020, <https://www.ialsnet.org/meetings/business/KusumadaraAfifah-Indonesia.pdf>.

³² Fedina S. Sundaryani, "Judiciary Facing Severe Shortage of Judges," *The Jakarta Post*, February 26,

are usually reluctant to engage in litigation, particularly in cases where the patent owner faces a similar adversary in several countries. Secondly, patent specifications are translated into the local Indonesian language, although there are occasional errors. Thirdly, there is a lack of procedures to correct errors once a patent is granted. Fourthly, patent records are not fully computerized, and therefore thorough searches are impossible whenever an application is received. Searches are only converted into basic bibliographic data and invention abstracts, although not the complete specification. Lastly, applicants do bother whether their new products infringed upon any valid and existing patents.³³

All analyses relating to IPRs protection and enforcement in Indonesia show that it is difficult to realize favorable conditions from its basic provisions of CPTPP. The better the protection and enforcement, the better the investment climate and the transfer of technologies from foreign enterprises to Indonesia.

V. CONCLUSION AND RECOMMENDATION

IPRs basic provisions of CPTPP have impacts on TT and innovation. Besides, its promotion is a key priority for the LDCs and developing countries, including Indonesia. Therefore, the research carried out on IPRs basic provisions of CPTPP relating to TT and innovation is important and stipulates the necessity for Indonesia to participate in this new-generation free trade agreement.

As analyzed, some IPRs basic provisions in the IP Chapter of CPTPP has a substantial effect on member countries' TT and innovation activities. In fact, the implementation and fulfillment of the duties, and engagements of CPTPP are difficult. Therefore, it is presumed that there are great opportunities to receive foreign technologies and foster innovation for member countries, however to grasp this, involves limiting certain risks and disadvantages, in addition, the member countries need to modify several legal rules relating to IP, TT, and TT innovation. Launching new policies and regulations to satisfy the agreement's requirements does not prevent conflicts with existing legal rules to protect national defense, public health, and the environment. The limitation of this research is based on the fact that not all relevant IPRs provisions that

2015, accessed 26 February 2015, <http://www.thejakartapost.com/news/2015/02/26/judiciary-facing-severe-shortage-judges.html>.

³³ *Ibid.*

affect TT and Agreement innovation were analyzed. Therefore, based on this, it was suggested that Indonesia needs to consider the following points before participating in the CPTPP

Firstly, the country needs to possess concrete and detailed provisions on IP, TT, and innovation to create opportunities and favorable, realistic, effective and feasible, conditions of CPTPP, which is difficult to realize. This requires law-makers to review and thoroughly investigate relevant legal rules as well as IP, TT, and innovation experts.

Secondly, cases where TT and innovation are performed through IP licensing, assignment, stronger IPRs protection, and enforcement in developing countries, including Indonesia, results in greater innovation and increase TT flux in this nation³⁴.

Thirdly, since Indonesia started negotiations for CPTPP, the demand for institutional and policy adjustments has become more important than ever. Unlike other FTAs, this new-generation of free trade agreements go beyond the traditional scope of trade liberalization. This agreement comprises not only trade and investment, it is also regarded as 'behind-the-border commitments such as labor, environment, legal framework, the relationship between investors and the state, competition, IPRs, and etc.

Fourthly, Indonesia needs to concretize more regulations on TT laws such as effective evaluation, implementation, supervision, mechanism encouraging TT and innovation supporting units, concrete valuation policies, and regulations binding foreigners when signing TT contracts.

Finally, Indonesia should have a uniform, long-term, continuous education and training policy and IP, TT, innovation, and entrepreneurship training, particularly for higher educational institutions.

³⁴ Rod Falvey and Neil Foster, *The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence* (Vienna: Strategic Research and Economics Branch UNIDO, 2006), ix-x.

BIBLIOGRAPHY

Legal Documents

Comprehensive and Progressive Agreement for Trans-Pacific Partnership (opened for signature February 4 2016).

Journals and Periodicals

Barthos, Megawati and Rineke Sara. "Dysfunctional IP Infringements and Ineffectiveness of Enforcement Mechanisms Under Indonesian Law." *Journal of Legal, Ethical and Regulatory Issues Volume 22, no. 1 (2019): 1-10.*

Hill, Hal and Brian Johns. "The Transfer of Industrial Technology to Western Pacific Developing Countries." *Prometheus 1, no. 1 (2008): 62-83.*

Payumo, Jane G., et. al. "An Entrepreneurial, Research-Based University Model Focused on Intellectual Property Management for Economic Development in Emerging Economies: The case of Bogor Agricultural University, Indonesia." *World Patent Information, no. 36 (2014): 22-31.*

Tanwir, Ranti Fauza Mayana and Daniel Hendrawan. "Alternative Resolution of Intellectual Property Disputes as Part of Investment in the Creative Industry Sector Under Indonesian Law." *Humanities & Social Sciences Reviews 7, no. 5 (2019): 93-97, DOI: 10.18510/hssr.2019.7512.*

Thalib, Abd. "Technology Transfer in Indonesia: Legal Perspective." *UUM Journal of Legal Studies 5, (2014): 75-92.*

Books and Book Chapters

Agency of Industrial Science and Technology. *Trends in Principal Indicators on Research and Development Activities in Japan. Tokyo: Technology Research and Information Division, General Coordination Department, 1995.*

Akira, Kuroda. *Technology Transfer in Asia. A Case Study of Auto Parts and Electrical Parts Industries in Thailand. Tokyo: Maruzen Planet, 2001.*

Graff, Gregory D. "Echoes of Bayh-Dole? A survey of IP and Technology Transfer Policies in Emerging and Developing Economies." in *Intellectual Property Management in Health and Agricultural Innovation*, edited by Anatole Krattiger, Richard Mahoney, Lita Nelsen, et. al., 169-195. Oxford: MIHR and PIPRA, 2007.

Shoichi, Yamashita. *The Role of Foreign Direct Investment and Technology Transfer. Hiroshima: Hiroshima University Press, 1992.*

Web Sources

New Zealand Foreign Affairs and Trade. "Trans-Pacific Partnership Agreement (TPP)." Accessed 20 June 2020, <https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-concluded-but-not-in-force/trans-pacific-partnership-agreement-tpp/>.

Global Business Guide. "Indonesia in Free Trade Agreements." Accessed 2 June 2021, http://www.gbgingonesia.com/en/main/business_guide/2016/indonesia_in_free_trade_agreements_11504.php.

UNESCO. "Mapping Research Systems in Developing Countries - Country Report: The Science and Technology System In Indonesia, South Africa, France." Accessed 9 January 2008, <http://portal.unesco.org/>

- pv_obj_cache/pv_obj_id_C74B5BE23B9439279E9C04C2F80B90867DF30200/file-name/Indonesia.pdf.
- World Intellectual Property Organization. “Statistical Country Profiles: Indonesia.” Accessed 20 June 2020, https://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=ID.
- Kusumadara, Afifah. “Problems of Enforcing Intellectual Property Laws in Indonesia.” International Association of Law Schools. Accessed 15 June 2020, <https://www.ialsnet.org/meetings/business/KusumadaraAfifah-Indonesia.pdf>.
- “Japan Pledges Support for Thailand Joining Pacific Trade Pact.” *Kyodo News*, 8 January 2020. Accessed May 18 2020, <https://english.kyodonews.net/news/2020/01/bf7dc1caa9dd-japan-pledges-support-for-thailand-joining-pacific-trade-pact.html>.
- Ministry of Finance, Republic of Indonesia. “Innovate Indonesia: Unlocking Growth Through Technological Transformation.” Accessed 23 June 2020, <https://www.adb.org/sites/default/files/publication/575806/innovate-indonesia-unlocking-growth.pdf>.
- “CPTPP Facilitates Cooperation in Asia-Pacific Region,” *Nhan Dan Online*, 7 March 2018. Accessed February 6 2020, <https://en.nhandan.com.vn/business/item/5905502-cptpp-facilitates-cooperation-in-asia-pacific-region.html>.
- “CPTPP – Opportunity for Vietnam to Join Global Value Chain,” *Vietnam News Agency*, 2 November 2018. Accessed 2 June 2020, <https://en.vietnamplus.vn/cptpp-opportunity-for-vietnam-to-join-global-value-chain/141180.vnp>.
- Springer, Kyle. “Time to Jumpstart Australia-Indonesia Economic Relations,” *The Diplomat*, 8 February 2020. Accessed 18 May 2020, <https://thediplomat.com/2020/02/time-to-jumpstart-australia-indonesia-economic-relations/>.
- Sundaryani, Fedina S. “Judiciary Facing Severe Shortage of Judges.” *The Jakarta Post*, 26 February 2015. Accessed 26 February 2015, <http://www.thejakartapost.com/news/2015/02/26/judiciary-facing-severe-shortage-judges.html>.
- The ASEAN Post. “How Will the CPTPP Pan Out for ASEAN?” Accessed 6 February 2020, <https://theaseanpost.com/article/how-will-cptpp-pan-out-asean>.
- World Intellectual Property Organization. “WIPO Lex.” Accessed 30 August 2012, <http://wipo.int/wipolex/en/>.
- World Bank. “The World Bank in Indonesia: An Overview.” Accessed 23 June 2020. <http://www.worldbank.org/en/country/indonesia/overview>.
- World Trade Organization. “TRIPS – Trade-Related Aspects of Intellectual Property Rights.” Accessed 20 June 2020, https://www.wto.org/english/tratop_e/trips_e/trips_e.htm.

Others (Policy Brief, Working Draft, Presentation)

- Falvey, Rod and Neil Foster. “The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence.” Vienna: Strategic Research and Economics Branch UNIDO, 2006.
- Horan, Amanda, Christopher Johnson, and Heather Sykes. “Foreign Infringement of Intellectual Property Rights: Implications for Selected U.S. Industries.” US International Trade Commission: Office of Industries Working Paper, 2005.
- Kian Wie, Thee. “Channels of International Technology Transfer in Indonesia: A Brief

- Survey.” Working Paper Series Volume 2001-32. Kitakyushu: The International Centre for the Study of East Asian Development, 2001.
- Kirk, Ronald. “2012 Special 301 Report.” United States: Office of United States Trade Representative, 2012.
- Koncz, Jennifer and Anne Flatness. “US International Services.” Survey of Current Business: US Bureau of Economic Analysis²⁰¹⁰.
- W. Lesser. “Intellectual Property Protection for Indonesia,” in the *Second Conference on Agricultural Biotechnology. Jakarta, Indonesia: 13-15 June, 1995*.

